Mellomstrand vindkraftverk

Del B

B2: Rapporter ikke underlagt M-1941

Statkraft Vind Utvikling DA har gjennomført konsekvensutredninger av Mellomstrand vindkraftverk i henhold til utredningsprogrammet fastsatt av Norges vassdrags- og energidirektorat (NVE) 30.10.2025, som er beskrevet i vedlegg 1 i del A av konsesjonssøknaden. Fordi det gjøres en samordning av konsesjonsprosessen etter energiloven og planprosessen etter plan- og bygningsloven, er konsekvensutredning felles for konsesjonssøknaden og planforslaget med tilhørende planprogram fastsatt av Time kommune 19.06.2025 (Vedlegg A-2).

Denne delen av konsesjonssøknaden (del B) inneholder fagrapportene i sin helhet. Alle utredningene er utført av uavhengige konsulenter, som er oppsummert i tabell 6-1 i konsesjonssøknaden. En oppsummering av utredningene finnes i kapittel 6 i konsesjonssøknaden. Grunnet omfanget av fagrapportene er del B delt i to deler, en del som inneholder de fagrapportene underlagt M-1941 og en del som inneholder resten av fagrapportene. De rapportene som ikke er underlagt M-1941 er samlet i dette dokumentet, mens resten er samlet i et separat dokument som sendes som andre del av del B. Videre er vedlegg til landskapsrapporten, på grunn av sin betydelige størrelse, presentert som et eget dokument. En oversikt er presentert i innholdsoversikten på neste side.

Konsekvensene er vurdert med utgangspunkt i et «0-alternativ» (dagens situasjon) som beskriver den antatte situasjonen i de berørte områdene dersom tiltaket ikke blir gjennomført.

Innholdsoversikt

B1: Fagrapporter underlagt M-1941

- Støy
- Vannmiljø og forurensing
- Kulturminner og kulturmiljø
- Naturmangfold
- Friluftsliv
- Klimagassutslipp

B2: Fagrapporter ikke underlagt M-1941 (dette dokumentet)

- ROS-analyse
- Skyggekast
- Lokalt og regionalt næringsliv
- Landbruk
- Mineralressurser
- Folkehelse
- Landskap
- Eiendomsverdi
- Transportanalyse
- Klimatilpasning
- Værradar

B3: Oppdatert konsekvensutredning for Moifjellet og Mellomstrand vindkraftverk uten MS04

B4: Rapporter unntatt offentligheten:

Rapportene er unntatt offentlighet og sendt til NVE som en del av konsesjonssøknaden.

- Tematisk fagutredning fugl
- Elektronisk kommunikasjon
- Skredfare
- Flomfare og overvann
- Forsvaret
- Luftfart

Fagrapport:

Samfunnssikkerhet

RAPPORT

Mellomstrand vindkraftverk – ROS-analyse

OPPDRAGSGIVER

Statkraft Vind Utvikling DA

EMNE

ROS-ANALYSE

DATO / REVISJON: 07. 05 2026 / 00

DOKUMENTKODE: 10265688-01-PLAN-RAP-02



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RAPPORT

OPPDRAG	**Mellomstrand vindkraftverk - områderegulering**	DOKUMENTKODE	10265688-01-PLAN-RAP-02
EMNE	ROS-analyse	TILGJENGELIGHET	Åpen
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GNR./BNR./SNR.	/ /		

SAMMENDRAG

Denne risiko- og sårbarhetsanalyse (ROS-analysen er utarbeidet som en del av arbeidet med reguleringsplan og konsesjonssøknad for nye Mellomstrand vindkraftverk i Time kommune. Analysen skal bidra til å avdekke om planområdet er egnet for etablering av vindkraft, og om det foreligger forhold som krever særlige hensyn, avbøtende tiltak eller endringer i planforslaget.

ROS-analysen omfatter fremtidige risikoforhold ved etablering av Mellomstrand vindkraftverk, og tar utgangspunkt i kjente farer knyttet til naturgitte forhold, teknisk infrastruktur, transport, beredskap og menneskelig aktivitet. Vurderingene er basert på tilgjengelig kunnskap, relevante konsekvensutredninger, offentlige databaser og faglige vurderinger.

Resultatene fra ROS-analysen legges til grunn for videre planlegging og danner grunnlag for eventuelle bestemmelser, hensynssoner eller andre tiltak i reguleringsplanen som bidrar til å redusere risiko og sikre en forsvarlig arealbruk.

I Tabell 4-1 gjennomgås 35 risiko- og sårbarhetsforhold. Av disse vurderes seks uønskede hendelser å utgjøre en særskilt risiko, og disse har blitt analysert mer i detalj. De seks vurderte, uønskede hendelsene under er oppgitt i en risikomatrise før ev. avbøtende tiltak. Ingen hendelser er vurdert å ha høy risiko ut fra de kriteriene som er satt.

Risikomatrise	Konsekvens		
Sannsynlighet	Små	Middels	Store
Høy			
Middels	**Hendelse 1b) Sterk vind og løse gjenstander som skader mennesker, anlegg og/eller utstyr** **Hendelse 4 Vassdrags flom**	**Hendelse 3b) Nedfall av snø/is fra maskinhus eller iskast som skader mennesker, anlegg og/eller utstyr**	

01					
00		Leveranse av rapport	Eivind Holmvik	Tom Langeid	Tom Langeid
REV.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV

Lav	**Hendelse 28 Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.**	**Hendelse 8a) Skog- og lyngbrann**	**Hendelse 1a) Sterk vind som påfører skade på vindturbin**

ROS-analysen peker på avbøtende tiltak som vil redusere sannsynligheten for og konsekvensene av de ulike hendelsene. Det må rettes fokus mot disse forholdene i den videre prosessen. Forslag til avbøtende tiltak er oppsummert i tabellen under.

Uønsket Hendelse	**Forslag til tiltak for planområdet/bygget:**	**Oppfølging gjennom planverktøy/info til kommunen etc.:**
Hendelse 1a) Sterk vind som påfører skade på vindturbin	- Prosjektering og utførelse av vindturbiner med tilstrekkelig sikkerhet mhp. dimensjonerende vindforhold. - Følge rutiner for vedlikehold, inspeksjoner og oppfølging - Sikkerhetssystemer som stanser blader og gir mulighet til å justere navet og/eller blader ved ekstrem vind.	– Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og drift av anlegg
Hendelse 1b) Sterk vind og løse gjenstander	- Følge rutiner for oppbevaring og sikring av utstyr og gjenstander.	- Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og drift av anlegg.
Hendelse 3b) Nedfall av snø/is fra maskinhus eller iskast som skader mennesker, anlegg og/eller utstyr	- Interne rutiner og opplæring av driftspersonell. - I tråd med gjeldende vilkår om iskast i vindkraftkonsesjoner, må det settes opp fareskilt som varsler om at iskast kan inntreffe innenfor en definert sikkerhetssone rundt vindturbinene. - Varslingssystem for is-oppbygging (knyttet til egen arbeidsinstruks).	- Følges opp i henhold til NVEs veileder for iskast. - Øvrige tiltak følges opp i prosjektering og bygging, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg.
Hendelse 4 Vassdrags flom	- Etablere stikkrenner og kulverter for å bevare de naturlige vannveier så langt det er mulig. I noen tilfeller kan det være nødvendig å etablere grøfter og/eller justere veglinjer for gunstig kryssing av dreneringslinjer - Erosjonssikring bør vurderes i områder der tiltak plasseres innenfor flomutsatte områder	- Følges opp i prosjekteringen og bygging av tiltaket, gjennom føringer i detaljplanen jf. energiloven.
Hendelse 8a) Skog- og lyngbrann	- Gruset flate rundt turbiner, transformatorstasjon og driftsbygning, samt veier i området.	- Følges opp i prosjektering, bygging av tiltak, gjennom føringer i

	- Transformatorer planlegges etablert i lukkete celler som hindrer spredning. - Branndeteksjon og kontinuerlig overvåkning av komponenter. - Rutiner for stopping av turbin før farlige høye temperaturer oppnås. - Beredskapsplan med rutiner for hindring av spredning (f.eks. vanning)	detaljplanen jf. energiloven, og i drift av anlegg.
Hendelse 28 Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.	- Fysiske barrierer som lukkede systemer med oljetrau, tette celler og oljeoppsamling.	– Følges opp i områdereguleringen og detaljplan jf. energiloven, og drift av anlegget.

ROS-analysen viser at det gjennom planlegging og foreslåtte risikoreduserende tiltak vil være mulig å redusere sannsynligheten, årsakene, sårbarheten, konsekvensene og usikkerheten ved de uønskete hendelsene.

Gitt at de foreslåtte tiltakene følges opp i videre prosess og gjennomføring, vurderes risikoen knyttet til planforslaget å være innenfor det som anses som akseptabelt. Med utgangspunkt i samfunnssikkerhet vurderes planområdet derfor som arealmessig egnet til vindkraft.

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Innledning

1.1 Hensikten med ROS-analyser

Krav om ROS-analyser er et generelt utredningskrav som gjelder alle planer for utbygging, i henhold til plan- og bygningsloven (PBL) § 4-3. Hensikten med ROS-analyse er å sikre et tilstrekkelig kunnskapsgrunnlag for å ivareta samfunnssikkerhet i planområdet, og gi kommunen et godt beslutningsgrunnlag for å ivareta samfunnssikkerhet i arealplanleggingen.

I en ROS-analyse kartlegges alle risiko- og sårbarhetsforhold i forbindelse med ønsket utbyggingstiltak i et planområde. Med risiko- og sårbarhetsforhold menes forhold som har betydning for om arealet er egnet til utbyggingsformålet, og eventuelle endringer i slike forhold som følge av planlagt utbygging. Dette kan knytte seg til arealet slik det er fra naturens side, eller som følge av arealbruken.

Denne ROS-analysen for Mellomstrand vindkraftverk er utarbeidet av Multiconsult AS på oppdrag fra Statkraft Vind Utvikling DA.

1.2 Begrepsforklaring

Tabell 0-1 gir oversikt over de mest brukte begrepene i forbindelse med ROS-analyser.

Tabell 0-1: Begrepsforklaring

Begrep	Beskrivelse
ROS-analyse	Risiko- og sårbarhetsanalyse.
Fare	Med fare menes forhold som kan medføre konkrete stedfestede hendelser som innebærer skade eller tap.
Uønsket hendelse	En hendelse eller tilstand som kan medføre skade på mennesker, stabilitet eller materielle verdier.
Risiko	Uttrykk for den fare som uønskede hendelser/tilstander representerer for mennesker, stabilitet eller materielle verdier. Sannsynligheten for og konsekvensen av ulike hendelser gir til sammen et uttrykk for risikoen som en uønsket hendelse representerer.
Sannsynlighet	Et mål for hvor trolig det er at en bestemt hendelse inntreffer i planområdet innenfor et visst tidsrom.
Sårbarhet	Vurderer motstandsevnen til utbyggingsformålet, samfunnsfunksjonene, evt. barrierer og evnen til gjenopprettelse.
Konsekvens	Virkningen den uønskede hendelsen kan få i et planområde.
Usikkerhet	Handler om å vurdere kunnskapsgrunnlaget.
Barrierer	Eksisterende tiltak som f.eks. flom-/skredvoll, sikkerhetssoner rundt farlig industri eller varslingssystemer som kan redusere sannsynlighet for og konsekvens av en uønsket hendelse.
Tiltak	I oppfølging av funn for ROS-vurderingen kan det bli avdekket behov for tiltak for å redusere risiko og sårbarhet. Dette kan være forbedringer i barrierer eller nye tiltak.
Stabilitet	Innebærer en vurdering av eventuelle forstyrrelser i dagliglivet på grunn av svikt i kritiske samfunnsfunksjoner og manglende dekking av grunnleggende behov hos befolkningen. Konsekvenser for natur og miljø blir vurdert som egne punkter i ROS-analysen, der vurderingen av konsekvensene er rettet mot de tre konsekvenstypene.

1.3 Grunnlagsinformasjon

Vurderingene i analysen baserer seg på tilgjengelig dokumentasjon om prosjektet, samt på tilgjengelige faglige vurderinger. Dette består av offentlige tilgjengelige databaser og rapporter/notater utarbeidet ifm. planforslaget og annet oversendt underlag. Alle kildene som er blitt benyttet er opplistet i kapittel 7 Referanser.

2 Metode

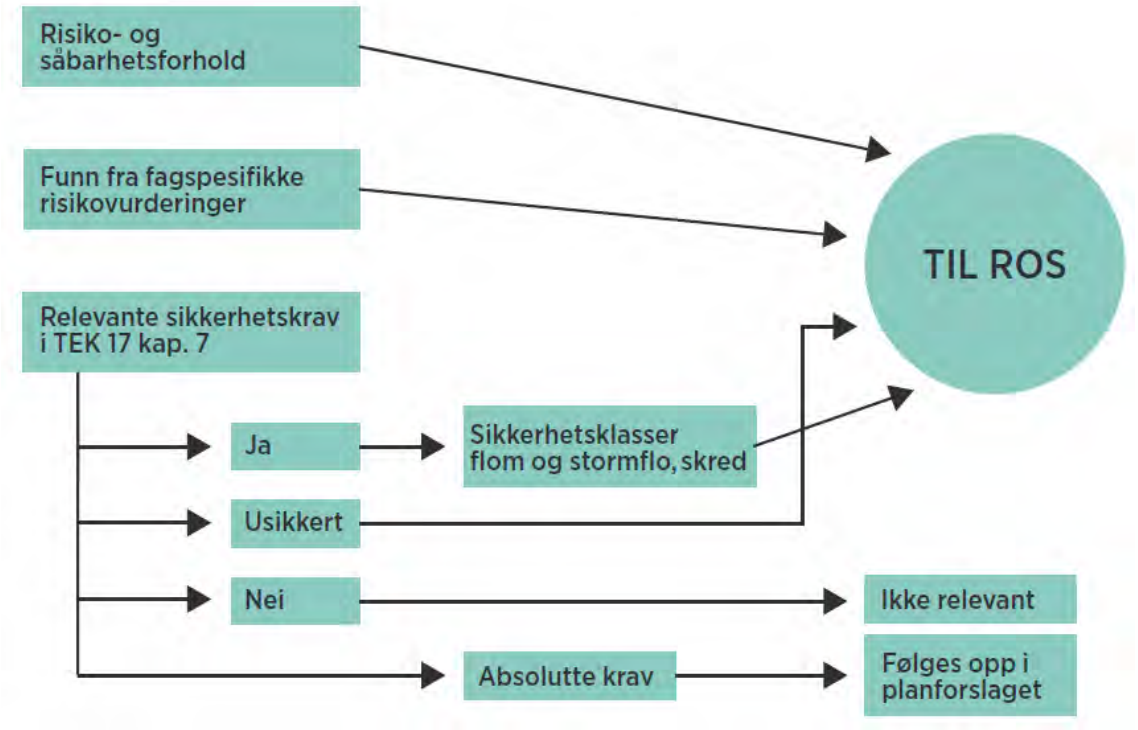
2.1 Bakgrunn og fremgangsmåte

Fremgangsmåten for utarbeidelse av denne ROS-analysen bygger på metode gitt i Direktoratet for sikkerhet og beredskaps (DSB) veileder *«Samfunnssikkerhet i kommunens arealplanlegging»* fra 2017. I veilederen anbefaler DSB at en ROS-analyse omfatter:

- Risiko- og sårbarhetsforhold som er vesentlig for å ivareta samfunnssikkerhet.
- Forhold i omkringliggende områder som kan få konsekvenser for planområdet.
- Endringer i risiko- og sårbarhetsforhold som følge av planlagt utbygging.
- Risiko- og sårbarhetsforhold i kombinasjon, herunder vurdering av endrede konsekvenser når det legges på klimapåslag for relevante naturforhold.
- Mulige konsekvenser av utbyggingen for omkringliggende områder.
- Vurdering av om kunnskapsgrunnlaget er tilstrekkelig for å vurdere risiko og sårbarhet, eller om ROS-analysen må følges opp gjennom nærmere kartlegginger.

Benyttet metoden tilrettelegger for å fange opp detaljert kunnskap om planområdet og utbyggingsformålet, se Figur 2-1. Risikomomenter til ROS-analysen identifiseres på ulike måter. Det innebærer å identifisere mulige uønskede hendelser gjennom å:

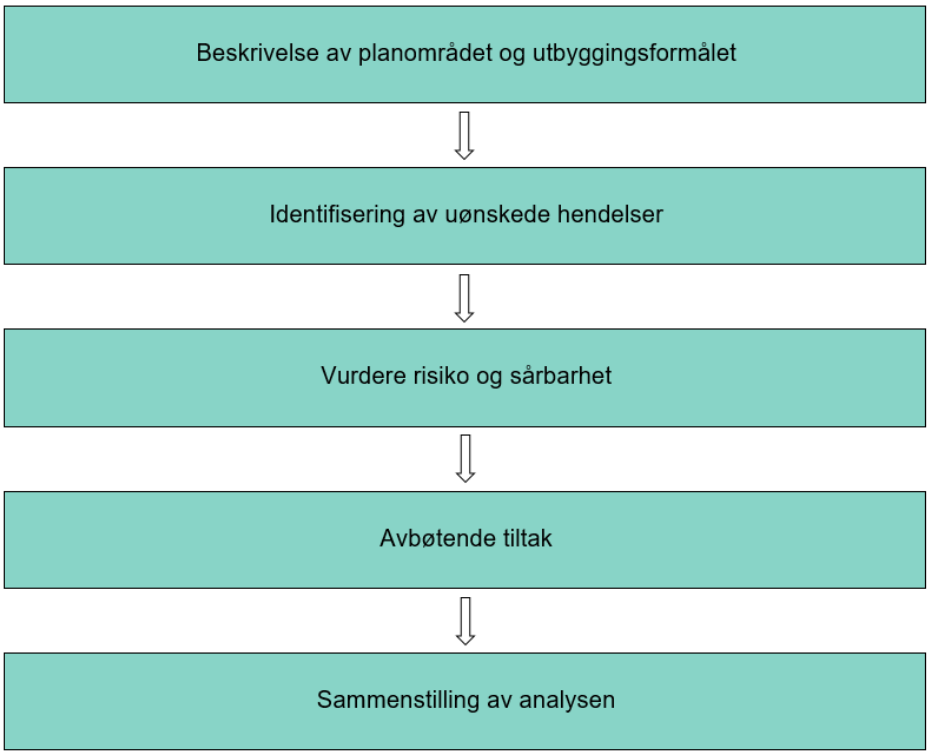
- kartlegge risiko- og sårbarhetsforhold,
- vurdere funn fra fagspesifikke risikovurderinger
- vurdere om sikkerhetskrav i byggteknisk forskrift (TEK 17), kap. 7, er relevante



Figur 2-1: Kartlegging av risiko- og sårbarhetsforhold for å identifisere mulige uønskede hendelser. Kilde: DSB veileder «samfunnssikkerhet i kommunens arealplanlegging» [1].

2.2 Analyseoppsett

Oppsettet i denne ROS-analysen tar utgangspunkt i anbefalt oppsett i DSBs veileder, og er inndelt i følgende trinn:



Figur 2-2: ROS-analysens hovedsteg, hentet fra DSBs veileder for Samfunnssikkerhet i kommunens arealplanlegging.

2.3 Avgrensning av analysen

I henhold til DSB sin veileder skal ROS-analysen inneholde hendelser som kan få konsekvenser for liv og helse, trygghet/stabilitet og eiendom/materielle verdier. Konsekvenser for ytre miljø inngår i begrenset grad, da dette først og fremst omfattes av andre utredninger i planlegging og prosjektering av tiltaket, som f.eks. YM-plan iht. internkontrollforskriften.

Hensikten med ROS-analysen er å påse at forhold som kan medføre *alvorlig* skade på mennesker, miljø, materielle verdier eller samfunnsfunksjoner skal klargjøres i plansaken og ligge til grunn for vedtak av planen. Alvorlige risikoforhold kan medføre krav om endringer, innføring av hensynssoner, planbestemmelser som ivaretar forholdet eller i alvorlige tilfeller at planen frarådes.

Fokus skal rettes mot det som er spesielt ved at virksomheten *lokaliseres som foreslått*, og ikke generelle trekk ved virksomheten som er uavhengig av lokalisering.

Analysen tar i hovedsak for seg forhold som knyttes til driftsfasen. Risiko i anleggsfasen vurderes i begrenset grad da dette er ivaretatt gjennom gjeldende lover og forskrifter (bl.a. av krav i byggherreforskriften). Forhold knyttet til anleggsfasen er kun medtatt dersom den uønskede hendelsen kan få konsekvenser for det omkringliggende området, da dette er relevant for planarbeidet. Uønskede hendelser som f.eks. personskader på anlegget som kan inntreffe i anleggsperioden omfattes av SHA-reglementet, er derfor ikke beskrevet i denne analysen.

Analysen omfatter enkelthendelser, og eventuelle følgehendelser er beskrevet i analyseskjema for den enkelte hendelse. Analysen omfatter ikke flere uavhengige, sammenfallende hendelser.

Denne analysen er utført på områdereguleringsplannivå. På dette nivået er ikke tiltaket ferdig prosjektert. Innenfor de rammer som reguleringsplanen setter kan det være rom for valg av ulike løsninger i byggeplan. Selv om vi gjennom de forutsetningene som er spesifisert i analysen har

forsøkt å sette klare rammer for risikovurderingen, kan det være detaljer i løsningsvalg som man ikke har oversikt over på dette planstadiet, og som kan påvirke risikoen.

Analysen som er gjennomført bygger på foreliggende planer og kunnskap. Ved endring i forutsetningene gjennom ny kunnskap eller endringer i løsningsvalg kan risikobildet bli annerledes. Hvis endringer medfører vesentlig økt risiko, må det vurderes om risikoanalysen bør oppdateres. Risikovurderinger må derfor være et løpende tema i videre planarbeid og prosjektering.

2.4 Prosess

ROS-analysen er utarbeidet med utgangspunkt i tilgjengelig informasjon, og gjennom to analysemøter (14.01.25 og 21.02.25) med ressurspersoner tilknyttet prosjektering og drift hos forslagstiller. I analysemøtene ble mulige uønskede hendelser drøftet og gjennomgått.

2.5 Identifikasjon av uønskede hendelser

For å ivareta en bred kartlegging av risiko- og sårbarhetsforhold benyttes liste over risikoer fra DSBs veileder [1]. Utsjekk av risikoene dokumenteres i kapittel 6.

2.6 Analyseskjema

Alle de uønskede hendelsene som er vurdert aktuelle for planområdet er analysert i eget skjema for å identifisere risiko og sårbarhetsforhold, som vist i Tabell 2-1. I skjemaet vurderes mulige årsaker til hendelsen, eksisterende barrierer, sårbarhet, sannsynlighet, konsekvenser og usikkerhet. I tillegg foreslås det forbyggende/risikoreduserende tiltak for planarbeidet og videre prosjektering der hvor dette anses som nødvendig eller hensiktsmessig.

Som en del av vurderingen av hvert aktuelt risiko- og sårbarhetsforhold skal sannsynligheten for at en uønsket hendelse skal inntreffe klassifiseres, dvs. det skal anslås hvor hyppig hendelsen kan forventes å inntreffe. Denne vurderingen må bygge på kjennskap til lokale forhold, erfaringer, statistikk og annen relevant informasjon. I denne ROS-analysen har vi benyttet klassifisering som vist i DSBs veileder [1].

I Tabell 2-1 er det spesifisert hvilke kriterier som ligger til grunn for vurderingene i analysen. Blant annet er konsekvenser for liv og helse vurdert som store dersom den uønskede hendelsen har dødsfall som verste konsekvens.

Tabell 2-1: Analyseskjema for uønskede hendelser.

Nr.	Navn uønsket hendelse:	(Navn)
Beskrivelse av uønsket hendelse: Konkret scenario, herunder omfang og hvor i planområdet den inntreffer. Er det særlige forhold fra beskrivelsen av planområdet som er aktuelle?		
Om naturpåkjenninger (TEK 17)	**Sikkerhetsklasse flom/skred**	**Forklaring**
Ja/nei	*Sikkerhetsklasser inneholder opplysninger som er klassifiseres som kraftsensitiv informasjon iht. kraftberedskapsforskriften. Sikkerhetsklasse oppgis derfor ikke i analysen.*	*I*
Årsaker		
Beskriv mulige årsaker		
Eksisterende barrierer		
- *Hva finnes allerede?* - *Videre vurdering må ta hensyn til disse* - *Vurdering av funksjonalitet*		

Sårbarhetsvurdering					
Sårbarhetsvurderingen tar for seg evne til motstand og gjenopprettelse ved utbyggingsformålet, eventuelle eksisterende barrierer og følgehendelser som følge av den uønskede hendelsen.					
Sannsynlighet	Høy	Middels	Lav	Forklaring	
PLAN-ROS SANNSYN-LIGHET	*Oftere enn 1 gang i løpet av 10 år. >10 år*	*1 gang i løpet av 10-100 år. 1-10 %*	*Sjeldnere enn 1 gang i løpet av 100 år. <1 %*	*Vurderingen skjer på bakgrunn av informasjon fra beskrivelsen av planområdet, kjente forekomster av tilsvarende hendelser, eksisterende barrierer eller forventede hendelser i fremtiden. Det gis en forklaring.*	
FLOM OG STORMFLO SANNSYNLIG-HET	*1 gang i løpet av 20 år, 1/20*	*1 gang i løpet av 200 år, 1/200*	*1 gang i løpet av 1000 år, 1/1000*		
SKREDSANN-SYNLIGHET	*1 gang i løpet av 100 år, 1/100*	*1 gang i løpet av 1000 år, 1/1000*	*1 gang i løpet av 5000 år, 1/5000*		
Konsekvensvurdering					
	Konsekvenskategorier				
Konsekvenstyper	Store	Middels	Små	Ikke relevant	Forklaring
Liv og helse	Død	Alvorlige personskader	Få og små personskader		Antall skadde og alvorlighet.
Stabilitet	*Bidrar til manglende tilgang på husly, varme, mat eller drikke. Eller kommunikasjon og fremkommelighet som forårsaker manglende tilgang til lege, sykehus etc.*	*Bidrar til manglende tilgang på kommunikasjon, fremkommelighet, telefon etc. i en kortere periode uten livsviktige konsekvenser*	*Bidrar til manglende følelse av trygghet i nabolaget som ved manglende gatebelysning, uoversiktlig trafikk, glatte veier etc.*		*Antall og varighet.*
Materielle verdier, skadepotensial	*> 50 millioner*	*5–50 millioner*	*< 0-5 million*		*Direkte kostnader. Økonomiske tap knyttet til skade på eiendom.*
Samlet begrunnelse av konsekvens:					
Usikkerhet	Begrunnelse				
Høy, middels, lav	1. *Hvilke data og erfaringer er benyttet? Er dataene/erfaringene relevante for hendelsen? Dersom data eller erfaringer er utilgjengelige eller upålitelige er usikkerheten høy. Beskriv benyttede kilder.* 2. *Har vi forstått hendelsen? Hvordan forstår vi den? Dersom forståelsen er dårlig er usikkerheten høy.* 3. *Er ekspertene som har gjort vurderingen enige? Dersom det er manglende enighet er usikkerheten høy.* 4. *Hvilket plannivå er ROS-analysen gjort på? På reguleringsplan/KP/KDP er tiltaket ikke ferdig prosjektert. Planen kan åpne for valg av ulike løsninger i byggeplan. Det kan være detaljer i løsningsvalg som man ikke har oversikt over på dette stadiet, og som kan påvirke risikoen.* *Dersom hendelsen er forstått, ekspertene er enige og det foreligger tilstrekkelig data som er delvis pålitelige, er usikkerheten middels eller lav. Avhengig av hvor pålitelige dataene er.*				
Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet					
Tiltak: - *Foreslå tiltak som kan påvirke sannsynligheten for de uønskede hendelsene, årsakene, sårbarhet, konsekvenser og usikkerhet* - *Er det nødvendig å vurdere flere aktuelle planer, lokalisering og egnethet?* - *Synliggjøre dersom forhold er avdekket, men det ikke skal følges opp av kommunen*			*Oppfølging gjennom planverktøy/info til kommunen etc.:* - *Opprettelse av hensynssoner, bestemmelser, arealformål, krav til byggesak etc.* - *Man kan også foreslå at man skal la være å gå videre med planforslaget* - *Det er viktig at alvorlige forhold kommer frem her slik at de følges opp i planforslaget*		

2.7 Usikkerhet

Som vist i Tabell 2-1 vil bakgrunnen for vurderingen av hver aktuell uønsket hendelse komme tydelig frem ved hjelp av at usikkerheten rundt vurderingen også fremgår av analysen. Dette punktet er ment som en hjelp til kommunen og andre interessenter for å kunne etterprøve vurderingene. Det er derfor viktig at hvert analyseskjema leses i sin helhet, slik at man kan danne en egen mening om de enkelte uønskede hendelsene. Dersom usikkerheten er vurdert til å være høy kan det skyldes:

- manglende relevante data
- at hendelsen er vanskelig å forstå
- at det er manglende enighet blant ekspertene

Usikkerhet kan i mange tilfeller reduseres ved å tilføye eller tilegne seg ny eller mer kunnskap og informasjon, gjennom for eksempel fagvurderinger- og undersøkelser.

2.8 Risikoreduserende tiltak

Det foreslås risikoreduserende tiltak i forbindelse med uønskete hendelser. Tiltak som foreslås i analyseskjemaet kan både omfatte tiltak basert på verktøy i plan- og bygningsloven (hensynssoner, arealformål og bestemmelser), men også øvrige tiltak som bør følges opp i videre detaljprosjektering, anleggsfasen og den permanente driftsfasen. Aktuelle tiltak kan være nye tiltak eller forbedringer av eksisterende barrierer. Det kan også være tiltak for å etablere ny kunnskap. Tiltakene kan påvirke sannsynligheten, årsakene, sårbarheten, konsekvensene og usikkerheten ved de uønskete hendelsene.

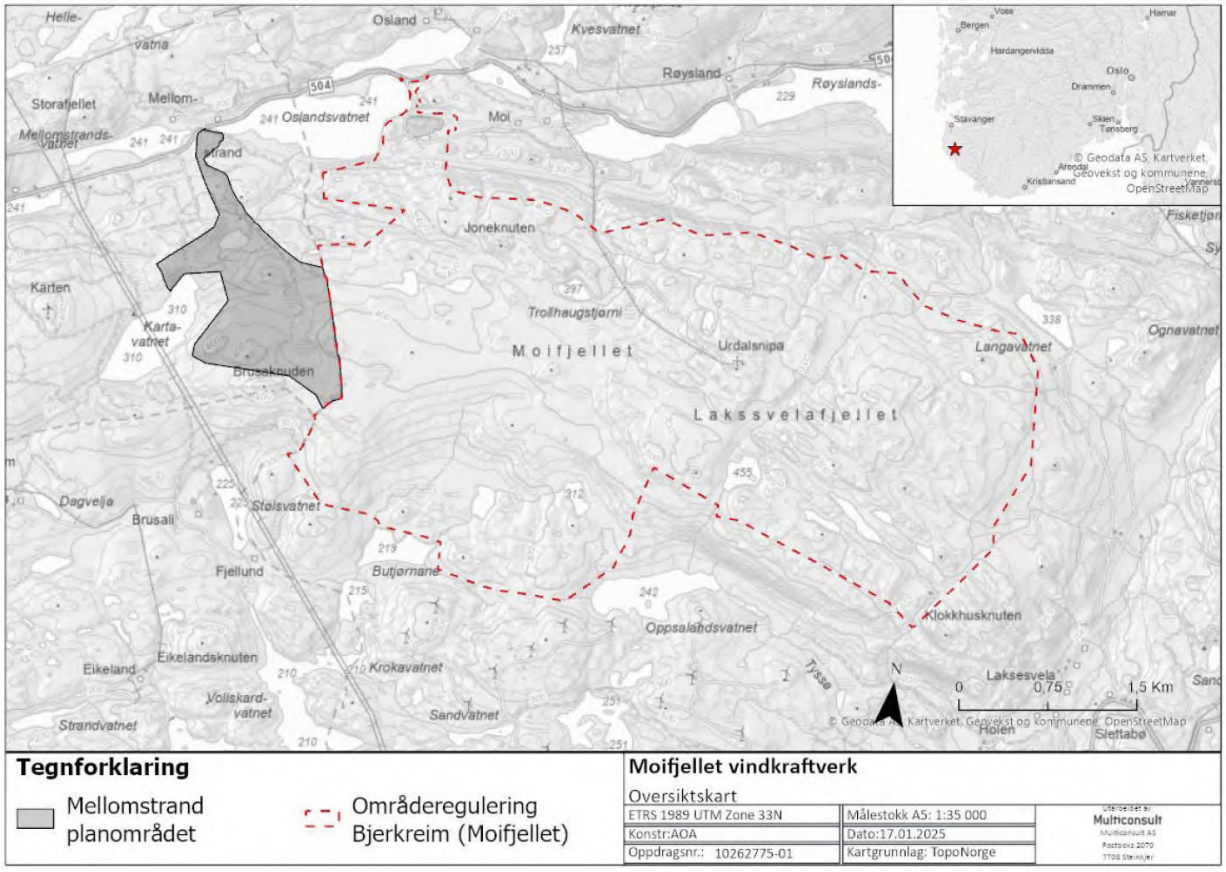
2.9 Sammenstilling

I kapittel **Feil! Fant ikke referansekilden.** vises alle analyseskjema for mulige uønskede hendelser som er presentert i kapittel 4. For å gi en oversikt over tiltak for å hindre uønskede hendelser i planarbeidet og i gjennomføringsfasen, er det laget en sammenstilling av uønskede hendelser og avbøtende tiltak i kapittel 6 Oppsummering og konklusjon.

3 Planområdet og utbyggingsformål/tiltak

Planområdet er lokalisert i sørøstre hjørnet av Time kommune mot grensen til Bjerkreim og Hå kommune. Planområdets størrelse er på totalt 1439 dekar. I eksempelutlegg er det 4 vindturbiner i planområdet med tilhørende infrastruktur.

Mellomstrand vindkraftverk er en utvidelse av pågående prosess med Moifjellet vindkraftverk i Bjerkreim kommune. Planområdene grenser mot hverandre, og planlegges med felles infrastruktur som adkomstvei og nettilknytning m.m.



Figur 3-1: Oversiktskart som viser planområdet for Mellomstrand vindkraftverk i Time kommune markert med gråt. Moifjellet vindkraftverk i Bjerkreim kommune er markert med rød stiplet linje. De to områdene grenser til hverandre. Kilde: Multiconsult.

3.1 Dagens situasjon

Nordre del av planområdet er dominert av landbruksarealer og innmarksbeite, samt et mindre område som omfatter et tidligere masseuttak nær fylkesveien (Fv.). 504. Fra Fv. 504 stiger terrenget mot sør, og ved vann ved høyde 305.1, endrer vegetasjonen seg til å bli dominert av åpent fast mark med innslag av barskog og myrområder.

3.2 Utbyggingsformålet

Hensikten med planarbeidet er å planavklare arealbruken for vindkraftverket på overordnet nivå. Detaljene i utformingen av anlegget skal avklares i konsesjonsprosessen og påfølgende detaljplan iht. energiloven.

4 Identifisering av uønskede hendelser

I følgende tabell gis en oversikt over de identifiserte uønskede hendelsene for Mellomstrand vindkraftverk. Hendelse i Tabell 4-1 er hentet fra DSBs veileder [1] og sjekkliste ROS fra Time kommune. Kolonnen med overskrift «Vurderes videre (ja/nei) indikerer om forholdet er relevant å vurdere mer detaljert i eget analyseskjema i kapittel 5.1.

Tabell 4-1: Identifiserte uønskede hendelser

ID	Risiko- og sårbarhetsforhold	Kommentar	Vurderes videre (ja/nei)
Naturhendelser:			
1	Storm og sterk vind	Flyvende gjenstander, ødeleggelse av vindturbiner eller teknisk infrastruktur. Reduserer fremkommelighet til planområdet etc.	I forhold til dette prosjektet vurderes: a) Helt eller delvis kollaps av vindturbin/turbinblad som følge av sterk vind b) Løse gjenstander som blir tatt av vind. a) Ekstremvind vil være en av flere viktige designkriterier og en av de sentrale parameterne som må vurderes og diskuteres i dialogen med de aktuelle turbinleverandørene. Ekstremvær og sterk vind kan føre til skade på vindturbinene. Vurderes videre som **Hendelse 1a) Sterk vind som påfører skade på vindturbin** Feil! Fant ikke referansekilden.**.** **b)** Løse gjenstander kan forekomme selv om det vil være rutiner som skal forhindre dette. Vurderes videre som **Hendelse 1b) Sterk vind og løse gjenstander 5.1.2.**
2	Bølger/bølgehøyde/ stormflo	Ikke relevant i dette prosjektet.	Vurderes ikke videre.
3	Snø/is	Kan resultere i glatt føre, fokksnø, fallulykker, nedfall av snø, iskast og redusert fremkommelighet for utrykningskjøretøy, samt redusert fremkommelighet for arbeidere.	I forhold til dette prosjektet vurderes: a) Vei og atkomst til anlegget b) Nedfall av snø/is fra kraftledning og maskinhus eller Iskast fra turbinblader. a) Vei og atkomst til anlegget. Veien til Mellomstrand vil benyttes hele året. Det vil bli utarbeidet driftsrutiner som ivaretar føre og fremkommelighet. Det planlegges ikke for bebyggelse med varig opphold. Veien er stengt med bom for andre enn de som har tillatelse til kjøring. Punkt a) vurderes ikke videre. b) Nedfall av snø/is fra maskinhus eller iskast fra turbinblader. Det vil

			informeres/skiltes om sikkerhetsavstand for nedfall av snø/is og iskast, samt at det etableres nødvendige rutiner, blant annet for å minimere eksponering av arbeidere for iskast. Punkt b) vurderes videre som **hendelse 3b). Iskast som skader mennesker, anlegg og/eller utstyr 5.1.3.**
4	Vassdragsflom	Oversvømmelse, materielle skader, stengte veier og redusert fremkommelighet.	Det er utarbeidet en flomfarevurdering hvor det er identifisert flere bekkefar og en del myr innenfor planområdet som vil kunne være utsatt for flom. Det er i eksempelutlegget ingen turbinpunkter innenfor område med flomfare, men hvis turbiner plasseres lavt i terrenget vil turbinene kunne havne i flomutsatt områder. Deler av veier og annen infrastruktur vil kunne havne innenfor flomutsatt områder, og vil kunne være sårbar for skader ved en flomhendelse. Spesielt der vassdrag krysses. Vurderes videre som **hendelse 4 vassdragsflom 5.1.4.**
5	Urban flom/overvann	Ikke relevant for dette prosjektet.	Dette er ikke et urbant område. Vurderes ikke videre.
6	Skred (kvikkleire, stein, jord, fjell, snø, inkl. sekundærvirkning (oppdemming, flodbølge), flomras, steinsprang, områdestabilitet/fare for utglidning)	Tap av liv, ødelagt bebyggelse, materielle verdier	I planområdet er det gjort en overordnet skredfareutredning for alle ulike skredtyper i bratt terreng. Etter feltkartlegging og en gjennomgang av grunnlagsmaterialet er det ikke identifisert noen områder innenfor planområdet til Mellomstrand vindkraftverk hvor det er vurdert mulighet for reell skredfare. Vurderes ikke videre
7	Store nedbørsmengder	Kan resultere i samme uønskede hendelser som adresseres i punktet «vassdragsflom»- men mye av vannet her vil absorberes av den naturlige overflaten i planområdet.	Planområdet ligger i et forholdsvis uberørt område. Vindkraftverket med tilhørende Infrastruktur vil utformes slik at overvann håndteres. Vurderes ikke videre.
8	Skog- og lyngbrann	Fare for spredning til bebyggelse og materielle skader. Turbin brann kan forekomme, som kan sende gnister til omliggende natur.	I forhold til dette prosjektet vurderes: a) Brann i vindturbin som sprer seg til vegetasjon. b) Vegetasjonsbrann som skader turbinene og andre installasjoner. a) Ved turbinbrann kan gnister havne i omliggende natur. I tørkeperioder kan dette føre til branntilløp. Det legges til grunn at turbinene har branndeteksjon

			og kontinuerlig overvåkning av komponenter. Rutiner for stopping av turbin før farlige høye temperaturer oppnås. Ved spesielle planlagte tiltak som forårsaker økt risiko for brann har man egne rutiner for utarbeidelse av risikoanalyser og tiltak som følge av det. Rutiner for hindring av spredning Vurderes videre som **hendelse 8a) turbinbrann 5.1.6.** b) Det er opparbeidede grusflater uten vegetasjon inn mot turbiner og servicebygg. Kabler ligger i bakken. Grusflater omkring turbinene og annet anlegg vil være en barriere som gjør at brann i vegetasjonen i område ikke vil få vesentlige konsekvenser for vindkraftanlegget. Vurderes ikke videre.
9	Torden/lyn	Lyn kan sette vindturbinen ut av drift, skade vindturbinen eller medføre brann i turbinen. Lyn kan sette elektrisk nettanlegg ut av drift eller medføre brann.	Turbinene vil få systemer for å avlede lyn, men det har forekommet skader på turbinblader som mistenkes påført av lynnedslag i Norge. Nettanleggene vil få lyn- og overspenningssystem samt jordingsanlegg. Vurderes ikke videre i ROS-analyse, men i kvalitetsoppfølging av komponenter/anlegg. Delvis fulgt opp i pkt. 8 a) vedr. brann.
10	Erosjon	Erosjon som utløsende faktor for ras eller skred. Potensielle konsekvenser i anleggsfasen.	Veier og anlegg utformes med tilstrekkelig sikkerhet mot erosjon. Overvåkes gjennom rutinemessig vedlikehold av vei. Vurderes ikke videre. Håndteres delvis gjennom pkt. 6 skred
11	Radon	Krav i TEK17 reduserer forekomst av radon i bebyggelse, fare for liv/helse Ikke relevant her.	Det planlegges å gjøre målinger av radon og bebyggelse vil utføres iht. byggetekniskforskrift. Vurderes ikke videre.
12	Grunnvann	Kan tiltaket endre grunnvannstanden slik at skader oppstår eller avrenning endres?	I forbindelse med etablering av turbiner, servicebygg og veier vil det gjøres terrengbearbeidelser som vil kunne påvirke avrenningen lokalt, men ikke i en slik grad at det medføre større endringer i planområdet og påvirke grunnvannstanden. Vurderes ikke videre.
13	Naturlige terrengformasjoner som utgjør fare (stup, vann, etc.)	Bratt terreng	Terrenget innenfor planområdet omfatter middels kuperte ås- og fjellandskap med veksling mellom åpne heiområder, innslag av fjellskog, enger og dvergbuskdominert vegetasjon. Ved ferdsel utover veier og

			merkede stier i området må det vises aktsomhet som normalt ved ferdsel i utmark. Vurderes ikke videre
Kritiske samfunnsfunksjoner og kritiske infrastrukturer Kan planen/tiltaket få konsekvenser for strategiske områder og funksjoner:			
14	Samferdselsårer som vei, jernbane, luftfart, skipsfart, bru, tunnel og knutepunkt	Behov for stenging av veier, mulig nedetid for jernbane, havner eller flyplass, ekstra avkjørsel fra hovedvei, færre avkjørsler fra hovedvei, redusert fremkommelighet.	Utbygningen meldes til Luftfartstilsynet. Merking iht. gjeldende retningslinjer. Merkekrav for alt over 30 m, både ved anleggs- og driftsfasen. Det forutsettes at transport av vindturbinene til planområdet risikovurderes og ivaretas gjennom transport- og anleggsplan i anleggsfasen. Vurderes ikke videre.
15	Infrastruktur for forsyning av vann, avløps- og overvannshåndtering , energi/el, gass og telekommunikasjon	Skade på viktig infrastruktur.	I forhold til dette prosjektet vurderes: a) Vannforsyning b) Telekommunikasjon a) I sør berører planområdet nedbørsfeltet til Hagavatnet som er drikkevannskilde. Vurderes under pkt. 28 - forurensning. b) Fare for forstyrrelser på ekomsignaler til/fra Bjerkreimsenderen. Tilstrekkelige tiltak for ivaretakelse av ekomsignaler vil bli iverksatt. Vurderes ikke videre.
16	Tjenester som skoler, barnehager, helseinstitusjoner, nød- og redningstjenester	Redusert fremkommelighet for redningstjenester/utrykningskjøretøyer, innsatstid nødetater etc.	Transport av vindturbinene til planområdet vil risikovurderes og ivaretas gjennom transport- og anleggsplan i anleggsfasen. Vurderes ikke videre.
17	Brannvannforsyning	Er det tilstrekkelig kapasitet i vannforsyning til brannslukking	Det anlegges ikke kommunalt vann/avløp i området, da det ikke tilrettelegges for permanent opphold. Naturlige vannkilder er tilgjengelig i området. Vurderes ikke videre.
18	Bortfall av strøm	Intern drift og opprettholde sikkerhet	Bortfall av strøm vil påvirke mulighet til å justere turbinstilling. Ved behov for justering under ekstreme vindforhold vil backupsystemer sikre at turbinblader vil kunne justeres til optimal stilling, og tårnhus vil designes for å tåle ekstremvind i alle posisjoner.
19	Utrykningstid politi, ambulanse og brann	Bør være under 12 minutter i tettbygd strøk og uansett under 25 minutter der et større antall personer bor eller arbeider, ref. krav fra Helsedirektoratet. Ikke relevant i dette prosjektet.	Det tilrettelegges ikke for permanent opphold i planområdet. Alle vindturbinene og annet teknisk anlegg vil ha kjøreadkomst som sikrer tilgjengelighet. Planområdet ligger ca. 30 km unna Sola flystasjon hvor redningshelikopter er stasjonert. Transport av vindturbinene til planområdet risikovurderes og ivaretas i transport- og

			anleggsplan i anleggsfasen. Vurderes ikke videre.
20	Forsvarsområde	Tidligere skytefelt	Forsvarsbygg har informert prosjektet om at det er et gammelt skytefelt (Laksesvela skytefelt) som berører planområdet i sør, og at det er risiko for ueksploderte sprenglegemer i området. Det er usikkerhet knyttet til omfanget av bruken av det gamle skytefeltet. I samtale med Forsvarsbygg mener de at under inspeksjoner og normal trafikk i terrenget er det liten risiko knyttet til ueksploderte sprenglegemer, og anbefalte tiltak er at det utarbeides en instruksjons-/varslingsplan for tilfeller hvor materiale skulle bli funnet i terrenget. For anleggsfasen vil det gjøres en egen risikovurdering og vurdering av aktuelle avbøtende tiltak. Vurderes ikke videre.
21	Ivaretakelse av sårbare grupper.	Nedleggelse/forringelse av omsorgsbygg, sykehjem etc, manglende tilrettelegging for universell utforming.	Omsorgsbygg, sykehjem etc. er Ikke relevant for dette prosjektet. Gjennom etablering av anleggsveier kan området ev. bli mer tilgjengelig for grupper med funksjonsnedsettelser. Vurderes ikke videre.
22	Dambrudd	Ikke relevant for dette prosjektet.	Ikke relevant for dette prosjektet. Vurderes ikke videre.
Menneske- og virksomhetsbaserte farer Kan planen føre til:			
23	Ulykke med farlig gods		Transport av ev. farlig gods i anleggsfasen ivaretas gjennom egne vurderinger og prosedyrer i transport- og anleggsplan. I driftsfase vil det bli transporter noe olje (bl.a. gir- og hydraulikkolje) og noen kjemikaler som f.eks. kjølevæske. Mengden olje og kjemikalier vurderes som relativt liten, og vil ivaretas gjennom interne rutiner. Vurderes ikke videre.
24	Ulykke i av-/påkjørsler		Trafikkmengde i driftsfasen vil være begrenset. Anleggstrafikk vil risikovurderes og ivaretas i transport- og anleggsplan. Vurderes ikke videre.
25	Møteulykker/generell trafikkulykke		Trafikkmengde i driftsfasen vil være begrenset. Anleggstrafikk vil risikovurderes og ivaretas i transport- og anleggsplan. utredes ikke videre.
26	Ulykke med syklende/gående		Trafikkmengde i driftsfasen vil være begrenset. Anleggstrafikk risikovurderes og ivaretas gjennom transport- og anleggsplan. Vurderes ikke videre.
27	Virksomhet som håndterer farlige	(eksplosjon, forurensing, brann, gassutslipp)	Vindkraftverk er ikke omfattet av storulykkeforskriften.

	stoffer (kjemikalier, eksplosiver, olje/gass, radioaktivitet, storulykkevirksomheter)	Medfører foreslått virksomhet fare for storulykker?	Ev. farlige stoffer i anleggsfasen vil risikovurderes og ivaretas gjennom byggherreforskriften og håndteres gjennom byggherrens SHA-plan og ulykke- og beredskapsplaner. Vurderes ikke videre.
28	Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.		I driftsfasen kan det forekomme utslipp av mineralolje, glykol, gir- og hydraulikkolje. Det kan også forekomme mindre utslipp av drivstoff andre kjemikaler. Deler av planområdet i sør berører nedbørsfeltet til Hagavatnet drikkevannskilde, tiltak innenfor nedbørsfeltet skal godkjennes av Mattilsynet. Vurderes videre som **hendelse 28 forurensning 5.1.7.** For anleggsfasen vi det gjennomføres egen risikovurdering knyttet til forurensing ved utslipp og bearbeidelse av terreng. Det skal utarbeides ulykke- og beredskapsplaner og transport- og anleggsplan.
29	Elektromagnetiske forhold	Risiko bør vurderes dersom det planlegges lokalisering av bygg der mennesker oppholder seg over lengre tid nær slike felt. Det finnes anbefalinger på tesla-verdi, som ikke samsvarer med krav til byggegrenser.	Planlegges ikke byggverk for varig opphold. Vurderes ikke videre.
30	Fare for sabotasje/terrorhandlinger	Er tiltaket i seg selv et mål med forhøyet risiko?	I forhold til dette prosjektet vurderes: Ut fra et forsyningssikkerhetsperspektiv anses ikke vindparken som viktig i den nasjonale infrastrukturen. Dette underbygges av dagens regulering i kraftberedskapsforskriften hvor enkeltvindturbiner er uklassifisert.Fra andre vindkraftverk har man sett protestaksjoner hvor det har vært grupper som har benyttet sivil ulydighet, men det vurderes som lite sannsynlig at disse gruppene vil utføre handlinger som kan medføre miljøskade. Det vil bli utarbeidet en plan for å håndtere demonstrasjoner eller sabotasjehandlinger under byggefasen. For driftsfasen vil det bli utarbeidet en beredskapsplan. Vurderes ikke videre.

31	Gruver, åpne sjakter etc.		Forslagstiller ikke kjent med at det er åpne gruver eller sjakter etc. i området. Ved ferdsel i utmark må aktsomhet vises. Vurderes ikke videre.
Farer relatert til anleggsarbeid			
32	Ulykker i forbindelse med anleggstrafikk	Atkomstforhold til anlegg-/riggplass, anleggstrafikk i nærheten av boligområder/skoler/ barnehager, snumuligheter på anlegget for å unngå rygging inn/ut av anleggsplassen etc.	Transport av vindturbiner til planområdet må risikovurderes og ivaretas gjennom transport- og anleggsplan. Inntransport håndteres vanligvis av leverandør, og det må søkes til vegmyndigheter og politi. Vurderes ikke videre.
33	Uvedkommende tar seg inn på anleggsplass/ riggplass	Tilstrekkelig sikring av anleggsplass med gjerder etc. og rutiner for adgangskontroll.	Sikring av anleggsplass er tema som dekkes gjennom Byggherreforskriften og håndteres gjennom byggherrens SHA-plan. Vurderes ikke videre.
34	Ulykker i forbindelse med anleggsgjennom-føring/utbygging		Sikring av anleggsplass er tema som dekkes gjennom Byggherreforskriften og håndteres gjennom byggherrens SHA-plan og ulykke- og beredskapsplaner. Vurderes ikke videre.
Andre uønskede hendelser			
35			Ingen ytterligere risikoforhold som bør hensyntas. Vurderes ikke videre.

5 Risiko- og sårbarhetsvurdering

Det er identifisert 35 risiko- og sårbarhetsforhold i Tabell 4 1. Av disse ble 6 uønskede hendelser vurdert som relevante for planområdet. Disse vurderes mer detaljert i analyseskjemaene. Hendelsene som analyseres nærmere i egne analyseskjemaer er:

- Nr. 1a): Sterk vind som påfører skade på vindturbin.
- Nr. 1b): Sterk vind og løse gjenstander
- Nr.3b): Nedfall av snø/is fra maskinhus eller iskast som skader mennesker, anlegg og/eller utstyr
- Nr. 4: Vassdragsflom.
- Nr. 8a): Skog- og lyngbrann
- Nr 28: Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.

5.1 Analyse av identifiserte hendelser

5.1.1 Hendelse 1a) Sterk vind som påfører skade på vindturbin

Nr. 1a)	Navn uønsket hendelse:	Sterk vind som påfører skade på vindturbin	
Beskrivelse av uønsket hendelse: Sterk vind kan fører til skade på vindturbiner/turbinblader.			
Om naturpåkjenninger (TEK 17)		Sikkerhetsklasse flom/skred	Forklaring
Ikke relevant		Ikke relevant	
Årsaker			
Beskriv mulige årsaker - Teknisk feil på vindturbin/turbinblader			

Eksisterende barrierer
- Personlig verneutstyr. - Varslingssystem for sterk vind (knyttet til egen arbeidsinstruks). - Sikkerhetssystemer for stans av blader og for å snu nav.
Sårbarhetsvurdering
Ved sterkt vind er det sikkerhetssystemer som stanser blader. Det finnes også sikkerhetssystemer som kan vri på nav og bladene slik at man får mindre belastning på tårn, men helt eller delvis kollaps av vinger kan forekomme. Tårnkollaps har inntruffet svært sjeldent.

Sannsynlighet	Høy	Middels	Lav	Forklaring
PLAN-ROS SANNSYN-LIGHET	Oftere enn 1 gang i løpet av 10 år. >10 år	1 gang i løpet av 10-100 år. 1-10 %	Sjeldnere enn 1 gang i løpet av 100 år. <1 %	
			X	Tiltakshaver har vært i kontakt med NVE vedr. hendelser med helt eller delvis kollaps av turbiner. Det foreligger ikke noen statistikk over hendelser da det på nåværende tidspunkt ikke er krav om innrapportering av hendelser. Det er allikevel registrert 8 hendelser i nyere tid knyttet til skade på rotor og vinge. 4 av hendelsene omfatter vingebrudd. Som følge av at det ikke foreligger statistikk er det tatt en skjønnsmessig vurdering basert på kjente hendelser, hvor sannsynligheten for at en større hendelse knyttet til f.eks. helt eller delvis kollaps av en vindturbin/turbinblad vurderes som svært liten, og mindre enn 1/100.

Konsekvensvurdering

	Konsekvenskategorier				
Konsekvenstyper	Høy	Middels	Små	Ikke relevant	Forklaring
Liv og helse	X				Helt eller delvis kollaps av vindturbin/ turbinblad kan medføre alvorlig skade, og i verste fall død.
Stabilitet			X		I perioder med sterk vind kan det oppfattes som utrygt å ferdes i område
Materielle verdier	X				Ved kollaps eller delvis kollaps av en vindturbin/ turbinblad vil de materielle

					skadene være store.
Samlet begrunnelse av konsekvens: Ved kollaps av vindturbin kan konsekvensene for liv og helse og materielle verdier være høy, men sannsynligheten for at dette inntreffer vurderes som svært lav. Samlet konsekvens vurderes som høy til middels.					
Usikkerhet	Begrunnelse				
Middels	Det er kjent at hendelsen kan skje, men tiltakshaver er ikke kjent med at det foreligger statistikk for hvor ofte hendelsen kan forekomme. Med stor sikkerhet kan man allikevel si at større hendelser som helt eller delvis kollaps av turbiner forekommer sjeldent, og er knyttet opp mot prosjekteringsfeil.				
Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet					
Tiltak: - Prosjektering og utførelse av vindturbiner med tilstrekkelig sikkerhet mhp. dimensjonerende vindforhold. - Følge rutiner for vedlikehold, inspeksjoner og oppfølging - Sikkerhetssystemer som stanser blader og gir mulighet til å justere navet og/eller blader ved ekstrem vind.			Oppfølging gjennom planverktøy/info til kommunen etc.: - Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg		

5.1.2 Hendelse 1b) Sterk vind og løse gjenstander som skader mennesker, anlegg og/eller utstyr

Nr. 1b)	Navn uønsket hendelse:	Sterk vind og løse gjenstander		
Beskrivelse av uønsket hendelse: Sterk vind kan kaste på løse/ikke sikrede gjenstander.				
Om naturpåkjenninger (TEK 17)		Sikkerhetsklasse flom/skred	Forklaring	
Ikke relevant		Ikke relevant		
Årsaker				
Beskriv mulige årsaker - Løse eller ikke sikrede gjenstander blir tatt av vinden.				
Eksisterende barrierer				
- Rutine for forsvarlig oppbevaring av gjenstander i området i perioder med sterk vind. - Personlig verneutstyr. - Varslingssystem for sterk vind (knyttet til egen arbeidsinstruks). - Design på nye tårnhus reduserer muligheten for at løse gjenstander/komponenter kan Løsne/falle ned.				
Sårbarhetsvurdering				
Løse gjenstander under sterk vind kan medføre skade på personell og materiell i området, men det vil være interne rutiner for forsvarlig oppbevaring av utstyr. Driftspersonell vil bruke verneutstyr som bl.a. hjelm. Deler av planområdet er et utfartsområde for lokale i området og på Jæren. Innenfor planområdet er det en markert turrute til bl.a Brusaknuden og Karten.				
Sannsynlighet	Høy	Middels	Lav	Forklaring
PLAN-ROS SANNSYN-LIGHET	Oftere enn 1 gang i løpet av 10 år. >10 år	1 gang i løpet av 10-100 år. 1-10 %	Sjeldnere enn 1 gang i løpet av 100 år. <1 %	
		X		Hendelser knyttet til gjenstander som ikke er tilstrekkelig sikret kan forekomme selv om det er rutiner som skal forhindre dette. Sannsynligheten vurderes derfor som middels.

Konsekvensvurdering					
	Konsekvenskategorier				
Konsekvenstyper	Høy	Middels	Små	Ikke relevant	Forklaring
Liv og helse		X			Konsekvens for liv og helse vil avhenge av størrelse på gjenstand og hvor gjenstanden befinner. En gjenstand som blir tatt av vinden og faller ned fra tårn eller tårnhuset vil kunne potensielt ha alvorlige konsekvens, mens en gjenstand som befinner seg på bakken vil sannsynligvis føre til små konsekvenser. som følge av dette vurderes konsekvens til middels
Stabilitet			X		I perioder med sterk vind kan det oppfattes som utrygt å ferdes i område
Materielle verdier			X		Løse gjenstander vil utgjøre begrenset materiell skade på anlegget.
Samlet begrunnelse av konsekvens: Løse gjenstander som blir tatt av vinden vil kunne utgjøre en risiko for liv og helse hvis de faller fra vindturbinene, men det antas at bortsett fra driftspersonell med verneutstyr så vil det være begrenset med ferdsel i området rundt turbinene i perioder med sterk vind. Løse gjenstander vurderes å kunne forsake forholdsvis små materielle skalder. Samlet konsekvens vurderes derfor som små.					
Usikkerhet	Begrunnelse				
Middels	Det er kjent at hendelsen kan skje, men tiltakshaver er ikke kjent med at det foreligger statistikk for hvor ofte hendelsen kan forekomme. Både i drift og anleggsfase vil det utarbeides rutiner som skal forhindre at vinden tar løse gjenstander.				
Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet					
Tiltak: - Følge rutiner for oppbevaring og sikring av utstyr og gjenstander.	Oppfølging gjennom planverktøy/info til kommunen etc.: - Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg.				

5.1.3 Hendelse 3b) Nedfall av snø/is fra maskinhus og kraftlinje eller iskast som skader mennesker, anlegg og/eller utstyr

Nr. 3	Navn uønsket hendelse:	Iskast	
Beskrivelse av uønsket hendelse: - Snø/iskast fra turbinblader - Snø/is som faller ned fra maskinhus og kraftledninger.			
Om naturpåkjenninger (TEK 17)		Sikkerhetsklasse flom/skred	Forklaring
Ikke relevant		Ikke relevant	
Årsaker			
Kombinasjonen av lav temperatur, høy luftfuktighet/nedbør og sterk vind kunne medføre isdannelse på vindturbinens rotor, eller maskinhus og kraftledninger. Personer som befinner seg innenfor kastesonen:			

- Driftspersonell i området i forbindelse med reparasjon/vedlikehold.
- Driftspersonell som går ut og inn av turbinen.
- Turgåere

Eksisterende barrierer

- Rutiner for skilting i en gitt sikkerhetsavstand (myntet på tredjepart).
- Varslingssystem og interne rutiner for snø- og is-oppbygging (knyttet til egen arbeidsinstruks).
- Personlig verneutstyr.

Sårbarhetsvurdering

Det er driftspersonell i området i forbindelse med reparasjon/vedlikehold. Går inn og ut av vindturbinen er kritisk punkt. Akkurat når turbinene starter og stopper skjer det bevegelser som kan trigge at snø/is løsner fra turbinbladene. Driftspersonell har rutiner for å stanse/starte vindturbinene med fjernstyring – når de selv er utenfor sikkerhetssonen for iskast.

Snø og is som har dannet seg på maskinhus eller kraftledning kan løsne flakvis og falle ned eller bli tatt av vinden.

Deler av planområdet er et utfartsområde for lokale i området og på Jæren. Innenfor planområdet er det en markert turrute til bl.a Brusaknuden og Karten.

Sannsynlighet	Høy	Middels	Lav	Forklaring
			X	Den mest brukte metodikken for beregning av teoretisk lengde på iskaster er Seifert-formelen [7]. Basert på maksimal teoretisk kastelengde og at sannsynligheten for at is skal lande på en spesifikk flate avtar svært raskt med avstand fra turbinen. Ved nedfall av snø/is fra maskinhus så faller det erfaringsmessig innenfor 100 m, men at det kan bli kastet lenger ved vind. Kraftledninger er lavere enn vindturbiner og nedfall av snø/is vil derfor berøre et mindre område. Sannsynlighet for at mennesker skal bli truffet av nedfall av snø/is og iskast vurderes som lav.

Konsekvensvurdering

	Konsekvenskategorier				
Konsekvenstyper	Høy	Middels	Små	Ikke relevant	Forklaring
Liv og helse	X				Å bli truffet av isklump/flak som et resultat av iskast eller nedfall kan i verste fall føre til død.
Stabilitet			X		Kan oppleves utrygt å ferdes i område på vinteren.
Materielle verdier			X		Skader på materiell som et resultat av kast eller nedfall av snø/is antas å være små.

Samlet begrunnelse av konsekvens:
Iskast fra turbinbladene og nedfall av snø/is fra maskinhus og kan få store konsekvensene for liv og helse, men skader på de materielle verdiene anses å være forholdsvis små. Ferdsel i område i perioder hvor det er fare for iskast eller nedfall av snø/is vurderes som begrenset både med tanke på vær, og at det vil skiltes om fare for iskast og nedfall av snø/is fra vindturbiner.
Samlet konsekvens vurderes derfor som små til middels

Usikkerhet	Begrunnelse
Lav	Det er ikke utført beregninger av sannsynlighet for at personer blir truffet av nedfall av snø/is

	eller iskast ifm. på Mellomstrand. Forståelsen av hendelsen vurderes allikevel som god med bakgrunn i erfaringer fra andre vindkraftprosjekter.
Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet	
Tiltak: - Interne rutiner og opplæring av driftspersonell. - I tråd med gjeldende vilkår om iskast i vindkraftkonsesjoner, må det settes opp fareskilt som varsler om at iskast kan inntreffe innenfor en definert sikkerhetssone rundt vindturbinene, både langs veier og i terrenget - Varslingssystem for is-oppbygging (knyttet til egen arbeidsinstruks).	Oppfølging gjennom planverktøy/info til kommunen etc. - Følges opp i henhold til NVEs veileder for iskast. - Øvrige tiltak følges opp i prosjektering og bygging, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg.

5.1.4 Hendelse 4 Vassdragsflom

Nr. 4	Navn uønsket hendelse:	Vassdrags flom		
Beskrivelse av uønsket hendelse: Vassdragsflom som skader turbiner eller internt veianlegg, internt kabelanlegg (går i vei) eller andre deler av anlegget. Hendelsen kan også medføre personskade.				
Om naturpåkjenninger (TEK 17)	Sikkerhetsklasse flom/skred	Forklaring		
Ja	Iht. relevant sikkerhetsklasse	Vindturbiner nevnes ikke under preaksepterte løsninger for sikkerhetsklasser i veiledning til TEK 17 § 7-2. I flomvurdering er sikkerhetsklasser vurdert og klassifisert.		
Årsaker				
Beskriv mulige årsaker: I deler av planområdet langs bekkefar, vann og myrområder vil det kunne være områder med flomfare. I eksempelutlegget er det ingen turbinpunkter innenfor områder med flomfare, men hvis turbiner plasseres lavt i terrenget vil de kunne være innenfor flomutsatte områder. Adkomstvei og ev. annen infrastruktur knyttet til vindparken vil kunne havne innenfor flomutsatte områder og påvirker dreneringsveier.				
Eksisterende barrierer				
- Flomsonene ved 200-flom er kartlagt. - Regelverk og andre myndighetskrav skal bidra til sikkerhet mot flom, både i anleggs- og driftsfase.				
Sårbarhetsvurdering				
Vanninntrengning kan skade infrastruktur som setter enkeltturbiner midlertidig ute av drift. Det er lite trolig at turbinene vil kunne ta dirkete skade av flom hvis de plasseres innenfor flomsonene, men det kan forekomme erosjon rundt turbinpunktene. Flom kan medføre begrenser tilkomstmuligheten gjennom bl.a. skade på vei.				
Sannsynlighet	Høy	Middels	Lav	Forklaring
Sannsynlighet for flom	1 gang i løpet av 20 år, 1/20	1 gang i løpet av 200 år, 1/200	1 gang i løpet av 1000 år, 1/1000	
		X		Iht. flomvurdering.
Konsekvensvurdering				
	Konsekvenskategorier			

Konsekvenstyper	Høy	Middels	Små	Ikke relevant	Forklaring
Liv og helse			X		Flomhendelse i planområdet vil ha så begrenset utredelse at fare for alvorlige personskader vurderes som er liten.
Stabilitet			X		Små konsekvenser for stabilitet dersom enkeltturbiner settes ut av drift
Materielle verdier		X			Ved flomhendelser kan det forekomme skade på veier og kabler. Anslagsvis vurdert til lav-middels
Samlet begrunnelse av konsekvens: Potensielle flomhendelser vil berøre mindre deler av planområdet. Det vil være varslingssystemer som gjør at man med stor sannsynlighet vil kunne avverge hendelser som medfører fare for liv og helse. Flomhendelser vil kunne føre til noe materielle skader, men viktige elementer som vindturbiner vil med stor sannsynlighet ligge utenfor potensielle flomsoner. Samlet konsekvens vurderes derfor som små.					
Usikkerhet			Begrunnelse		
Lav			Flomvurderingen for planområdet er basert på en Rain-On-Grid-modell (ROG), som simulerer avrenning via et nedbørsforløp med variabel nedbørintensitet over tid. Modellen inkluderer både hydrologiske og hydrauliske beregninger. Resultatene fra ROG sammenlignes og vurderes opp mot konvensjonelle metoder for flomberegninger. Nedbørsforløpet som simuleres er modellert med etter frekvensstorm-metoden, som gir et nedbørsforløp der alle nedbørintensiteter med 200-års gjentaksintervall for alle varigheter er innbefattet i samme nedbørshendelse.		
Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet					
Tiltak: - Etablere stikkrenner og kulverter for å bevare naturlige vannveier så langt det er mulig. I noen tilfeller kan det være nødvendig å etablere grøfter og/eller justere veglinjer for gunstig kryssing av dreneringslinjer. - Erosjonssikring bør vurderes i områder der tiltak plasseres innenfor flomutsatte områder.			Oppfølging gjennom planverktøy/info til kommunen etc.: - Følges opp i prosjekteringen og bygging av tiltaket, gjennom føringer i detaljplanen jf. energiloven.		

5.1.5 Hendelse 8a) Skog- og lyngbrann

Nr. 8a)	Navn uønsket hendelse:	Turbinbrann som sprer seg til vegetasjon
Beskrivelse av uønsket hendelse: Brann i vindturbin eller transformatorstasjon kan sende gnister til omliggende vegetasjon. I tørkeperioder vil dette kunne føre til branntilløp.		

Om naturpåkjenninger (TEK 17)	Sikkerhetsklasse flom/skred	Forklaring
Ikke relevant	Ikke relevant	

Årsaker

Brann i vindturbin eller transformatorstasjon som sende gnister til omliggende natur.

Eksisterende barrierer

- Gruset flate rundt turbiner, transformatorstasjon og driftsbygning, samt veier i området.
- I store deler av planområdet er det skrinn vegetasjon, og naturlige barrierer som bergrygger og vassdrag.
- Branndeteksjon og kontinuerlig overvåkning av komponenter.
- Rutiner for stopping av turbin før farlige høye temperaturer oppnås.
- Beredskapsplan med rutiner for hindring av spredning (f.eks. vanning).

Sårbarhetsvurdering

Systemer for tidlig deteksjon, naturlige og konstruerte barrierer, samt avstand gjør at en brann i planområdet i hovedsak vil få begrenset omfang. Øst for Kartavatnet er det et skogsområde relativt nært et turbinpunkt i eksempelutlegget, og vil kunne bli berørt av brann i nærliggende turbin. Sannsynlighet for at brann vil kunne nå annen bebyggelse vurderes som svært liten da skogsområdet er begrenset i omfang og avgrenses av kartavatnet i øst og skrin vegetasjon i vest, nord og sør.

Sannsynlighet	Høy	Middels	Lav	Forklaring
	Oftere enn 1 gang i løpet av 10 år. >10 år	1 gang i løpet av 10-100 år. 1-10 %	Sjeldnere enn 1 gang i løpet av 100 år. <1 %	
			X	Brann i vindturbin og transformatorstasjon kan forekomme, men sett opp mot antall vindturbiner og transformatorstasjoner i Norge så forekommer det sjeldent. For at en brann skal spre seg til omkringliggende vegetasjon er man videre avhengig av at det er tørt i terrenget og vind. Sannsynligheten vurderes derfor som liten.

Konsekvensvurdering

	Konsekvenskategorier				
Konsekvenstyper	Høy	Middels	Små	Ikke relevant	Forklaring
Liv og helse			X		Systemer og driftspersonell vil med stor sannsynlig oppdage og varsle brann på et tidlig stadium, hvor ikke essensiell personell vil bli ført bort fra området.
Stabilitet			X		Brann kan føre til midlertidig driftsstans og redusert fremkommelighet.
Materielle verdier	X				Kostnaden for en vindturbin eller er høy, og en brann som helt eller delvis skader en turbin vil kunne medføre betydelige kostnader.

Samlet begrunnelse av konsekvens:
Ved brann i turbin kan det forekomme spredning til tilgrensende vegetasjon hvis værforholdene legger til rette for det. Konsekvensene av brann vurderes å begrense seg til en turbin med små konsekvenser for liv og helse. Samlet konsekvens vurderes derfor som små til middels.

Usikkerhet	Begrunnelse
Lav	Klimaendringer kan føre til periodevis varmere og tørrere værforhold, noe som kan øke sannsynligheten for lyng.

Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet

Tiltak: - Gruset flate rundt turbiner, transformatorstasjon og driftsbygning, samt veier i området. - Branndeteksjon og kontinuerlig overvåkning av komponenter. - Rutiner for stopping av turbin før farlige høye temperaturer oppnås. - Beredskapsplan med rutiner for hindring av spredning (f.eks. vanning)	Oppfølging gjennom planverktøy/info til kommunen etc.: - Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg

5.1.6 Hendelse 28 Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.

Nr. 28	Navn uønsket hendelse:	Forurensing drikkevann	
Beskrivelse av uønsket hendelse: Utslipp av mineralolje, glykol, gir- og hydraulikkolje eller andre drivstoff og kjemikaler fra vindturbiner.			
Om naturpåkjenninger (TEK 17)		Sikkerhetsklasse flom/skred	Forklaring
Ikke relevant		Ikke relevant	
Årsaker			
- Lekkasje fra vindturbin eller transformatorstasjon som følge av teknisk feil eller mangelfullt vedlikehold. - Lekkasje fra vindturbin som følge av helt eller delvis kollaps. - Lekkasje fra kjøretøyer eller annet utstyr som følge av teknisk feil eller ulykke.			
Eksisterende barrierer			
- Klausuler som legger begrensninger på bruk og aktivitet innenfor nedbørsfeltet. - Varslingssystemer ved lekkasje. - Beredskapsplan med rutiner for hindring av spredning.			
Sårbarhetsvurdering			
Vindkraftverk på land vurderes generelt å ha lite potensial for større/alvorlig forurensing. Av mulige forurensningskilder i driftsfasen er gir- og hydraulikkolje, samt glykol eller annet type kjølemedium i vindturbinene eller transformatorstasjon. Moderne vindturbiner er utstyrt med trau hvor olje vil samles opp ved lekkasje. Lekkasje under anleggsfasen ivaretas gjennom byggherreforskriften og håndteres gjennom byggherrens SHA-plan og ulykke- og beredskapsplaner. Lekkasje fra kjøretøyer i driftsfase vurderes å være av så begrenset karakter at det ikke vil kunne påvirke resipient.			

Sannsynlighet	Høy	Middels	Lav	Forklaring
	Oftere enn 1 gang i løpet av 10 år. >10 år	1 gang i løpet av 10-100 år. 1-10 %	Sjeldnere enn 1 gang i løpet av 100 år. <1 %	
			X	Hendelser som involverer større utslipp i driftsfasen forekommer svært sjeldent, og anslås å være mindre 1/100. Det vil være noe mer sannsynlig at mindre utslipp. Mindre utslippene vil være lokale og da primært løsmasser rundt turbinene. Det finnes også avbøtende tiltak som oljetrau som kan samle opp olje. Sannsynligheten vurderes derfor som liten.

Konsekvensvurdering		
	Konsekvenskategorier	

Konsekvenstyper	Høy	Middels	Små	Ikke relevant	Forklaring
Liv og helse			X		Ved større utslipp i planområdet kan miljøtilstanden på det aktuelle vannforekomsten påvirkes, men det vil være varslingssystemer gjør at dette vil fanges opp på et så tidlig stadium at det i liten grad vil utgjøre fare for liv og helse. Planområdet berører ikke nedbørsfelt til drikkevann.
Stabilitet			X		Større utslipp fra vindturbiner vil kunne føre til noe usikkerhet og manglende trygghet, selv om ingen drikkevannskilder blir berørt. Sannsynligheten for slike utslipp er svært liten. Sannsynligheten for mindre utslipp er noe større, men disse vil igjen ha et begrenset omfang at trygghetsfølelsen i liten grad vi bli påvirket.
Materielle verdier			X		De materielle skadene ved forurensing i planområdet vil være begrenset.
Samlet begrunnelse av konsekvens: Ved større utslipp vil vannforekomster i planområdet kunne bli påvirkete. Moderne vindturbiner har systemer som gjør at utslipp vil bli oppdaget, og man vil kunne iverksette tiltak som gjør at faren for liv og helse er lav. Spesielt når drikkevannskilder ikke berøres. Konsekvensene for stabilitet vurderes også som små siden drikkevannskilder ikke kan bli berørt. Materielle skadene ved forurensing vil være små. Samlet konsekvens vurderes som små					
Usikkerhet			Begrunnelse		
Lav			Det er i forbindelse med planforslaget utredet forurensing både på land og i vannmiljø.		
Forslag til tiltak og mulig oppfølging i arealplanleggingen og annet					
Tiltak: - Fysiske barrierer som lukkede systemer med oljetrau og tette celler			Oppfølging gjennom planverktøy/info til kommunen etc.: - Følges opp i områdereguleringen og detaljplan jf. energiloven, og drift av anlegget		

6 Oppsummering og konklusjon

ROS-analysen har som mål å sikre at forhold som kan medføre alvorlige konsekvenser for mennesker, miljø, økonomiske verdier eller samfunnsfunksjoner klargjøres i plansaken, slik at omfang og skader av uønskede hendelser reduseres. ROS-analysen identifiserer hvordan prosjektet eventuelt bør endres, samt tiltak som bør følges opp i videre detaljprosjektering, anleggsfasen og den permanente driftsfasen for området for å redusere risikoen til et akseptabelt nivå. Analysen danner grunnlag for videre avgjørelser og kommer med anbefalinger om mulige risikoreduserende tiltak som er aktuelle for planområdet og/eller utbyggingstiltaket.

6.1 Risikomatrise

Matrisen under sammenstiller vurderinger for sannsynlighet og konsekvens for de 5 hendelsene som er analysert i kapittel 5.1. De er plassert i matrisen etter sannsynlighet og samlet vurderte konsekvens.

Tabell 6-1: Risikomatrise

Risikomatrise	Konsekvens		
Sannsynlighet	Små	Middels	Store
Høy			
Middels	**Hendelse 1b) Sterk vind og løse gjenstander som skader mennesker, anlegg og/eller utstyr** **Hendelse 4 Vassdrags flom**	**Hendelse 3b) Nedfall av snø/is fra maskinhus eller iskast som skader mennesker, anlegg og/eller utstyr**	
Lav	**Hendelse 28 Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.**	**Hendelse 8a) Skog- og lyngbrann**	**Hendelse 1a) Sterk vind som påfører skade på vindturbin**

6.2 Foreslåtte tiltak

ROS-analysen peker på avbøtende tiltak som vil redusere sannsynligheten for og konsekvensene av de ulike hendelsene. Det må rettes fokus mot disse forholdene i den videre planprosessen.

I Tabell 6-2 gis en opplisting av identifiserte uønskede hendelser i forbindelse med planforslaget og hvilke tiltak som foreslås for å redusere risikoen forbundet med hendelsene.

Tabell 6-2: Oversikt over foreslåtte tiltak

Uønsket Hendelse	**Forslag til tiltak for planområdet/bygget:**	**Oppfølging gjennom planverktøy/info til kommunen etc.:**

Hendelse 1a) Sterk vind som påfører skade på vindturbin	- Prosjektering og utførelse av vindturbiner med tilstrekkelig sikkerhet mhp. dimensjonerende vindforhold. - Følge rutiner for vedlikehold, inspeksjoner og oppfølging - Sikkerhetssystemer som stanser blader og gir mulighet til å justere navet og/eller blader ved ekstrem vind.	– Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og drift av anlegg
Hendelse 1b) Sterk vind og løse gjenstander	- Følge rutiner for oppbevaring og sikring av utstyr og gjenstander.	- Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og drift av anlegg.
Hendelse 3b) Nedfall av snø/is fra maskinhus eller iskast som skader mennesker, anlegg og/eller utstyr	- Interne rutiner og opplæring av driftspersonell. - I tråd med gjeldende vilkår om iskast i vindkraftkonsesjoner, må det settes opp fareskilt som varsler om at iskast kan inntreffe innenfor en definert sikkerhetssone rundt vindturbinene. - Varslingssystem for is-oppbygging (knyttet til egen arbeidsinstruks).	- Følges opp i henhold til NVEs veileder for iskast. - Øvrige tiltak følges opp i prosjektering og bygging, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg.
Hendelse 4 Vassdrags flom	- Etablere stikkrenner og kulverter for å bevare de naturlige vannveier så langt det er mulig. I noen tilfeller kan det være nødvendig å etablere grøfter og/eller justere veglinjer for gunstig kryssing av dreneringslinjer - Erosjonssikring bør vurderes i områder der tiltak plasseres innenfor flomutsatte områder	- Følges opp i prosjekteringen og bygging av tiltaket, gjennom føringer i detaljplanen jf. energiloven.
Hendelse 8a) Skog- og lyngbrann	- Gruset flate rundt turbiner, transformatorstasjon og driftsbygning, samt veier i området. - Transformatorer planlegges etablert i lukkete celler som hindrer spredning. - Branndeteksjon og kontinuerlig overvåkning av komponenter. - Rutiner for stopping av turbin før farlige høye temperaturer oppnås. - Beredskapsplan med rutiner for hindring av spredning (f.eks. vanning)	- Følges opp i prosjektering, bygging av tiltak, gjennom føringer i detaljplanen jf. energiloven, og i drift av anlegg.

Hendelse 28 Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.	- Fysiske barrierer som lukkede systemer med oljetrau, tette celler og oljeoppsamling.	– Følges opp i områdereguleringen og detaljplan jf. energiloven, og drift av anlegget.

6.3 Oppsummering

Av de 35 risiko- og sårbarhetsforholdene som er blitt analysert er 6 identifisert og vurdert som potensielle uønskede hendelser innenfor og i tilknytning til planområdet. Disse er:

- Nr. 1a): Sterk vind som påfører skade på vindturbin.
- Nr. 1b): Sterk vind og løse gjenstander
- Nr.3b): Nedfall av snø/is fra maskinhus eller iskast som skader mennesker, anlegg og/eller utstyr
- Nr. 4: Vassdragsflom.
- Nr. 8a): Skog- og lyngbrann
- Nr 28: Fare for akutt forurensning på land eller i sjø, oljeutslipp etc.

ROS-analysen viser at det gjennom planlegging og foreslåtte risikoreduserende tiltak vil være mulig å redusere sannsynligheten, årsakene, sårbarheten, konsekvensene og usikkerheten ved de uønskete hendelsene.

Gitt at de foreslåtte tiltakene følges opp i videre prosess og gjennomføring, vurderes risikoen knyttet til planforslaget å være innenfor det som anses som akseptabelt. Med utgangspunkt i samfunnssikkerhet vurderes planområdet derfor som arealmessig egnet til vindkraft.

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RAPPORT

Moifjellet og Mellomstrand vindkraftverk

OPPDRAGSGIVER

Statkraft Vind Utvikling DA

EMNE

KU - SKYGGEKAST

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Rapport

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SAMMENDRAG

På oppdrag fra Statkraft er det utført en skyggekastanalyse for Moifjellet og Mellomstrand vindkraftverk i Bjerkreim og Time kommuner, Rogaland fylke.

Analysen er gjort i henhold til NVE sin veileder nr. 2/2014 som ble utarbeidet for å vurdere skyggekast fra vindturbiner og følger kravene fastsatt i planprogrammet fra både kommunen og NVE. I tillegg er rapport fra 2022 om oppdatert kunnskapsgrunnlag om skyggekast fra vindturbiner anvendt i fastsettelse av influensområde.

Rapporten kartlegger hvor og i hvilken grad skyggekast kan oppstå fra vindkraftverkene på Moifjellet og Mellomstrand. Rapporten tar for seg to alternativer:

Alternativ 1 inkluderer både Moifjellet og Mellomstrand vindkraftverk.

Alternativ 2 omfatter kun Moifjellet vindkraftverk.

For hvert alternativ er det vurdert hvordan skyggekast påvirker nærliggende boliger, friluftsområder og andre relevante steder. Det er utarbeidet kart som viser omfanget av skyggekast i de ulike scenarioene. I tillegg er det gjort en vurdering på omfanget av sumvirkninger av skyggekast fra flere vindkraftverk på bygg som blir utsatt for skyggekast fra Moifjellet og Mellomstrand vindkraftverk.

Skyggekastanalysen for Moifjellet og Mellomstrand vindkraftverk viser at flere boliger og fritidsbygg i influensområdet vil kunne oppleve skyggekastbelastning. Beregningene viser at skyggekast kan bli en utfordring for flere mottakere, særlig i områdene nord for Moifjellet.

- **Alternativ 1** (Moifjellet og Mellomstrand) gir størst omfang av skyggekast, med 35 mottakere over NVEs anbefalte grenseverdi.
- **Alternativ 2** (kun Moifjellet) gir noe lavere belastning, men fortsatt 28 mottakere over grenseverdien.

Noen mottakere vil kunne oppleve sumvirkninger fra eksisterende vindkraftverk. Disse mottakerne er lokalisert sørøst og sørvest for Moifjellet.

Flere friluftsområder og turruter kan også bli påvirket av skyggekast fra Moifjellet og Mellomstrand vindkraftverk.

For å redusere belastningen av skyggekast på mottakerne kan det derfor være nødvendig med avbøtende tiltak. Skyggekastkalendere kan utarbeides for å vise når skyggekast er forventet å kunne inntreffe. Sammen med automatiserte lyssensorer kan turbinene stoppes dersom det både er klarvær og man ser i skyggekastkalenderen at en mottaker kan være utsatt. Dette vil minimere ulempene for naboer og andre berørte.

03	02.03.26	Oppdatering av figurer og revidering av rapport etter tilbakemelding	Martine Bjugg	Jonas B Ghini	Håvard Finanger
02	22.01.26	Ny revisjon med nytt oppdragsnr og nytt alternativ med Mellomstrand	Martine Bjugg	Jonas B Ghini	Håvard Finanger
01	30.01.25	Oppdatering av rapport etter tilbakemelding	Martine Bjugg	Jonas B Ghini	Håvard Finanger
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1 Bakgrunn

I forbindelse med konsekvensutredningen for Moifjellet og Mellomstrand vindkraftverk i Bjerkreim og Time kommuner, Rogaland fylke, er det utført en skyggekastanalyse.

Rapporten tar for seg to alternativer:

Alternativ 1 inkluderer både Moifjellet og Mellomstrand vindkraftverk.

Alternativ 2 omfatter kun Moifjellet vindkraftverk.

For begge alternativene er det analysert hvor skyggekast kan oppstå, samt omfanget av dette på nærliggende boliger, friluftsområder og andre berørte arealer. Det er også gjort vurderinger av sumvirkninger, der bygg påvirkes av skyggekast fra flere vindkraftverk.

I området rundt Moifjellet og Mellomstrand finnes det seks eksisterende vindkraftverk. Ved vurdering av sumvirkninger er det kun de tre nærmeste – Bjerkreim, Stigafjellet og Måkaknuten – som er inkludert. De tre øvrige vindkraftverkene ligger for langt unna til å være aktuelle og er derfor ikke tatt med i analysen. Det er gjennomført egne simuleringer for å sikre at disse tre vindkraftverkene alene ikke bidrar til skyggekastbelastning over gjeldende grenseverdier innenfor influensområdet til Moifjellet og Mellomstrand vindkraftverk.

Analysen er utført i henhold til NVE sin veileder nr. 2/2014 for vurdering av skyggekast fra vindturbiner og følger kravene fastsatt i planprogrammet fra både kommunen og NVE. Utredningen er basert på et eksempelutlegg med 38 turbiner for Moifjellet og 4 turbiner for Mellomstrand. Turbinene har en totalhøyde på 200 meter til vingetipp, en rotordiameter på litt over 160 meter og en kapasitet på rundt 7 MW. Figur 3.1 viser det analyserte turbinutlegget.

2 Skyggekast

Et punkt er skyggelagt dersom det står et legeme mellom punktet og solskiven langs strålen fra solskiven mot punktet. Dersom det skyggende legemet beveger seg vil også den resulterende skyggen bevege seg, og dette vil kunne oppleves som sjenerende.

En vindturbin skiller seg ut fra andre høye byggverk og installasjoner med sine roterende blader. Normalt vil man bare observere den direkte bevegelsen når man ser rett på turbinene. Men under spesielle omstendigheter vil turbinen stå i en posisjon mellom solen og betraktningsstedet. Da vil rotorbladene sveipe foran solskiven og kaste en bevegelig skygge som vil projiseres mot betraktningsstedet i et repeterende mønster. Dels vil man oppleve dette som en sveipende skygge over en flate, dels vil man merke en hurtig veksling mellom direkte lys og korte «glimt» med skygge. Dette kan være sjenerende mens fenomenet pågår. Et slikt betraktningssted, som mottar skyggekast, kalles for en skyggekastmottaker. En skyggekastmottaker er altså eksponert for en roterende skygge i løpet av mer eller mindre avgrensende tidsrom ettersom solen beveger seg gjennom året.

Fordi skyggen kastes lengst når solbanen er lav, er det typisk om morgen og kveld skyggekast inntreffer, og oftere i vintermånedene enn om sommeren. Imidlertid er det nødvendig med eksakte beregninger for å få en klar forståelse av skyggekastutfordringen.

For skyggekast fra vindturbiner er det etablert solide metoder og grenseverdier (Norges vassdrags- og energidirektorat, 2022b) og NVE har publisert en veileder til gjennomføring av slike beregninger (Norges vassdrags- og energidirektorat, 2014).

2.1 Skyggekastmottakere

Flere typer mottakere defineres som følsomme for skyggekastmottak. Det er i stor grad snakk om bygg der mennesker oppholder seg over tid, og i noen grad uteareal med spesielle bruksmønster. NVE definerer følgende typer mottakere som sensitive for skyggekast fra vindturbiner:

- Helårsboliger, samt fritidsboliger i aktiv bruk
- Skoler og barnehager
- Sykehus, samt alders- og sykehjem
- Hoteller og andre overnattingsbygg, kafeer, restauranter og veikroer
- Kontor- og næringslokaler med regelmessige dagaktiviteter som samtidig har eksponerte vindusflater

I tillegg til dette kan NVE trekke inn følgende kategorier som sensitive, etter skjønn:

- Veldefinerte kulturminner/kulturmiljøer med stor opplevelsesverdi/pedagogisk verdi
- Kirker, kirkegårder, parker, idrettsanlegg og lekeplasser
- Definerte turmål, utsiktspunkter og lignende
- Havneanlegg, marinaer

2.2 Anbefalte grenseverdier for vindturbiner

Grenseverdiene NVE oppgir referer til antallet timer i året en skyggekastsensitiv mottaker kan utsettes for skyggekast fra en vindturbin før omfanget av belastningen vil regnes som sjenerende. Verdiene gis for to forskjellige scenarioer: verst tenkelig grad av skyggekast, og realistisk grad av skyggekast. Verdiene er anbefalinger, og grenseverdiene kan fravikes i unntakstilfeller.

Verst tenkelig scenario

En skyggekastmottaker, som f.eks. en helårsbolig, regnes som et slags drivhus, med vinduer i alle retninger, slik at all skygge som faller på boligen også legges til total belastningsgrad. I tillegg regner man at solen alltid skinner i alle timer med dagslys, at turbinen alltid står vinkelrett på mottakerpunktet, og man tar ikke høyde for driftsstans på anlegg (for vindturbiner er det snakk om vedlikehold og dårlige vindforhold, altså at det forutsettes at turbinene er i drift hele året (8760 timer)).

NVEs anbefalinger er at skyggekastmottakere ikke utsettes for mer enn 30 timer verst-tenkelig skyggekast per år, eller mer enn 30 minutter per dag

Realistisk scenario

Samme som for verst tenkelig scenario regnes en skyggekastmottaker som et slags drivhus, med vinduer i alle retninger, slik at all skygge som faller på boligen også legges til total belastningsgrad. Videre vil det realistiske scenarioet utføre beregninger med en viss sannsynlighet for solskinn i løpet av timene med dagslys, som altså reduserer total belastning siden under overskyet vær er lyset fra solskiven altfor diffust til at en skygge regnes som sjenerende. I tillegg tar man hensyn til realistisk driftstid for anlegget, basert på vindrosen for området. Ved å bruke vindrosen blir turbinene orientert slik at de vender mot vindretningen, og de er ikke standard fordelt. En viktig effekt av dette er at når vinden dreier turbinene kan det oppstå perioder der skyggen slutter å flakke over mottakeren og dermed reduseres skyggekastbelastningen til null i en slik periode. Dette skyldes at dersom turbinen roterer i et plan (tilnærmet) parallelt med linjen mellom en mottaker og solskiven, så vil skyggen fra bladene være fast, ikke «blinkende».

For realistisk skyggekastmottak anbefaler NVE at en mottaker ikke utsettes for mer enn 8 timer per år. NVE trekker også inn at i en situasjon der vest tenkelig skyggekast overskrider grenseverdien kan man fravike denne dersom realistisk skyggekast kan reduseres til under 8 timer per år ved avbøtende tiltak.

2.3 NVEs krav til beregningsmetodikk

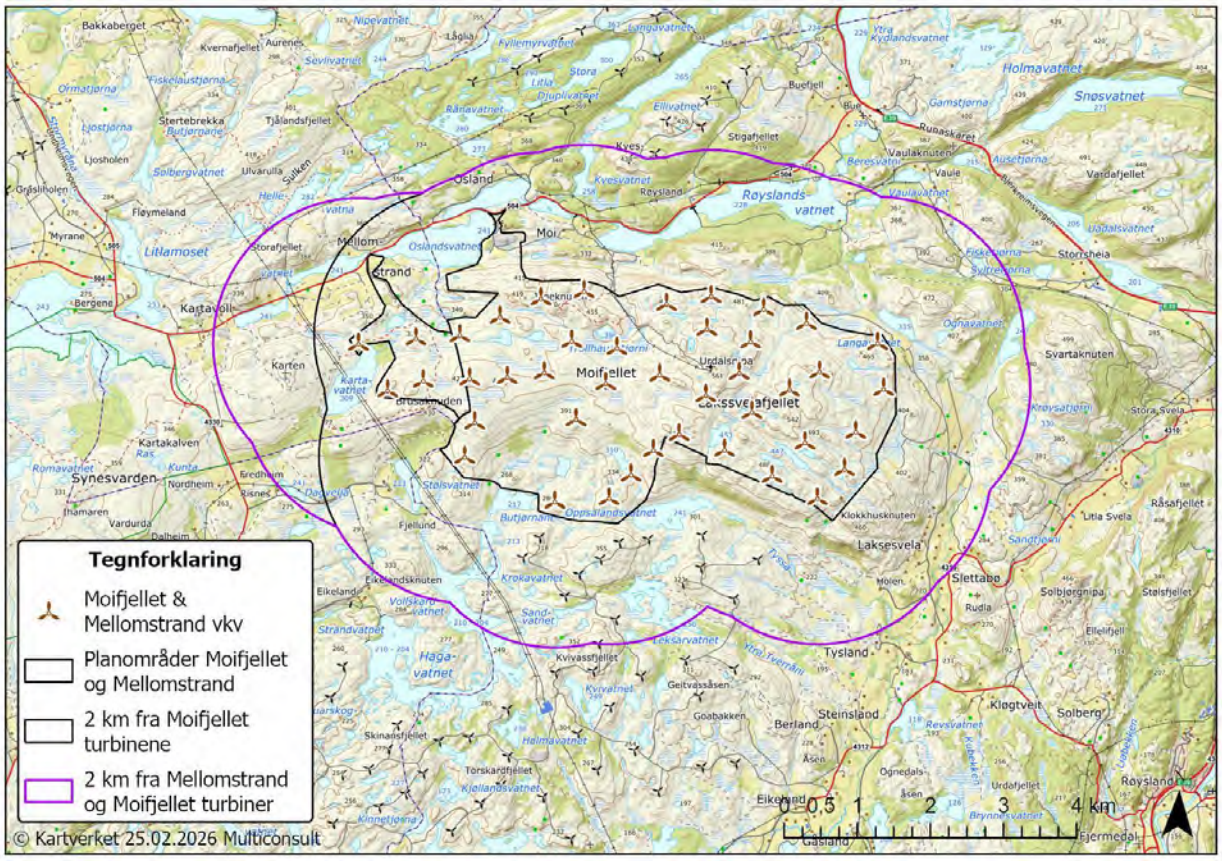
NVEs veileder beskriver noen detaljer rundt fremgangsmåten for skyggekastberegninger.

- Beregningene skal ta hensyn til terrengets høydeprofil i området som vurderes, og dette inkluderer skjermingseffekter av terreng som ligger mellom en mottaker og en kilde til skygge.

- Beregningene av teoretisk skyggekast skal baseres på drivhustilstand, det vil si at bygningene ikke har én bestemt retning mot vindturbinene og at mottakeren har vinduer i alle retninger. Mottakeren skal være en standard vertikal flate på 2 x 2 meter hevet 2 meter over bakken med mindre spesielle forhold tilsier noe annet.
- I det realistiske scenarioet skal en solskinnssannsynlighet på 50% benyttes. Dette er stort sett en overvurdering for de fleste steder i Norge, som forsikrer at man holder seg til et konservativt estimat for skyggekastbelastning. Det skal benyttes en retningsfordeling på vind fordelt på minst 8 sektorer og en årlig driftstid på 7000 timer.
- For beregningene regnes skyggekast fra en kilde som er mer enn 1500[1] m fra en mottaker som så svakt at det ikke bidrar til total belastning.

3 Skyggekastmottakere og analyseområde

NVEs krav til beregningsmetodikk innebærer at ingen områder som er lenger enn 1500 meter fra vindkraftverket er relevante for skyggekastanalysen. Det er planlagt å bruke mer moderne og større turbiner som vil ha bredere blader enn det som ble lagt til grunn for NVEs krav fra 2014. Det vil derfor bli anvendt en radius på 2000 meter etter anbefalinger i rapport utarbeidet av Norconsult på oppdrag fra NVE (Norges vassdrags- og energidirektorat [NVE], 2022). Figur 3-1 viser området som er relevant for skyggekastanalysen, der det er lagt til grunn an avstand på 2000 meter fra turbinene.



Figur 3-1: Området som er relevant for skyggekastanalysen (lilla strek for alternativ 1 og svart strek for alternativ 2), med en avstand på 2000 meter fra turbinene.

[1] Som omtalt i avsnitt 3 vil analysen ta utgangspunkt i et strengere avstandskrav enn det NVE legger opp til, det vil bli benyttet 2000 meter.

På grunn av flere vindkraftverk i området, kan noen mottakere oppleve skyggekast fra ulike vindkraftverk på forskjellige tider av dagen eller året. Selv om hvert enkelt vindkraftverk ikke nødvendigvis overskrider de anbefalte grenseverdiene for skyggekast, kan sumvirkningene føre til at den totale mengden skyggekast i løpet av et år overstiger disse grenseverdiene. Det er derfor gjort simuleringer i to omganger for hvert alternativ. Første omgang tar bare hensyn til vindturbinene i Moifjellet og Mellomstrand vindkraftverk eller Moifjellet vindkraftverk, mens andre omgang inkluderer nærliggende vindkraftverk for å vurdere sumvirkninger av skyggekast.

Det er forventet at utbyggingen vil føre til mest skyggekast oppe på Moifjellet og Lakssvelafjellet, og i grensene mellom Moifjellet vindkraftverk og de allerede etablerte vindkraftverkene nord og sør for Moifjellet vindkraftverk. Det er forventet at boliger nord for vindkraftverket vil kunne oppleve mye skyggekast. Spesielt boligene rundt Røyslandsvatnet og Oslandsvatnet forventes å bli berørt av utbygging av Moifjellet og Mellomstrand vindkraftverk. Disse boligene vil ha de eksisterende vindkraftverkene, Stigafjellet og Måkaknuten nord for seg og få Moifjellet vindkraftverk sør for seg.

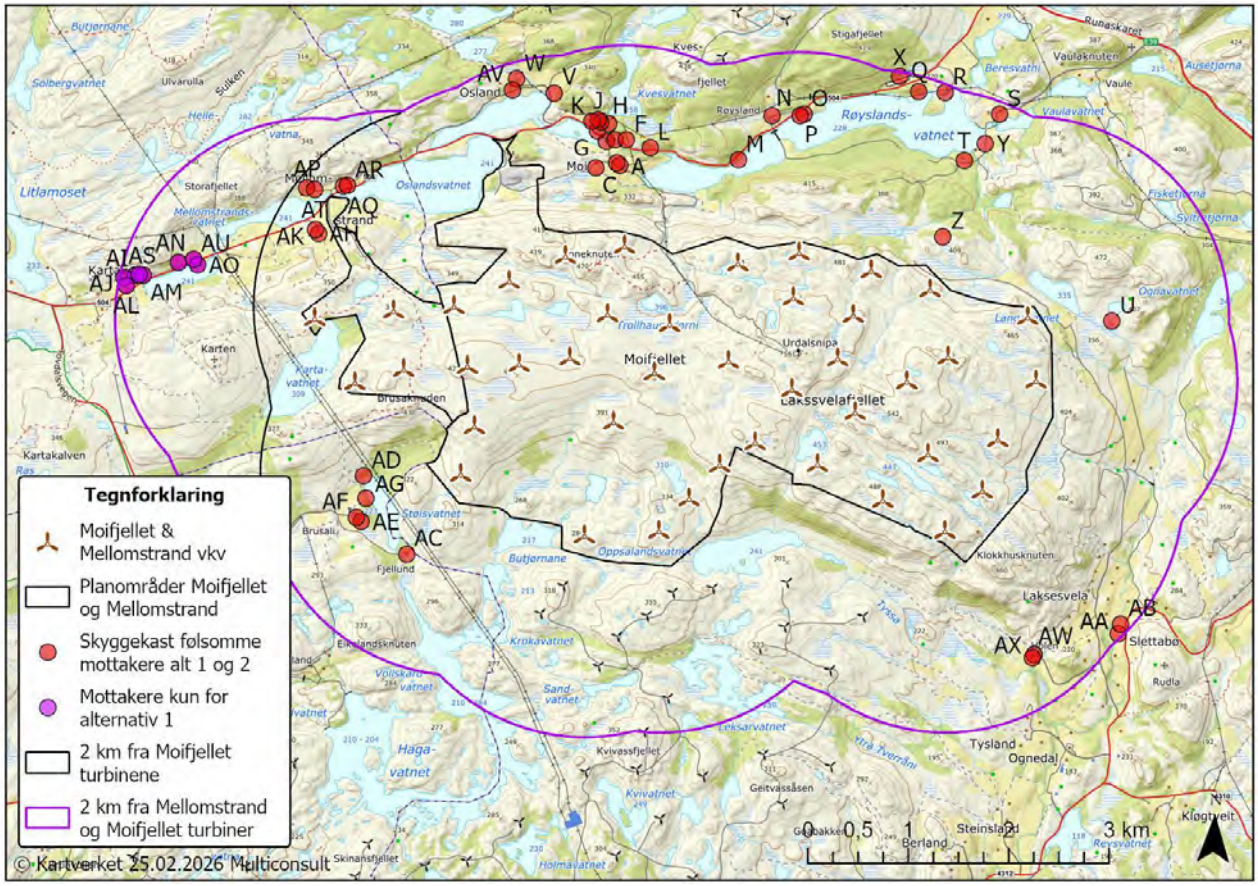
3.1 Definerte skyggekastmottakere

Figur 3-2 viser de identifiserte skyggekastmottakerne som røde og lilla sirkler i området rundt Moifjellet og Mellomstrand. Tabell 3-1 gir en oversikt over boligene, inkludert deres geografiske posisjon og avstand til nærmeste vindturbin. Mottakerne er hovedsakelig spredt i området nord for Moifjellet og Mellomstrand, men enkelte mottakere er også lokalisert på både øst- og vestsiden av planområdet.

Totalt er det identifisert 50 mottakere som er følsomme for skyggekast ved Moifjellet og Mellomstrand vindkraftverk. Av disse er 8 mottakere kun relevante i alternativ 1, ettersom de ligger mer enn 2 km fra nærmeste turbin i alternativ 2. For alternativ 2 er det derfor reelt sett 42 mottakere, men for å sammenligne er alle mottakerne inkludert i samtlige tabeller. Alle mottakerne er illustrert i Figur 3-2. De røde sirklene viser de definerte mottakerne for alternativ 1 og 2, mens de lilla sirklene viser mottakere som bare gjelder for alternativ 1.

Utvalget av mottakere er i praksis gjort ved en iterativ prosess der flere simuleringer er kjørt etter hverandre for å bestemme hvilke mottakere som skal undersøkes i detalj og hvilke mottakere som ikke undersøkes videre. Simuleringene viste at ikke alle boligene innenfor en radius på 2 km blir utsatt for skyggekast. Det kan være på grunn av beliggenhet i forhold til solen og vindkraftverket eller skjerming i terrenget. De mottakerne som ikke undersøkes videre er beskrevet i avsnitt 3.2.

For de skyggekastfølsomme mottakerne som tas med i konsekvensutredningen beregnes skyggekastbelastningen for hver individuell mottaker. NVEs veileder åpner for at analysen kan gruppere lignede mottakere sammen, men dette kan redusere nøyaktigheten, så vi velger å se på hver mottaker individuelt.



Figur 3-2: Definerte skyggekastmottakere.

I tråd med NVE sine krav for beregningsmetodikk (avsnitt 2.3) for verst tenkelig scenario utføres beregningene med skyggekastmottakerne vist i Figur 3-2 definert som «drivhus», hvor hver mottaker er et vindu på 2x2 meter, som alltid peker rett mot skyggekilden. For det realistiske scenarioet, der solskinnsannsynligheten er 50% og driftstiden satt til 7000 timer, brukes samme størrelse og mål på mottakerne som for verst tenkelig scenario.

Tabell 3-1: Oversikt over skyggekastmottakere, deres lokasjon og avstand til nærmeste vindturbin. Koordinatsystemet er EU89, UTM 32. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Plassering		Avstand til nærmeste turbin (m)
		Østlig	Nordlig	
A	Moi 32 – Våningshus	321 454	6 505 063	808
B	Moi 26 – Enebolig	321 420	6 505 084	841
C	Moi 21 – Våningshus	321 215	6 505 041	840
D	Buevegen 1805 – Fritidsbygning	321 315	6 505 303	1 067
E	Buevegen 1816 – Fritidsbygning	321 403	6 505 321	1 076
F	Buevegen 1818 – Fritidsbygning	321 520	6 505 315	1 060
G	Buevegen 1786 – Fritidsbygning	321 226	6 505 404	1 183
H	Buevegen 1784 – Fritidsbygning	321 338	6 505 475	1 230
I	Buevegen 1782 – Fritidsbygning	321 263	6 505 492	1 260
J	Buevegen 1780 – Fritidsbygning	321 239	6 505 515	1 287
K	Buevegen 1778 – Fritidsbygning	321 178	6 505 500	1 289
L	Buevegen 1850 – Fritidsbygning	321 753	6 505 237	1 015

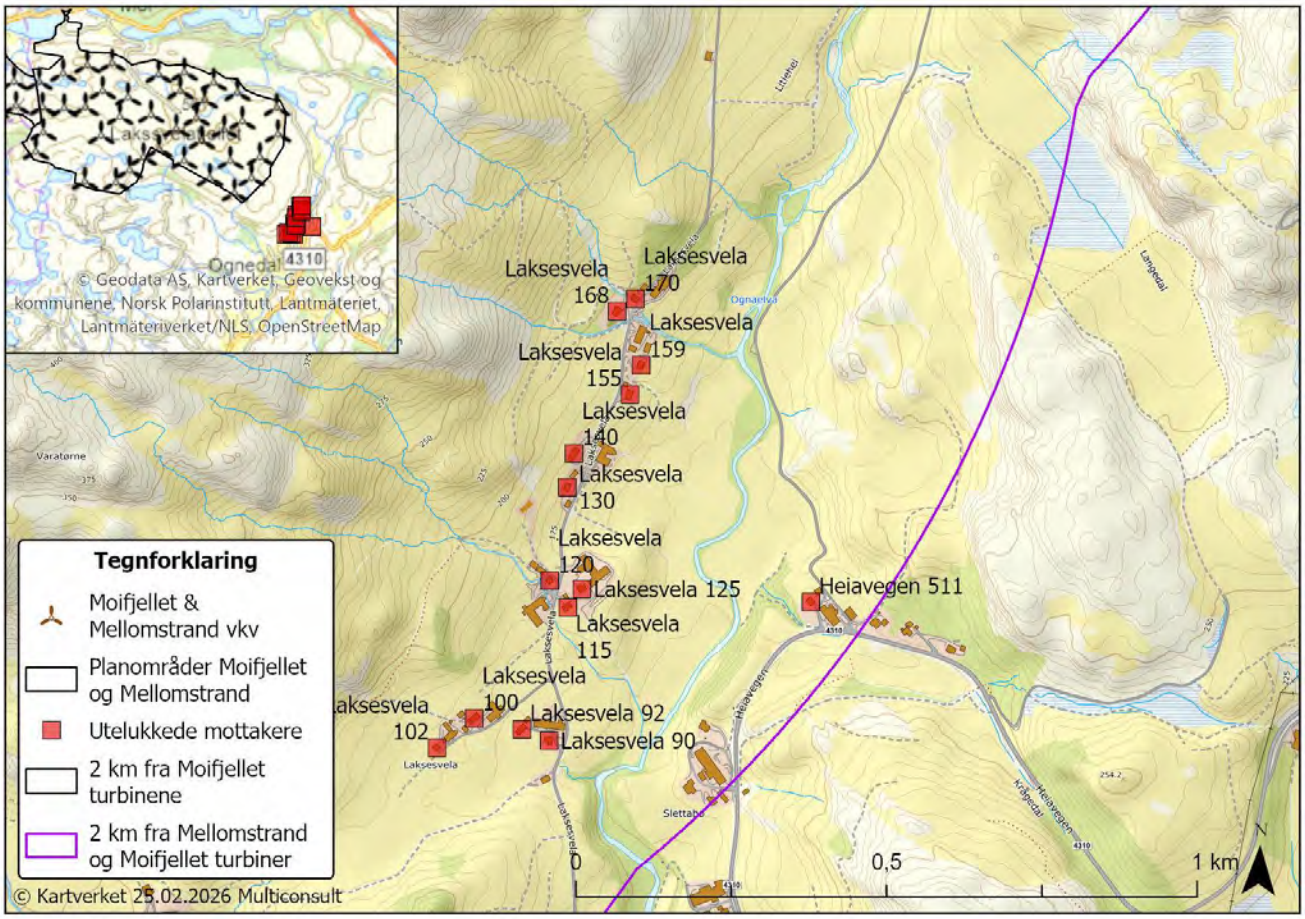
M	Buevegen 1941 – Fritidsbygning	322 631	6 505 117	1 034
N	Buevegen 1988 – Bygning for overnatting	322 968	6 505 553	1 392
O	Buevegen 2023 – Fritidsbygning	323 284	6 505 569	1 383
P	Buevegen 2021 – Fritidsbygning	323 246	6 505 557	1 371
Q	Buevegen 2141 – Fritidsbygning	324 426	6 505 794	1 844
R	Buevegen 2165 – Fritidsbygning	324 693	6 505 786	1 922
S	Vaule 176 – Enebolig	325 238	6 505 571	1 883
T	Vaule 247 – Fritidsbygning	324 881	6 505 111	1 334
U	Store Svela, eiendom 60/5, Bjerkreim kommune – Fritidsbygning	326 356	6 503 511	835
V	Osland 45 – Våningshus	320 801	6 505 783	1 636
W	Osland 65 – Våningshus	320 423	6 505 925	1 837
X	Buevegen 2100 – Gatekjøkken, kioskbygning	324 241	6 505 947	1 956
Y	Vaule 218 – Fritidsbygning	325 098	6 505 291	1 560
Z	Eiendom 57/3, Bjerkreim kommune – Fritidsbygning (ikke ferdig bygd)	324 676	6 504 359	553
AA	Heiavegen 543 – Enebolig	326 420	6 500 403	1 959
AB	Heiavegen 541 – Våningshus	326 443	6 500 501	1 905
AC	Brusalivegen 201 – Våningshus	319 326	6 501 193	961
AD	Eiendom121/8, Hå kommune – Fritidsbygning	318 902	6 501 969	931
AE	Brusalivegen 217 – Enebolig	318 880	6 501 518	1 096
AF	Brusalivegen 215 – Enebolig	318 829	6 501 559	1 129
AG	Brusalivegen 219 – Fritidsbygning	318 928	6 501 743	974
AH	Buevegen 1463 – Våningshus	318 453	6 504 383	849
AI	Buevegen 1288 – Enebolig	316 626	6 503 970	1 844
AJ	Buevegen 1272 - Enebolig	316 516	6 503 946	1 945
AK	Buevegen 1461 – Enebolig	318 418	6 504 425	890
AL	Buevegen 1270 - Våningshus	316 535	6 503 867	1 912
AM	Buevegen 1290 – Enebolig	316 702	6 503 968	1 770
AN	Buevegen 1292 – Våningshus	317 053	6 504 099	1 477
AO	Buevegen 1343 – Fritidsbygning	317 250	6 504 070	1 351
AP	Buevegen 1496 – Våningshus	318 337	6 504 834	1 302
AQ	Buevegen 1500 – Våningshus	318 697	6 504 851	1 341
AR	Buevegen 1502 – Enebolig	318 747	6 504 864	1 336
AS	Buevegen 1286 – Enebolig	316 662	6 503 974	1 810
AT	Buevegen 1498 – Våningshus	318 415	6 594 822	1 286
AU	Buevegen 1340 – Enebolig	317 204	6 504 129	1 285
AV	Osland 85 – Våningshus	320 384	6 505 811	1 740
AW	Laksesvela 60 - Enebolig	325 581	6 500 197	1 507
AX	Laksesvela 58 - Enebolig	325 558	6 500 163	1 522

3.2 Skyggekastmottakere som ble utelukket

Etter flere simuleringer, under både verst tenkelige og realistiske forutsetninger, ble flere boliger ekskludert fra vurderingene til tross for at de ligger innenfor en radius på 2 km fra turbinene. Alle simuleringene viste at disse

boligene ikke ville oppleve belastning fra skyggekast, og de ble derfor utelatt fra resultatene for å forenkle fremstillingen og utregningene.

Bygningene som ble utelukket fra vurderingen ligger sørøst for planområdet ved Laksesvela. De innledende simuleringene indikerte at disse boligene sannsynligvis ikke vil bli påvirket av skyggekast fra vindkraftverkene. Dette skyldes flere faktorer, inkludert bygningenes plassering i forhold til turbinene og solens bane. I tillegg spiller topografien en viktig rolle, da boligene ligger relativt tett oppunder østsida av dalen, som betyr at dersom skyggekast skulle nådd disse mottakerne, så måtte solen ha stått høyt i nordvest. Selv ikke midt på sommeren kommer solen i en slik posisjon, og dermed treffes ikke disse ekskluderte mottakerne av skyggekast. Figur 3-3 viser de utelukkede mottakerne.



Figur 3-3: Utelukkede mottakere.

4 Modellering

Modellen tar inn de planlagte turbinplasseringene, høyde på turbinene, rotordiameter og terrenget i området.

4.1 Hvordan beregningene utføres

Beregningen av skyggekast i programvaren skjer ved en kombinasjon av:

- Kjent geografisk posisjon, for å finne solbanen gjennom året.
- Definert terreng, så man kan bestemme når solens bane er under horisonten sett fra ethvert relevant punkt i simuleringen.
- Turbinenes posisjon og størrelse.

For å sikre en grundig analyse av området rundt Moifjellet, er det lagt til grunn et influensområde som dekker en avstand på omtrent 10 x 10 km. Dette gir tilstrekkelig rom for å inkludere de omkringliggende omgivelsene som

kan ha innvirkning på resultatene. Influensområdet deles inn i et rutenett med 30 x 30 meter oppløsning. Dette rutenettet utgjør en stor samling individuelle punkt (altså små «lapper» á 30 x 30 m), og modellen stiller seg i hvert slikt punkt, og ser mot solen. Dersom en av turbinene står mellom observasjonspunktet og solskiven uten at det er skyggende terreng i veien, tikkes det opp en teller som holder styr på hvor mange minutter skyggekast dette ene punktet mottar per år. Solbanen representeres ved at man hopper tre dager av gangen (dette håndterer årstider), og vurderer hvert døgn oppstykket i 2-minuttersbolker[2]. Etter at alle punkt i rutenettet har gått gjennom en slik solbaneberegning blir det satt sammen kart som beskriver forskjellige karakteristikker ved skyggekastbelastningen.

I tillegg til kartene brukes de spesifikke skyggekastmottakerne, omtalt i avsnitt 3.1, for mer avanserte beregninger.

5 Resultater for alternativ 1: Moifjellet og Mellomstrand

5.1 Resultater for Moifjellet og Mellomstrand vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet og Mellomstrand vindkraftverk. Det er ikke tatt hensyn til sumvirkninger i dette kapittelet, de vises i kapittel 5.2. Resultatene, og diskusjonen rundt disse, som presenteres i dette kapitlet starter med kart over maksimal teoretisk skyggekastbelastning på en flate 1.5 meter over bakkenivå. Dette vil representere den typen skyggekast en person ute på en plen vil kunne motta. Deretter vises skyggekastmottak for mottakerne definert i avsnitt 3.1.

Etter dette presenteres et kart der sannsynligheten for solskinn er satt til 50% og driftstiden til turbinen satt til 7000 timer i tråd med NVEs retningslinjer for beregninger av vindturbiner. For å oppnå en mer realistisk orientering av turbinene, er vindrosen for Mellomstrand (hentet fra Moifjellet) benyttet i fordelingen av driftstid per sektor/vindretning. Vindrosen for Moifjellet er benyttet siden Mellomstrand ligger såpass nært Moifjellet. Det vurderes at vindforholdene er tilnærmet like, og det anses derfor uproblematisk å bruke samme vindrose for begge områdene. Deretter presenteres beregnet realistisk skyggekast for de definerte mottakerne.

Noter at sammenligningen av kartene med de individuelt definerte mottakerne ikke er rett frem; geometrien for modellen er annerledes. Kartene viser skyggekast ned på en tenkt horisontal flate, hvor oppgitt belastning er et gjennomsnitt for en rute på 10 x 10 meter, mens de individuelle beregningene ser på et vertikalt 2 x 2 meter vindu med senter 2 meter over bakken. Kartene vil gi en kvalitativ indikasjon på hvilke deler av et område som er tungt belastet, men ikke nødvendigvis et nøyaktig tall på hvor mange timer skyggekast et kjøkkenvindu utsettes for per år. Generelt viser kartene et lavere antall timer med skyggekastbelastning enn det man finner ved den detaljerte beregningen for mottakere representert med vinduer. Kartene brukes altså for å få en oversikt over belastningen over større areal, mens det er tabeller over individuelle mottakeres skyggekastbelastning som måles opp mot NVEs retningslinjer for maksimal tillatt skyggekastbelastning.

5.1.1 Kart – Verst tenkelig scenario

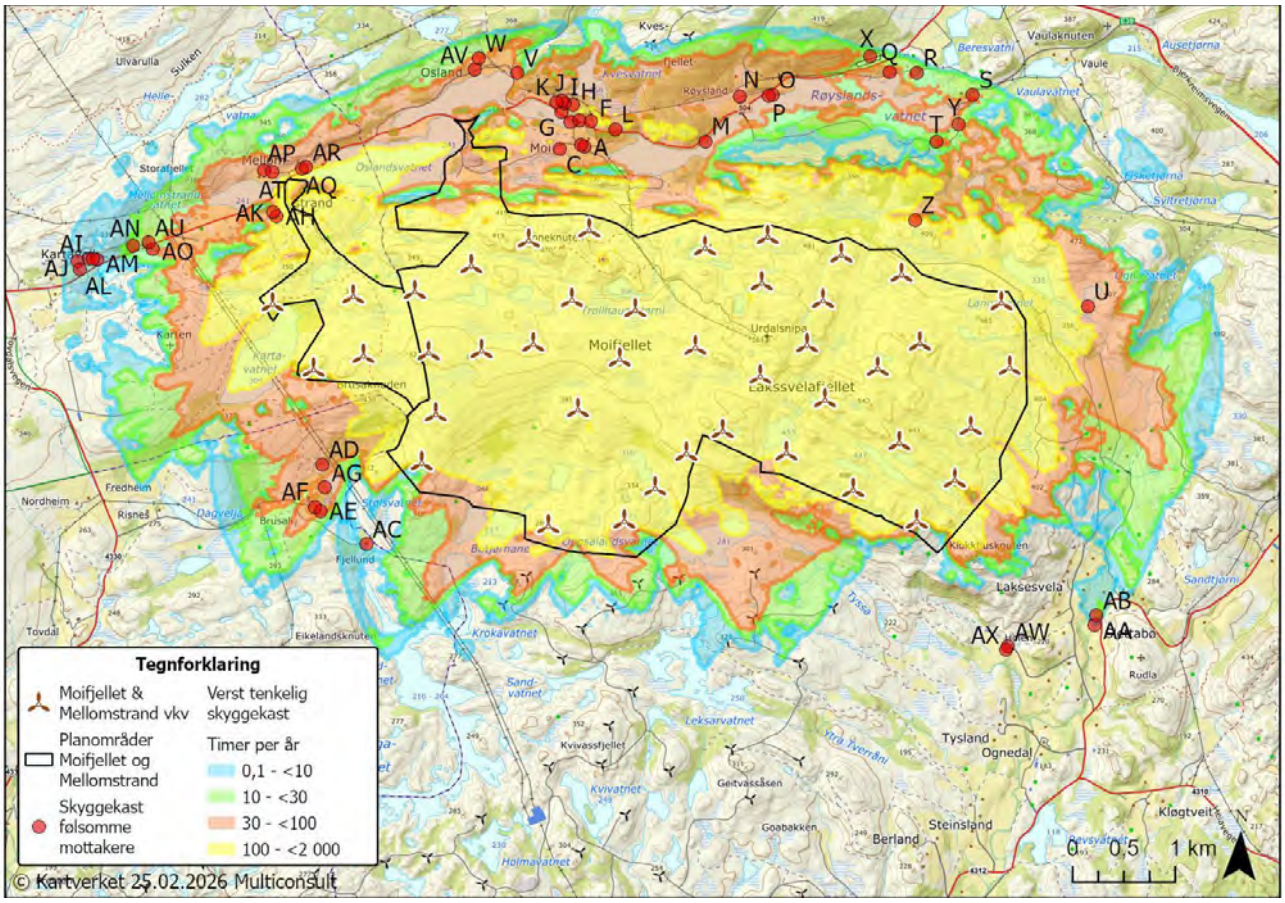
Figur 5-1 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer fra vindkraftverket.

De tykke linjene i kartet representerer koter eller konturlinjer, tilsvarende de som brukes på et terrengkart, men i denne sammenhengen viser de mengden skyggekast i løpet av et år. Innenfor hver konturlinje er skyggekastvarigheten høyere enn verdien angitt i tegnforklaringen. Dette betyr at områdene som befinner seg innenfor en bestemt kontur vil oppleve lengre perioder med skyggekast sammenlignet med områdene utenfor.

[2] Selv om beregningen forenkles ved å hoppe tre dager av gangen og beregnes med 2-minutters oppløsning innenfor hver tredje dag, blir det totale resultatet justert for dette. Analysen antar at dersom det inntreffer 2 minutter skyggekast den ene dagen, så antas det at de to andre dagene, som ikke sjekkes eksplisitt, har samme belastning.

Fargene grønn og blå indikerer akseptable nivåer av skyggekast, som ligger under de anbefalte grenseverdiene for maksimalt teoretisk skyggekast. Fargene rød og gul indikerer områder som er over akseptable nivåer for skyggekast, der gul er områder som er mest utsatt. Kartet gir en klar visualisering av hvor man kan forvente mest skyggekast fra vindkraftverket; som forventet er størst skyggekastbelastning innenfor vindkraftverkets planområde.

Figuren gir en god indikasjon på hvilke områder og mottakere som vil bli meget utsatt for skyggekast. Nord til nordvest for vindkraftverket er det en konsentrasjon av røde områder, med noen gule flekker, som indikerer høy skyggekastpåvirkning. Boliger i disse områdene kan derfor bli betydelig utsatt for skyggekast.



Figur 5-1: Teoretisk verst tenkelig scenario, målt i antall timer per år.

5.1.2 Individuelle mottakere – Verst tenkelig scenario

Tabell 5-1 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i avsnitt 3.1. Det kommer tre delresultater fra beregningen. Det første er vist i kolonnen «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonnen «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Det sier ikke i seg selv noe om intensiteten per dag. Demonstrert med for eksempel, Moi 32 (mottaker A), der det kommer omtrent 91 timer skyggekast fordelt over 112 dager. Dette betyr i snitt, ca. 49 minutter skyggekast per dag med skyggekast. Men, som man ser i kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), som gir belastningen på den verste dagen, ser vi at maksimalt mottak på én dag er 1 time og 42 minutter. Altså er det mange dager med kortere skyggekastmottak enn 49 minutter, og andre dager med mottak opp mot maksimal teoretisk verdi.

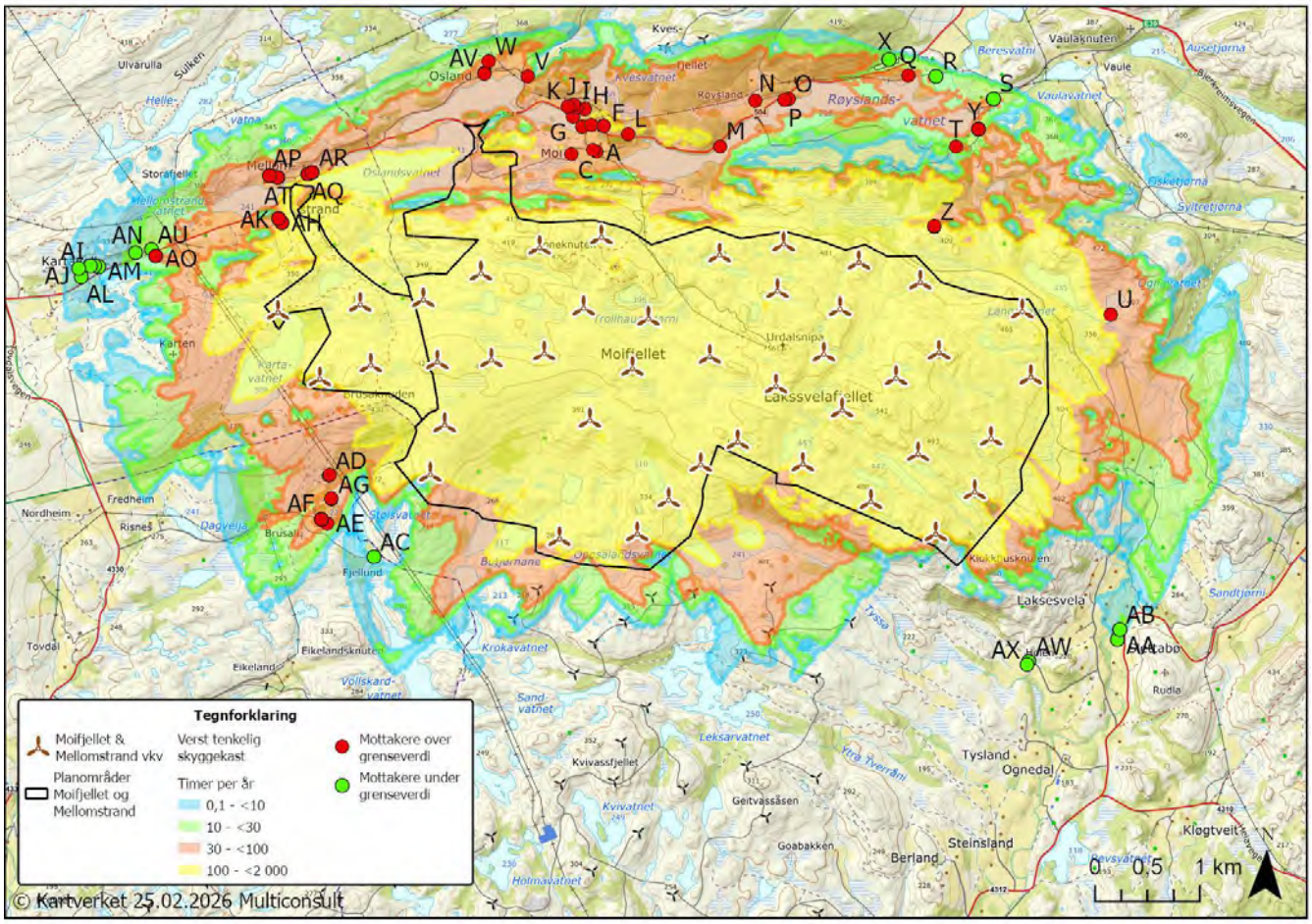
Tabell 5-1: Maksimalt teoretisk skyggekast for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk. Kolonnen «Timer/år» gir totalt antall timer skyggekast på mottakeren per år. Kolonnen «Dager/år» gir antallet dager per år det inntreffer skyggekast i det hele tatt. Kolonnen «Timer/dag (verste dag)» gir antallet

timer skyggekast på den dagen med aller størst belastning. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Dager/år	Timer/dag (verste dag)
A	Moi 32	91:38	112	01:42
B	Moi 26	89:39	100	01:41
C	Moi 21	86:06	91	01:50
D	Buevegen 1805	86:46	113	01:28
E	Buevegen 1816	88:55	117	01:28
F	Buevegen 1818	93:48	136	01:27
G	Buevegen 1786	74:46	111	01:30
H	Buevegen 1784	84:32	122	01:27
I	Buevegen 1782	83:59	124	01:28
J	Buevegen 1780	84:10	121	01:29
K	Buevegen 1778	70:27	91	01:27
L	Buevegen 1850	93:42	157	01:31
M	Buevegen 1941	59:05	78	01:35
N	Buevegen 1988	52:08	72	01:06
O	Buevegen 2023	44:00	60	01:14
P	Buevegen 2021	41:34	54	01:14
Q	Buevegen 2141	38:26	104	00:35
R	Buevegen 2165	27:56	84	00:27
S	Vaule 176	22:57	89	00:22
T	Vaule 247	33:51	96	00:42
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	88:23	178	01:03
V	Osland 45	40:04	74	00:43
W	Osland 65	38:02	93	00:32
X	Buevegen 2100	18:09	68	00:20
Y	Vaule 218	26:05	77	00:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	275:29	207	02:12
AA	Heiavegen 543	00:55	23	00:04
AB	Heiavegen 541	08:56	44	00:16
AC	Brusalivegen 201	00:00	0	00:00
AD	Eiendom 1121/8, Hå kommune	51:19	110	00:39
AE	Brusalivegen 217	38:11	72	00:37
AF	Brusalivegen 215	28:44	73	00:33
AG	Brusalivegen 219	48:21	103	00:40
AH	Buevegen 1463	141:02	185	01:16
AI	Buevegen 1288	06:49	26	00:21
AJ	Buevegen 1272	06:04	24	00:20
AK	Buevegen 1461	130:01	182	01:14

AL	Buevegen 1270	05:09	22	00:20
AM	Buevegen 1290	07:22	26	00:22
AN	Buevegen 1292	10:45	32	00:26
AO	Buevegen 1343	26:21	76	00:36
AP	Buevegen 1496	70:50	130	00:51
AQ	Buevegen 1500	100:51	144	01:18
AR	Buevegen 1502	100:26	142	01:18
AS	Buevegen 1286	07:05	26	00:21
AT	Buevegen 1498	85:06	130	01:04
AU	Buevegen 1340	12:49	36	00:28
AV	Osland 85	38:33	102	00:32
AW	Laksesvela 60	00:00	0	00:00
AX	Laksesvela 58	00:00	0	00:00

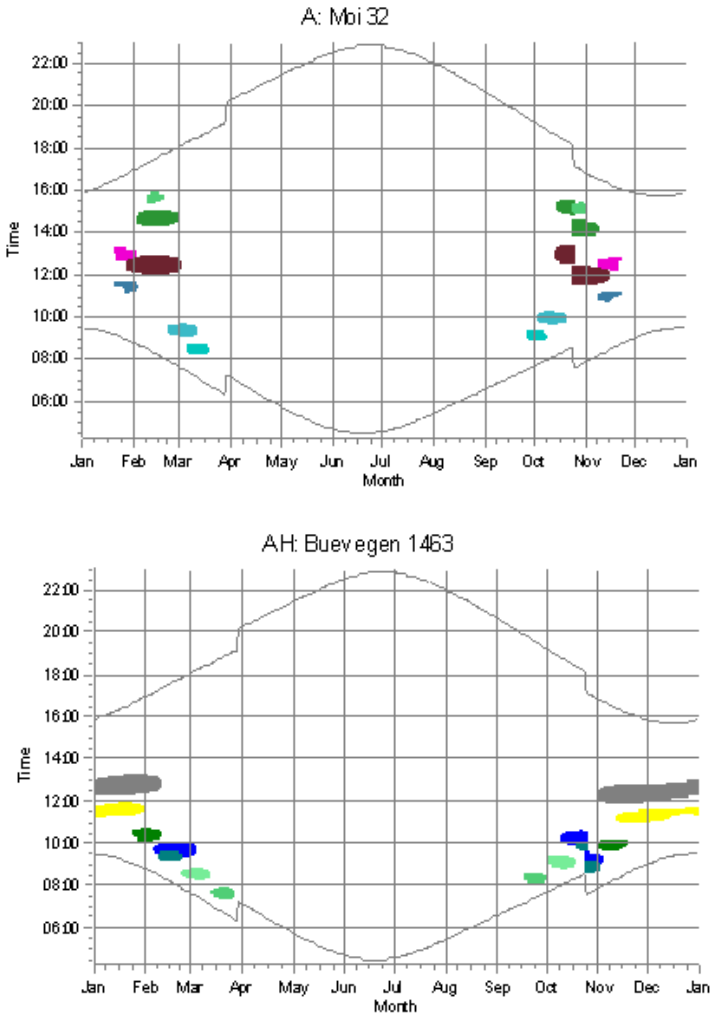
Det er anslått at 15 av 50 mottakere ligger under NVEs anbefalte grenseverdi for teoretisk maksimalt skyggekast, se Figur 5-2 der disse 15 mottakerne er vist med grønne prikker. Tre av disse mottakerne er lokalisert nordøst for planområdet nært Røyslandsvatnet (mottakere R, S og X i tabell), syv mottakere er lokalisert nordvest for planområdet ved Kartavoll (mottakere AI, AJ, AL-AN, AS og AU i tabell), en er lokalisert sørvest for planområdet ved Fjellund (mottaker AC i tabell) og fire er lokalisert sørøst for planområdet ved Slettabø og Holen (mottakere AA, AB, AW og AX i tabell). Den mottakeren som blir mest utsatt for skyggekast er den som ligger nært en turbin, mottakeren er lokalisert nord for planområdet, det er en hytte som er under bygging og er omtrent 553 meter unna en turbin (mottaker Z i tabell).



Figur 5-2: Verst tenkelig skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi.

Mange av de mest utsatte boligene og fritidsbygningene er lokalisert rett nord for vindkraftverket, noe som gjør det sannsynlig at de vil oppleve skyggekast på samme tid i løpet av dagen. Grunnet boligenes posisjon i forhold til vindkraftverket og solens bane vil de fleste av mottakerne mest sannsynlig oppleve mest skyggekast på dagtid, mellom 9 - 16. Mottakernes lokalisering kombinert med solens bevegelsesmønster gjør at belastningen av skyggekast på mottakerne er høyest rundt midt på dagen når solen står høyest på himmelen i løpet av vinterhalvåret. Da strekker skyggen fra vindturbinene seg lenger og mottakerne i nord opplever skyggekast. De fleste av mottakerne vil kun oppleve skyggekast om vinteren, mens noen få vil kunne merke det også i sen høst og tidlig vår. Seks av mottakerne kan imidlertid oppleve skyggekast om sommeren, men da enten tidlig om morgenen eller sent på kvelden.

Figur 5-3 illustrerer når to mottakere forventes å oppleve skyggekast gjennom året (x-aksen), samt på hvilke tidspunkter av døgnet dette skjer (y-aksen). De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast (se vedlagt rapport for info om hvilken turbin som svarer til hvilken farge i figuren). Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast. Mottakerne A og AH er valgt for å illustrere den forventede skyggekastbelastningen for de områdene som ligger nord og nordvest for planområdet, og som trolig vil oppleve ulik belastning fra de to alternativene. En fullstendig oversikt over når hver mottaker kan forvente skyggekast for alle fire scenarioene legges ved rapporten som vedlegg.

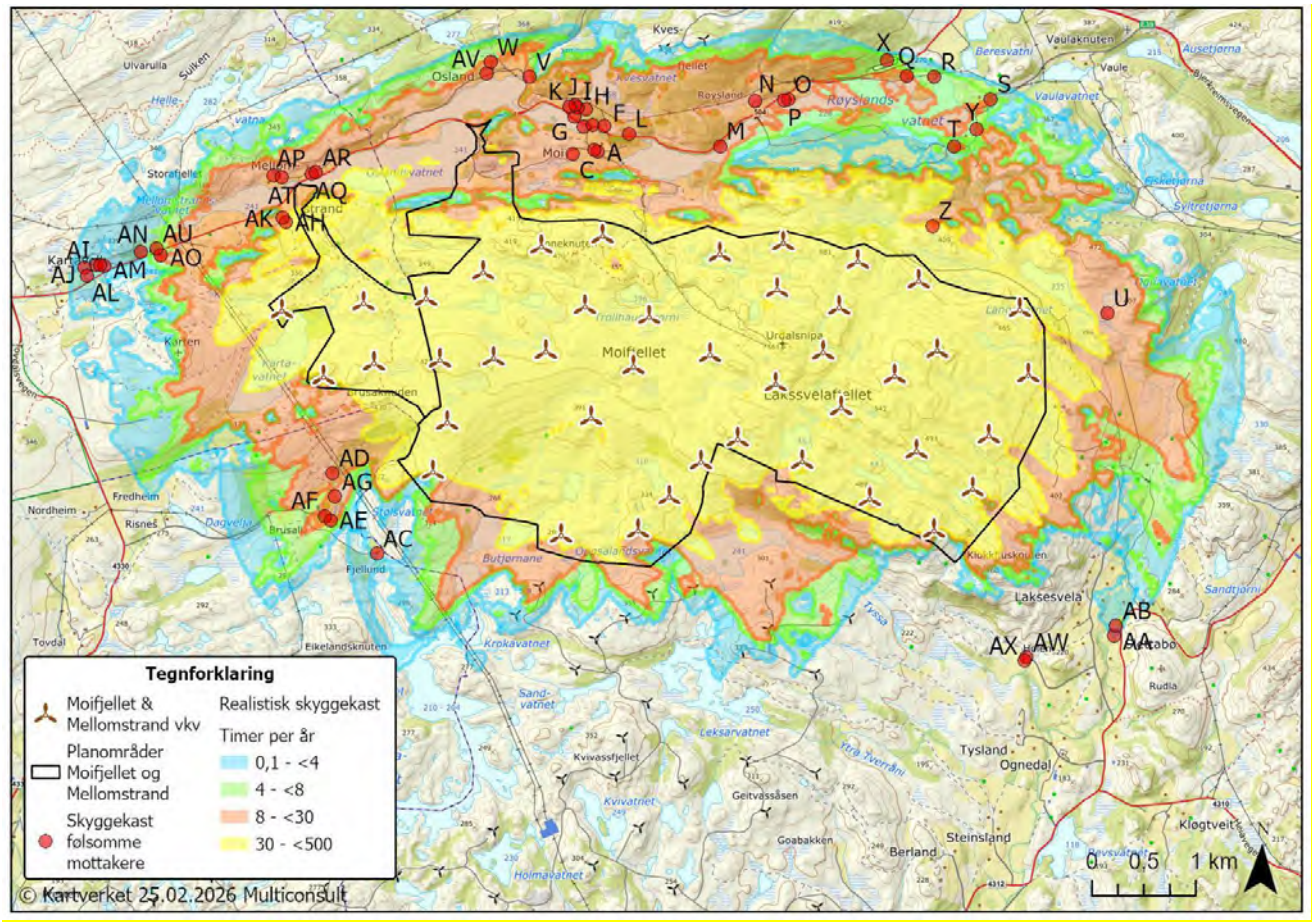


Figur 5-3: Forventet tidspunkt for skyggekast for mottaker A og AH. De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast. Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast. Mottaker A er lokalisert nord for planområdet, mens mottaker AH ligger nordvest for planområdet.

5.1.3 Kart – Realistisk scenario

Figur 5-4 viser et tilsvarende kart som Figur 5-1, men nå er en solskinnssannsynlighet på 50% og driftstid basert på vindrosen tatt med. Forskjellen i resultatet er at simuleringen først beregner teoretisk maksimum som om sola skinner hele tiden (nøyaktig på samme vis som vist i Figur 5-1), og deretter reduseres denne teoretiske maksimumsbelastningen med 50%, basert på antakelsen om at faktisk solskinn bare inntreffer halvparten av tiden. I tillegg justeres belastningen med en driftstid på totalt 7000 timer, basert på vindrosen og driftstid per sektor/vindretning.

Sammenlignet med maksimalt teoretisk skyggekast reduseres utstrekningen av skyggekast noe, og områdene som viser verdier over anbefalt nivå krymper. Denne reduksjonen er imidlertid ikke betydelig nok til å være visuelt fremtredende. Kartet indikerer at arealene med høy belastning forblir omfattende, noe som indikerer at de fleste mottakerne fremdeles vil bli eksponert for skyggekast i mengder som overskrider anbefalte verdier.



Figur 5-4: Realistisk scenario med antall timer per år.

5.1.4 Individuelle mottakere – Realistisk scenario

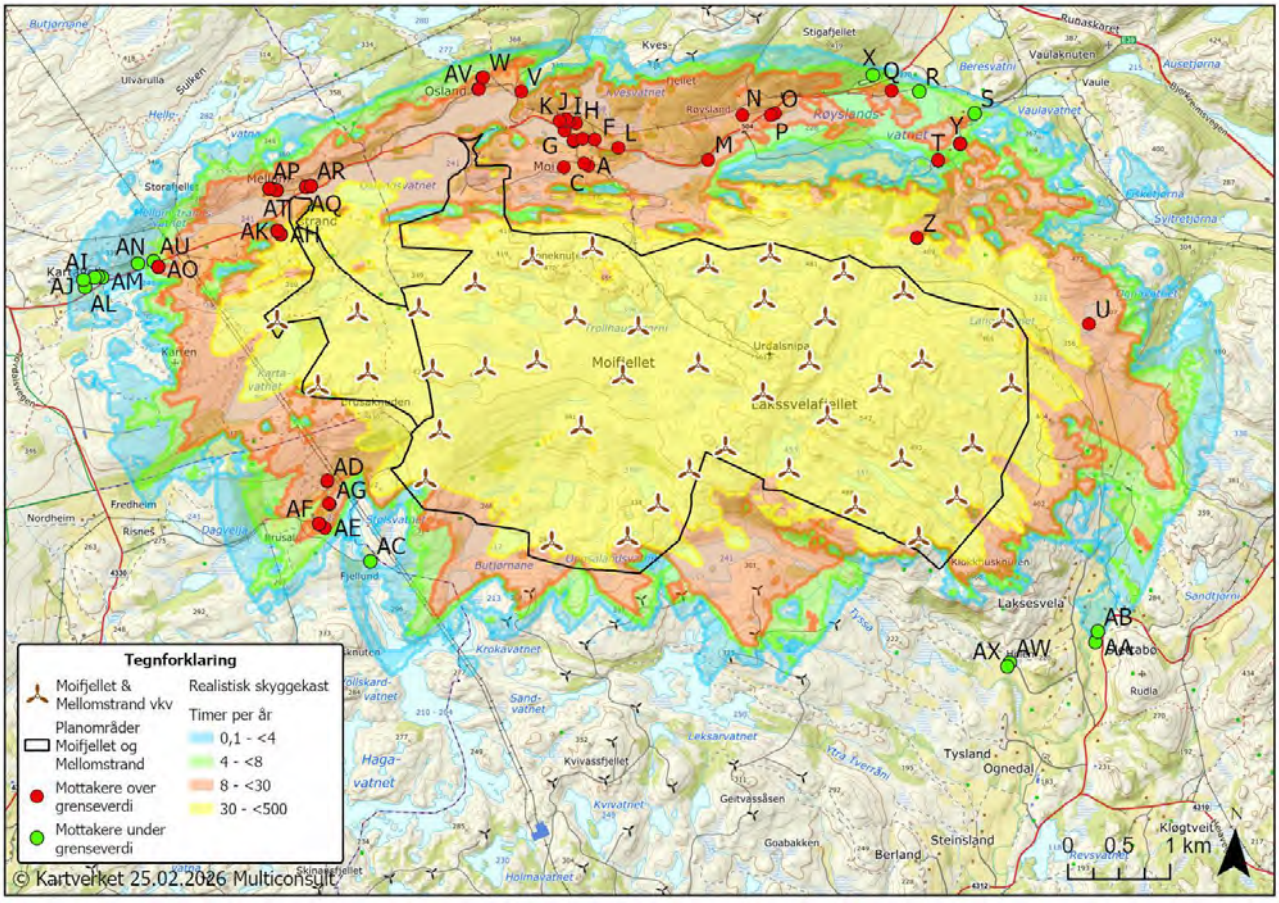
Tabell 5-2 oppsummerer resultatet av denne beregningen. Sammenlignet med tallene for teoretisk maksimum (se *Tabell 5-1*) er disse tallene redusert både på grunn av 50% solskinnssannsynlighet og driftstiden til turbinene.

Tabell 5-2: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk definert i avsnitt 3.1. Andre kolonne «Timer/år (verst tenkelig)» er hentet fra Tabell 5-1 for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	*Timer/år (verst tenkelig)*
A	Moi 32	23:03	91:38
B	Moi 26	22:23	89:39
C	Moi 21	21:52	86:06
D	Buevegen 1805	21:39	86:46
E	Buevegen 1816	22:11	88:55
F	Buevegen 1818	23:19	93:48
G	Buevegen 1786	18:42	74:46
H	Buevegen 1784	20:47	84:32
I	Buevegen 1782	20:49	83:59
J	Buevegen 1780	20:55	84:10

K	Buevegen 1778	17:24	70:27
L	Buevegen 1850	23:02	93:42
M	Buevegen 1941	14:26	59:05
N	Buevegen 1988	12:51	52:08
O	Buevegen 2023	10:56	44:00
P	Buevegen 2021	10:19	41:34
Q	Buevegen 2141	09:10	38:26
R	Buevegen 2165	06:35	27:56
S	Vaule 176	05:01	22:57
T	Vaule 247	08:22	33:51
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	21:46	88:23
V	Osland 45	09:51	40:04
W	Osland 65	10:12	38:02
X	Buevegen 2100	04:23	18:09
Y	Vaule 218	05:48	26:05
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	65:33	275:29
AA	Heiavegen 543	00:16	00:55
AB	Heiavegen 541	02:37	08:56
AC	Brusalivegen 201	00:00	00:00
AD	Eiendom 1121/8, Hå kommune	12:38	51:19
AE	Brusalivegen 217	08:48	38:11
AF	Brusalivegen 215	06:42	28:44
AG	Brusalivegen 219	11:28	48:21
AH	Buevegen 1463	37:39	141:02
AI	Buevegen 1288	01:53	06:49
AJ	Buevegen 1272	01:40	06:04
AK	Buevegen 1461	34:46	130:01
AL	Buevegen 1270	01:24	05:09
AM	Buevegen 1290	02:02	07:22
AN	Buevegen 1292	03:03	10:45
AO	Buevegen 1343	07:32	26:21
AP	Buevegen 1496	18:59	70:50
AQ	Buevegen 1500	26:38	100:51
AR	Buevegen 1502	26:23	100:26
AS	Buevegen 1286	01:58	07:05
AT	Buevegen 1498	22:52	85:06
AU	Buevegen 1340	03:41	12:49
AV	Osland 85	10:20	38:33
AW	Laksesvela 60	00:00	00:00
AX	Laksesvela 58	00:00	00:00

Det er estimert at 18 mottakere befinner seg under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast (mottakere R, S, X, Y, AA – AC, AF, AI, AJ, AL – AO, AS, AU, AW og AX), se Figur 5-5. Av disse 18 er 15 de samme som også lå under grenseverdien i det maksimale teoretiske scenarioet. De tre mottakerne, Y, AF og AO, som kun ligger under grenseverdien i det realistiske scenarioet, er lokalisert henholdsvis nordøst, sørvest og vest for planområdet. Alle de tre mottakerne som kommer under grenseverdiene i det realistiske scenarioet var mottakere som i verst tenkelig scenario var under ble redusert var mottakere som i verst tenkelig var under grenseverdien på 30 timer på år, men over grensen på maksimalt 30 minutter per dag.



Figur 5-5: Realistisk skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi.

Den mottakeren som befinner seg nærmest turbinene, er den som er mest utsatt for skyggekast. Dette antyder at både fysisk avstand fra turbinene og den lokale topografien spiller en sentral rolle i hvor mye skyggekast en mottaker vil oppleve.

For mottakerne som opplever skyggekast rundt midt på dagen, reduseres varigheten av skyggekast primært på grunn av lavere sannsynlighet for solskinn. Dette betyr at selv om skyggekast teoretisk sett kan vare lenger, vil faktiske værforhold, som perioder med overskyet vær, bidra til å korte ned skyggekastets varighet. Dermed oppstår en reduksjon i skyggekastets påvirkning, selv i de mest utsatte periodene, noe som fører til en lavere faktisk eksponering enn beregningene for teoretisk maksimalt skyggekast skulle tilsi. For eksempel Buevegen 2023 (mottaker O) har gått fra 44:00 til 10:56 og Vaule 247 (mottaker Y) har gått fra 22:57 til 05:01. Det er viktig å nevne at Buevegen 2023 fortsatt ikke er under grenseverdiene, mens Vaule 247 er under grenseverdi for begge scenarioene for timer per år, men var målt til over grenseverdi for verst tenkelig på grunn av minutter per dag.

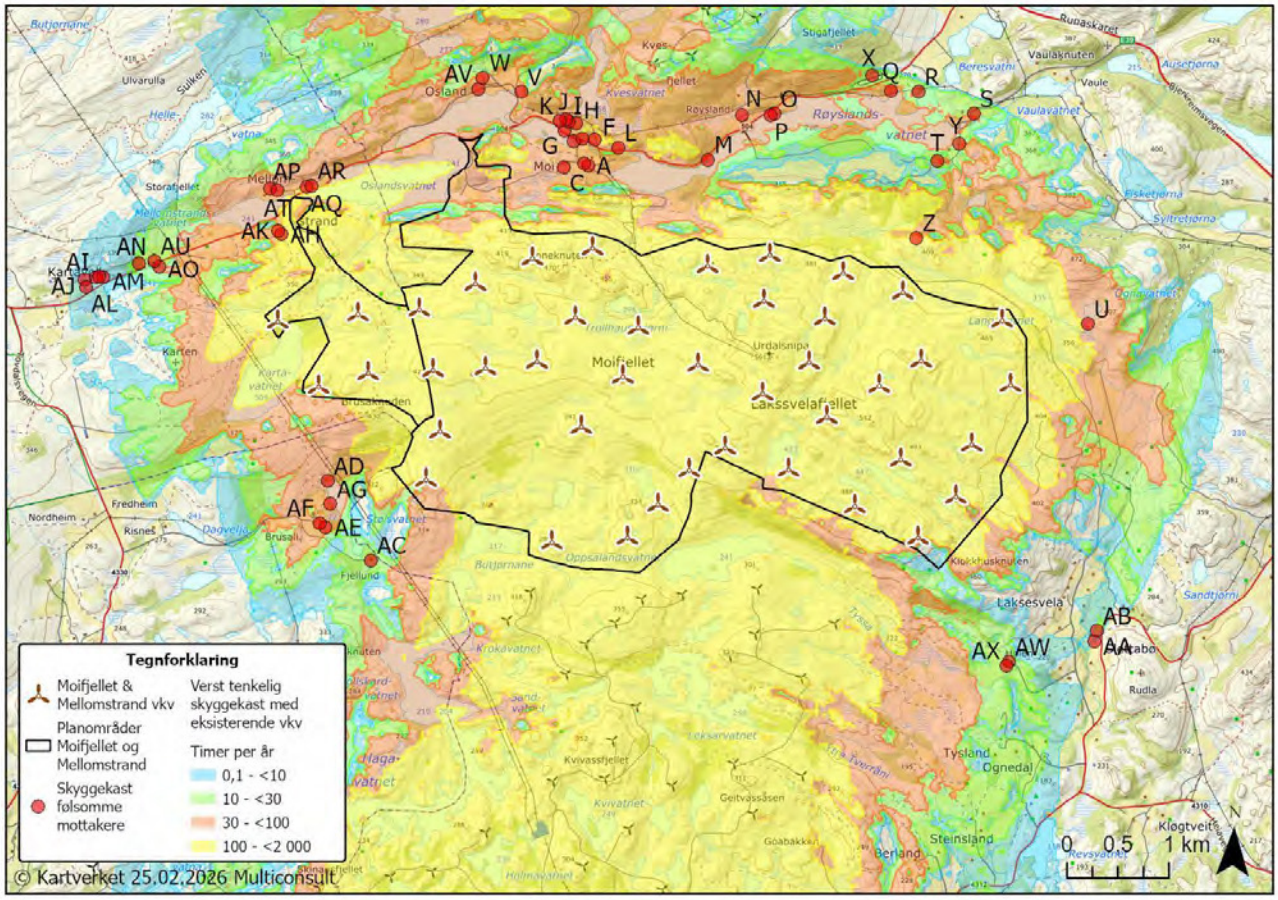
5.2 Resultater for Moifjellet og Mellomstrand vindkraftverk med sumvirkninger fra nærliggende vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet og Mellomstrand vindkraftverk med hensyn til nærliggende vindkraftverk. Resultatene og diskusjonen rundt disse vil ha samme oppsett som i forrige kapittel for å gi et godt sammenligningsgrunnlag, og tydelig vise hvilke skyggekastmottakere som får ekstra belastning på grunn av sumvirkningen av flere vindkraftverk.

For de eksisterende nærliggende vindkraftverkene benyttes Moifjellets vindrose som grunnlag for beregningene i det realistiske scenarioet. Dette medfører en mindre grad av unøyaktighet, mest for vindkraftverket mot nord, fordi mellomliggende terreng vil påvirke den faktiske vindrosen i de andre vindkraftverkene noe. Denne unøyaktigheten er vurdert som liten, siden avstandene mellom vindkraftverkene er små.

5.2.1 Kart – Verst tenkelig scenario

Figur 5-6 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer som følge av alle de tre vindkraftverkene rundt Moifjellet og Mellomstrand vindkraftverk sitt influensområde.



Figur 5-6:Teoretisk verst tenkelig skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

Når man tar hensyn til nærliggende vindkraftverk ser man en større utstrekning nord og sør for Moifjellet og Mellomstrand av arealer som ligger over anbefalt grenseverdi, spesielt røde arealer har blitt større. Dette er naturlig siden disse vindkraftverkene hver for seg vil lage skyggekast som nå legges sammen for en større total belastning. Figuren viser at det vil bli mer skyggekast sør for Moifjellet og Mellomstrand vindkraftverk, men der er det ikke registret noen mottakere. Områdene nord for planområdet er i hovedsak fremdeles rød og det forventes av den grunn ikke særlig endring for mottakerne som er lokalisert der.

5.2.2 Individuelle mottakere – Verst tenkelig scenario

Tabell 5-3 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i Figur 3-2 og tar hensyn til sumvirkninger fra alle vindkraftverkene. Resultatene er vist med de samme oppsettet som delresultatene i avsnitt 5.1.2, der første er vist i kolonnene «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonne «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Den tredje kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), gir belastningen på den verste dagen.

Tabell 5-3: Teoretisk skyggekast for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk med hensyn til nærliggende vindkraftverk. Kolonne 6, 7 og 8 (i grått) er hentet fra tabell 5-1 for verst tenkelig skyggekast for Moifjellet og Mellomstrand uten nærliggende vindkraftverk for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/ år	Dager /år	Timer/ dag (verste dag)	*Timer/ år*	*Dager/ år*	*Timer/ dag (verste dag)*
A	Moi 32	91:38	112	01:42	91:38	112	01:42
B	Moi 26	89:39	100	01:41	89:39	100	01:41
C	Moi 21	86:06	91	01:50	86:06	91	01:50
D	Buevegen 1805	86:46	113	01:28	86:46	113	01:28
E	Buevegen 1816	88:55	117	01:28	88:55	117	01:28
F	Buevegen 1818	93:48	136	01:27	93:48	136	01:27
G	Buevegen 1786	74:46	111	01:30	74:46	111	01:30
H	Buevegen 1784	84:32	122	01:27	84:32	122	01:27
I	Buevegen 1782	83:59	124	01:28	83:59	124	01:28
J	Buevegen 1780	84:10	121	01:29	84:10	121	01:29
K	Buevegen 1778	70:27	91	01:27	70:27	91	01:27
L	Buevegen 1850	93:42	157	01:31	93:42	157	01:31
M	Buevegen 1941	59:05	78	01:35	59:05	78	01:35
N	Buevegen 1988	52:08	72	01:06	52:08	72	01:06
O	Buevegen 2023	44:00	60	01:14	44:00	60	01:14
P	Buevegen 2021	41:34	54	01:14	41:34	54	01:14
Q	Buevegen 2141	38:26	104	00:35	38:26	104	00:35
R	Buevegen 2165	27:56	84	00:27	27:56	84	00:27
S	Vaule 176	22:57	89	00:22	22:57	89	00:22
T	Vaule 247	33:51	96	00:42	33:51	96	00:42
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	88:23	178	01:03	88:23	178	01:03
V	Osland 45	40:04	74	00:43	40:04	74	00:43
W	Osland 65	38:02	93	00:32	38:02	93	00:32
X	Buevegen 2100	18:09	68	00:20	18:09	68	00:20
Y	Vaule 218	26:05	77	00:41	26:05	77	00:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	275:29	207	02:12	275:29	207	02:12
AA	Heiavegen 543	00:55	23	00:04	00:55	23	00:04

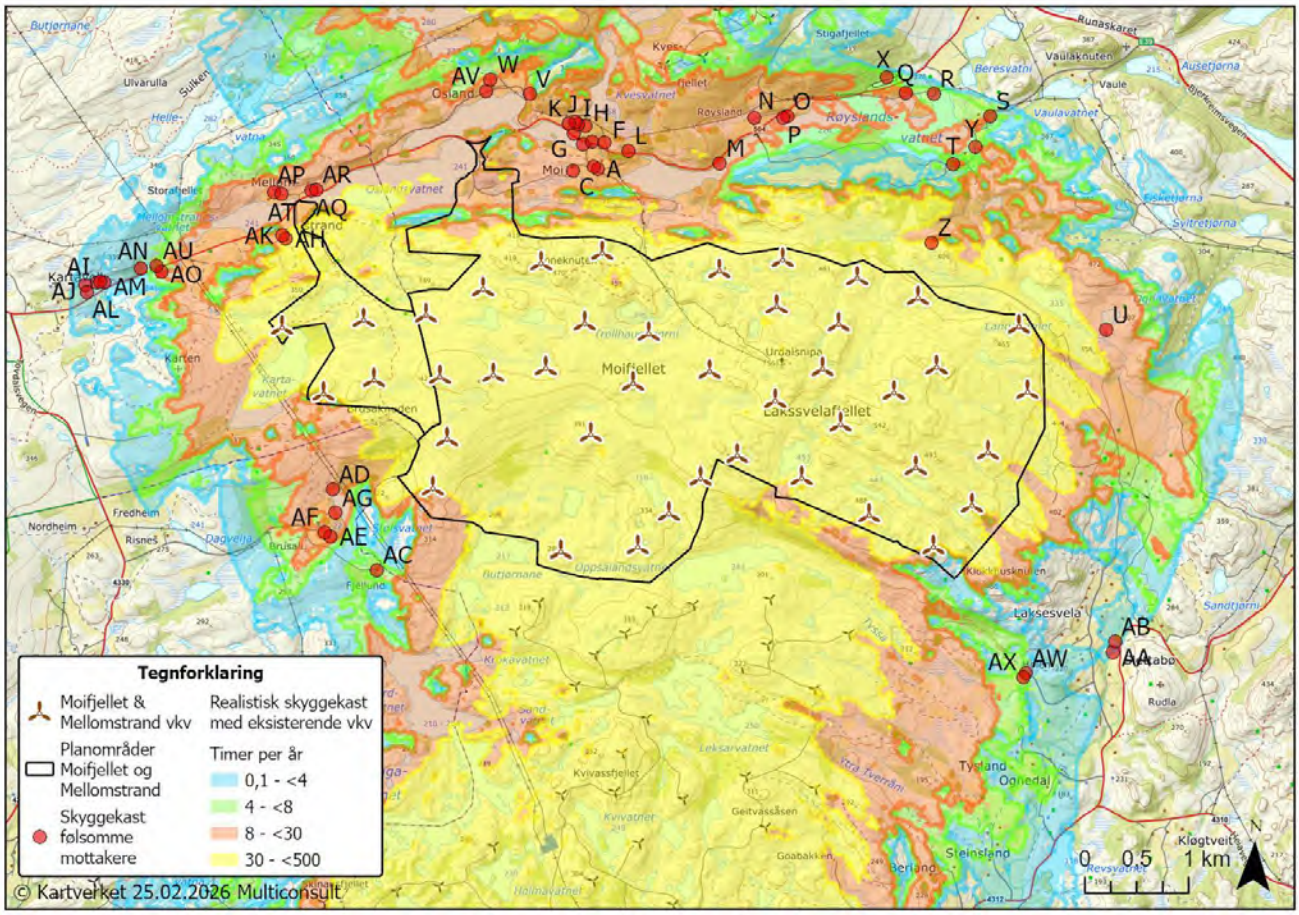
AB	Heiavegen 541	08:56	44	00:16	08:56	44	00:16
AC	**Brusalivegen 201**	**20:48**	**76**	**00:28**	**00:00**	**0**	**00:00**
AD	**Eiendom 1121/8, Hå kommune**	**55:08**	**140**	**00:39**	**51:19**	**110**	**00:39**
AE	**Brusalivegen 217**	**45:46**	**111**	**00:37**	**38:11**	**72**	**00:37**
AF	**Brusalivegen 215**	**35:48**	**111**	**00:33**	**28:44**	**73**	**00:33**
AG	**Brusalivegen 219**	**55:36**	**141**	**00:40**	**48:21**	**103**	**00:40**
AH	Buevegen 1463	141:02	185	01:16	141:02	185	01:16
AI	Buevegen 1288	06:49	26	00:21	06:49	26	00:21
AJ	Buevegen 1272	06:04	24	00:20	06:04	24	00:20
AK	Buevegen 1461	130:01	182	01:14	130:01	182	01:14
AL	Buevegen 1270	05:09	22	00:20	05:09	22	00:20
AM	Buevegen 1290	07:22	26	00:22	07:22	26	00:22
AN	Buevegen 1292	10:45	32	00:26	10:45	32	00:26
AO	Buevegen 1343	26:21	76	00:36	26:21	76	00:36
AP	Buevegen 1496	70:50	130	00:51	70:50	130	00:51
AQ	Buevegen 1500	100:51	144	01:18	100:51	144	01:18
AR	Buevegen 1502	100:26	142	01:18	100:26	142	01:18
AS	Buevegen 1286	07:05	26	00:21	07:05	26	00:21
AT	Buevegen 1498	85:06	130	01:04	85:06	130	01:04
AU	Buevegen 1340	12:49	36	00:28	12:49	36	00:28
AV	Osland 85	38:33	102	00:32	38:33	102	00:32
AW	**Laksesvela 60**	**15:45**	**79**	**00:18**	**00:00**	**0**	**00:00**
AX	**Laksesvela 58**	**16:20**	**82**	**00:18**	**00:00**	**0**	**00:00**

Det er noen forskjeller mellom denne tabellen og tabell 5-1 i avsnitt 5.2. Det er 7 mottakere som kan oppleve en forskjell når man tar til betraktning sumvirkninger. For 4 av de 7 mottakere (AD-AG) er det bare endring i timer per år og antall dager hvor det oppleves skyggekast, men det er ingen forskjell på timer per dag. De tre siste mottakerne (AC, AW og AX) opplever ingenting fra Moifjellet og Mellomstrand men opplever skyggekast fra nærliggende vindkraftverk og har derfor en økning i tabellen. Basert på den maksimerte teoretiske analysen vil det ikke bli stor endring for mottakerne når man ser på sumeffekten av alle aktuelle nærliggende vindkraftverk. Det vil kunne bli en endring på antall timer over et helt år, men ingen endring i hva som maksimalt kan oppleves gjennom en dag, med unntak av mottaker AC, AW og AX. Selv om den verste dagen fortsatt vil ha samme belastning, kan det bli flere dager med høy skyggekastbelastning, noe som kan merkes.

5.2.3 Kart – Realistisk scenario

Figur 5-7 viser et tilsvarende kart som Figur 5-6, men nå er en solskinnssannsynlighet på 50% tatt med og driftstid basert på vindrosen tatt med.

Sammenlignet med maksimalt teoretisk i avsnitt 5.2.2 kan man observere en liten endring. Selv om endringen ikke er svært merkbar, viser kartet at arealene har blitt noe redusert. Spesielt ser man at andelen av røde og gule områder har minsket, og disse strekker seg ikke like langt ut som tidligere.



Figur 5-7: Realistisk skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

5.2.4 Individuelle mottakere – Realistisk scenario

Tabell 5-4 oppsummerer resultatet av det realistiske scenarioet. Det er benyttet samme metodikk som i avsnitt 5.1.4. Sammenlignet med tallene for teoretisk maksimum (se Tabell 5-3) er disse tallene redusert både på grunn av 50% solskinnssannsynlighet og driftstiden til turbinene, som tar høyde for vindrosen. Antall timer er betraktelig redusert. Mottakeren som anses å være mest utsatt for skyggekast opplever nesten 65 timer per år (mottaker Z). Denne fritidsboligen er under bygging og ligger i nærhet av planområdet, omtrent 550 meter unna nærmeste turbin og det er derfor forventet at vil ha en stor belastning. Tabellen viser i tillegg økningen av forventet skyggekasttimer per år når man tar med sumvirkninger.

Tabell 5-4: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk med hensyn til nærliggende vindkraftverk. Tabellen viser økning i antatt skyggekast for realistisk scenario når det tas hensyn til sumvirkninger (økning fra tabell 5.2). De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Økning
A	Moi 32	23:03	-
B	Moi 26	22:23	-
C	Moi 21	21:52	-
D	Buevegen 1805	21:39	-
E	Buevegen 1816	22:11	-
F	Buevegen 1818	23:19	-

G	Buevegen 1786	18:42	-
H	Buevegen 1784	20:47	-
I	Buevegen 1782	20:49	-
J	Buevegen 1780	20:55	-
K	Buevegen 1778	17:24	-
L	Buevegen 1850	23:02	-
M	Buevegen 1941	14:26	-
N	Buevegen 1988	12:51	-
O	Buevegen 2023	10:56	-
P	Buevegen 2021	10:19	-
Q	Buevegen 2141	09:10	-
R	Buevegen 2165	06:35	-
S	Vaule 176	05:01	-
T	Vaule 247	08:22	-
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	21:46	-
V	Osland 45	09:51	-
W	Osland 65	10:12	-
X	Buevegen 2100	04:23	-
Y	Vaule 218	05:48	-
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	65:33	-
AA	Heiavegen 543	00:16	-
AB	Heiavegen 541	02:37	-
AC	Brusalivegen 201	05:52	05:52
AD	Eiendom 1121/8, Hå kommune	13:45	01:07
AE	Brusalivegen 217	10:58	02:10
AF	Brusalivegen 215	08:43	02:01
AG	Brusalivegen 219	13:34	02:06
AH	Buevegen 1463	37:39	-
AI	Buevegen 1288	01:53	-
AJ	Buevegen 1272	01:40	-
AK	Buevegen 1461	34:46	-
AL	Buevegen 1270	01:24	-
AM	Buevegen 1290	02:02	-
AN	Buevegen 1292	03:03	-
AO	Buevegen 1343	07:32	-
AP	Buevegen 1496	18:59	-
AQ	Buevegen 1500	26:38	-
AR	Buevegen 1502	26:23	-
AS	Buevegen 1286	01:58	-

AT	Buevegen 1498	22:52	-
AU	Buevegen 1340	03:41	-
AV	Osland 85	10:20	-
AW	Laksesvela 60	4:04	04:04
AX	Laksesvela 58	4:14	04:14

Når nærliggende vindkraftverk tas med i vurderingen, endres resultatene slik at én mottaker som tidligere lå under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast, nå får et beregnet skyggekast som overstiger grenseverdien (mottaker AF). Det er 17 mottakere som er under anbefalt grenseverdi (mottakere R, S, X, Y, AA – AC, AI, AJ, AL – AO, AS, AU, AW og AX). Åtte av mottakerne er lokalisert ved Kartavoll, en sørvest for området, fire sørøst for området og fire nordøst for området. Resultatene fra Tabell 5-4 viser at skyggekast fra flere vindkraftverk kan forekomme, det er en mottaker (mottaker AF) som går over anbefalt grenseverdi når man tar betraktning av nærliggende vindkraftverk. Det vil si at de nærliggende vindkraftverkene fører til en økning i den totale skyggekastbelastningen for enkelte mottakere.

Basert på hvilke mottakere som opplever en økning i skyggekast, kan vi konkludere med at det er Bjerkreim vindkraftverk, som ligger sør for Moifjellet og Mellomstrand som fører til økt skyggekastbelastning.

Det vil si at for kun Moifellet og Mellomstrand vindkraftverk er det hovedsakelig mottakerne nord for vindkraftverket som belastes over anbefalt grenseverdi. Mens når man tar hensyn til nærliggende vindkraftverk vil noen av mottakere til øst og til vest merke en større belastning, over anbefalt grenseverdi.

Det er ingen av mottakerne som opplever skyggekast over anbefalt grenseverdi fra de eksisterende vindkraftverkene. De mottakerne som merker en belastning fra eksisterende, opplever det i hovedsak tidlig på morgenen eller sent på kvelden i sommerhalvåret. Det er ulike tidspunkt og på ulike tider av året enn hva det forventes Moifjellet og Mellomstrand vindkraftverk vil bidra med. Det vil si at det vil bidra med mer skyggekast på flere tidspunkt igjennom dagen. En oversikt over når hver mottaker opplever skyggekast ligger i vedlegg.

6 Reslultater for alternativ 2: Moifjellet

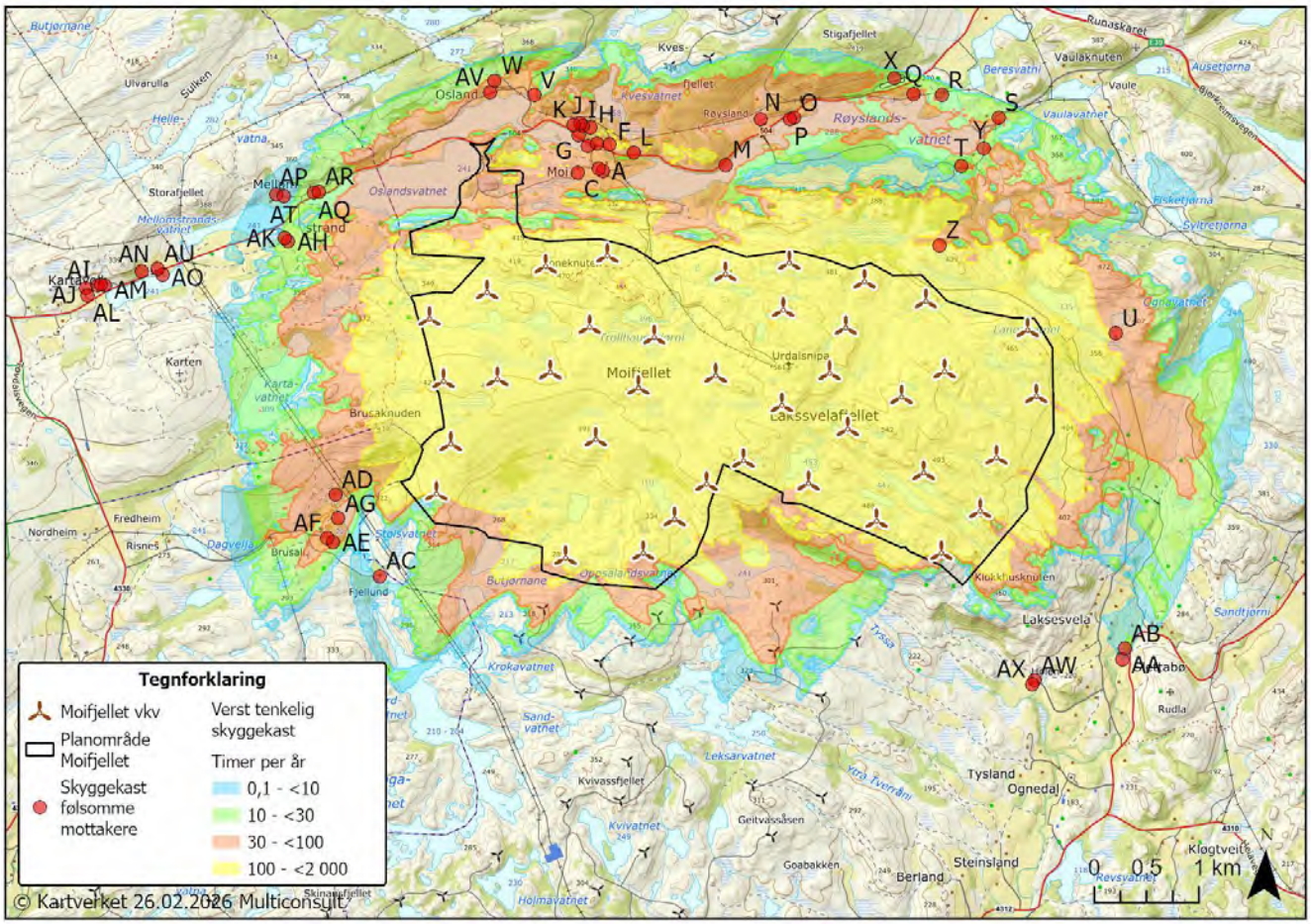
6.1 Resultater for Moifjellet vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet vindkraftverk. Det er ikke tatt hensyn til sumvirkninger i dette kapittelet, de vises i kapittel 6.2.

6.1.1 Kart – Verst tenkelig scenario

Figur 6-1 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer fra vindkraftverket.

Figuren gir en god indikasjon på hvilke områder og mottakere som vil bli utsatt for skyggekast. Nord til nordvest for vindkraftverket er det en konsentrasjon av røde områder, med noen gule flekker, som indikerer høy skyggekastpåvirkning. Boliger i disse områdene kan derfor bli betydelig utsatt for skyggekast.



Figur 6-1: Teoretisk verst tenkelig scenario, målt i antall timer per år.

6.1.2 Individuelle mottakere – Verst tenkelig scenario

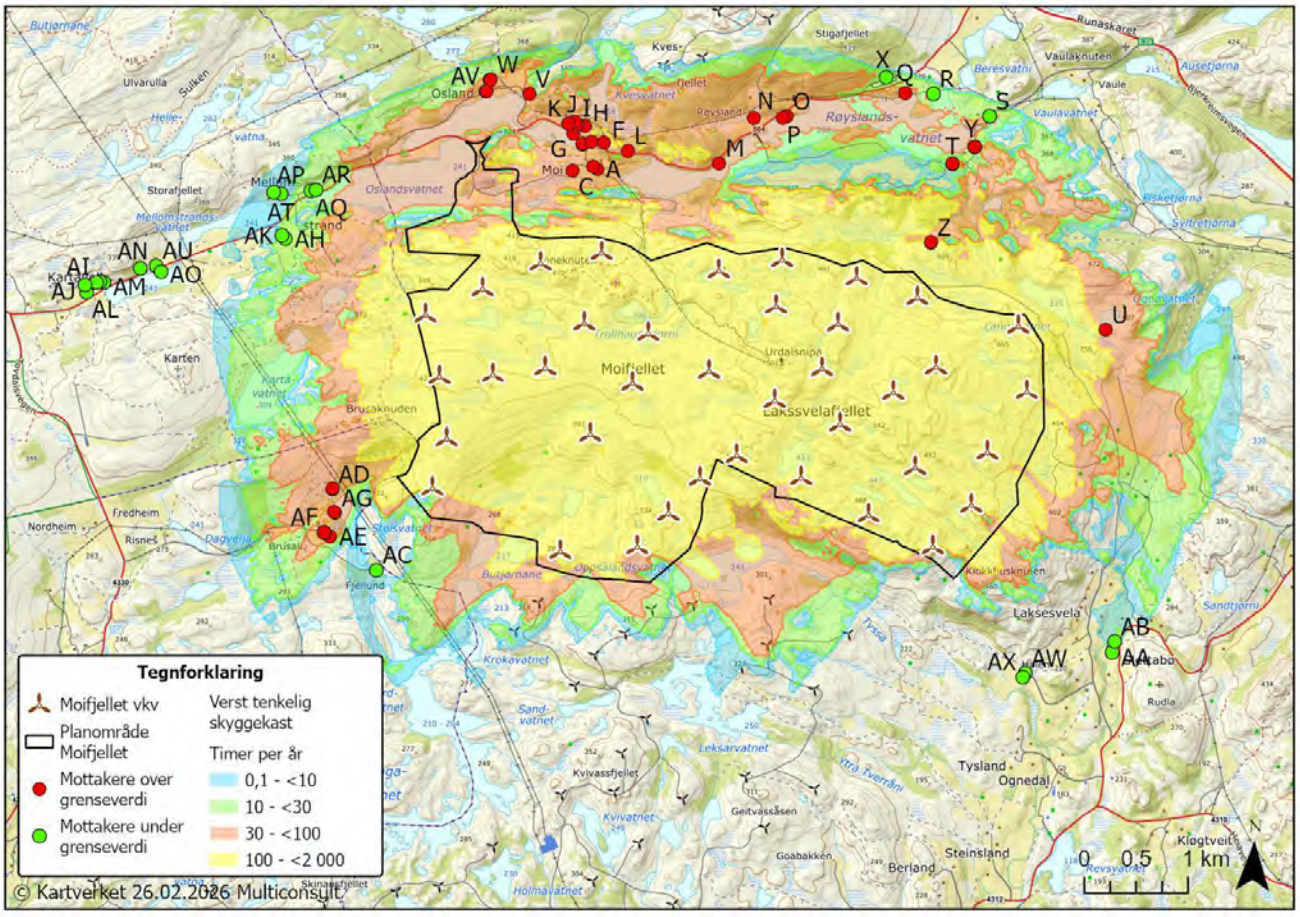
Tabell 6-1 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i avsnitt 3.1. Det kommer tre delresultater fra beregningen. Det første er vist i kolonnen «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonnen «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Den tredje kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), gir belastningen på den verste dagen.

Tabell 6-1: Maksimalt teoretisk skyggekast for skyggekastmottakerne for Moifjellet vindkraftverk. Kolonnen «Timer/år» gir totalt antall timer skyggekast på mottakeren per år. Kolonnen «Dager/år» gir antallet dager per år det inntreffer skyggekast i det hele tatt. Kolonnen «Timer/dag (verste dag)» gir antallet timer skyggekast på den dagen med aller størst belastning. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Dager/år	Timer/dag (verste dag)
A	Moi 32	91:38	112	1:42
B	Moi 26	89:39	100	1:41
C	Moi 21	86:06	91	1:50
D	Buevegen 1805	86:46	113	1:28
E	Buevegen 1816	88:55	117	1:28
F	Buevegen 1818	93:48	136	1:27
G	Buevegen 1786	74:46	111	1:30
H	Buevegen 1784	84:32	122	1:27
I	Buevegen 1782	83:59	124	1:28
J	Buevegen 1780	84:10	121	1:29
K	Buevegen 1778	70:27	91	1:27
L	Buevegen 1850	93:42	157	1:31
M	Buevegen 1941	59:05	78	1:35
N	Buevegen 1988	52:08	72	1:06
O	Buevegen 2023	44:00	60	1:14
P	Buevegen 2021	41:34	54	1:14
Q	Buevegen 2141	38:26	104	0:35
R	Buevegen 2165	27:56	84	0:27
S	Vaule 176	22:57	89	0:22
T	Vaule 247	33:51	96	0:42
U	Store Svela, eiendom 60/5, Bjerkreim kommune	88:23	178	1:03
V	Osland 45	40:04	74	0:43
W	Osland 65	38:02	93	0:32
X	Buevegen 2100	18:09	68	0:20
Y	Vaule 218	26:05	77	0:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	275:29	207	2:12
AA	Heiavegen 543	0:55	23	0:04
AB	Heiavegen 541	8:56	44	0:16
AC	Brusalivegen 201	0:00	0	0:00
AD	Eiendom 121/8, Hå kommune	51:19	110	0:39
AE	Brusalivegen 217	38:11	72	0:37
AF	Brusalivegen 215	28:44	73	0:33
AG	Brusalivegen 219	48:21	103	0:40
AH	Buevegen 1463	22:57	83	0:25
AI	Buevegen 1288	0:00	0	0:00

AJ	Buevegen 1272	0:00	0	0:00
AK	Buevegen 1461	15:23	55	0:24
AL	Buevegen 1270	0:00	0	0:00
AM	Buevegen 1290	0:00	0	0:00
AN	Buevegen 1292	0:00	0	0:00
AO	Buevegen 1343	0:00	0	0:00
AP	Buevegen 1496	7:33	28	0:21
AQ	Buevegen 1500	17:35	62	0:24
AR	Buevegen 1502	18:16	62	0:24
AS	Buevegen 1286	0:00	0	0:00
AT	Buevegen 1498	8:10	30	0:21
AU	Buevegen 1340	0:00	0	0:00
AV	Osland 85	38:33	102	0:32
AW	Laksesvela 60	0:00	0	0:00
AX	Laksesvela 58	0:00	0	0:00

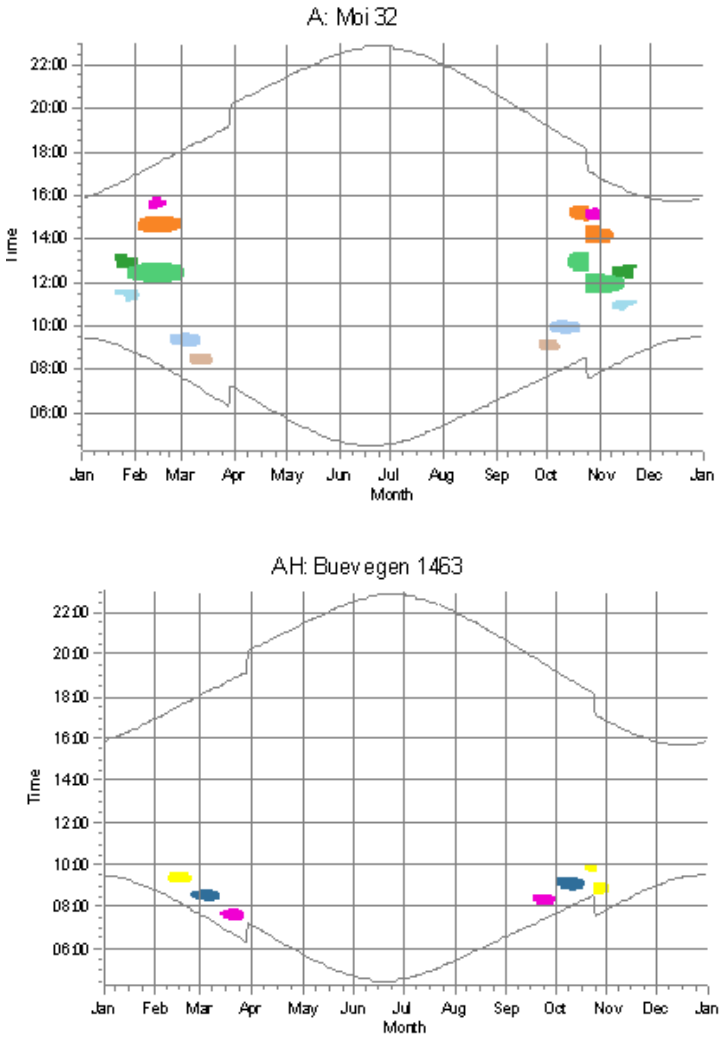
Det er anslått at 22 av 50 mottakere ligger under NVEs anbefalte grenseverdi for teoretisk maksimalt skyggekast. Det er 14 mottakere som er under hvis man bare ser på mottakere innenfor 2 km av Moifjellet vindkraftverk, men for sammenligning er alle mottakerne fra alternativ 1 tatt med. Se Figur 6-2 der disse 22 mottakerne er vist med grønne prikker. Tre av disse mottakerne er lokalisert nordøst for planområdet nært Røyslandsvatnet (mottakere R, S og X i tabell), 14 mottakere er lokalisert nordvest for planområdet ved Mellomstrand/Kartavoll (mottakere AH – AU i tabell), en er lokalisert sørvest for planområdet ved Fjellund (mottaker AC i tabell) og fire er lokalisert sørøst for planområdet ved Slettabø og Holen (mottakere AA, AB, AW og AX i tabell). Den mottakeren som blir mest utsatt for skyggekast er omtrent 553 meter unna en turbin (mottaker Z i tabell).



Figur 6-2: Verst tenkelig skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi.

Mange av de mest utsatte boligene og fritidsbygningene er lokalisert rett nord for vindkraftverket, noe som gjør det sannsynlig at de vil oppleve skyggekast på samme tid i løpet av dagen. Grunnet boligenes posisjon i forhold til vindkraftverket og solens bane vil de fleste av mottakerne mest sannsynlig oppleve mest skyggekast på dagtid, mellom 9 - 16. Mottakernes lokalisering kombinert med solens bevegelsesmønster gjør at belastningen av skyggekast på mottakerne er høyest når solen står høyest på himmelen i løpet av vinterhalvåret. Da strekker skyggen fra vindturbinene seg lenger og mottakerne i nord opplever skyggekast. De fleste av mottakerne vil kun oppleve skyggekast om vinteren, mens noen få vil kunne merke det også i sen høst og tidlig vår. Seks av mottakerne kan imidlertid oppleve skyggekast om sommeren, men da enten tidlig om morgenen eller sent på kvelden.

Figur 6-3 illustrerer når to mottakere forventes å oppleve skyggekast gjennom året (x-aksen), samt på hvilke tidspunkter av døgnet dette skjer (y-aksen). De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast. Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast. Mottakerne A og AH er valgt for å illustrere den forventede skyggekastbelastningen for de områdene som ligger nord og nordvest for planområdet, og som trolig vil oppleve ulik belastning fra de to alternativene. En fullstendig oversikt over når hver mottaker kan forvente skyggekast for alle fire scenarioene legges ved rapporten som vedlegg.

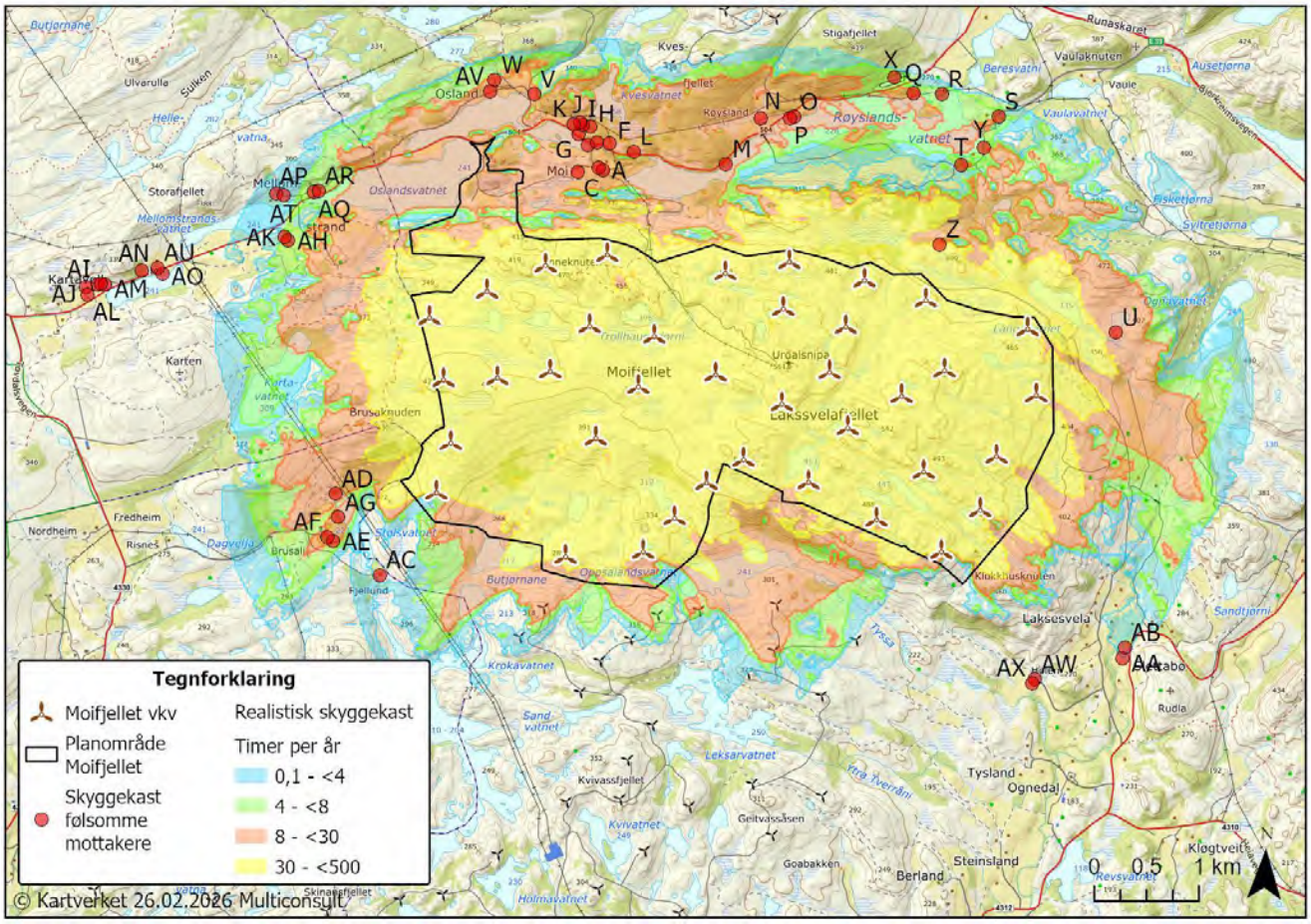


Figur 6-3: Forventet tidspunkt for skyggekast for mottaker A og AH. De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast. Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast Mottaker A er lokalisert nord for planområdet, mens mottaker AH ligger nordvest for planområdet.

6.1.3 Kart – Realistisk scenario

Figur 6-4 viser et tilsvarende kart som Figur 6-1, men nå er en solskinnssannsynlighet på 50% og driftstid basert på vindrosen tatt med. Forskjellen i resultatet er at simuleringen først beregner teoretisk maksimum som om sola skinner hele tiden (nøyaktig på samme vis som vist i Figur 6-1), og deretter reduseres denne teoretiske maksimumsbelastningen med 50%, basert på antakelsen om at faktisk solskinn bare inntreffer halvparten av tiden. I tillegg justeres belastningen med en driftstid på totalt 7000 timer, basert på vindrosen og driftstid per sektor/vindretning.

Sammenlignet med maksimalt teoretisk skyggekast reduseres utstrekningen av skyggekast noe, og områdene som viser verdier over anbefalt nivå krymper. Denne reduksjonen er imidlertid ikke betydelig nok til å være visuelt fremtredende. Kartet indikerer at arealene med høy belastning forblir omfattende, noe som indikerer at de fleste mottakerne fremdeles vil bli eksponert for skyggekast i mengder som overskrider anbefalte verdier.



Figur 6-4: Realistisk scenario med antall timer per år.

6.1.4 Individuelle mottakere – Realistisk scenario

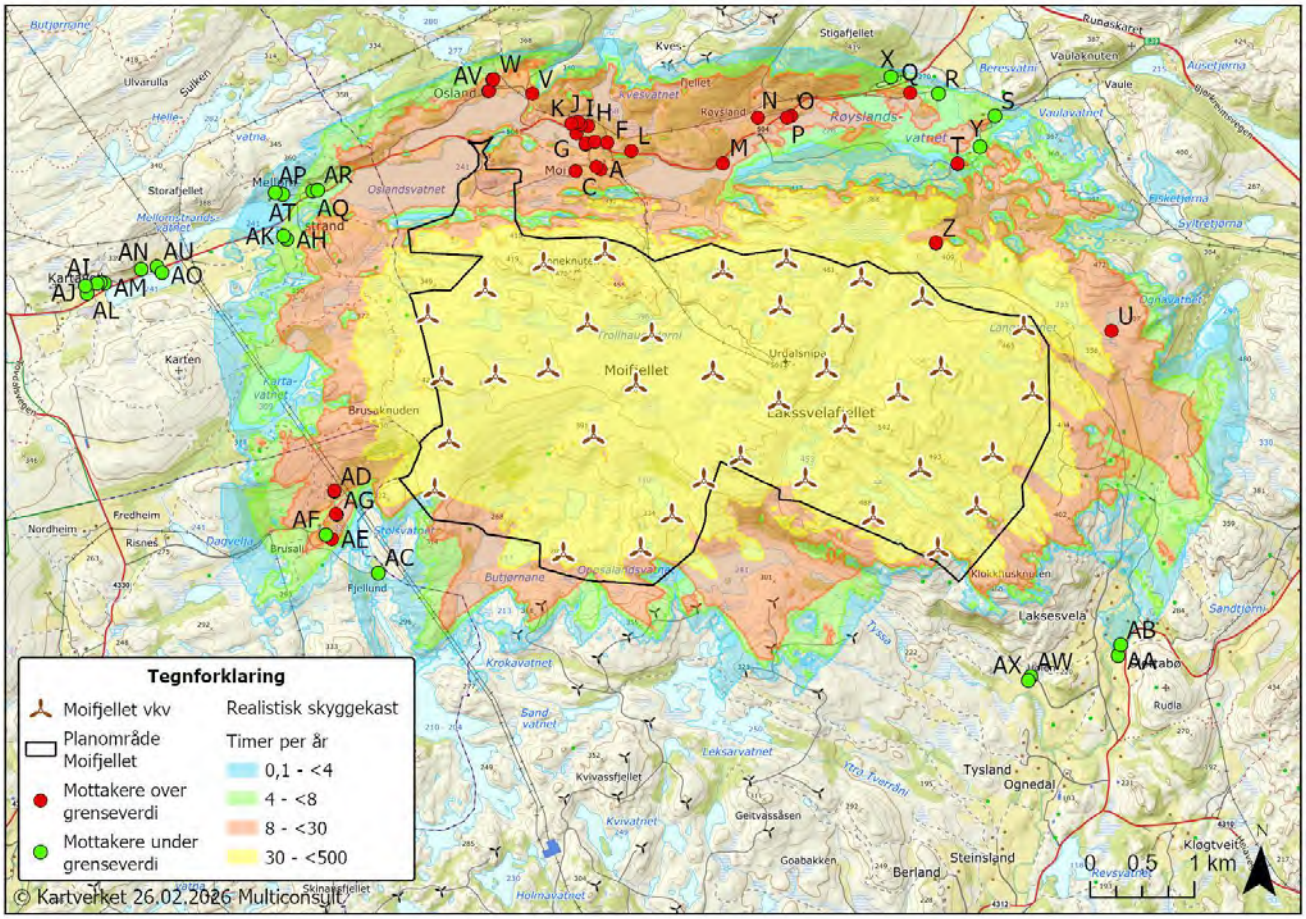
Tabell 6-2 oppsummerer resultatet av den realistiske skyggekastbelastningen. Sammenlignet med tallene for teoretisk maksimum (se Tabell 6-1) er disse tallene redusert både på grunn av 50% solskinnssannsynlighet og driftstiden til turbinene.

Tabell 6-2: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet vindkraftverk definert i avsnitt 3.1. Tredje kolonne «Timer/dag (verste dag)» er hentet fra Tabell 6-1 for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	*Timer/år (verst tenkelig)*
A	Moi 32	23:03	91:38
B	Moi 26	22:23	89:39
C	Moi 21	21:52	86:06
D	Buevegen 1805	21:39	86:46
E	Buevegen 1816	22:11	88:55
F	Buevegen 1818	23:19	93:48
G	Buevegen 1786	18:42	74:46
H	Buevegen 1784	20:47	84:32
I	Buevegen 1782	20:49	83:59
J	Buevegen 1780	20:55	84:10

K	Buevegen 1778	17:24	70:27
L	Buevegen 1850	23:02	93:42
M	Buevegen 1941	14:26	59:05
N	Buevegen 1988	12:51	52:08
O	Buevegen 2023	10:56	44:00
P	Buevegen 2021	10:19	41:34
Q	Buevegen 2141	9:10	38:26
R	Buevegen 2165	6:35	27:56
S	Vaule 176	5:01	22:57
T	Vaule 247	8:22	33:51
U	Store Svela, eiendom 60/5, Bjerkreim kommune	21:46	88:23
V	Osland 45	9:51	40:04
W	Osland 65	10:12	38:02
X	Buevegen 2100	4:23	18:09
Y	Vaule 218	5:48	26:05
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	65:33	275:29
AA	Heiavegen 543	0:16	0:55
AB	Heiavegen 541	2:37	8:56
AC	Brusalivegen 201	0:00	0:00
AD	Eiendom 121/8, Hå kommune	12:38	51:19
AE	Brusalivegen 217	8:48	38:11
AF	Brusalivegen 215	6:42	28:44
AG	Brusalivegen 219	11:28	48:21
AH	Buevegen 1463	6:36	22:57
AI	Buevegen 1288	0:00	0:00
AJ	Buevegen 1272	0:00	0:00
AK	Buevegen 1461	4:24	15:23
AL	Buevegen 1270	0:00	0:00
AM	Buevegen 1290	0:00	0:00
AN	Buevegen 1292	0:00	0:00
AO	Buevegen 1343	0:00	0:00
AP	Buevegen 1496	2:13	7:33
AQ	Buevegen 1500	5:06	17:35
AR	Buevegen 1502	5:18	18:16
AS	Buevegen 1286	0:00	0:00
AT	Buevegen 1498	2:24	8:10
AU	Buevegen 1340	0:00	0:00
AV	Osland 85	10:20	38:33
AW	Laksesvela 60	0:00	0:00
AX	Laksesvela 58	0:00	0:00

Det er estimert at 24 mottakere befinner seg under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast (mottakere R, S, X, Y, AA – AC, AF, AH – AU, AW og AU), se Figur 6-5. Av disse 24 er 22 de samme som også lå under grenseverdien i det maksimale teoretiske scenarioet. De to mottakerne, Y og AF, som kun ligger under grenseverdien i det realistiske scenarioet, er lokalisert sørvest og nordøst for planområdet.



Figur 6-5: Realistisk skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi

Den mottakeren som befinner seg nærmest turbinene, er den som er mest utsatt for skyggekast. Dette antyder at både fysisk avstand fra turbinene og den lokale topografien spiller en sentral rolle i hvor mye skyggekast en mottaker vil oppleve.

For mottakerne som opplever skyggekast rundt midt på dagen, reduseres varigheten av skyggekast primært på grunn av lavere sannsynlighet for solskinn. Dette betyr at selv om skyggekast teoretisk sett kan vare lenger, vil faktiske værforhold, som perioder med overskyet vær, bidra til å korte ned skyggekastets varighet. Dermed oppstår en reduksjon i skyggekastets påvirkning, selv i de mest utsatte periodene, noe som fører til en lavere faktisk eksponering enn beregningene for teoretisk maksimalt skyggekast skulle tilsi. For eksempel Buevegen 2023 (mottaker O) har gått fra 44:00 til 10:56 og Brusalivegen 215 (mottaker AF) har gått fra 28:44 til 7:23. Det er viktig å nevne at Buevegen 2023 fortsatt ikke er under grenseverdiene, mens Brusalivegen 215 er under grenseverdi for begge scenarioene for timer per år, men var målt til over grenseverdi for verst tenkelig på grunn av timer per dag.

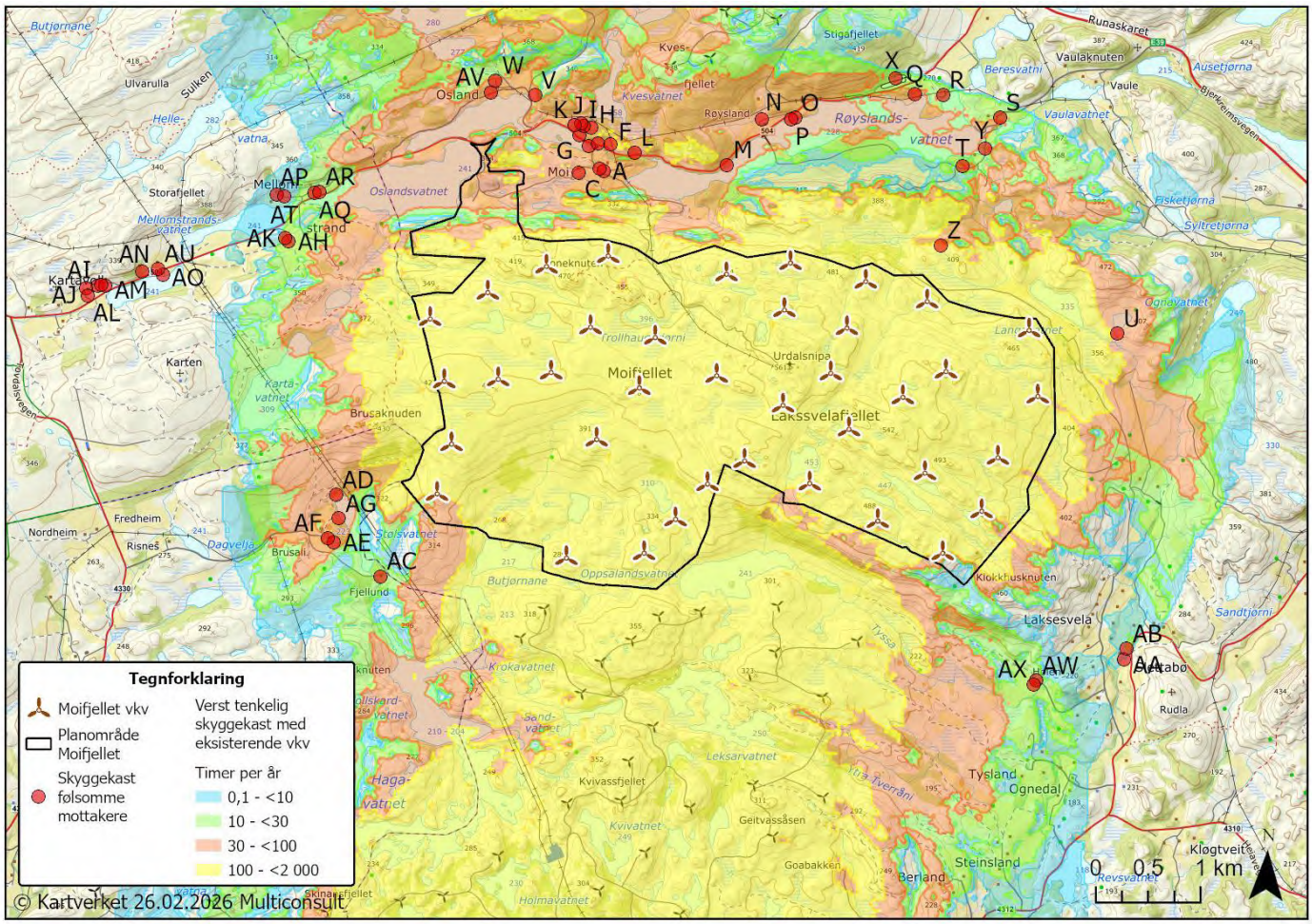
6.2 Resultater for sumvirkninger fra nærliggende vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet vindkraftverk med hensyn til nærliggende vindkraftverk. Resultatene og diskusjonen rundt disse vil ha samme oppsett som i forrige kapittel for å gi et godt sammenligningsgrunnlag, og tydelig vise hvilke skyggekastmottakere som får ekstra belastning på grunn av sumvirkningen av flere vindkraftverk.

Noter at for realistisk skyggekastberegning er vindrosen for Moifjellet benyttet. Dette kan medføre en viss unøyaktighet når den anvendes på de andre vindkraftverkene, da vindrosen spesifikt representerer vindforholdene ved Moifjellet og ikke nødvendigvis de eksakte forholdene ved de andre lokasjonene.

6.2.1 Kart – Verst tenkelig scenario

Figur 6-6 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer som følge av alle de tre vindkraftverkene rundt Moifjellet vindkraftverk sitt influensområde.



Figur 6-6:Teoretisk verst tenkelig skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

Når man tar hensyn til nærliggende vindkraftverk ser man en større utstrekning nord og sør for Moifjellet av arealer som ligger over anbefalt grenseverdi, spesielt røde arealer har blitt større. Dette er naturlig siden disse vindkraftverkene hver for seg vil lage skyggekast som nå legges sammen for en større total belastning. Figuren viser at det vil bli mer skyggekast sør for Moifjellet vindkraftverk, men der er det ikke registret noen mottakere. Områdene nord for planområdet er i hovedsak fremdeles rød og det forventes av den grunn ikke særlig endring for mottakerne som er lokalisert der.

6.2.2 Individuelle mottakere – Verst tenkelig scenario

Tabell 6-3 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i Figur 3-2 og tar hensyn til sumvirkninger fra alle vindkraftverkene. Resultatene er vist med de samme oppsettet som delresultatene i avsnitt , der første er vist i kolonnene «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonne «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Den tredje kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), gir belastningen på den verste dagen.

Tabell 6-3: Teoretisk skyggekast for skyggekastmottakerne for Moifjellet vindkraftverk med hensyn til nærliggende vindkraftverk. Kolonne 6, 7 og 8 (i grått) er hentet fra Tabell 6-1 for skyggekast for Moifjellet uten nærliggende vindkraftverk for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	**Timer/år**	**Dager/ år**	**Timer/ dag (verste dag)**	*Timer/år*	*Dager /år*	*Timer/ dag (verste dag)*
A	Moi 32	91:38	112	1:42	91:38	112	1:42
B	Moi 26	89:39	100	1:41	89:39	100	1:41
C	Moi 21	86:06	91	1:50	86:06	91	1:50
D	Buevegen 1805	86:46	113	1:28	86:46	113	1:28
E	Buevegen 1816	88:55	117	1:28	88:55	117	1:28
F	Buevegen 1818	93:48	136	1:27	93:48	136	1:27
G	Buevegen 1786	74:46	111	1:30	74:46	111	1:30
H	Buevegen 1784	84:32	122	1:27	84:32	122	1:27
I	Buevegen 1782	83:59	124	1:28	83:59	124	1:28
J	Buevegen 1780	84:10	121	1:29	84:10	121	1:29
K	Buevegen 1778	70:27	91	1:27	70:27	91	1:27
L	Buevegen 1850	93:42	157	1:31	93:42	157	1:31
M	Buevegen 1941	59:05	78	1:35	59:05	78	1:35
N	Buevegen 1988	52:08	72	1:06	52:08	72	1:06
O	Buevegen 2023	44:00	60	1:14	44:00	60	1:14
P	Buevegen 2021	41:34	54	1:14	41:34	54	1:14
Q	Buevegen 2141	38:26	104	0:35	38:26	104	0:35
R	Buevegen 2165	27:56	84	0:27	27:56	84	0:27
S	Vaule 176	22:57	89	0:22	22:57	89	0:22
T	Vaule 247	33:51	96	0:42	33:51	96	0:42
U	Store Svela, eiendom 60/5, Bjerkreim kommune	88:23	178	1:03	88:23	178	1:03
V	Osland 45	40:04	74	0:43	40:04	74	0:43
W	Osland 65	38:02	93	0:32	38:02	93	0:32
X	Buevegen 2100	18:09	68	0:20	18:09	68	0:20
Y	Vaule 218	26:05	77	0:41	26:05	77	0:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	275:29	207	2:12	275:29	207	2:12
AA	Heiavegen 543	0:55	23	0:04	0:55	23	0:04
AB	Heiavegen 541	8:56	44	0:16	8:56	44	0:16

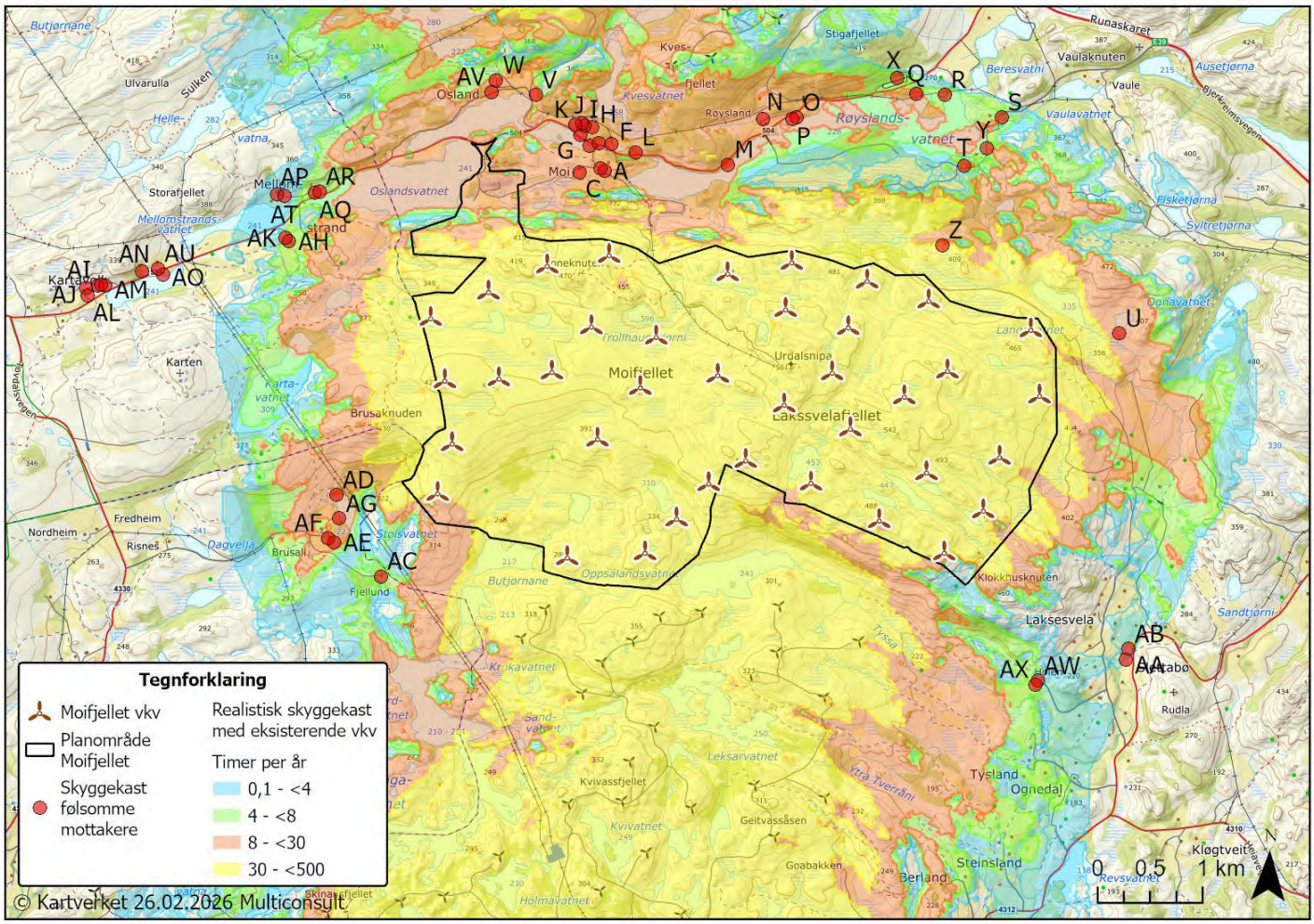
AC	**Brusalivegen 201**	**20:48**	**76**	**0:28**	**0:00**	**0**	**0:00**
AD	**Eiendom 121/8, Hå kommune**	**55:08**	**140**	**0:39**	**51:19**	**110**	**0:39**
AE	**Brusalivegen 217**	**45:46**	**111**	**0:37**	**38:11**	**72**	**0:37**
AF	**Brusalivegen 215**	**35:48**	**111**	**0:33**	**28:44**	**73**	**0:33**
AG	**Brusalivegen 219**	**55:36**	**141**	**0:40**	**48:21**	**103**	**0:40**
AH	Buevegen 1463	22:57	83	0:25	22:57	83	0:25
AI	Buevegen 1288	0:00	0	0:00	0:00	0	0:00
AJ	Buevegen 1272	0:00	0	0:00	0:00	0	0:00
AK	Buevegen 1461	15:23	55	0:24	15:23	55	0:24
AL	Buevegen 1270	0:00	0	0:00	0:00	0	0:00
AM	Buevegen 1290	0:00	0	0:00	0:00	0	0:00
AN	Buevegen 1292	0:00	0	0:00	0:00	0	0:00
AO	Buevegen 1343	0:00	0	0:00	0:00	0	0:00
AP	Buevegen 1496	7:33	28	0:21	7:33	28	0:21
AQ	Buevegen 1500	17:35	62	0:24	17:35	62	0:24
AR	Buevegen 1502	18:16	62	0:24	18:16	62	0:24
AS	Buevegen 1286	0:00	0	0:00	0:00	0	0:00
AT	Buevegen 1498	8:10	30	0:21	8:10	30	0:21
AU	Buevegen 1340	0:00	0	0:00	0:00	0	0:00
AV	Osland 85	38:33	102	0:32	38:33	102	0:32
AW	**Laksesvela 60**	**15:45**	**79**	**0:18**	**0:00**	**0**	**0:00**
AX	**Laksesvela 58**	**16:20**	**82**	**0:18**	**0:00**	**0**	**0:00**

Det er noen forskjeller mellom denne tabellen og Tabell 6-1 i avsnitt 6.1. Samme som for alternativ 1 er det 7 mottakere er det en endring i antall når man tar til betraktning sumvirkninger (mottakerne er markert med fet skrift i tabell). For 4 mottakere (AD-AG) er det bare endring i timer per år og antall dager hvor det oppleves skyggekast, men det er ingen forskjell på timer per dag. De tre siste mottakerne (AC, AW og AX) opplever ingenting fra Moifjellet men opplever skyggekast fra nærliggende vindkraftverk og har derfor en økning i tabellen. Basert på den maksimerte teoretiske analysen vil det ikke bli stor endring for mottakerne når man ser på sumeffekten av alle aktuelle nærliggende vindkraftverk. Det vil kunne bli en endring på antall timer over et helt år, men ingen endring i hva som maksimalt kan oppleves gjennom en dag, med unntak av mottaker AC, AW og AX. Dette betyr at når man vurderer sumvirkninger fra nærliggende vindkraftverk, kan det oppstå endringer i forholdene for mottakerne. Selv om den verste dagen fortsatt vil ha samme belastning, kan det bli flere dager med høy skyggekastbelastning, noe som kan merkes av enkelte mottakere.

6.2.3 Kart – Realistisk scenario

Figur 6-7 viser et tilsvarende kart som Figur 6-6, men nå er en solskinnssannsynlighet på 50% tatt med og driftstid basert på vindrosen tatt med.

Sammenlignet med maksimalt teoretisk i avsnitt 6.2.1 kan man observere en liten endring. Selv om endringen ikke er svært merkbar, viser kartet at arealene har blitt noe redusert. Spesielt ser man at andelen av røde og gule områder har minsket, og disse strekker seg ikke like langt ut som tidligere.



Figur 6-7: Realistisk skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

6.2.4 Individuelle mottakere – Realistisk scenario

Tabell 6-4 oppsummerer resultatet av det realistiske scenarioet. Det er benyttet samme metodikk som i avsnitt 6.1.4. Mottakeren som anses å være mest utsatt for skyggekast opplever nesten 65 timer per år (mottaker Z). Denne fritidsboligen er under bygging og ligger i nærhet av planområdet, omtrent 550 meter unna nærmeste turbin og det er derfor forventet at vil ha en stor belastning. Tabellen viser i tillegg økningen av forventet skyggekasttimer per år når man tar med sumvirkninger.

Tabell 6-4: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet vindkraftverk med hensyn til nærliggende vindkraftverk. Tabellen viser økning i antatt skyggekast når det tas hensyn til sumvirkninger. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Økning
A	Moi 32	23:03	-
B	Moi 26	22:23	-
C	Moi 21	21:52	-
D	Buevegen 1805	21:39	-
E	Buevegen 1816	22:11	-
F	Buevegen 1818	23:19	-
G	Buevegen 1786	18:42	-

H	Buevegen 1784	20:47	-
I	Buevegen 1782	20:49	-
J	Buevegen 1780	20:55	-
K	Buevegen 1778	17:24	-
L	Buevegen 1850	23:02	-
M	Buevegen 1941	14:26	-
N	Buevegen 1988	12:51	-
O	Buevegen 2023	10:56	-
P	Buevegen 2021	10:19	-
Q	Buevegen 2141	9:10	-
R	Buevegen 2165	6:35	-
S	Vaule 176	5:01	-
T	Vaule 247	8:22	-
U	Store Svela, eiendom 60/5, Bjerkreim kommune	21:46	-
V	Osland 45	9:51	-
W	Osland 65	10:12	-
X	Buevegen 2100	4:23	-
Y	Vaule 218	5:48	-
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	65:33	-
AA	Heiavegen 543	0:16	-
AB	Heiavegen 541	2:37	-
AC	Brusalivegen 201	5:52	05:52
AD	Eiendom 121/8, Hå kommune	13:45	01:07
AE	Brusalivegen 217	10:58	02:10
AF	Brusalivegen 215	8:43	02:01
AG	Brusalivegen 219	13:34	02:06
AH	Buevegen 1463	6:36	-
AI	Buevegen 1288	0:00	-
AJ	Buevegen 1272	0:00	-
AK	Buevegen 1461	4:24	-
AL	Buevegen 1270	0:00	-
AM	Buevegen 1290	0:00	-
AN	Buevegen 1292	0:00	-
AO	Buevegen 1343	0:00	-
AP	Buevegen 1496	2:13	-
AQ	Buevegen 1500	5:06	-
AR	Buevegen 1502	5:18	-
AS	Buevegen 1286	0:00	-
AT	Buevegen 1498	2:24	-
AU	Buevegen 1340	0:00	-
AV	Osland 85	10:20	-
AW	Laksesvela 60	4:04	04:04

AX	Laksesvela 58	4:14	04:14

I motsetning til teoretisk skyggekast, tar realistisk skyggekast mer hensyn til realistiske forhold som vær og solskinnsvariasjoner, og gir dermed et mer nøyaktig bilde av hvordan mottakerne vil bli påvirket av nærliggende vindkraftverk. Mens teoretisk skyggekast antar maksimal påvirkning basert på ideelle solforhold, reflekterer realistisk skyggekast hvordan mottakerne faktisk vil oppleve skyggekast under varierende værforhold, noe som ofte resulterer i kortere varighet og mindre intensitet enn de maksimale beregningene tilsier. Det er derfor ulike resultater mellom de to scenarioene.

Når man tar hensyn til nærliggende vindkraftverk, endres resultatene slik at færre mottakere ligger under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast. Det er nå 23 mottakere som er under anbefalt grenseverdi (mottakere R, S, X, Y, AA-AC, AH-AU, AW OG AX). Likt som verst tenkelige scenario er det 7 mottakere som opplever endring som følge av eksisterende vindkraftverk. Den mottakeren som får en størst endring, som går fra under grenseverdi til over grenseverdi er mottaker AF, den går fra 6:42 til 8:43. Det er tre mottakere (AC, AW og AX) som går fra null til å oppleve skyggekast som følge av Bjerkreim vindkraftverk. Det vil si at de nærliggende vindkraftverkene fører til en økning i den totale skyggekastbelastningen for enkelte mottakere.

Basert på hvilke mottakere som opplever en økning i skyggekast, kan vi konkludere med at flere mottakere sørøst og sørvest for Moifjellet vindkraftverk opplever økt skyggekastbelastning fra Bjerkreim vindkraftverk.

Det vil si at for kun Moifellet vindkraftverk er det hovedsakelig mottakerne nord for vindkraftverket som belastes over anbefalt grenseverdi. Mens når man tar hensyn til nærliggende vindkraftverk vil noen av mottakere til øst og til vest merke en større belastning.

Det er ingen av mottakerne som opplever skyggekast over anbefalt grenseverdi fra de eksisterende vindkraftverkene. De mottakerne som merker en belastning fra eksisterende, opplever det i hovedsak tidlig på morgenen eller sent på kvelden i sommerhalvåret. Det er ulike tidspunkt og på ulike tider av året enn hva det forventes Moifjellet vindkraftverk vil bidra med. Det vil si at det vil bidra med mer skyggekast på flere tidspunkt igjennom dagen. En oversikt over når hver mottaker opplever skyggekast ligger i vedlegg.

7 Sammenligning av alternativene

Ved vurdering av hvor mange mottakere som overskrider grenseverdiene for skyggekast, må både teoretiske og realistiske beregninger legges til grunn. Basert på resultatene i kapittel 5.2 og 6.2, som er inkludert sumvirkninger fra eksisterende vindkraftverk, viser beregningene at:

- Alternativ 1 medfører at 35 mottakere havner over anbefalt grenseverdi for skyggekast
- Alternativ 2 medfører at 28 mottakere havner over anbefalt grenseverdi for skyggekast

De realistiske beregningene viste at for alternativ 1 havner 33 mottakere over grenseverdien, men for alternativ 2 havner 27 mottakere over grenseverdien.

For å sammenligne alternativene er det utarbeidet en tabell som viser realistisk skyggekast med sumvirkninger fra eksisterende vindkraftverk (resultater fra avsnitt 5.2.4 og 6.2.4). Tabell 7-1 omfatter de 14 mottakerne som vil oppleve en forskjell mellom alternativene.

Tabell 7-1. Realistisk skyggekastbelasting for de mottakerne som vil oppleve en forskjell mellom alternativ 1 og alternativ 2. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Adresse	Alternativ 1	Alternativ 2	Forskjell
		Timer/år (realistisk)	Timer/år (realistisk)	
AH	Buevegen 1463	37:39	6:36	31:03
AI	Buevegen 1288	01:53	0:00	01:53
AJ	Buevegen 1272	01:40	0:00	01:40
AK	Buevegen 1461	34:46	4:24	30:22
AL	Buevegen 1270	01:24	0:00	01:24
AM	Buevegen 1290	02:02	0:00	02:02
AN	Buevegen 1292	03:03	0:00	03:03
AO	Buevegen 1343	07:32	0:00	07:32
AP	Buevegen 1496	18:59	2:13	16:46
AQ	Buevegen 1500	26:38	5:06	21:32
AR	Buevegen 1502	26:23	5:18	21:05
AS	Buevegen 1286	01:58	0:00	01:58
AT	Buevegen 1498	22:52	2:24	20:28
AU	Buevegen 1340	03:41	0:00	03:41

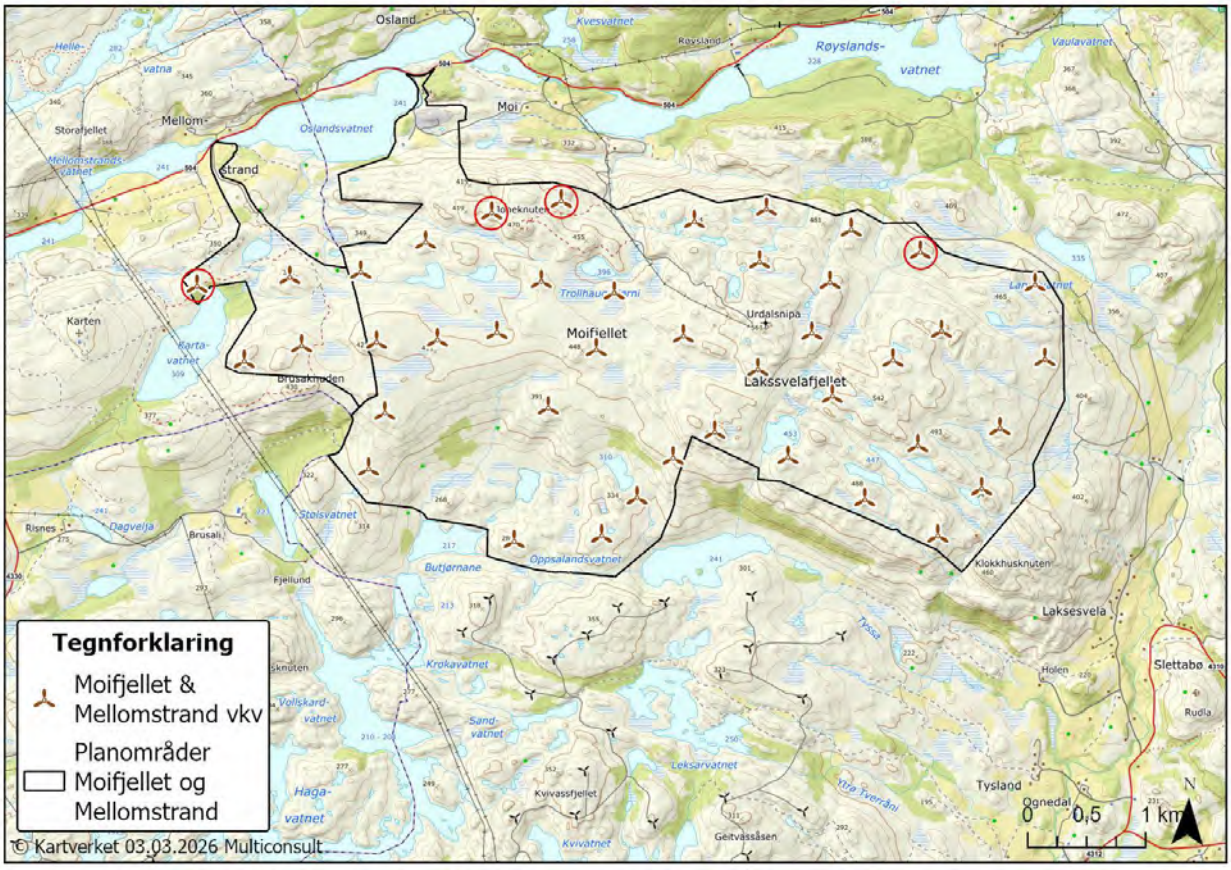
Det er tydelig at alternativ 1 gir mest skyggekast for flest mottakere, noe som henger sammen med at det fire mer turbiner i alternativ 1. Åtte av mottakerne (AI, AJ, AL-AO, AS og AU) i tabellen påvirkes kun av alternativ 1, da de ligger utenfor influensområdet til alternativ 2.

I tillegg er det seks mottakere (AH, AK, AP-AR og AT) som vil oppleve betydelig mer skyggekast med alternativ 1. Dette skyldes at de fire turbinene ved Mellomstrand kommer nær disse mottakerne. For alle seks fører alternativ 1 til at de overskrider grenseverdiene, mens de med alternativ 2 ligger under. Ved utbygging av alternativ 1 må det derfor vurderes tiltak for disse seks mottakerne i tillegg.

8 Avbøtende tiltak

For å sikre at ingen mottakere blir utsatt for skyggekast over anbefalt grenseverdi er det noen aktuelle tiltak som kan gjøres. Før utbygging burde det utarbeides skyggekastkalendere. Skyggekastkalendere viser når skyggekast er forventet å kunne inntreffe. Sammen med automatiserte lyssensorer kan turbinene stoppes dersom det både er klarvær og man ser i skyggekastkalenderen at en mottaker kan være utsatt. Dette vil minimere ulempene for naboer og andre berørte.

Et annet tiltak kan være endring av turbinlayout. Det er spesielt fire turbiner som bidrar med mye skyggekast, en liten justering i layout kan bidra til mindre skyggekastbelastning for mottakerne. I Figur 8-1 er de fire turbinene som bidrar med mest skyggekast markert med en røs sirkel.



Figur 8-1: Kart med det utredningsutlegget. De turbinene som bidrar med mest skyggekast er markert med rød ring rundt.

9 Påvirkning på bebyggelse og friluftsliv

Siden det er flere boliger i nærheten av vindkraftverket, forventes det at bebyggelsen kan påvirkes av skyggekast. Også friluftsområder kan bli utsatt. Det er registrert et viktig friluftsområde på Moifjellet og vannene nord for Moifjellet, og et viktig friluftsområde ved Brusaknuden og Karten[3]. Det er i tillegg registrert en turrute opp til Urdalsnipa og en turrute til Brusaknuden og Karten. Både turrutene og friluftsområdene vil være i hovedsakelig innenfor både de «gule» og «røde» områdene. Dette kan føre til at turgåere opplever skyggekast i perioder med sollys, noe som kan påvirke brukervennligheten av områdene. Alternativ 1 vil føre til den største utbredelsen av skyggekast og vil dermed føre til en større belastning på friluftsliv.

[3] For utdypende informasjon om friluftsområdene se egen utredning om friluftsliv, *Moifjellet og Mellomstrand – Konsekvensutredning Friluftsliv*

10 Konklusjon

Skyggekastanalysen for Moifjellet og Mellomstrand vindkraftverk viser at flere boliger og fritidsbygg i influensområdet vil kunne oppleve betydelig skyggekastbelastning, og i tillegg vil skyggekast kunne berøre viktige friluftsområder. Beregningene viser at skyggekast kan bli en betydelig utfordring for flere mottakere, særlig i områdene nord for Moifjellet.

- **Alternativ 1** (Moifjellet + Mellomstrand) gir størst omfang av skyggekast, med 35 mottakere over NVEs anbefalte grenseverdi.
- **Alternativ 2** (kun Moifjellet) gir noe lavere belastning, men fortsatt 28 mottakere over grenseverdien.

Noen mottakere vil kunne oppleve sumvirkninger fra eksisterende vindkraftverk, de mottakerne er lokalisert sørøst og sørvest for Moifjellet.

Skyggekast forekommer hovedsakelig i vinterhalvåret når solbanen er lav, og belastningen er størst midt på dagen. Enkelte mottakere vil også oppleve skyggekast tidlig morgen og sen kveld i sommerhalvåret.

Viktige friluftsområder og turruter, blant annet ved Moifjellet, Brusaknuden og Karten, ligger innenfor områder med høy skyggekastbelastning. Dette kan redusere opplevelseskvaliteten og brukervennligheten for turgåere.

Det er anbefales avbøtende tiltak for å redusere skyggekast. Skyggekastkalendere kan utarbeides for å vise når skyggekast er forventet å kunne inntreffe. Sammen med automatiserte lyssensorer kan turbinene stoppes dersom det både er klarvær og man ser i skyggekastkalenderen at en mottaker kan være utsatt. Dette vil minimere ulempene for naboer og andre berørte. Et annet tiltak kan være endring av turbinlayout. Det er spesielt fire turbiner som bidrar med mye skyggekast, en liten justering i layout kan bidra til mindre skyggekastbelastning for mottakerne.

Samlet vurdering

Alternativ 2 gir minst skyggekast og lavest påvirkning på friluftsliv, men uansett valg av alternativ må tiltak implementeres for å sikre at belastningen holdes innenfor akseptable nivåer. Det anbefales at avbøtende tiltak planlegges allerede i prosjekteringsfasen for å minimere ulemper for naboer og berørte områder.

11 Vedlegg

1.1 Skyggekastkalender – Tabell – Verst tenkelig scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-1.1_Tabell-Moifjellet og Mellomstrand-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

1.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-1.2_Grafisk-Moifjellet og Mellomstrand-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

2.1 Skyggekastkalender – Tabell – Realistisk scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-2.1_Tabell-Moifjellet og Mellomstrand-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

2.2 Skyggekastkalender – Grafisk – Realistisk scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-2.2_Grafisk-Moifjellet og Mellomstrand-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

3.1 Skyggekastkalender – Tabell – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-3.1_Tabell-Moifjellet og Mellomstrand-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

3.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-3.2_Grafisk- Moifjellet og Mellomstrand-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

4.1 Skyggekastkalender – Tabell – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-4.1_Tabell- Moifjellet og Mellomstrand-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

4.2 Skyggekastkalender – Grafisk – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-4.2_Grafisk- Moifjellet og Mellomstrand-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

5.1 Skyggekastkalender – Tabell – Verst tenkelig scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-5.1_Tabell-Moifjellet-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

5.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-5.2_Grafisk-Moifjellet-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

6.1 Skyggekastkalender – Tabell – Realistisk scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-6.1_Tabell-Moifjellet-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

6.2 Skyggekastkalender – Grafisk – Realistisk scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-6.2_Grafisk-Moifjellet-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

7.1 Skyggekastkalender – Tabell – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-7.1_Tabell- Moifjellet-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

7.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-7.2_Grafisk- Moifjellet-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

8.1 Skyggekastkalender – Tabell – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-8.1_Tabell- Moifjellet-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

8.2 Skyggekastkalender – Grafisk – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-8.2_Grafisk- Moifjellet-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

12 Referanser

Norges vassdrags- og energidirektorat. (2014). *Skyggekast fra vindkraftverk: Veileder for beregning av skyggekast og presentasjon av NVEs forvaltningspraksis* (Veileder nr. 2/2014). NVE. https://publikasjoner.nve.no/veileder/2014/veileder2014_02.pdf

Norges vassdrags- og energidirektorat. (2022a). *Oppdatert kunnskapsgrunnlag om skyggekast fra vindturbiner* (Ekstern rapport nr. 4/2022). NVE. https://publikasjoner.nve.no/eksternrapport/2022/eksternrapport2022_04.pdf

Norges vassdrags- og energidirektorat. (2022b). *Skyggekast fra vindturbiner*. NVE. https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/skyggekast-fra-vindturbiner/

Vedlegg 1.1

Tabell Moifjellet og Mellomstrand vindkraftverk

worst case

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17	21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19	21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21	21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24	21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26	21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28	21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30	21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33	21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35	21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37	21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40	21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42	21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44	21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47	21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49	21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51	22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53	22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00	22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03	22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05	22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07	22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10	22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12	22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14	22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17	22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19	22:24	22:50
29	08:52		11:15 (33)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21	22:25	22:50
30	08:50		11:15 (33)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24	22:27	22:49
31	08:48		11:17 (33)				07:10				04:41	
	16:54	57	13:05 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December
1	04:32		05:24		06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33		05:26		06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34		05:28		06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35		05:31		06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36		05:33		06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37		05:35		06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39		05:37		06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40		05:39		06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41		05:42		06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43		05:44		06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44		05:46		06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46		05:48		06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47		05:51		07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49		05:53		07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51		05:55		07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52		05:57		07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54		06:00		07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56		06:02		07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58		06:04		07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00		06:06		07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01		06:08		07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03		06:11		07:19			08:27		12:35 (28)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (28)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (28)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (28)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (28)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13		06:22		07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16		06:24		07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18		06:26		07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20		06:29		07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22		06:31					07:49		11:34 (28)				09:28
	22:03		20:42					16:51	90	15:09 (24)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17	21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19	21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21	21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24	21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26	21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28	21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30	21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33	21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35	21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37	21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40	21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12	22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14	22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17	22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19	22:24	22:50
29	08:52		10:56 (33)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21	22:25	22:50
30	08:50		10:50 (33)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24	22:27	22:49
31	08:48		10:44 (33)				07:10				04:41	
	16:54	62	14:05 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (28)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (22)	15:51
2	04:33		05:26		06:35		07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34		05:28		06:37		07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35		05:31		06:40		07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36		05:33		06:42		07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37		05:35		06:44		07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39		05:37		06:46		07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40		05:39		06:49		07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41		05:42		06:51		07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43		05:44		06:53		08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44		05:46		06:55		08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46		05:48		06:57		08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47		05:51		07:00		08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49		05:53		07:02		08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51		05:55		07:04		08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52		05:57		07:06		08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54		06:00		07:08		08:16		11:34 (28)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (28)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (28)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (23)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (28)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (23)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (28)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (23)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (28)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (23)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (28)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (23)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (28)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (23)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (28)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (23)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (28)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (23)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (28)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (23)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (28)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (23)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (28)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (24)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (28)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (24)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (28)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (24)	15:52			15:50
31	05:22		06:31				07:49		10:31 (28)				09:28
	22:03		20:42				16:51	99	14:52 (24)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April		May	June
1	09:28			08:46			11:39 (28)	07:35		09:25 (15)		07:07	05:44	04:40
	15:53			16:56	88		15:12 (24)	18:05	9	09:34 (15)		20:17	21:26	22:31
2	09:27			08:43			11:39 (28)	07:33				07:04	05:41	04:38
	15:54			16:58	88		15:13 (24)	18:07				20:19	21:28	22:32
3	09:27			08:41			11:40 (28)	07:30				07:01	05:39	04:37
	15:55			17:01	85		15:12 (24)	18:09				20:21	21:31	22:34
4	09:27			08:39			11:39 (28)	07:27				06:58	05:36	04:36
	15:57			17:03	83		15:11 (24)	18:12				20:24	21:33	22:35
5	09:26		12:20 (20)	08:37			11:39 (28)	07:24				06:55	05:34	04:35
	15:58	1	12:21 (20)	17:06	80		15:09 (24)	18:14				20:26	21:35	22:37
6	09:25		12:19 (20)	08:34			11:40 (28)	07:21				06:52	05:31	04:34
	16:00	5	12:24 (20)	17:08	74		15:08 (24)	18:17				20:28	21:37	22:38
7	09:24		12:17 (20)	08:32			11:40 (28)	07:19				06:50	05:29	04:33
	16:02	11	12:28 (20)	17:11	62		14:11 (23)	18:19				20:30	21:40	22:39
8	09:24		12:17 (20)	08:30			11:41 (28)	07:16				06:47	05:26	04:32
	16:03	13	12:30 (20)	17:13	61		14:11 (23)	18:21				20:33	21:42	22:40
9	09:23		12:18 (20)	08:27			11:42 (28)	07:13				06:44	05:24	04:31
	16:05	16	12:34 (20)	17:16	57		14:10 (23)	18:24				20:35	21:44	22:42
10	09:22		11:06 (33)	08:25			11:42 (28)	07:10				06:41	05:22	04:30
	16:07	25	12:39 (20)	17:18	54		14:09 (23)	18:26				20:37	21:46	22:43
11	09:21		11:02 (33)	08:23			11:44 (28)	07:07				06:38	05:19	04:29
	16:09	31	12:41 (20)	17:21	48		14:08 (23)	18:28				20:40	21:49	22:44
12	09:20		11:01 (33)	08:20			11:45 (28)	07:04				06:35	05:17	04:29
	16:11	40	12:41 (20)	17:23	42		14:06 (23)	18:31				20:42	21:51	22:45
13	09:18		11:02 (33)	08:18			11:46 (28)	07:02				06:32	05:15	04:28
	16:13	42	12:42 (20)	17:26	32		14:02 (23)	18:33				20:44	21:53	22:46
14	09:17		11:02 (33)	08:15			11:49 (28)	06:59				06:30	05:13	04:28
	16:15	42	12:42 (20)	17:28	18		12:07 (28)	18:35				20:47	21:55	22:47
15	09:16		11:02 (33)	08:13			11:52 (28)	06:56				06:27	05:10	04:27
	16:17	43	12:42 (20)	17:31	12		12:04 (28)	18:38				20:49	21:58	22:47
16	09:15		11:02 (33)	08:10			09:29 (15)	06:53				06:24	05:08	04:27
	16:19	43	12:42 (20)	17:33	5		09:34 (15)	18:40				20:51	22:00	22:48
17	09:13		11:02 (33)	08:07			09:25 (15)	06:50				06:21	05:06	04:27
	16:21	45	12:42 (20)	17:36	12		09:37 (15)	18:42				20:53	22:02	22:49
18	09:12		11:03 (33)	08:05			09:24 (15)	06:47				06:19	05:04	04:27
	16:23	57	13:55 (23)	17:38	16		09:40 (15)	18:45				20:56	22:04	22:49
19	09:10		11:03 (33)	08:02			09:23 (15)	06:44				06:16	05:02	04:27
	16:25	70	13:59 (23)	17:40	17		09:40 (15)	18:47				20:58	22:06	22:50
20	09:08		11:04 (33)	08:00			09:22 (15)	06:41				06:13	05:00	04:27
	16:28	75	14:01 (23)	17:43	19		09:41 (15)	18:49				21:00	22:08	22:50
21	09:07		11:04 (33)	07:57			09:21 (15)	06:39				06:10	04:58	04:27
	16:30	80	14:03 (23)	17:45	20		09:41 (15)	18:51				21:03	22:10	22:50
22	09:05		11:05 (33)	07:54			09:20 (15)	06:36				06:08	04:56	04:27
	16:32	82	14:05 (23)	17:48	21		09:41 (15)	18:54				21:05	22:12	22:50
23	09:03		11:05 (33)	07:52			09:21 (15)	06:33				06:05	04:54	04:27
	16:34	83	14:05 (23)	17:50	21		09:42 (15)	18:56				21:07	22:14	22:51
24	09:02		11:06 (33)	07:49			09:21 (15)	06:30				06:02	04:52	04:27
	16:37	84	14:07 (23)	17:53	20		09:41 (15)	18:58				21:10	22:16	22:51
25	09:00		11:07 (33)	07:46			09:21 (15)	06:27				05:59	04:51	04:28
	16:39	84	14:52 (24)	17:55	20		09:41 (15)	19:01				21:12	22:18	22:51
26	08:58		11:09 (33)	07:44			09:21 (15)	06:24				05:57	04:49	04:28
	16:41	79	14:57 (24)	17:57	19		09:40 (15)	19:03				21:14	22:20	22:50
27	08:56		11:10 (33)	07:41			09:22 (15)	06:21				05:54	04:47	04:29
	16:44	86	15:12 (24)	18:00	16		09:38 (15)	19:05				21:17	22:22	22:50
28	08:54		11:13 (33)	07:38			09:23 (15)	06:18				05:52	04:46	04:30
	16:46	90	15:13 (24)	18:02	14		09:37 (15)	19:08				21:19	22:24	22:50
29	08:52		11:40 (28)					07:15				05:49	04:44	04:30
	16:49	88	15:14 (24)					20:10				21:21	22:25	22:50
30	08:50		11:39 (28)					07:12				05:46	04:42	04:31
	16:51	88	15:13 (24)					20:12				21:24	22:27	22:49
31	08:48		11:39 (28)					07:10					04:41	
	16:54	88	15:13 (24)					20:14					22:29	
Potential sun hours	221			260			365			432		521	547	
Total, worst case		1491			1104			9						
Sun reduction		0,50			0,50			0,50						
Oper. time red.		0,80			0,80			0,80						
Wind dir. red.		0,62			0,63			0,73						
Total reduction		0,25			0,25			0,29						
Total, real		371			276			3						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33	05:26	06:35	07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34	05:28	06:37	07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35	05:31	06:40	07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36	05:33	06:42	07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37	05:35	06:44	07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39	05:37	06:46	07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40	05:39	06:49	07:55			08:08		11:09 (28)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (24)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (24)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (24)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (24)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22	06:31		07:49		11:13 (28)				09:28		
	22:03	20:42		16:51	50	13:38 (23)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46		11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43		11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41		12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39		11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34		12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32		12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30		12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27		12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25		12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23		12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20		12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18		12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15		09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13		09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10		09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07		09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05		09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02		09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00		09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57		09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54		09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52		09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49		09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46		09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44		09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41		09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38		09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)				20:10	21:21	22:25	22:50
30	08:50		11:58 (28)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)				20:12	21:24	22:27	22:49
31	08:48		11:58 (28)				07:10		04:41	
	16:54	88	15:22 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33		05:26		06:35		07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34		05:28		06:37		07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35		05:31		06:40		07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36		05:33		06:42		07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37		05:35		06:44		07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39		05:37		06:46		07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40		05:39		06:49		07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41		05:42		06:51		07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43		05:44		06:53		08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44		05:46		06:55		08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46		05:48		06:57		08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47		05:51		07:00		08:07			08:20		11:30 (28)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (24)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22		06:31				07:49		11:35 (28)				09:28		11:11 (33)
	22:03		20:42				16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02		19:07	21:19	22:24	22:50
29	08:52		12:24 (28)			07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)			20:10	21:21	22:25	22:50
30	08:50		12:23 (28)			07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)			20:12	21:24	22:27	22:49
31	08:48		12:24 (28)			07:10		04:41	
	16:53	77	15:26 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1549		1149					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,62		0,62					
Total reduction		0,25		0,25					
Total, real		386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28			08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53			16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27		12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1	12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27		12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4	12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27		12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7	12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26		12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17	12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25		12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16	12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24		12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19	12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24		12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22	12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23		12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22	12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22		12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22	12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21		12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22	12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20		12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28	13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18		12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33	13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17		12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36	13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16		11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47	13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54	13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13		11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57	13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12		11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72	14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85	14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09		11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88	14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07		11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88	14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05		11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89	14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03		11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87	14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02		11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81	14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00		11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82	14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58		11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83	14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56		11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83	14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54		11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82	14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80	14:54 (24)				20:10	21:21	22:25	22:50
30	08:50		11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79	14:53 (24)				20:12	21:24	22:27	22:49
31	08:48		11:26 (28)				07:10		04:41	
	16:54	76	14:52 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1562			681					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,61			0,66					
Total reduction		0,24			0,26					
Total, real		382			180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33		05:26		06:35		07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34		05:28		06:37		07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35		05:31		06:40		07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36		05:33		06:42		07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37		05:35		06:44		07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39		05:37		06:46		07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40		05:39		06:49		07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41		05:42		06:51		07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43		05:44		06:53		08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44		05:46		06:55		08:02			08:15		10:57 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (24)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (28)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (24)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (28)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (24)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (28)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (20)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (23)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (20)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (23)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22		06:31				07:49		11:06 (28)				09:28		
	22:03		20:42				16:51	15	11:21 (28)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46	11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43	11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41	11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39	11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34	12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27	09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25	09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23	09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20	09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18	09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15	09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13	09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10	09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07	09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05	09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02	09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00	09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57	09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54	09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (28)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)			20:10	21:21	22:25	22:50
30	08:50		11:51 (28)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)			20:12	21:24	22:27	22:49
31	08:48		11:52 (28)			07:10		04:41	
	16:54	55	14:55 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:08 (20)	08:46	11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (20)	16:56	49	13:50 (23)	18:05	20:17	21:26	22:31
2	09:27		12:08 (20)	08:43	11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (20)	16:58	44	13:48 (23)	18:07	20:19	21:28	22:32
3	09:27		12:09 (20)	08:41	11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (20)	17:01	39	13:47 (23)	18:09	20:21	21:31	22:34
4	09:27		12:09 (20)	08:39	11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (20)	17:03	32	13:45 (23)	18:12	20:24	21:33	22:35
5	09:26		12:09 (20)	08:37	11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (20)	17:06	19	12:02 (28)	18:14	20:26	21:35	22:37
6	09:25		12:10 (20)	08:34	11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (23)	17:08	14	12:00 (28)	18:17	20:28	21:37	22:38
7	09:24		11:43 (28)	08:32	11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (23)	17:11	6	11:56 (28)	18:19	20:30	21:40	22:39
8	09:24		11:41 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	41	13:37 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23		11:40 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	47	13:39 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22		11:38 (28)	08:25		09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (23)	17:18	3	09:42 (15)	18:26	20:37	21:46	22:43
11	09:21		11:38 (28)	08:23		09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (23)	17:21	10	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:37 (28)	08:20		09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (24)	17:23	14	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:37 (28)	08:18		09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (24)	17:26	16	09:49 (15)	18:33	20:44	21:53	22:46
14	09:17		11:36 (28)	08:15		09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (24)	17:28	17	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:36 (28)	08:13		09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (24)	17:31	18	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:35 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:36 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:36 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (24)	17:38	19	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:36 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (24)	17:40	18	09:50 (15)	18:47	20:58	22:06	22:50
20	09:09		11:35 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (24)	17:43	17	09:49 (15)	18:49	21:00	22:08	22:50
21	09:07		11:35 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (24)	17:45	15	09:48 (15)	18:51	21:03	22:10	22:50
22	09:05		11:36 (28)	07:54		09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (24)	17:48	12	09:46 (15)	18:54	21:05	22:12	22:50
23	09:03		11:35 (28)	07:52		09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (24)	17:50	6	09:44 (15)	18:56	21:07	22:14	22:51
24	09:02		11:35 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (28)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (24)				20:10	21:21	22:25	22:50
30	08:50		11:37 (28)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (24)				20:12	21:24	22:27	22:49
31	08:48		11:38 (28)				07:10		04:41	
	16:54	51	13:50 (23)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,61			0,68					
Total reduction		0,24			0,27					
Total, real		457			110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (20)	16:56	45 13:44 (23)	18:05	20:17	21:26	22:31
2	09:27	12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (20)	16:58	40 13:42 (23)	18:07	20:19	21:28	22:32
3	09:27	12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (20)	17:01	34 13:40 (23)	18:09	20:21	21:31	22:34
4	09:27	12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (20)	17:03	20 11:59 (28)	18:12	20:24	21:33	22:35
5	09:26	12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (23)	17:06	16 11:57 (28)	18:14	20:26	21:35	22:37
6	09:25	12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (23)	17:08	11 11:55 (28)	18:17	20:28	21:37	22:38
7	09:24	11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (28)	08:25	09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (24)	17:18	6 09:43 (15)	18:26	20:37	21:46	22:43
11	09:21	11:34 (28)	08:23	09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (24)	17:21	11 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:33 (28)	08:20	09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (24)	17:23	15 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:34 (28)	08:18	09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (24)	17:26	16 09:48 (15)	18:33	20:44	21:53	22:46
14	09:17	11:33 (28)	08:15	09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (24)	17:28	18 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:32 (28)	08:13	09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (24)	17:31	19 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:32 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:32 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (24)	17:38	18 09:50 (15)	18:45	20:56	22:04	22:49
19	09:10	11:32 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (24)	17:40	17 09:49 (15)	18:47	20:58	22:06	22:50
20	09:09	11:32 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (24)	17:43	16 09:48 (15)	18:49	21:00	22:08	22:50
21	09:07	11:32 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (24)	17:45	14 09:47 (15)	18:51	21:03	22:10	22:50
22	09:05	11:32 (28)	07:54	09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (24)	17:48	10 09:45 (15)	18:54	21:05	22:12	22:50
23	09:03	11:31 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (28)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (24)			20:10	21:21	22:25	22:50
30	08:50	11:34 (28)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (23)			20:12	21:24	22:27	22:49
31	08:48	11:35 (28)			07:10		04:41	
	16:54	48 13:44 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,69				
Total reduction		0,24		0,27				
Total, real		467		100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (24)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (23)
5	04:36	05:33	06:42	07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37	05:35	06:44	07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38	05:37	06:46	07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40	05:39	06:49	07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41	05:42	06:51	07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43	05:44	06:53	08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44	05:46	06:55	08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46	05:48	06:57	08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47	05:51	07:00	08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49	05:53	07:02	08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51	05:55	07:04	08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52	05:57	07:06	08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54	06:00	07:08	08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56	06:02	07:11	08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58	06:04	07:13	08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27	21:16	19:48	18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25	21:13	19:45	18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24	21:10	19:42	18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18	21:02	19:33	18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14	20:57	19:27	17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12	20:54	19:25	17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20	06:29	07:37	07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05	20:45	19:16	16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22	06:31		07:49		09:05 (15)				09:28		12:04 (20)
	22:03	20:42		16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28		11:58 (20)	08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56	49	13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43	11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58	47	13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41	11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01	42	13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39	11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03	35	13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37	11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06	23	11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34	11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08	20	11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32	11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11	16	11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30	11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13	11	11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18			18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18			07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45			18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46			06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)				20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)				07:10		04:41		05:22	06:31		07:49				09:28		11:57 (20)
	16:54	53	13:36 (23)				20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	1841		243											1761		403	
Sun reduction	0,50		0,50											0,50		0,50	
Oper. time red.	0,80		0,80											0,80		0,80	
Wind dir. red.	0,62		0,65											0,62		0,62	
Total reduction	0,25		0,26											0,25		0,25	
Total, real	452		63											435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:52 (33)	08:46	13:17 (28)	07:35	08:53 (17)	07:07	05:44	04:40
	15:53 17	12:09 (33)	16:56 36	13:53 (28)	18:05 19	09:12 (17)	20:17	21:26	22:30
2	09:27	11:51 (33)	08:43	13:18 (28)	07:32	08:53 (17)	07:04	05:41	04:38
	15:54 19	12:10 (33)	16:58 43	15:13 (23)	18:07 20	09:13 (17)	20:19	21:28	22:32
3	09:27	11:51 (33)	08:41	13:17 (28)	07:30	08:52 (17)	07:01	05:39	04:37
	15:55 19	12:10 (33)	17:01 52	15:18 (23)	18:09 21	09:13 (17)	20:21	21:30	22:34
4	09:26	11:51 (33)	08:39	13:18 (28)	07:27	08:52 (17)	06:58	05:36	04:36
	15:57 20	12:11 (33)	17:03 54	15:20 (23)	18:12 20	09:12 (17)	20:24	21:33	22:35
5	09:26	11:52 (33)	08:37	13:17 (28)	07:24	08:52 (17)	06:55	05:34	04:35
	15:58 20	12:12 (33)	17:06 58	15:21 (23)	18:14 20	09:12 (17)	20:26	21:35	22:37
6	09:25	11:52 (33)	08:34	13:18 (28)	07:21	08:52 (17)	06:52	05:31	04:34
	16:00 20	12:12 (33)	17:08 62	15:43 (24)	18:16 19	09:11 (17)	20:28	21:37	22:38
7	09:24	11:52 (33)	08:32	13:17 (28)	07:19	08:53 (17)	06:49	05:29	04:33
	16:02 21	12:13 (33)	17:11 68	15:46 (24)	18:19 17	09:10 (17)	20:30	21:40	22:39
8	09:24	11:53 (33)	08:30	13:18 (28)	07:16	08:54 (17)	06:47	05:26	04:32
	16:03 21	12:14 (33)	17:13 72	15:51 (24)	18:21 14	09:08 (17)	20:33	21:42	22:40
9	09:23	11:52 (33)	08:27	13:18 (28)	07:13	08:55 (17)	06:44	05:24	04:31
	16:05 22	12:14 (33)	17:16 78	15:59 (24)	18:24 10	09:05 (17)	20:35	21:44	22:42
10	09:22	11:53 (33)	08:25	13:18 (28)	07:10		06:41	05:22	04:30
	16:07 22	12:15 (33)	17:18 82	16:00 (24)	18:26		20:37	21:46	22:43
11	09:21	11:54 (33)	08:23	10:11 (15)	07:07		06:38	05:19	04:29
	16:09 22	12:16 (33)	17:21 84	16:00 (24)	18:28		20:40	21:49	22:44
12	09:20	11:53 (33)	08:20	10:06 (15)	07:04		06:35	05:17	04:29
	16:11 23	12:16 (33)	17:23 89	15:59 (24)	18:31		20:42	21:51	22:45
13	09:18	11:53 (33)	08:18	10:04 (15)	07:01		06:32	05:15	04:28
	16:13 29	13:27 (20)	17:26 90	15:58 (24)	18:33		20:44	21:53	22:46
14	09:17	11:54 (33)	08:15	10:03 (15)	06:59		06:30	05:13	04:28
	16:15 38	13:37 (20)	17:28 87	15:57 (24)	18:35		20:47	21:55	22:46
15	09:16	11:55 (33)	08:13	10:02 (15)	06:56		06:27	05:10	04:27
	16:17 44	13:43 (20)	17:31 81	15:54 (24)	18:38		20:49	21:57	22:47
16	09:15	11:55 (33)	08:10	10:01 (15)	06:53		06:24	05:08	04:27
	16:19 45	13:44 (20)	17:33 72	15:24 (23)	18:40		20:51	22:00	22:48
17	09:13	11:55 (33)	08:07	10:00 (15)	06:50		06:21	05:06	04:27
	16:21 45	13:44 (20)	17:35 67	15:23 (23)	18:42		20:53	22:02	22:49
18	09:12	11:57 (33)	08:05	10:00 (15)	06:47		06:19	05:04	04:27
	16:23 44	13:46 (20)	17:38 61	15:23 (23)	18:45		20:56	22:04	22:49
19	09:10	11:57 (33)	08:02	10:00 (15)	06:44		06:16	05:02	04:27
	16:25 44	13:46 (20)	17:40 43	15:21 (23)	18:47		20:58	22:06	22:50
20	09:08	11:58 (33)	08:00	09:59 (15)	06:41		06:13	05:00	04:27
	16:28 43	13:46 (20)	17:43 41	15:19 (23)	18:49		21:00	22:08	22:50
21	09:07	11:59 (33)	07:57	09:59 (15)	06:38		06:10	04:58	04:27
	16:30 40	13:46 (20)	17:45 32	15:15 (23)	18:51		21:03	22:10	22:50
22	09:05	11:59 (33)	07:54	09:59 (15)	06:36		06:08	04:56	04:27
	16:32 40	13:46 (20)	17:48 25	10:24 (15)	18:54		21:05	22:12	22:50
23	09:03	12:01 (33)	07:52	10:00 (15)	06:33		06:05	04:54	04:27
	16:34 36	13:46 (20)	17:50 24	10:24 (15)	18:56		21:07	22:14	22:50
24	09:02	12:03 (33)	07:49	10:01 (15)	06:30		06:02	04:52	04:27
	16:37 34	13:46 (20)	17:53 22	10:23 (15)	18:58		21:10	22:16	22:51
25	09:00	12:05 (33)	07:46	09:00 (17)	06:27		05:59	04:51	04:28
	16:39 32	13:46 (28)	17:55 27	10:22 (15)	19:01		21:12	22:18	22:50
26	08:58	13:21 (28)	07:43	08:57 (17)	06:24		05:57	04:49	04:28
	16:41 27	13:48 (28)	17:57 30	10:20 (15)	19:03		21:14	22:20	22:50
27	08:56	13:20 (28)	07:41	08:55 (17)	06:21		05:54	04:47	04:29
	16:44 28	13:48 (28)	18:00 28	10:17 (15)	19:05		21:17	22:22	22:50
28	08:54	13:19 (28)	07:38	08:54 (17)	06:18		05:52	04:46	04:30
	16:46 31	13:50 (28)	18:02 22	10:13 (15)	19:07		21:19	22:24	22:50
29	08:52	13:19 (28)			07:15		05:49	04:44	04:30
	16:49 32	13:51 (28)			20:10		21:21	22:25	22:50
30	08:50	13:18 (28)			07:12		05:46	04:42	04:31
	16:51 33	13:51 (28)			20:12		21:24	22:27	22:49
31	08:48	13:18 (28)			07:10			04:41	
	16:53 34	13:52 (28)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	945		1530		160				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,61		0,61		0,74				
Total reduction	0,24		0,24		0,29				
Total, real	230		370		47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		12:48 (28)	09:00		11:36 (33)
	22:49		22:01		20:40		19:13			16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33		05:26		06:35		07:42			07:54		12:48 (28)	09:02		11:36 (33)
	22:48		21:58		20:37		19:10			16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34		05:28		06:37		07:44			07:56		12:48 (28)	09:03		11:36 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35		05:31		06:40		07:46		09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47		21:54		20:31		19:04	7	09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36		05:33		06:42		07:48		09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46		21:51		20:28		19:01	12	09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37		05:35		06:44		07:51		09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45		21:49		20:25		18:59	15	09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38		05:37		06:46		07:53		09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44		21:47		20:22		18:56	18	09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40		05:39		06:48		07:55		09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43		21:44		20:20		18:53	19	09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41		05:42		06:51		07:57		09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42		21:42		20:17		18:50	20	09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43		05:44		06:53		08:00		09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40		21:39		20:14		18:47	20	09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44		05:46		06:55		08:02		09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39		21:37		20:11		18:45	20	09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46		05:48		06:57		08:04		09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38		21:34		20:08		18:42	19	09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47		05:51		07:00		08:06		09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37		21:31		20:05		18:39	18	09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49		05:53		07:02		08:09		09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35		21:29		20:02		18:36	26	10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51		05:55		07:04		08:11		09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34		21:26		19:59		18:33	29	10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52		05:57		07:06		08:13		09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32		21:24		19:56		18:31	28	10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54		05:59		07:08		08:16		10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30		21:21		19:54		18:28	21	10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56		06:02		07:10		08:18		10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29		21:18		19:51		18:25	23	10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58		06:04		07:13		08:20		10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27		21:16		19:48		18:22	24	10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00		06:06		07:15		08:23		10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25		21:13		19:45		18:20	25	10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01		06:08		07:17		08:25		10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24		21:10		19:42		18:17	37	15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03		06:11		07:19		08:27		10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22		21:08		19:39		18:14	42	15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05		06:13		07:22		08:30		10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20		21:05		19:36		18:12	50	15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07		06:15		07:24		08:32		10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18		21:02		19:33		18:09	63	15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09		06:17		07:26		07:35		09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16		20:59		19:30		17:06	69	14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11		06:20		07:28		07:37		09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14		20:56		19:27		17:04	74	14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13		06:22		07:30		07:39		09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12		20:54		19:24		17:01	82	15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16		06:24		07:33		07:42		09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10		20:51		19:22		16:59	89	15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18		06:26		07:35		07:44		09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07		20:48		19:19		16:56	90	15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20		06:29		07:37		07:47		09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05		20:45		19:16		16:54	90	15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22		06:31				07:49		12:49 (28)				09:28		11:51 (33)
	22:03		20:42				16:51	81	15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								1111			1317			529	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,64			0,59			0,64	
Total reduction								0,26			0,23			0,26	
Total, real								286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17	21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19	21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21	21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23	21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26	21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28	21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30	21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33	21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35	21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (33)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23	22:27	22:49
31	08:48		14:08 (33)				07:10				04:41	
	16:53	21	15:27 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (28)	08:45		11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:32 (28)	16:01	30	13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47		11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20	13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49		11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11	11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52		11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10	11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54		11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8	11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56			09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53			15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58			09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52			15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49	09:46 (12)				09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55 15:38 (28)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		793		765									221		1347			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,62		0,61									0,60		0,62			
Total reduction		0,25		0,24									0,24		0,25			
Total, real		197		187									53		334			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56	74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (15)	15:51
2	09:27		08:43		10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58	73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (15)	15:50
3	09:27		08:41		10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01	74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (15)	15:49
4	09:26		08:39		10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03	71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (15)	15:48
5	09:26		08:37		10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06	68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (15)	15:47
6	09:25		08:34		10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08	64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (15)	15:46
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	16:02		17:11	59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (15)	15:45
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	16:03		17:13	52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (15)	15:45
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	16:05		17:16	43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (15)	15:44
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	16:07		17:18	26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (15)	15:43
11	09:21		08:22		12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21	5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (15)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (15)	15:42
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	16:13	5 12:44 (9)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (15)	15:42
14	09:17	12:39 (9)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15	7 12:46 (9)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (15)	15:42
15	09:16	12:39 (9)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17	15 12:54 (9)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (15)	15:42
16	09:14	12:38 (9)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19	17 12:55 (9)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (15)	15:42
17	09:13	12:38 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21	18 12:56 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (15)	15:42
18	09:12	12:37 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23	19 12:56 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (15)	15:42
19	09:10	12:38 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25	20 12:58 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (15)	15:42
20	09:08	12:37 (17)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27	22 12:59 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (15)	15:42
21	09:07	12:35 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30	23 12:58 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (9)	15:43
22	09:05	12:34 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32	33 14:16 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (9)	15:43
23	09:03	12:33 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34	39 14:19 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (9)	15:44
24	09:01	12:33 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37	42 14:21 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (9)	15:44
25	09:00	12:32 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39	45 14:22 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (9)	15:45
26	08:58	10:57 (12)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41	50 14:24 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (9)	15:46
27	08:56	10:51 (12)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44	64 14:24 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (9)	15:47
28	08:54	10:51 (12)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46	69 14:25 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (9)	15:48
29	08:52	10:51 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49	70 14:26 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (9)	15:49
30	08:50	10:50 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)				07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53	74 14:27 (15)				20:14		22:29		22:03	20:42		16:51	7 12:20 (17)			15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319		236		199
Total, worst case		704		609										7		1322	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,63										0,63		0,62	
Total reduction		0,25		0,25										0,25		0,25	
Total, real		174		153										2		328	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (12)	09:00
	15:53		16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (15)	15:51
2	09:27		08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (12)	09:01
	15:54		16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (15)	15:50
3	09:27		08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (12)	09:03
	15:55		17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (15)	15:49
4	09:26		08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (12)	09:05
	15:57		17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (15)	15:48
5	09:26		08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (12)	09:07
	15:58		17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (15)	15:47
6	09:25		08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (12)	09:09
	16:00		17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (15)	15:46
7	09:24		08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (12)	09:10
	16:02		17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (15)	15:45
8	09:24		08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (12)	09:12
	16:03		17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (15)	15:45
9	09:23		08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (12)	09:13
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12	09:20		08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (12)	09:17
	16:11		17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (15)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (12)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (15)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (17)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (15)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (17)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (15)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (17)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (15)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (15)	15:42
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	16:37	43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (9)	15:45
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	16:41	49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (17)	15:52			15:50
31	08:48		10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)				09:28
	16:53	69	14:22 (15)			20:14		22:29		22:03	20:42		16:51	25 12:17 (17)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (26)	08:45	14:59 (17)	07:35	07:07	05:44	04:39
	15:52 20	12:23 (26)	16:56 18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27	12:03 (26)	08:43	14:59 (17)	07:32	07:04	05:41	04:38
	15:54 20	12:23 (26)	16:58 19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27	12:03 (26)	08:41	14:58 (17)	07:30	07:01	05:38	04:37
	15:55 20	12:23 (26)	17:01 19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26	12:03 (26)	08:39	14:59 (17)	07:27	06:58	05:36	04:36
	15:57 21	12:24 (26)	17:03 19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26	12:04 (26)	08:37	14:59 (17)	07:24	06:55	05:33	04:34
	15:58 26	13:33 (12)	17:06 19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25	12:04 (26)	08:34	15:00 (17)	07:21	06:52	05:31	04:33
	16:00 29	13:35 (12)	17:08 18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24	12:05 (26)	08:32	15:00 (17)	07:18	06:49	05:29	04:32
	16:01 31	13:37 (12)	17:11 17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23	12:06 (26)	08:30	15:00 (17)	07:16	06:46	05:26	04:31
	16:03 33	13:39 (12)	17:13 16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23	12:06 (26)	08:27	15:02 (17)	07:13	06:44	05:24	04:31
	16:05 33	13:39 (12)	17:15 14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22	12:07 (26)	08:25	15:03 (17)	07:10	06:41	05:21	04:30
	16:07 35	13:41 (12)	17:18 11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21	12:07 (26)	08:22	15:07 (17)	07:07	06:38	05:19	04:29
	16:09 35	13:41 (12)	17:20 5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19	12:08 (26)	08:20		07:04	06:35	05:17	04:29
	16:11 35	13:42 (12)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (26)	08:17		07:01	06:32	05:15	04:28
	16:12 35	13:43 (12)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (26)	08:15		06:58	06:29	05:12	04:28
	16:14 35	13:44 (12)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (26)	08:12		06:56	06:27	05:10	04:27
	16:17 34	13:45 (12)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (26)	08:10		06:53	06:24	05:08	04:27
	16:19 32	13:45 (12)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (26)	08:07		06:50	06:21	05:06	04:27
	16:21 29	13:45 (12)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (26)	08:05		06:47	06:18	05:04	04:26
	16:23 26	13:46 (12)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (12)	08:02		06:44	06:16	05:02	04:26
	16:25 21	13:46 (12)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (12)	07:59		06:41	06:13	05:00	04:26
	16:27 22	13:47 (12)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (12)	07:57		06:38	06:10	04:58	04:26
	16:30 21	13:47 (12)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (12)	07:54		06:35	06:07	04:56	04:27
	16:32 21	13:47 (12)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (12)	07:51		06:33	06:05	04:54	04:27
	16:34 20	13:47 (12)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (12)	07:49		06:30	06:02	04:52	04:27
	16:37 19	13:47 (12)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (12)	07:46		06:27	05:59	04:50	04:28
	16:39 18	13:47 (12)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (12)	07:43		06:24	05:57	04:49	04:28
	16:41 17	13:47 (12)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (12)	07:41		06:21	05:54	04:47	04:29
	16:44 20	15:09 (17)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (12)	07:38		06:18	05:51	04:45	04:29
	16:46 23	15:12 (17)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (12)			07:15	05:49	04:44	04:30
	16:48 21	15:14 (17)			20:10	21:21	22:25	22:49
30	08:50	15:00 (17)			07:12	05:46	04:42	04:31
	16:51 15	15:15 (17)			20:12	21:23	22:27	22:49
31	08:48	15:00 (17)			07:09		04:41	
	16:53 16	15:16 (17)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case	783		175					
Sun reduction	0,50		0,50					
Oper. time red.	0,80		0,80					
Wind dir. red.	0,60		0,55					
Total reduction	0,24		0,22					
Total, real	187		39					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15		12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43	21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16		12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43	21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17		12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42	20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19		12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42	20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20		12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42	21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21		12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42	21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22		12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42	20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23		12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42	20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24		12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42	20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25		12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42	20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25		12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42	20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26		12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43	20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27		12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43	20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27		12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44	20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27		12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44	21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28		12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45	20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28		12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46	20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28		12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47	20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28		12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47	21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28		12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49	20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28		12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50	20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	13:54 (26)	08:45	15:12 (12)	07:35	07:06	05:43	04:39
	15:52 9	14:03 (26)	16:56 14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27	13:54 (26)	08:43	15:12 (12)	07:32	07:04	05:41	04:38
	15:54 11	14:05 (26)	16:58 16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27	13:54 (26)	08:41	15:11 (12)	07:29	07:01	05:38	04:37
	15:55 12	14:06 (26)	17:01 17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26	13:54 (26)	08:39	15:11 (12)	07:27	06:58	05:36	04:36
	15:57 13	14:07 (26)	17:03 18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26	13:53 (26)	08:37	15:11 (12)	07:24	06:55	05:33	04:34
	15:58 15	14:08 (26)	17:06 18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25	13:53 (26)	08:34	15:11 (12)	07:21	06:52	05:31	04:33
	16:00 16	14:09 (26)	17:08 19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24	13:54 (26)	08:32	15:11 (12)	07:18	06:49	05:29	04:32
	16:01 16	14:10 (26)	17:10 19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23	13:54 (26)	08:30	15:11 (12)	07:15	06:46	05:26	04:31
	16:03 17	14:11 (26)	17:13 18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23	13:53 (26)	08:27	15:12 (12)	07:13	06:44	05:24	04:31
	16:05 18	14:11 (26)	17:15 18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22	13:53 (26)	08:25	15:12 (12)	07:10	06:41	05:21	04:30
	16:07 19	14:12 (26)	17:18 17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20	13:53 (26)	08:22	15:13 (12)	07:07	06:38	05:19	04:29
	16:09 19	14:12 (26)	17:20 14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19	13:54 (26)	08:20	15:16 (12)	07:04	06:35	05:17	04:28
	16:10 19	14:13 (26)	17:23 11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18	13:53 (26)	08:17	15:18 (12)	07:01	06:32	05:14	04:28
	16:12 21	14:14 (26)	17:25 5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17	13:54 (26)	08:15		06:58	06:29	05:12	04:27
	16:14 21	14:15 (26)	17:28		18:35	20:46	21:55	22:46
15	09:16	13:54 (26)	08:12		06:56	06:27	05:10	04:27
	16:16 21	14:15 (26)	17:30		18:37	20:49	21:57	22:47
16	09:14	13:54 (26)	08:10		06:53	06:24	05:08	04:27
	16:19 21	14:15 (26)	17:33		18:40	20:51	21:59	22:48
17	09:13	13:54 (26)	08:07		06:50	06:21	05:06	04:27
	16:21 22	14:16 (26)	17:35		18:42	20:53	22:02	22:48
18	09:11	13:55 (26)	08:05		06:47	06:18	05:04	04:26
	16:23 21	14:16 (26)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:55 (26)	08:02		06:44	06:15	05:02	04:26
	16:25 21	14:16 (26)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:56 (26)	07:59		06:41	06:13	05:00	04:26
	16:27 20	14:16 (26)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:56 (26)	07:57		06:38	06:10	04:58	04:26
	16:30 20	14:16 (26)	17:45		18:51	21:02	22:10	22:50
22	09:05	13:57 (26)	07:54		06:35	06:07	04:56	04:27
	16:32 19	14:16 (26)	17:47		18:53	21:05	22:12	22:50
23	09:03	13:58 (26)	07:51		06:32	06:05	04:54	04:27
	16:34 18	14:16 (26)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:59 (26)	07:49		06:30	06:02	04:52	04:27
	16:36 17	14:16 (26)	17:52		18:58	21:09	22:16	22:50
25	08:59	14:01 (26)	07:46		06:27	05:59	04:50	04:28
	16:39 14	14:15 (26)	17:55		19:00	21:12	22:18	22:50
26	08:58	14:02 (26)	07:43		06:24	05:57	04:49	04:28
	16:41 11	14:13 (26)	17:57		19:03	21:14	22:20	22:50
27	08:56	14:05 (26)	07:41		06:21	05:54	04:47	04:29
	16:44 6	14:11 (26)	18:00		19:05	21:16	22:22	22:50
28	08:54		07:38		06:18	05:51	04:45	04:29
	16:46		18:02		19:07	21:19	22:23	22:50
29	08:52				07:15	05:49	04:44	04:30
	16:48				20:10	21:21	22:25	22:49
30	08:50	15:15 (12)			07:12	05:46	04:42	04:31
	16:51 8	15:23 (12)			20:12	21:23	22:27	22:49
31	08:48	15:14 (12)			07:09		04:41	
	16:53 11	15:25 (12)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case	476		204					
Sun reduction	0,50		0,50					
Oper. time red.	0,80		0,80					
Wind dir. red.	0,55		0,55					
Total reduction	0,22		0,22					
Total, real	104		45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,55			0,55	
Total reduction					0,22			0,22			0,22	
Total, real					7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:45	10:57 (37)	07:35	16:28 (17)	07:06	05:44	04:39
	15:52		16:56 40	13:50 (26)	18:04 11	16:39 (17)	20:16	21:26	22:30
2	09:27		08:43	10:59 (37)	07:32	16:27 (17)	07:04	05:41	04:38
	15:54		16:58 37	13:51 (26)	18:07 13	16:40 (17)	20:19	21:28	22:32
3	09:27		08:41	11:02 (37)	07:30	16:27 (17)	07:01	05:38	04:37
	15:55		17:01 28	13:49 (26)	18:09 14	16:41 (17)	20:21	21:30	22:33
4	09:26		08:39	13:29 (26)	07:27	16:27 (17)	06:58	05:36	04:36
	15:57		17:03 20	13:49 (26)	18:12 17	16:44 (17)	20:23	21:33	22:35
5	09:26		08:37	13:30 (26)	07:24	16:27 (17)	06:55	05:33	04:34
	15:58		17:06 17	13:47 (26)	18:14 19	16:46 (17)	20:26	21:35	22:36
6	09:25		08:34	13:33 (26)	07:21	16:28 (17)	06:52	05:31	04:33
	16:00		17:08 12	13:45 (26)	18:16 17	16:45 (17)	20:28	21:37	22:38
7	09:24		08:32		07:18	16:29 (17)	06:49	05:29	04:32
	16:01		17:11		18:19 15	16:44 (17)	20:30	21:39	22:39
8	09:23		08:30		07:15	16:30 (17)	06:46	05:26	04:32
	16:03		17:13		18:21 12	16:42 (17)	20:32	21:42	22:40
9	09:23		08:27		07:13	16:33 (17)	06:44	05:24	04:31
	16:05		17:15		18:23 6	16:39 (17)	20:35	21:44	22:41
10	09:22		08:25		07:10		06:41	05:21	04:30
	16:07		17:18		18:26		20:37	21:46	22:43
11	09:20		08:22		07:07		06:38	05:19	04:29
	16:09		17:20		18:28		20:39	21:48	22:44
12	09:19		08:20	14:57 (7)	07:04		06:35	05:17	04:29
	16:11		17:23 8	15:05 (7)	18:30		20:42	21:51	22:45
13	09:18		08:17	14:59 (7)	07:01		06:32	05:15	04:28
	16:12		17:25 11	15:10 (7)	18:33		20:44	21:53	22:45
14	09:17	11:05 (37)	08:15	15:02 (7)	06:58		06:29	05:12	04:28
	16:14 3	11:08 (37)	17:28 12	15:14 (12)	18:35		20:46	21:55	22:46
15	09:16	10:59 (37)	08:12	15:06 (12)	06:56		06:27	05:10	04:27
	16:17 10	11:09 (37)	17:30 12	15:18 (12)	18:37		20:49	21:57	22:47
16	09:14	10:52 (37)	08:10	15:06 (12)	06:53		06:24	05:08	04:27
	16:19 18	11:10 (37)	17:33 15	15:21 (12)	18:40		20:51	21:59	22:48
17	09:13	10:51 (37)	08:07	15:05 (12)	06:50		06:21	05:06	04:27
	16:21 19	11:10 (37)	17:35 16	15:21 (12)	18:42		20:53	22:02	22:48
18	09:11	10:51 (37)	08:05	15:05 (12)	06:47		06:18	05:04	04:26
	16:23 20	11:11 (37)	17:38 15	15:20 (12)	18:44		20:56	22:04	22:49
19	09:10	10:51 (37)	08:02	15:06 (12)	06:44		06:16	05:02	04:26
	16:25 21	11:12 (37)	17:40 16	15:22 (12)	18:47		20:58	22:06	22:49
20	09:08	10:51 (37)	07:59	15:07 (12)	06:41		06:13	05:00	04:26
	16:27 22	11:13 (37)	17:43 17	15:24 (12)	18:49		21:00	22:08	22:50
21	09:07	10:51 (37)	07:57	15:07 (12)	06:38		06:10	04:58	04:26
	16:30 22	11:13 (37)	17:45 20	15:27 (12)	18:51		21:02	22:10	22:50
22	09:05	10:51 (37)	07:54	15:08 (12)	06:35		06:07	04:56	04:27
	16:32 27	12:49 (32)	17:47 20	15:28 (12)	18:53		21:05	22:12	22:50
23	09:03	10:51 (37)	07:51	15:09 (12)	06:32		06:05	04:54	04:27
	16:34 39	13:02 (32)	17:50 18	15:27 (12)	18:56		21:07	22:14	22:50
24	09:01	10:52 (37)	07:49	15:12 (12)	06:30		06:02	04:52	04:27
	16:37 40	13:04 (32)	17:52 13	15:25 (12)	18:58		21:09	22:16	22:50
25	08:59	10:52 (37)	07:46	15:16 (12)	06:27		05:59	04:50	04:28
	16:39 39	13:04 (32)	17:55 5	15:21 (12)	19:00		21:12	22:18	22:50
26	08:58	10:52 (37)	07:43		06:24		05:57	04:49	04:28
	16:41 39	13:24 (26)	17:57		19:03		21:14	22:20	22:50
27	08:56	10:53 (37)	07:41		06:21		05:54	04:47	04:29
	16:44 39	13:28 (26)	18:00		19:05		21:16	22:22	22:50
28	08:54	10:53 (37)	07:38	16:32 (17)	06:18		05:51	04:45	04:29
	16:46 41	13:35 (26)	18:02 4	16:36 (17)	19:07		21:19	22:23	22:50
29	08:52	10:54 (37)			07:15		05:49	04:44	04:30
	16:48 41	13:44 (26)			20:10		21:21	22:25	22:49
30	08:50	10:55 (37)			07:12		05:46	04:42	04:31
	16:51 42	13:47 (26)			20:12		21:23	22:27	22:49
31	08:48	10:56 (37)			07:09			04:41	
	16:53 42	13:49 (26)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	524		356		124				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,67		0,57		0,57				
Total reduction	0,27		0,23		0,23				
Total, real	139		81		28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (26)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (26)	15:48
5	04:36	05:33	06:42	07:48		17:09 (17)	08:01		13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (17)	16:39	13	13:15 (26)	15:47
6	04:37	05:35	06:44	07:50		17:06 (17)	08:03		13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (17)	16:36	17	13:18 (26)	15:46
7	04:38	05:37	06:46	07:53		17:04 (17)	08:06		12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (17)	16:34	21	13:19 (26)	15:45
8	04:40	05:39	06:48	07:55		17:03 (17)	08:08		10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (17)	16:32	29	13:20 (26)	15:44
9	04:41	05:41	06:50	07:57		17:02 (17)	08:10		10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (17)	16:30	37	13:22 (26)	15:44
10	04:42	05:44	06:53	07:59		17:01 (17)	08:13		10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (17)	16:27	40	13:21 (26)	15:43
11	04:44	05:46	06:55	08:02		17:01 (17)	08:15		10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (17)	16:25	41	13:19 (26)	15:43
12	04:45	05:48	06:57	08:04		17:01 (17)	08:18		10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (17)	16:23	42	13:19 (26)	15:42
13	04:47	05:50	06:59	08:06		17:02 (17)	08:20		10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (17)	16:21	41	13:15 (26)	15:42
14	04:49	05:53	07:01	08:09		17:06 (17)	08:22		10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (17)	16:19	41	13:07 (26)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (37)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (26)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (37)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (26)	15:42
17	04:54	05:59	07:08	08:16		15:45 (12)	08:29		10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (12)	16:13	39	12:37 (32)	15:42
18	04:56	06:02	07:10	08:18		15:42 (12)	08:32		10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (12)	16:11	40	12:38 (32)	15:42
19	04:57	06:04	07:12	08:20		15:40 (12)	08:34		10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (12)	16:09	39	12:37 (32)	15:42
20	04:59	06:06	07:15	08:23		15:39 (12)	08:36		10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (12)	16:07	28	12:25 (32)	15:42
21	05:01	06:08	07:17	08:25		15:37 (12)	08:38		10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (12)	16:06	22	10:49 (37)	15:43
22	05:03	06:10	07:19	08:27		15:37 (12)	08:41		10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (12)	16:04	22	10:49 (37)	15:43
23	05:05	06:13	07:21	08:30		15:36 (12)	08:43		10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (12)	16:02	21	10:49 (37)	15:44
24	05:07	06:15	07:24	08:32		15:35 (12)	08:45		10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (12)	16:01	20	10:49 (37)	15:44
25	05:09	06:17	07:26	07:34		14:36 (12)	08:47		10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (12)	15:59	19	10:48 (37)	15:45
26	05:11	06:19	07:28	07:37		14:35 (12)	08:49		10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (12)	15:57	18	10:49 (37)	15:46
27	05:13	06:22	07:30	07:39		14:35 (12)	08:51		10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (12)	15:56	10	10:48 (37)	15:47
28	05:15	06:24	07:32	07:41		14:30 (7)	08:53		10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (12)	15:55	3	10:47 (37)	15:48
29	05:17	06:26	07:35	07:44		14:27 (7)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (7)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (7)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (7)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39		
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30		
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38		
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32		
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37		
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33		
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36		
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35		
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35		
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36		
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33		
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37		
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32		
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39		
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32		
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40		
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31		
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41		
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30		
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42		
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29		
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43		
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29		
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44		
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28		
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45		
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28		
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46		
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27		
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47		
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27		
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47		
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27		
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48		
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26		
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49		
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26		
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49		
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26		
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49		
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26		
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50		
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27		
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50		
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27		
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50		
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27		
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50		
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28		
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50		
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28		
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50		
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29		
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50		
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29		
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49		
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30		
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49		
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31		
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49		
31	08:47		15:29 (8)				07:09						04:41					
	16:53	20	15:49 (8)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				
Sun reduction		0,50			0,50			0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80			0,80			0,80				
Wind dir. red.		0,53			0,54			0,58			0,68			0,68				
Total reduction		0,21			0,22			0,23			0,27			0,27				
Total, real		16			169			118			331			18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60	19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35		18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57	19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37		18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54	19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39		18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35	19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42		18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31	19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44		18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28	19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46		18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25	19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48		18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18	19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50		19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11	19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53			07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13			18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55			08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11			18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57			08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08			18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59			08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05			18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01		18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7	18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04		18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13	18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06		18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16	18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08		18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19	18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10		18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20	18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12		18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21	18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15		18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22	18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17		18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22	18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19		18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22	18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21		18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21	18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23		18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19	18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26		18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18	18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28		18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15	18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30		18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11	18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32			07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21			16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34			07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18			16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37			07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16			16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)				07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)				16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (23)	08:46	10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53 31	12:43 (24)	16:56 18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28	11:14 (23)	08:44	10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54 30	12:43 (24)	16:58 17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27	11:13 (23)	08:41	10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55 31	12:43 (24)	17:01 14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27	11:13 (23)	08:39	10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57 30	12:43 (24)	17:03 11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26	11:14 (23)	08:37	10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58 28	12:42 (24)	17:06 7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25	11:14 (23)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (28)	09:09		11:00 (23)
	16:00 28	12:42 (24)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (28)	15:46	28	12:28 (24)
7	09:25	11:14 (23)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (28)	09:10		11:01 (23)
	16:02 26	12:41 (24)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (28)	15:45	29	12:30 (24)
8	09:24	11:14 (23)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (28)	09:12		11:02 (23)
	16:03 21	11:35 (23)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (28)	15:45	30	12:31 (24)
9	09:23	11:15 (23)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (28)	09:14		11:03 (23)
	16:05 21	11:36 (23)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (28)	15:44	30	12:32 (24)
10	09:22	11:15 (23)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (28)	09:15		11:03 (23)
	16:07 21	11:36 (23)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (28)	15:44	30	12:32 (24)
11	09:21	11:15 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (28)	09:16		11:04 (23)
	16:09 22	11:37 (23)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (28)	15:43	30	12:33 (24)
12	09:20	11:15 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (28)	09:18		11:04 (23)
	16:11 22	11:37 (23)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (28)	15:43	31	12:34 (24)
13	09:19	11:16 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (28)	09:19		11:05 (23)
	16:13 22	11:38 (23)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (28)	15:42	31	12:35 (24)
14	09:17	11:16 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (28)	09:20		11:06 (23)
	16:15 22	11:38 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (28)	15:42	30	12:35 (24)
15	09:16	11:16 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (28)	09:21		11:06 (23)
	16:17 22	11:38 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (28)	15:42	31	12:36 (24)
16	09:15	11:16 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (28)	09:22		11:08 (23)
	16:19 22	11:38 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (28)	15:42	30	12:37 (24)
17	09:13	11:18 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (28)	09:23		11:09 (23)
	16:21 21	11:39 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (23)	15:42	30	12:38 (24)
18	09:12	11:18 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (28)	09:24		11:08 (23)
	16:23 21	11:39 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (23)	15:42	30	12:37 (24)
19	09:10	10:13 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (28)	09:25		11:09 (23)
	16:25 27	11:39 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (23)	15:42	29	12:38 (24)
20	09:09	10:12 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (28)	09:26		11:10 (23)
	16:28 30	11:39 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (23)	15:43	30	12:39 (24)
21	09:07	10:11 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (28)	09:26		11:11 (23)
	16:30 32	11:39 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (23)	15:43	29	12:40 (24)
22	09:05	10:10 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (28)	09:27		11:11 (23)
	16:32 32	11:38 (23)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (23)	15:43	29	12:40 (24)
23	09:03	10:09 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (28)	09:27		11:11 (23)
	16:34 31	11:37 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (23)	15:44	30	12:40 (24)
24	09:02	10:09 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (23)	09:28		11:12 (23)
	16:37 29	11:36 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (23)	15:45	30	12:41 (24)
25	09:00	10:09 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (23)	09:28		11:12 (23)
	16:39 26	11:34 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (23)	15:45	29	12:41 (24)
26	08:58	10:09 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (23)	09:28		11:13 (23)
	16:41 19	10:28 (28)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (23)	15:46	30	12:42 (24)
27	08:56	10:09 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (23)	09:28		11:13 (23)
	16:44 20	10:29 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (23)	15:47	30	12:42 (24)
28	08:54	10:09 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (23)	09:29		11:13 (23)
	16:46 19	10:28 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (23)	15:48	31	12:43 (24)
29	08:52	10:09 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (23)	09:29		11:13 (23)
	16:49 20	10:29 (28)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (23)	15:49	30	12:42 (24)
30	08:50	10:09 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (23)	09:28		11:13 (23)
	16:51 19	10:28 (28)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (23)	15:50	31	12:43 (24)
31	08:48	10:10 (28)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (23)
	16:54 19	10:29 (28)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (12)
	15:52	16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (12)
2	09:27		12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (12)
	15:54	16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (12)
3	09:27		12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (12)
	15:55	17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (12)
4	09:26		12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (12)
	15:57	17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (12)
5	09:26		12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (12)
	15:58	18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (12)
6	09:25		12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (12)
	16:00	19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (12)
7	09:24		12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (12)
	16:01	20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (12)
8	09:24		12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (12)
	16:03	19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (12)
9	09:23		12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (12)
	16:05	20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (12)
10	09:22		12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (12)
	16:07	20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (12)
11	09:21		12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (12)
	16:09	20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (12)
12	09:19		12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (12)
	16:11	20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (12)
13	09:18		12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (12)
	16:12	20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (12)
14	09:17		12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (12)
	16:14	20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (12)
15	09:16		12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (12)
	16:17	20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (12)
16	09:14		12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (12)
	16:19	20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (12)
17	09:13		12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (12)
	16:21	19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (12)
18	09:11		12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (12)
	16:23	19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (12)
19	09:10		13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (12)	09:25		12:50 (12)
	16:25	18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (12)	15:42	13	13:03 (12)
20	09:08		13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (12)	09:25		12:51 (12)
	16:27	16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (12)	15:42	12	13:03 (12)
21	09:07		13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (12)	09:26		12:51 (12)
	16:30	15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (12)	15:43	12	13:03 (12)
22	09:05		13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (12)	09:27		12:52 (12)
	16:32	12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (12)	15:43	12	13:04 (12)
23	09:03		13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (12)	09:27		12:52 (12)
	16:34	9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (12)	15:44	12	13:04 (12)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (12)	09:28		12:52 (12)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (12)	15:44	12	13:04 (12)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (12)	09:28		12:53 (12)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (12)	15:45	13	13:06 (12)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (12)	09:28		12:53 (12)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (12)	15:46	13	13:06 (12)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (12)	09:28		12:54 (12)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (12)	15:47	13	13:07 (12)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (12)	09:28		12:53 (12)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (12)	15:48	14	13:07 (12)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (12)	09:28		12:53 (12)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (12)	15:49	15	13:08 (12)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (12)	09:28		12:54 (12)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (12)	15:50	15	13:09 (12)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (12)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (12)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (12)	08:59
	15:52		16:56 19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (12)	15:51
2	09:27		08:43	13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (12)	09:01
	15:54		16:58 16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (12)	15:50
3	09:27		08:41	13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (12)	09:03
	15:55		17:01 12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (12)	15:49
4	09:26		08:39	14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (12)	09:05
	15:57		17:03 5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (12)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (12)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (12)	15:47
6	09:25		08:34	15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (26)	09:10
	16:01		17:11 11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (26)	15:45
8	09:23		08:30	15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (26)	09:12
	16:03		17:13 15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (26)	15:44
9	09:23		08:27	15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (26)	09:13
	16:05		17:15 18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (26)	15:44
10	09:22		08:25	15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (26)	09:15
	16:07		17:18 19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (26)	15:43
11	09:20		08:22	15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (26)	09:16
	16:09		17:20 21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (26)	15:43
12	09:19		08:20	15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (26)	09:17
	16:10		17:23 22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17	15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (26)	09:19
	16:12 5	13:58 (26)	17:25 22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15	15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (26)	09:20
	16:14 9	14:00 (26)	17:28 23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12	15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (37)	09:21
	16:17 11	14:01 (26)	17:30 22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10	15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (37)	09:22
	16:19 17	14:07 (26)	17:33 22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07	15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (37)	09:23
	16:21 21	14:10 (26)	17:35 21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05	15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (37)	09:24
	16:23 27	14:11 (26)	17:38 19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02	15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (37)	09:25
	16:25 32	14:12 (26)	17:40 17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59	15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (37)	09:25
	16:27 36	14:12 (26)	17:43 14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57	15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (12)	08:38	11:05 (37)	09:26
	16:30 42	14:13 (26)	17:45 8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (12)	16:06 42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (12)	08:41	11:08 (37)	09:27
	16:32 45	14:14 (26)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (12)	16:04 36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (12)	08:43	11:12 (37)	09:27
	16:34 44	14:14 (26)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (12)	16:02 32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (12)	08:45	11:16 (37)	09:27
	16:36 42	14:15 (26)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (12)	16:01 28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (12)	08:47	13:27 (26)	09:28
	16:39 40	14:15 (26)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (12)	15:59 21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (12)	08:49	13:29 (26)	09:28
	16:41 37	14:15 (26)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (12)	15:57 17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (12)	08:51	13:29 (26)	09:28
	16:44 33	14:15 (26)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (12)	15:56 12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (12)	08:53	13:30 (26)	09:28
	16:46 24	14:15 (26)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (12)	15:55 9	13:39 (26)	15:47
29	08:52	13:51 (26)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (12)	08:55	13:35 (26)	09:28
	16:48 23	14:14 (26)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (12)	15:53 5	13:40 (26)	15:49
30	08:50	13:52 (26)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (12)	08:57		09:28
	16:51 22	14:14 (26)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (12)	15:52		15:50
31	08:48	13:54 (26)			07:09		04:41		05:22	06:31		07:49	14:47 (12)			09:28
	16:53 20	14:14 (26)			20:14		22:29		22:03	20:42		16:51 20	15:07 (12)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (32) | 08:45		10:15 (13) | 07:35		13:26 (26) | 07:07		18:42 (17) | 05:44	| 04:39
	15:52	47	14:26 (14) | 16:56	119	15:37 (35) | 18:04	35	17:05 (9) | 20:16	19	19:01 (17) | 21:26	| 22:30
2	09:27		12:11 (32) | 08:43		12:16 (32) | 07:32		15:45 (7) | 07:04		18:43 (17) | 05:41	| 04:38
	15:54	53	14:28 (14) | 16:58	114	15:38 (35) | 18:07	27	17:09 (9) | 20:19	16	18:59 (17) | 21:28	| 22:32
3	09:27		12:10 (32) | 08:41		12:17 (32) | 07:30		16:34 (12) | 07:01		18:46 (17) | 05:38	| 04:37
	15:55	58	14:29 (14) | 17:01	113	15:38 (35) | 18:09	33	17:12 (9) | 20:21	11	18:57 (17) | 21:30	| 22:33
4	09:26		12:10 (32) | 08:39		09:39 (37) | 07:27		16:31 (12) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (14) | 17:03	109	15:39 (35) | 18:12	43	17:15 (9) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (32) | 08:36		09:39 (37) | 07:24		16:29 (12) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (14) | 17:06	105	15:39 (35) | 18:14	46	17:15 (9) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (32) | 08:34		09:40 (37) | 07:21		16:26 (12) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (14) | 17:08	95	15:39 (35) | 18:16	49	17:15 (9) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (13) | 08:32		09:40 (37) | 07:18		16:25 (12) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (14) | 17:11	96	15:39 (35) | 18:19	50	17:15 (9) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (13) | 08:30		09:38 (37) | 07:15		16:23 (12) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (14) | 17:13	96	15:38 (35) | 18:21	52	17:15 (9) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (13) | 08:27		09:36 (37) | 07:13		16:22 (12) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (14) | 17:16	98	15:38 (35) | 18:23	53	17:15 (9) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (13) | 08:25		09:33 (37) | 07:10		16:20 (12) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (14) | 17:18	107	15:57 (7) | 18:26	54	17:14 (9) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (13) | 08:22		09:29 (37) | 07:07		16:19 (12) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (14) | 17:20	114	16:00 (7) | 18:28	54	17:13 (9) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (13) | 08:20		09:27 (37) | 07:04		16:18 (12) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (14) | 17:23	118	16:03 (7) | 18:30	54	17:12 (9) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (13) | 08:17		09:24 (37) | 07:01		16:18 (12) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (14) | 17:25	118	16:04 (7) | 18:33	52	17:10 (9) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (13) | 08:15		09:21 (37) | 06:58		16:17 (12) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (14) | 17:28	114	16:05 (7) | 18:35	51	17:08 (9) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (13) | 08:12		09:18 (37) | 06:56		16:17 (12) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (14) | 17:30	120	16:07 (7) | 18:37	47	17:04 (9) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (13) | 08:10		09:13 (37) | 06:53		16:17 (12) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (14) | 17:33	125	16:08 (7) | 18:40	46	17:03 (12) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (13) | 08:07		09:13 (37) | 06:50		16:17 (12) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (14) | 17:35	123	16:08 (7) | 18:42	46	17:03 (12) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (13) | 08:05		09:13 (37) | 06:47		16:16 (12) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (14) | 17:38	121	16:08 (7) | 18:44	46	17:02 (12) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (13) | 08:02		09:15 (37) | 06:44		16:16 (12) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (14) | 17:40	118	16:09 (7) | 18:47	56	18:01 (17) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (13) | 07:59		09:16 (37) | 06:41		16:16 (12) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (14) | 17:43	114	16:09 (7) | 18:49	60	18:03 (17) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (13) | 07:57		09:17 (37) | 06:38		16:16 (12) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (14) | 17:45	110	16:09 (7) | 18:51	64	18:05 (17) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (13) | 07:54		09:18 (37) | 06:35		16:17 (12) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (14) | 17:48	104	16:08 (7) | 18:54	63	18:05 (17) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (13) | 07:51		09:20 (37) | 06:32		16:17 (12) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (14) | 17:50	95	16:08 (7) | 18:56	64	18:06 (17) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (13) | 07:49		13:09 (26) | 06:30		16:18 (12) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (14) | 17:52	77	16:08 (7) | 18:58	64	18:06 (17) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (13) | 07:46		13:11 (26) | 06:27		16:18 (12) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (14) | 17:55	71	16:07 (7) | 19:00	62	18:06 (17) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (13) | 07:43		13:13 (26) | 06:24		16:20 (12) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (35) | 17:57	66	16:06 (7) | 19:03	61	18:07 (17) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (13) | 07:41		13:16 (26) | 06:21		16:22 (12) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (35) | 18:00	58	16:05 (7) | 19:05	57	18:07 (17) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (13) | 07:38		13:19 (26) | 06:18		16:23 (12) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (35) | 18:02	49	16:04 (7) | 19:07	54	18:06 (17) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (13) |		| 07:15		17:26 (12) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (35) |		| 20:10	47	19:05 (17) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (13) |		| 07:12		17:29 (12) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (35) |		| 20:12	38	19:04 (17) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (13) |		| 07:09		18:41 (17) |			| 04:41	|
	16:53	126	15:37 (35) |		| 20:14	22	19:03 (17) |			| 22:29	|
Potential sun hours	221		260		365		432		521	547
Total, worst case		3257		2867		1550		46		
Sun reduction		0,50		0,50		0,50		0,50		
Oper. time red.		0,80		0,80		0,80		0,80		
Wind dir. red.		0,60		0,59		0,58		0,62		
Total reduction		0,24		0,24		0,23		0,25		
Total, real		786		675		361		11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:39	16:57 (12)	07:51	09:03 (37)	08:59	09:52 (13)
	22:48	22:01	20:39		19:13	53 17:50 (9)	16:49	107 15:26 (7)	15:51	96 14:16 (14)
2	04:33	05:26	06:35		07:41	16:58 (12)	07:53	09:06 (37)	09:01	09:53 (13)
	22:48	21:58	20:37		19:10	54 17:52 (9)	16:46	98 15:08 (35)	15:50	91 14:16 (14)
3	04:34	05:28	06:37		07:44	16:58 (12)	07:56	09:08 (37)	09:03	09:54 (13)
	22:47	21:56	20:34		19:07	54 17:52 (9)	16:44	96 15:08 (35)	15:49	88 14:17 (14)
4	04:35	05:30	06:39		07:46	16:58 (12)	07:58	09:10 (37)	09:05	09:54 (13)
	22:46	21:54	20:31		19:04	54 17:52 (9)	16:41	94 15:08 (35)	15:48	83 14:17 (14)
5	04:36	05:33	06:42		07:48	17:00 (12)	08:01	09:10 (37)	09:07	09:55 (13)
	22:45	21:51	20:28		19:01	52 17:52 (9)	16:39	95 15:09 (35)	15:47	77 14:17 (14)
6	04:37	05:35	06:44		07:50	17:00 (12)	08:03	09:10 (37)	09:08	09:57 (13)
	22:45	21:49	20:25		18:58	52 17:52 (9)	16:37	105 15:09 (35)	15:46	71 14:17 (14)
7	04:38	05:37	06:46		07:53	17:01 (12)	08:06	09:08 (37)	09:10	11:57 (32)
	22:44	21:46	20:22		18:56	50 17:51 (9)	16:34	111 15:09 (35)	15:45	64 14:17 (14)
8	04:40	05:39	06:48		07:55	17:03 (12)	08:08	11:48 (32)	09:12	11:57 (32)
	22:43	21:44	20:19		18:53	48 17:51 (9)	16:32	112 15:09 (35)	15:44	62 14:17 (14)
9	04:41	05:41	06:51	18:40 (17)	07:57	17:04 (12)	08:10	11:47 (32)	09:13	11:59 (32)
	22:41	21:41	20:16	10 18:50 (17)	18:50	46 17:50 (9)	16:30	113 15:09 (35)	15:44	57 14:17 (14)
10	04:42	05:44	06:53	18:37 (17)	07:59	17:06 (12)	08:13	09:45 (13)	09:15	12:00 (32)
	22:40	21:39	20:14	15 18:52 (17)	18:47	40 17:48 (9)	16:27	121 15:08 (35)	15:43	53 14:17 (14)
11	04:44	05:46	06:55	18:35 (17)	08:02	16:22 (7)	08:15	09:42 (13)	09:16	12:01 (32)
	22:39	21:36	20:11	19 18:54 (17)	18:44	36 17:45 (9)	16:25	127 15:08 (35)	15:43	47 14:16 (14)
12	04:45	05:48	06:57	18:34 (17)	08:04	16:18 (7)	08:17	09:41 (13)	09:17	12:03 (32)
	22:38	21:34	20:08	21 18:55 (17)	18:42	25 17:41 (9)	16:23	130 15:08 (35)	15:42	44 14:17 (14)
13	04:47	05:50	06:59	17:21 (12)	08:06	13:56 (26)	08:20	09:39 (13)	09:19	12:04 (32)
	22:36	21:31	20:05	37 18:55 (17)	18:39	42 17:38 (9)	16:21	131 15:06 (35)	15:42	39 14:17 (14)
14	04:49	05:53	07:02	17:17 (12)	08:09	13:50 (26)	08:22	09:39 (13)	09:20	12:07 (32)
	22:35	21:29	20:02	45 18:55 (17)	18:36	53 16:37 (7)	16:19	131 15:05 (35)	15:42	34 14:17 (14)
15	04:50	05:55	07:04	17:13 (12)	08:11	13:46 (26)	08:25	09:39 (13)	09:21	13:06 (26)
	22:33	21:26	19:59	52 18:55 (17)	18:33	62 16:37 (7)	16:17	128 15:03 (35)	15:42	26 14:16 (14)
16	04:52	05:57	07:06	17:11 (12)	08:13	13:44 (26)	08:27	09:39 (13)	09:22	13:08 (26)
	22:32	21:23	19:56	56 18:55 (17)	18:30	69 16:39 (7)	16:15	124 15:02 (35)	15:42	22 14:15 (14)
17	04:54	05:59	07:08	17:08 (12)	08:16	13:41 (26)	08:29	09:38 (13)	09:23	13:10 (26)
	22:30	21:21	19:53	59 18:54 (17)	18:28	75 16:39 (7)	16:13	125 14:07 (14)	15:42	18 14:15 (14)
18	04:56	06:02	07:10	17:07 (12)	08:18	09:55 (37)	08:32	09:38 (13)	09:24	13:12 (26)
	22:29	21:18	19:50	63 18:55 (17)	18:25	86 16:39 (7)	16:11	129 14:09 (14)	15:42	16 14:15 (14)
19	04:58	06:04	07:12	17:06 (12)	08:20	09:51 (37)	08:34	09:39 (13)	09:25	13:16 (3)
	22:27	21:15	19:47	63 18:54 (17)	18:22	98 16:39 (7)	16:09	131 14:11 (14)	15:42	11 14:15 (14)
20	04:59	06:06	07:15	17:04 (12)	08:23	09:49 (37)	08:36	09:38 (13)	09:25	13:16 (3)
	22:25	21:13	19:45	65 18:53 (17)	18:20	106 16:40 (7)	16:07	129 14:11 (14)	15:42	9 14:14 (14)
21	05:01	06:08	07:17	17:03 (12)	08:25	09:46 (37)	08:38	09:39 (13)	09:26	13:17 (3)
	22:23	21:10	19:42	64 18:51 (17)	18:17	113 16:39 (7)	16:06	131 14:13 (14)	15:43	9 14:15 (14)
22	05:03	06:11	07:19	17:01 (12)	08:27	09:45 (37)	08:41	09:38 (13)	09:26	13:18 (3)
	22:21	21:07	19:39	64 18:50 (17)	18:14	116 16:39 (7)	16:04	131 14:13 (14)	15:43	9 14:16 (14)
23	05:05	06:13	07:21	17:00 (12)	08:30	09:44 (37)	08:43	09:39 (13)	09:27	13:18 (3)
	22:19	21:05	19:36	62 18:48 (17)	18:12	119 16:38 (7)	16:02	128 14:14 (14)	15:44	9 14:16 (14)
24	05:07	06:15	07:24	17:00 (12)	08:32	09:43 (37)	08:45	09:39 (13)	09:27	13:18 (3)
	22:18	21:02	19:33	58 18:46 (17)	18:09	122 16:38 (7)	16:01	127 14:14 (14)	15:44	11 14:17 (14)
25	05:09	06:17	07:26	16:59 (12)	07:34	08:43 (37)	08:47	09:40 (13)	09:28	13:15 (26)
	22:16	20:59	19:30	46 17:45 (12)	17:06	123 15:38 (7)	15:59	124 14:15 (14)	15:45	14 14:17 (14)
26	05:11	06:19	07:28	16:58 (12)	07:37	08:44 (37)	08:49	09:40 (13)	09:28	13:14 (26)
	22:14	20:56	19:27	47 17:45 (12)	17:04	122 15:37 (7)	15:58	119 14:15 (14)	15:46	17 14:18 (14)
27	05:13	06:22	07:30	16:58 (12)	07:39	08:48 (37)	08:51	09:49 (13)	09:28	13:13 (26)
	22:11	20:53	19:24	46 17:44 (12)	17:01	118 15:36 (7)	15:56	112 14:16 (14)	15:47	20 14:19 (14)
28	05:15	06:24	07:32	16:58 (12)	07:41	08:51 (37)	08:53	09:49 (13)	09:28	13:12 (26)
	22:09	20:51	19:21	46 17:44 (12)	16:59	115 15:35 (7)	15:55	109 14:16 (14)	15:48	24 14:21 (14)
29	05:17	06:26	07:35	16:58 (12)	07:44	08:54 (37)	08:55	09:50 (13)	09:28	12:14 (32)
	22:07	20:48	19:19	50 17:48 (9)	16:56	119 15:34 (7)	15:53	106 14:16 (14)	15:49	31 14:23 (14)
30	05:20	06:28	07:37	16:57 (12)	07:46	08:57 (37)	08:57	09:50 (13)	09:28	12:13 (32)
	22:05	20:45	19:16	52 17:49 (9)	16:53	117 15:32 (7)	15:52	103 14:16 (14)	15:50	37 14:25 (14)
31	05:22	06:31			07:49	08:59 (37)			09:28	12:12 (32)
	22:03	20:42			16:51	115 15:29 (7)			15:51	41 14:25 (14)
Potential sun hours	546	478	386		319		236		199	
Total, worst case				1040		2454		3527		1230
Sun reduction				0,50		0,50		0,50		0,50
Oper. time red.				0,80		0,80		0,80		0,80
Wind dir. red.				0,59		0,59		0,60		0,59
Total reduction				0,24		0,24		0,24		0,24
Total, real				245		577		846		289

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (1) 04:32	20:33 (1) 05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30 8	20:35 (1) 22:48 15	20:48 (1) 22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (1) 04:33	20:33 (1) 05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31 11	20:38 (1) 22:47 15	20:48 (1) 21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (1) 04:34	20:33 (1) 05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33 12	20:39 (1) 22:47 15	20:48 (1) 21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (1) 04:35	20:33 (1) 05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34 12	20:39 (1) 22:46 14	20:47 (1) 21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (1) 04:36	20:33 (1) 05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36 13	20:40 (1) 22:45 14	20:47 (1) 21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (1) 04:37	20:34 (1) 05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37 13	20:40 (1) 22:44 13	20:47 (1) 21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (1) 04:39	20:34 (1) 05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38 14	20:42 (1) 22:43 12	20:46 (1) 21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (1) 04:40	20:34 (1) 05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40 14	20:42 (1) 22:42 12	20:46 (1) 21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (1) 04:41	20:35 (1) 05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41 14	20:42 (1) 22:41 11	20:46 (1) 21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (1) 04:43	20:35 (1) 05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42 14	20:43 (1) 22:40 11	20:46 (1) 21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (1) 04:44	20:35 (1) 05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43 16	20:44 (1) 22:39 9	20:44 (1) 21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (1) 04:46	20:35 (1) 05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44 16	20:45 (1) 22:37 4	20:39 (1) 21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (1) 04:47	20:35 (1) 05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45 16	20:45 (1) 22:36 3	20:38 (1) 21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (1) 04:49	20:35 (1) 05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46 17	20:46 (1) 22:34 2	20:37 (1) 21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (1) 04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47 17	20:47 (1) 22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (1) 04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47 17	20:47 (1) 22:31	21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (1) 04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48 18	20:48 (1) 22:30	21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (1) 04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48 17	20:48 (1) 22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (1) 04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49 18	20:49 (1) 22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (1) 05:00	06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49 18	20:49 (1) 22:25	21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (1) 05:01	06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49 18	20:49 (1) 22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (1) 05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50 18	20:49 (1) 22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (1) 05:05	06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50 18	20:49 (1) 22:19	21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (1) 05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50 17	20:49 (1) 22:17	21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (1) 05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50 17	20:49 (1) 22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (1) 05:11	06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50 18	20:50 (1) 22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (1) 05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49 17	20:49 (1) 22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (1) 05:15	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49 17	20:49 (1) 22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (1) 05:18	06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49 17	20:50 (1) 22:07	20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42 20:27 (1)	04:31	20:32 (1) 05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26 2 20:29 (1)	22:48 17	20:49 (1) 22:05	20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41 20:27 (1)		05:22	06:31		07:48		09:27
	16:53		20:14		22:28 3 20:30 (1)		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					5	469	150					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,73	0,73	0,73					
Total reduction					0,29	0,29	0,29					
Total, real					1	138	44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April			May			June		
1	09:28	08:46	07:35	07:07			05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56	18:05	20:17			21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43	07:33	07:04			05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59	18:07	20:19			21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41	07:30	07:01			05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01	18:10	20:21			21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39	07:27	06:58			05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04	18:12	20:24			21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37	07:24	06:55			05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06	18:14	20:26			21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34	07:21	06:53			05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09	18:17	20:28			21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32	07:19	06:50			05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11	18:19	20:31			21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	07:16	06:47			05:27			04:32		06:15 (36)
	16:04	17:14	18:21	20:33			21:42			22:40	29	06:44 (36)
9	09:23	08:27	07:13	06:44			05:24			04:31		06:16 (36)
	16:06	17:16	18:24	20:35			21:44			22:42	29	06:45 (36)
10	09:22	08:25	07:10	06:41		07:48 (38)	05:22			04:31		06:15 (36)
	16:07	17:18	18:26	20:37	10	07:58 (38)	21:46			22:43	30	06:45 (36)
11	09:21	08:23	07:07	06:38		07:45 (38)	05:20			04:30		06:16 (36)
	16:09	17:21	18:28	20:40	17	08:02 (38)	21:49			22:44	29	06:45 (36)
12	09:20	08:20	07:04	06:36		07:41 (38)	05:17			04:29		06:15 (36)
	16:11	17:23	18:31	20:42	22	08:03 (38)	21:51			22:45	30	06:45 (36)
13	09:18	08:18	07:02	06:33		07:37 (38)	05:15			04:29		06:16 (36)
	16:13	17:26	18:33	20:44	27	08:04 (38)	21:53			22:46	30	06:46 (36)
14	09:17	08:15	06:59	06:30		07:35 (38)	05:13			04:28		06:16 (36)
	16:15	17:28	18:35	20:47	30	08:05 (38)	21:55			22:46	30	06:46 (36)
15	09:16	08:13	06:56	06:27		07:34 (38)	05:11			04:28		06:15 (36)
	16:17	17:31	18:38	20:49	33	08:07 (38)	21:57			22:47	31	06:46 (36)
16	09:14	08:10	06:53	06:24		07:33 (38)	05:09			04:28		06:16 (36)
	16:19	17:33	18:40	20:51	34	08:07 (38)	22:00			22:48	30	06:46 (36)
17	09:13	08:07	06:50	06:22		07:32 (38)	05:06			04:27		06:16 (36)
	16:21	17:36	18:42	20:54	35	08:07 (38)	22:02			22:48	31	06:47 (36)
18	09:12	08:05	06:47	06:19		07:31 (38)	05:04			04:27		06:16 (36)
	16:24	17:38	18:45	20:56	37	08:08 (38)	22:04			22:49	31	06:47 (36)
19	09:10	08:02	06:44	06:16		07:30 (38)	05:02			04:27		06:16 (36)
	16:26	17:41	18:47	20:58	38	08:08 (38)	22:06			22:49	31	06:47 (36)
20	09:08	08:00	06:42	06:13		07:30 (38)	05:00			04:27		06:16 (36)
	16:28	17:43	18:49	21:00	39	08:09 (38)	22:08			22:50	31	06:47 (36)
21	09:07	07:57	06:39	06:11		07:30 (38)	04:58			04:27		06:16 (36)
	16:30	17:46	18:52	21:03	38	08:08 (38)	22:10			22:50	31	06:47 (36)
22	09:05	07:54	06:36	06:08		07:29 (38)	04:56			04:27		06:17 (36)
	16:32	17:48	18:54	21:05	39	08:08 (38)	22:12			22:50	31	06:48 (36)
23	09:03	07:52	06:33	06:05		07:29 (38)	04:55			04:28		06:17 (36)
	16:35	17:50	18:56	21:07	39	08:08 (38)	22:14			22:50	31	06:48 (36)
24	09:02	07:49	06:30	06:02		07:29 (38)	04:53			04:28		06:17 (36)
	16:37	17:53	18:58	21:10	38	08:07 (38)	22:16			22:50	31	06:48 (36)
25	09:00	07:46	06:27	06:00		07:29 (38)	04:51			04:28		06:18 (36)
	16:39	17:55	19:01	21:12	38	08:07 (38)	22:18			22:50	31	06:49 (36)
26	08:58	07:44	06:24	05:57		07:29 (38)	04:49		06:24 (36)	04:29		06:18 (36)
	16:42	17:58	19:03	21:14	37	08:06 (38)	22:20	8	06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41	06:21	05:54		07:29 (38)	04:48		06:21 (36)	04:29		06:19 (36)
	16:44	18:00	19:05	21:17	37	08:06 (38)	22:22	13	06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38	06:18	05:52		07:29 (38)	04:46		06:20 (36)	04:30		06:18 (36)
	16:47	18:02	19:08	21:19	36	08:05 (38)	22:24	16	06:36 (36)	22:50	31	06:49 (36)
29	08:52		07:16	05:49		07:30 (38)	04:44		06:19 (36)	04:31		06:19 (36)
	16:49		20:10	21:21	34	08:04 (38)	22:25	18	06:37 (36)	22:49	30	06:49 (36)
30	08:50		07:13	05:47		07:30 (38)	04:43		06:19 (36)	04:31		06:19 (36)
	16:51		20:12	21:24	33	08:03 (38)	22:27	20	06:39 (36)	22:49	30	06:49 (36)
31	08:48		07:10				04:41		06:17 (36)			
	16:54		20:14				22:29	22	06:39 (36)			
Potential sun hours	221	260	365	432			521			547		
Total, worst case					691			254			878	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,65			0,62			0,58	
Total reduction					0,26			0,25			0,23	
Total, real					178			63			204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October	November	December
1	04:32		06:20 (36)	05:24			06:33		07:44 (38)	07:39	07:51	09:00
	22:48	30	06:50 (36)	22:01			20:40	17	08:01 (38)	19:13	16:49	15:51
2	04:33		06:20 (36)	05:27			06:35		07:47 (38)	07:42	07:54	09:01
	22:48	30	06:50 (36)	21:58			20:37	10	07:57 (38)	19:10	16:47	15:50
3	04:34		06:20 (36)	05:29			06:38			07:44	07:56	09:03
	22:47	29	06:49 (36)	21:56			20:34			19:07	16:44	15:49
4	04:35		06:20 (36)	05:31			06:40			07:46	07:59	09:05
	22:46	29	06:49 (36)	21:54			20:31			19:05	16:42	15:48
5	04:36		06:21 (36)	05:33			06:42			07:48	08:01	09:07
	22:46	28	06:49 (36)	21:51			20:28			19:02	16:39	15:47
6	04:38		06:21 (36)	05:35		07:49 (38)	06:44			07:51	08:03	09:09
	22:45	28	06:49 (36)	21:49	13	08:02 (38)	20:25			18:59	16:37	15:47
7	04:39		06:23 (36)	05:38		07:46 (38)	06:47			07:53	08:06	09:10
	22:44	27	06:50 (36)	21:47	18	08:04 (38)	20:23			18:56	16:35	15:46
8	04:40		06:23 (36)	05:40		07:44 (38)	06:49			07:55	08:08	09:12
	22:43	26	06:49 (36)	21:44	22	08:06 (38)	20:20			18:53	16:32	15:45
9	04:42		06:23 (36)	05:42		07:43 (38)	06:51			07:57	08:11	09:13
	22:42	26	06:49 (36)	21:42	25	08:08 (38)	20:17			18:50	16:30	15:44
10	04:43		06:24 (36)	05:44		07:41 (38)	06:53			08:00	08:13	09:15
	22:40	24	06:48 (36)	21:39	28	08:09 (38)	20:14			18:48	16:28	15:44
11	04:45		06:25 (36)	05:46		07:40 (38)	06:55			08:02	08:15	09:16
	22:39	23	06:48 (36)	21:37	30	08:10 (38)	20:11			18:45	16:26	15:43
12	04:46		06:25 (36)	05:49		07:39 (38)	06:58			08:04	08:18	09:17
	22:38	23	06:48 (36)	21:34	32	08:11 (38)	20:08			18:42	16:24	15:43
13	04:48		06:26 (36)	05:51		07:38 (38)	07:00			08:07	08:20	09:19
	22:36	21	06:47 (36)	21:32	33	08:11 (38)	20:05			18:39	16:22	15:43
14	04:49		06:28 (36)	05:53		07:37 (38)	07:02			08:09	08:22	09:20
	22:35	18	06:46 (36)	21:29	35	08:12 (38)	20:02			18:36	16:19	15:43
15	04:51		06:28 (36)	05:55		07:36 (38)	07:04			08:11	08:25	09:21
	22:34	17	06:45 (36)	21:26	36	08:12 (38)	19:59			18:34	16:17	15:42
16	04:53		06:30 (36)	05:58		07:36 (38)	07:06			08:14	08:27	09:22
	22:32	14	06:44 (36)	21:24	37	08:13 (38)	19:57			18:31	16:15	15:42
17	04:54		06:31 (36)	06:00		07:35 (38)	07:09			08:16	08:29	09:23
	22:30	11	06:42 (36)	21:21	38	08:13 (38)	19:54			18:28	16:13	15:42
18	04:56		06:35 (36)	06:02		07:36 (38)	07:11			08:18	08:32	09:24
	22:29	5	06:40 (36)	21:18	38	08:14 (38)	19:51			18:25	16:12	15:42
19	04:58			06:04		07:35 (38)	07:13			08:21	08:34	09:25
	22:27			21:16	39	08:14 (38)	19:48			18:23	16:10	15:43
20	05:00			06:07		07:35 (38)	07:15			08:23	08:36	09:25
	22:25			21:13	38	08:13 (38)	19:45			18:20	16:08	15:43
21	05:02			06:09		07:34 (38)	07:17			08:25	08:39	09:26
	22:23			21:10	39	08:13 (38)	19:42			18:17	16:06	15:43
22	05:04			06:11		07:34 (38)	07:20			08:28	08:41	09:27
	22:22			21:08	39	08:13 (38)	19:39			18:15	16:04	15:44
23	05:06			06:13		07:34 (38)	07:22			08:30	08:43	09:27
	22:20			21:05	38	08:12 (38)	19:36			18:12	16:03	15:44
24	05:08			06:15		07:34 (38)	07:24			08:32	08:45	09:28
	22:18			21:02	37	08:11 (38)	19:33			18:09	16:01	15:45
25	05:10			06:18		07:34 (38)	07:26			07:35	08:47	09:28
	22:16			20:59	37	08:11 (38)	19:30			17:07	16:00	15:46
26	05:12			06:20		07:34 (38)	07:28			07:37	08:50	09:28
	22:14			20:57	36	08:10 (38)	19:28			17:04	15:58	15:46
27	05:14			06:22		07:35 (38)	07:31			07:39	08:52	09:28
	22:12			20:54	34	08:09 (38)	19:25			17:02	15:57	15:47
28	05:16			06:24		07:35 (38)	07:33			07:42	08:54	09:28
	22:10			20:51	32	08:07 (38)	19:22			16:59	15:55	15:48
29	05:18			06:27		07:36 (38)	07:35			07:44	08:56	09:28
	22:07			20:48	30	08:06 (38)	19:19			16:56	15:54	15:49
30	05:20			06:29		07:38 (38)	07:37			07:47	08:58	09:28
	22:05			20:45	27	08:05 (38)	19:16			16:54	15:53	15:50
31	05:22			06:31		07:41 (38)				07:49		09:28
	22:03			20:43	22	08:03 (38)				16:51		15:51
Potential sun hours	545			478			386			319	236	200
Total, worst case		409			833			27				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,58			0,65			0,65				
Total reduction		0,23			0,26			0,26				
Total, real		95			215			7				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	06:01 (38) 04:32	06:06 (38) 05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30 34	06:35 (38) 22:48 37	06:43 (38) 22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	06:01 (38) 04:33	06:07 (38) 05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32 35	06:36 (38) 22:48 36	06:43 (38) 21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	06:01 (38) 04:34	06:06 (38) 05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33 35	06:36 (38) 22:47 37	06:43 (38) 21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37	04:36	06:00 (38) 04:35	06:06 (38) 05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35 36	06:36 (38) 22:46 37	06:43 (38) 21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	06:01 (38) 04:37	06:06 (38) 05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36 36	06:37 (38) 22:46 37	06:43 (38) 21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	06:01 (38) 04:38	06:08 (38) 05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37	22:38 36	06:37 (38) 22:45 36	06:44 (38) 21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	06:01 (38) 04:39	06:08 (38) 05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39 36	06:37 (38) 22:44 36	06:44 (38) 21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	06:01 (38) 04:40	06:08 (38) 05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40 36	06:37 (38) 22:43 36	06:44 (38) 21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	06:02 (38) 04:42	06:08 (38) 05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41 36	06:38 (38) 22:42 36	06:44 (38) 21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	06:01 (38) 04:43	06:08 (38) 05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46	22:43 37	06:38 (38) 22:40 35	06:43 (38) 21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	06:02 (38) 04:45	06:09 (38) 05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44 37	06:39 (38) 22:39 35	06:44 (38) 21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17	04:29	06:02 (38) 04:46	06:09 (38) 05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45 36	06:38 (38) 22:38 35	06:44 (38) 21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	06:02 (38) 04:48	06:09 (38) 05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46 37	06:39 (38) 22:36 34	06:43 (38) 21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	06:03 (38) 04:49	06:10 (38) 05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46 36	06:39 (38) 22:35 33	06:43 (38) 21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	06:02 (38) 04:51	06:10 (38) 05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47 37	06:39 (38) 22:34 33	06:43 (38) 21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	06:02 (38) 04:53	06:11 (38) 05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48 37	06:39 (38) 22:32 32	06:43 (38) 21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06 06:12 (38)	04:27	06:03 (38) 04:54	06:11 (38) 06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02 10 06:22 (38)	22:48 37	06:40 (38) 22:30 31	06:42 (38) 21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04 06:11 (38)	04:27	06:03 (38) 04:56	06:12 (38) 06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04 14 06:25 (38)	22:49 37	06:40 (38) 22:29 30	06:42 (38) 21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02 06:09 (38)	04:27	06:03 (38) 04:58	06:13 (38) 06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06 18 06:27 (38)	22:49 37	06:40 (38) 22:27 29	06:42 (38) 21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00 06:08 (38)	04:27	06:03 (38) 05:00	06:13 (38) 06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08 20 06:28 (38)	22:50 37	06:40 (38) 22:25 28	06:41 (38) 21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58 06:06 (38)	04:27	06:03 (38) 05:02	06:14 (38) 06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10 23 06:29 (38)	22:50 37	06:40 (38) 22:23 27	06:41 (38) 21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56 06:05 (38)	04:27	06:04 (38) 05:04	06:16 (38) 06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12 25 06:30 (38)	22:50 37	06:41 (38) 22:22 24	06:40 (38) 21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55 06:03 (38)	04:28	06:04 (38) 05:06	06:17 (38) 06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14 28 06:31 (38)	22:50 37	06:41 (38) 22:20 21	06:38 (38) 21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53 06:03 (38)	04:28	06:04 (38) 05:08	06:18 (38) 06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16 29 06:32 (38)	22:50 37	06:41 (38) 22:18 19	06:37 (38) 21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51 06:02 (38)	04:28	06:05 (38) 05:10	06:20 (38) 06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18 30 06:32 (38)	22:50 37	06:42 (38) 22:16 16	06:36 (38) 20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49 06:02 (38)	04:29	06:05 (38) 05:12	06:22 (38) 06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20 31 06:33 (38)	22:50 36	06:41 (38) 22:14 12	06:34 (38) 20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48 06:01 (38)	04:29	06:05 (38) 05:14	06:25 (38) 06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22 32 06:33 (38)	22:50 37	06:42 (38) 22:12 6	06:31 (38) 20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46 06:01 (38)	04:30	06:05 (38) 05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24 33 06:34 (38)	22:50 37	06:42 (38) 22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44 06:01 (38)	04:31	06:05 (38) 05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25 34 06:35 (38)	22:49 37	06:42 (38) 22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43 06:01 (38)	04:32	06:06 (38) 05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27 34 06:35 (38)	22:49 37	06:43 (38) 22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41 06:01 (38)		05:22	06:31		07:49		09:28
	16:54		20:14		22:29 34 06:35 (38)		22:03	20:43		16:51		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					395	1094	808					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,58	0,58	0,58					
Total reduction					0,23	0,23	0,23					
Total, real					91	252	186					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		04:32		05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:18 (38)	33	06:46 (38)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (38)		04:33	06:19 (38)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	28	06:46 (38)	33	22:48	06:52 (38)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:17 (38)		04:34	06:18 (38)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:46 (38)	33	22:47	06:51 (38)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:16 (38)		04:35	06:18 (38)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:46 (38)	33	22:46	06:51 (38)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:16 (38)		04:37	06:19 (38)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:47 (38)	33	22:46	06:52 (38)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:15 (38)		04:38	06:21 (38)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:47 (38)	32	22:45	06:53 (38)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:14 (38)		04:39	06:22 (38)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:46 (38)	31	22:44	06:53 (38)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:13 (38)		04:40	06:23 (38)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	33	06:46 (38)	30	22:43	06:53 (38)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:14 (38)		04:42	06:24 (38)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	33	06:47 (38)	29	22:42	06:53 (38)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:13 (38)		04:43	06:25 (38)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:46 (38)	28	22:40	06:53 (38)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:14 (38)		04:45	06:26 (38)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:47 (38)	28	22:39	06:54 (38)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (38)		04:46	06:27 (38)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	32	06:46 (38)	27	22:38	06:54 (38)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:14 (38)		04:48	06:28 (38)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	33	06:47 (38)	26	22:36	06:54 (38)	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:15 (38)		04:49	06:30 (38)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	32	06:47 (38)	24	22:35	06:54 (38)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:15 (38)		04:51	06:31 (38)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	32	06:47 (38)	23	22:34	06:54 (38)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:39 (38)		04:28		06:15 (38)	04:53	06:33 (38)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	2	06:41 (38)		22:48	32	06:47 (38)	22:32	06:55 (38)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:37 (38)		04:27		06:15 (38)	04:54	06:33 (38)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	4	06:41 (38)		22:48	32	06:47 (38)	22:30	06:54 (38)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04		06:36 (38)		04:27		06:16 (38)	04:56	06:35 (38)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	7	06:43 (38)		22:49	31	06:47 (38)	22:29	06:55 (38)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:35 (38)		04:27		06:16 (38)	04:58	06:37 (38)	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	8	06:43 (38)		22:49	31	06:47 (38)	22:27	06:55 (38)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:33 (38)		04:27		06:16 (38)	05:00	06:38 (38)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	10	06:43 (38)		22:50	31	06:47 (38)	22:25	06:54 (38)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:31 (38)		04:27		06:16 (38)	05:02	06:39 (38)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	12	06:43 (38)		22:50	31	06:47 (38)	22:23	06:54 (38)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:30 (38)		04:27		06:17 (38)	05:04	06:41 (38)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	14	06:44 (38)		22:50	31	06:48 (38)	22:22	06:54 (38)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:29 (38)		04:28		06:17 (38)	05:06	06:42 (38)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	15	06:44 (38)		22:50	31	06:48 (38)	22:20	06:53 (38)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:28 (38)		04:28		06:17 (38)	05:08	06:44 (38)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	17	06:45 (38)		22:50	31	06:48 (38)	22:18	06:53 (38)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:26 (38)		04:28		06:18 (38)	05:10	06:45 (38)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	19	06:45 (38)		22:50	31	06:49 (38)	22:16	06:53 (38)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:25 (38)		04:29		06:17 (38)	05:12	06:47 (38)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	20	06:45 (38)		22:50	32	06:49 (38)	22:14	06:53 (38)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:23 (38)		04:29		06:18 (38)	05:14	06:49 (38)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22	06:45 (38)		22:50	32	06:50 (38)	22:12	06:52 (38)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:23 (38)		04:30		06:17 (38)	05:16	06:51 (38)	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	22	06:45 (38)		22:50	32	06:49 (38)	22:10	06:52 (38)	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:22 (38)		04:31		06:18 (38)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	24	06:46 (38)		22:49	32	06:50 (38)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:21 (38)		04:32		06:18 (38)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	25	06:46 (38)		22:49	33	06:51 (38)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:19 (38)					05:22		06:31		07:49		09:28
	16:54		20:14		22:29	26	06:45 (38)					22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521			547			545		478	386	319	236	200
Total, worst case						247			944			606						
Sun reduction						0,50			0,50			0,50						
Oper. time red.						0,80			0,80			0,80						
Wind dir. red.						0,58			0,58			0,58						
Total reduction						0,23			0,23			0,23						
Total, real						58			220			141						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 15:53	08:46 16:56	07:35 18:05	07:07 20:17	05:44 21:26 1	07:08 (38) | 04:40 07:09 (38) | 22:30 32	06:45 (38) | 04:32 07:17 (38) | 22:48 23	06:56 (38) | 05:24 07:19 (38) | 22:01 33	06:57 (38) | 06:33 07:30 (38) | 20:40	07:39 19:13	07:51 16:49	09:00 15:52
2	09:27 15:54	08:43 16:59	07:33 18:07	07:04 20:19	05:42 21:28 6	07:06 (38) | 04:39 07:12 (38) | 22:32 31	06:46 (38) | 04:33 07:17 (38) | 22:48 24	06:56 (38) | 05:27 07:20 (38) | 21:58 31	06:59 (38) | 06:35 07:30 (38) | 20:37	07:42 19:10	07:54 16:47	09:01 15:50
3	09:27 15:56	08:41 17:01	07:30 18:10	07:01 20:21	05:39 21:31 9	07:04 (38) | 04:38 07:13 (38) | 22:33 31	06:46 (38) | 04:34 07:17 (38) | 22:47 25	06:55 (38) | 05:29 07:20 (38) | 21:56 28	07:01 (38) | 06:38 07:29 (38) | 20:34	07:44 19:07	07:56 16:44	09:03 15:49
4	09:26 15:57	08:39 17:04	07:27 18:12	06:58 20:24	05:37 21:33 13	07:02 (38) | 04:36 07:15 (38) | 22:35 29	06:47 (38) | 04:35 07:16 (38) | 22:46 25	06:55 (38) | 05:31 07:20 (38) | 21:54 26	07:03 (38) | 06:40 07:29 (38) | 20:31	07:46 19:05	07:59 16:42	09:05 15:48
5	09:26 15:59	08:37 17:06	07:24 18:14	06:55 20:26	05:34 21:35 16	07:00 (38) | 04:35 07:16 (38) | 22:36 29	06:48 (38) | 04:37 07:17 (38) | 22:46 27	06:54 (38) | 05:33 07:21 (38) | 21:51 23	07:05 (38) | 06:42 07:28 (38) | 20:28	07:48 19:02	08:01 16:39	09:07 15:47
6	09:25 16:00	08:34 17:09	07:21 18:17	06:53 20:28	05:32 21:37 19	06:58 (38) | 04:34 07:17 (38) | 22:38 27	06:49 (38) | 04:38 07:16 (38) | 22:45 28	06:55 (38) | 05:35 07:23 (38) | 21:49 21	07:06 (38) | 06:44 07:27 (38) | 20:25	07:51 18:59	08:03 16:37	09:09 15:47
7	09:24 16:02	08:32 17:11	07:19 18:19	06:50 20:31	05:29 21:40 22	06:55 (38) | 04:33 07:17 (38) | 22:39 27	06:49 (38) | 04:39 07:16 (38) | 22:44 28	06:55 (38) | 05:38 07:23 (38) | 21:47 18	07:08 (38) | 06:47 07:26 (38) | 20:23	07:53 18:56	08:06 16:35	09:10 15:46
8	09:24 16:04	08:30 17:14	07:16 18:21	06:47 20:33	05:27 21:42 24	06:54 (38) | 04:32 07:18 (38) | 22:40 26	06:49 (38) | 04:40 07:15 (38) | 22:43 30	06:54 (38) | 05:40 07:24 (38) | 21:44 15	07:10 (38) | 06:49 07:25 (38) | 20:20	07:55 18:53	08:08 16:32	09:12 15:45
9	09:23 16:06	08:27 17:16	07:13 18:24	06:44 20:35	05:24 21:44 27	06:52 (38) | 04:31 07:19 (38) | 22:42 26	06:50 (38) | 04:42 07:16 (38) | 22:42 30	06:54 (38) | 05:42 07:24 (38) | 21:42 12	07:12 (38) | 06:51 07:24 (38) | 20:17	07:57 18:50	08:11 16:30	09:13 15:44
10	09:22 16:07	08:25 17:18	07:10 18:26	06:41 20:37	05:22 21:46 29	06:50 (38) | 04:31 07:19 (38) | 22:43 24	06:51 (38) | 04:43 07:15 (38) | 22:40 31	06:53 (38) | 05:44 07:24 (38) | 21:39 9	07:13 (38) | 06:53 07:22 (38) | 20:14	08:00 18:48	08:13 16:28	09:15 15:44
11	09:21 16:09	08:23 17:21	07:07 18:28	06:38 20:40	05:20 21:49 32	06:48 (38) | 04:30 07:20 (38) | 22:44 23	06:52 (38) | 04:45 07:15 (38) | 22:39 32	06:54 (38) | 05:46 07:26 (38) | 21:37 5	07:15 (38) | 06:55 07:20 (38) | 20:11	08:02 18:45	08:15 16:26	09:16 15:43
12	09:20 16:11	08:20 17:23	07:04 18:31	06:36 20:42	05:17 21:51 34	06:46 (38) | 04:29 07:20 (38) | 22:45 22	06:52 (38) | 04:46 07:14 (38) | 22:38 33	06:53 (38) | 05:49 07:26 (38) | 21:34	06:58 20:08	08:04 18:42	08:18 16:24	09:17 15:43
13	09:18 16:13	08:18 17:26	07:02 18:33	06:33 20:44	05:15 21:53 35	06:45 (38) | 04:29 07:20 (38) | 22:46 21	06:53 (38) | 04:48 07:14 (38) | 22:36 33	06:53 (38) | 05:51 07:26 (38) | 21:32	07:00 20:05	08:07 18:39	08:20 16:22	09:19 15:43
14	09:17 16:15	08:15 17:28	06:59 18:35	06:30 20:47	05:13 21:55 37	06:43 (38) | 04:28 07:20 (38) | 22:46 22	06:53 (38) | 04:49 07:15 (38) | 22:35 34	06:53 (38) | 05:53 07:27 (38) | 21:29	07:02 20:02	08:09 18:36	08:22 16:19	09:20 15:43
15	09:16 16:17	08:13 17:31	06:56 18:38	06:27 20:49	05:11 21:57 39	06:41 (38) | 04:28 07:20 (38) | 22:47 21	06:53 (38) | 04:51 07:14 (38) | 22:34 35	06:52 (38) | 05:55 07:27 (38) | 21:26	07:04 19:59	08:11 18:34	08:25 16:17	09:21 15:42
16	09:14 16:19	08:10 17:33	06:53 18:40	06:24 20:51	05:09 22:00 39	06:41 (38) | 04:28 07:20 (38) | 22:48 20	06:54 (38) | 04:53 07:14 (38) | 22:32 36	06:52 (38) | 05:58 07:28 (38) | 21:24	07:06 19:57	08:14 18:31	08:27 16:15	09:22 15:42
17	09:13 16:21	08:07 17:36	06:50 18:42	06:22 20:54	05:06 22:02 40	06:40 (38) | 04:27 07:20 (38) | 22:48 20	06:54 (38) | 04:54 07:14 (38) | 22:30 36	06:52 (38) | 06:00 07:28 (38) | 21:21	07:09 19:54	08:16 18:28	08:29 16:13	09:23 15:42
18	09:12 16:24	08:05 17:38	06:47 18:45	06:19 20:56	05:04 22:04 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:56 07:14 (38) | 22:29 37	06:52 (38) | 06:02 07:29 (38) | 21:18	07:11 19:51	08:18 18:25	08:32 16:12	09:24 15:42
19	09:10 16:26	08:02 17:41	06:44 18:47	06:16 20:58	05:02 22:06 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:58 07:14 (38) | 22:27 38	06:52 (38) | 06:04 07:30 (38) | 21:16	07:13 19:48	08:21 18:23	08:34 16:10	09:25 15:43
20	09:08 16:28	08:00 17:43	06:42 18:49	06:13 21:00	05:00 22:08 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:00 07:14 (38) | 22:25 38	06:51 (38) | 06:07 07:29 (38) | 21:13	07:15 19:45	08:23 18:20	08:36 16:08	09:25 15:43
21	09:07 16:30	07:57 17:46	06:39 18:52	06:11 21:03	04:58 22:10 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:02 07:14 (38) | 22:23 39	06:51 (38) | 06:09 07:30 (38) | 21:10	07:17 19:42	08:25 18:17	08:39 16:06	09:26 15:43
22	09:05 16:32	07:54 17:48	06:36 18:54	06:08 21:05	04:56 22:12 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:56 (38) | 05:04 07:15 (38) | 22:22 39	06:52 (38) | 06:11 07:31 (38) | 21:08	07:19 19:39	08:28 18:15	08:41 16:04	09:27 15:44
23	09:03 16:35	07:52 17:50	06:33 18:56	06:05 21:07	04:55 22:14 39	06:41 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:06 07:15 (38) | 22:20 39	06:51 (38) | 06:13 07:30 (38) | 21:05	07:22 19:36	08:30 18:12	08:43 16:03	09:27 15:44
24	09:02 16:37	07:49 17:53	06:30 18:58	06:02 21:10	04:53 22:16 38	06:42 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:08 07:15 (38) | 22:18 40	06:51 (38) | 06:15 07:31 (38) | 21:02	07:24 19:33	08:32 18:09	08:45 16:01	09:28 15:45
25	09:00 16:39	07:46 17:55	06:27 19:01	06:00 21:12	04:51 22:18 37	06:42 (38) | 04:28 07:19 (38) | 22:50 19	06:57 (38) | 05:10 07:16 (38) | 22:16 40	06:51 (38) | 06:18 07:31 (38) | 20:59	07:26 19:30	08:35 17:07	08:47 16:00	09:28 15:46
26	08:58 16:42	07:44 17:58	06:24 19:03	05:57 21:14	04:49 22:20 37	06:43 (38) | 04:29 07:20 (38) | 22:50 20	06:56 (38) | 05:12 07:16 (38) | 22:14 40	06:51 (38) | 06:20 07:31 (38) | 20:57	07:28 19:28	08:37 17:04	08:49 15:58	09:28 15:46
27	08:56 16:44	07:41 18:00	06:21 19:05	05:54 21:17	04:48 22:22 36	06:43 (38) | 04:29 07:19 (38) | 22:50 21	06:56 (38) | 05:14 07:17 (38) | 22:12 39	06:52 (38) | 06:22 07:31 (38) | 20:54	07:31 19:25	08:39 17:02	08:52 15:57	09:28 15:47
28	08:54 16:47	07:38 18:02	06:18 19:08	05:52 21:19	04:46 22:24 36	06:43 (38) | 04:30 07:19 (38) | 22:50 21	06:56 (38) | 05:16 07:17 (38) | 22:10 39	06:52 (38) | 06:24 07:31 (38) | 20:51	07:33 19:22	08:42 16:59	08:54 15:55	09:28 15:48
29	08:52 16:49		07:16 20:10	05:49 21:21	04:44 22:25 35	06:44 (38) | 04:31 07:19 (38) | 22:49 21	06:56 (38) | 05:18 07:17 (38) | 22:07 38	06:52 (38) | 06:27 07:30 (38) | 20:48	07:35 19:19	08:44 16:56	08:56 15:54	09:28 15:49
30	08:50 16:51		07:13 20:12	05:47 21:24	04:43 22:27 34	06:45 (38) | 04:32 07:19 (38) | 22:49 22	06:56 (38) | 05:20 07:18 (38) | 22:05 36	06:54 (38) | 06:29 07:30 (38) | 20:45	07:37 19:16	08:47 16:54	08:58 15:53	09:28 15:50
31	08:48 16:54		07:10 20:14		04:41 22:29 34	06:44 (38) | 07:18 (38) |	05:22 22:03 35	06:55 (38) | 06:31 07:30 (38) | 20:43		07:49 16:51		09:28 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					945	688	1047	221				
Sun reduction					0,50	0,50	0,50	0,50				
Oper. time red.					0,80	0,80	0,80	0,80				
Wind dir. red.					0,59	0,59	0,59	0,59				
Total reduction					0,24	0,24	0,24	0,24				
Total, real					224	163	248	52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				
Sun reduction			0,50		0,50				
Oper. time red.			0,80		0,80				
Wind dir. red.			0,73		0,71				
Total reduction			0,29		0,28				
Total, real			80		117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December
1	04:32	05:24	06:33		07:40		07:52	08:47 (2)	09:00
	22:49	22:01	20:40		19:13		16:49	9 08:56 (2)	15:51
2	04:33	05:26	06:35		07:42	09:06 (22)	07:54		09:02
	22:48	21:59	20:37		19:10	6 09:12 (22)	16:46		15:50
3	04:34	05:29	06:38		07:44	09:02 (22)	07:56		09:04
	22:47	21:56	20:34		19:07	13 09:15 (22)	16:44		15:49
4	04:35	05:31	06:40		07:46	09:00 (22)	07:59		09:05
	22:47	21:54	20:31		19:05	17 09:17 (22)	16:42		15:48
5	04:36	05:33	06:42		07:48	08:58 (22)	08:01		09:07
	22:46	21:52	20:28		19:02	20 09:18 (22)	16:39		15:47
6	04:38	05:35	06:44		07:51	08:57 (22)	08:04		09:09
	22:45	21:49	20:26		18:59	22 09:19 (22)	16:37		15:46
7	04:39	05:37	06:47		07:53	08:57 (22)	08:06		09:10
	22:44	21:47	20:23		18:56	23 09:20 (22)	16:35		15:46
8	04:40	05:40	06:49		07:55	08:55 (22)	08:08		09:12
	22:43	21:44	20:20		18:53	24 09:19 (22)	16:32		15:45
9	04:41	05:42	06:51		07:58	08:55 (22)	08:11		09:14
	22:42	21:42	20:17		18:50	24 09:19 (22)	16:30		15:44
10	04:43	05:44	06:53		08:00	08:55 (22)	08:13		09:15
	22:41	21:39	20:14		18:48	24 09:19 (22)	16:28		15:44
11	04:44	05:46	06:55		08:02	08:54 (22)	08:16		09:16
	22:39	21:37	20:11		18:45	25 09:19 (22)	16:26		15:43
12	04:46	05:49	06:58		08:04	08:55 (22)	08:18		09:18
	22:38	21:34	20:08		18:42	23 09:18 (22)	16:24		15:43
13	04:48	05:51	07:00		08:07	08:55 (22)	08:20		09:19
	22:37	21:32	20:05		18:39	22 09:17 (22)	16:21		15:43
14	04:49	05:53	07:02		08:09	08:55 (22)	08:23		09:20
	22:35	21:29	20:02		18:36	21 09:16 (22)	16:19		15:42
15	04:51	05:55	07:04		08:11	08:57 (22)	08:25		09:21
	22:34	21:26	20:00		18:34	18 09:15 (22)	16:17		15:42
16	04:53	05:58	07:06		08:14	08:58 (22)	08:27		09:22
	22:32	21:24	19:57		18:31	15 09:13 (22)	16:15		15:42
17	04:54	06:00	07:09		08:16	09:01 (22)	08:30		09:23
	22:31	21:21	19:54		18:28	10 09:11 (22)	16:13		15:42
18	04:56	06:02	07:11	08:19 (24)	08:18		08:32		09:24
	22:29	21:19	19:51	9 08:28 (24)	18:25		16:11		15:42
19	04:58	06:04	07:13	08:16 (24)	08:21		08:34		09:25
	22:27	21:16	19:48	13 08:29 (24)	18:23		16:10		15:43
20	05:00	06:06	07:15	08:14 (24)	08:23	09:48 (2)	08:37		09:26
	22:25	21:13	19:45	16 08:30 (24)	18:20	9 09:57 (2)	16:08		15:43
21	05:02	06:09	07:17	08:14 (24)	08:25	09:46 (2)	08:39		09:26
	22:24	21:10	19:42	17 08:31 (24)	18:17	13 09:59 (2)	16:06		15:43
22	05:04	06:11	07:20	08:13 (24)	08:28	09:44 (2)	08:41		09:27
	22:22	21:08	19:39	18 08:31 (24)	18:15	16 10:00 (2)	16:04		15:44
23	05:06	06:13	07:22	08:12 (24)	08:30	09:44 (2)	08:43		09:27
	22:20	21:05	19:36	19 08:31 (24)	18:12	17 10:01 (2)	16:03		15:44
24	05:08	06:15	07:24	08:12 (24)	08:32	09:42 (2)	08:45		09:28
	22:18	21:02	19:33	19 08:31 (24)	18:09	19 10:01 (2)	16:01		15:45
25	05:10	06:18	07:26	08:11 (24)	07:35	08:42 (2)	08:48		09:28
	22:16	20:59	19:31	19 08:30 (24)	17:07	19 09:01 (2)	15:59		15:45
26	05:12	06:20	07:28	08:12 (24)	07:37	08:43 (2)	08:50		09:28
	22:14	20:57	19:28	17 08:29 (24)	17:04	19 09:02 (2)	15:58		15:46
27	05:14	06:22	07:31	08:13 (24)	07:40	08:42 (2)	08:52		09:28
	22:12	20:54	19:25	15 08:28 (24)	17:02	19 09:01 (2)	15:57		15:47
28	05:16	06:24	07:33	08:14 (24)	07:42	08:43 (2)	08:54		09:29
	22:10	20:51	19:22	12 08:26 (24)	16:59	18 09:01 (2)	15:55		15:48
29	05:18	06:27	07:35	08:15 (24)	07:44	08:44 (2)	08:56		09:29
	22:08	20:48	19:19	8 08:23 (24)	16:56	17 09:01 (2)	15:54		15:49
30	05:20	06:29	07:37		07:47	08:44 (2)	08:58		09:28
	22:05	20:45	19:16		16:54	15 08:59 (2)	15:53		15:50
31	05:22	06:31			07:49	08:45 (2)			09:28
	22:03	20:43			16:51	13 08:58 (2)			15:51
Potential sun hours	545	478	386		319		236		200
Total, worst case				182		501		9	
Sun reduction				0,50		0,50		0,50	
Oper. time red.				0,80		0,80		0,80	
Wind dir. red.				0,70		0,73		0,74	
Total reduction				0,28		0,29		0,29	
Total, real				51		146		3	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
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13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
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	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
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14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
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	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05 23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35	07:42	07:54	09:02
	15:54	16:59	18:07 24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	15:50
3	09:27	08:41	07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10 24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	15:49
4	09:27	08:39	07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40	07:46 09:05 (22)	07:59	09:05
	15:57	17:04	18:12 23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31	19:05 11 09:16 (22)	16:42	15:48
5	09:26	08:37	07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42	07:48 09:02 (22)	08:01	09:07
	15:59	17:06	18:14 22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28	19:02 16 09:18 (22)	16:39	15:47
6	09:25	08:35	07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44	07:51 09:00 (22)	08:04	09:09
	16:00	17:09	18:17 22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26	18:59 19 09:19 (22)	16:37	15:46
7	09:25	08:32	07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47	07:53 09:00 (22)	08:06	09:10
	16:02	17:11	18:19 19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23	18:56 20 09:20 (22)	16:35	15:46
8	09:24	08:30	07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49	07:55 08:58 (22)	08:08	09:12
	16:04	17:13	18:21 18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20	18:53 23 09:21 (22)	16:32	15:45
9	09:23	08:28	07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51	07:58 08:57 (22)	08:11	09:14
	16:05	17:16	18:24 13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17	18:50 23 09:20 (22)	16:30	15:44
10	09:22	08:25	07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53	08:00 08:57 (22)	08:13	09:15
	16:07	17:18	18:26 7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14	18:48 24 09:21 (22)	16:28	15:44
11	09:21	08:23	07:07		06:38	05:20	04:30	04:44	05:46	06:55	08:02 08:57 (22)	08:16	09:16
	16:09	17:21	18:28		20:40	21:49	22:44	22:39	21:37	20:11	18:45 23 09:20 (22)	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58	08:04 08:57 (22)	08:18	09:18
	16:11	17:23	18:31		20:42	21:51	22:45	22:38	21:34	20:08	18:42 24 09:21 (22)	16:24	15:43
13	09:19	08:18	07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00	08:07 08:57 (22)	08:20	09:19
	16:13	17:26	18:33 5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05	18:39 23 09:20 (22)	16:21	15:43
14	09:17	08:15	06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02	08:09 08:57 (22)	08:23	09:20
	16:15	17:28	18:35 11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02	18:36 21 09:18 (22)	16:19	15:42
15	09:16	08:13	06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04	08:11 08:58 (22)	08:25	09:21
	16:17	17:31	18:38 15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00	18:34 20 09:18 (22)	16:17	15:42
16	09:15	08:10	06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06	08:14 08:58 (22)	08:27	09:22
	16:19	17:33	18:40 16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57	18:31 18 09:16 (22)	16:15	15:42
17	09:13	08:08	06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09	08:16 09:00 (22)	08:30	09:23
	16:21	17:36	18:42 18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54	18:28 15 09:15 (22)	16:13	15:42
18	09:12	08:05	06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 09:02 (22)	08:32	09:24
	16:23	17:38	18:45 19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51	18:25 10 09:12 (22)	16:11	15:42
19	09:10	08:02	06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13 08:22 (24)	08:21	08:34	09:25
	16:26	17:41	18:47 18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48 7 08:29 (24)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15 08:19 (24)	08:23	08:37	09:26
	16:28	17:43	18:49 19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45 12 08:31 (24)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17 08:18 (24)	08:25	08:39	09:26
	16:30	17:46	18:52 17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42 15 08:33 (24)	18:17	16:06	15:43
22	09:05	07:54	06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20 08:16 (24)	08:28	08:41	09:27
	16:32	17:48	18:54 15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39 17 08:33 (24)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22 08:15 (24)	08:30	08:43	09:27
	16:35	17:50	18:56 13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36 18 08:33 (24)	18:12	16:03	15:44
24	09:02	07:49 08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24 08:14 (24)	08:32	08:45	09:28
	16:37	17:53 12 08:42 (22)	18:59 8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33 19 08:33 (24)	18:09	16:01	15:45
25	09:00	07:46 08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26 08:14 (24)	07:35	08:48	09:28
	16:39	17:55 15 08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31 18 08:32 (24)	17:07	15:59	15:45
26	08:58	07:44 08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28 08:14 (24)	07:37	08:50	09:28
	16:42	17:58 19 08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28 19 08:33 (24)	17:04	15:58	15:46
27	08:56	07:41 08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31 08:14 (24)	07:40	08:52	09:28
	16:44	18:00 20 08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25 18 08:32 (24)	17:02	15:57	15:47
28	08:54	07:38 08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33 08:15 (24)	07:42	08:54	09:29
	16:46	18:02 22 08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 15 08:30 (24)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35 08:15 (24)	07:44	08:56	09:29
	16:49		20:10		21:21	22:26	22:50	22:08	20:48	19:19 13 08:28 (24)	16:56	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37 08:18 (24)	07:47	08:58	09:28
	16:51		20:12		21:24	22:27	22:49	22:05	20:45	19:16 8 08:26 (24)	16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31		07:49		09:28
	16:54		20:15			22:29		22:03	20:43		16:51		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200	
Total, worst case		88	369						179	290			
Sun reduction		0,50	0,50						0,50	0,50			
Oper. time red.		0,80	0,80						0,80	0,80			
Wind dir. red.		0,73	0,71						0,70	0,73			
Total reduction		0,29	0,29						0,28	0,29			
Total, real		26	105						50	84			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
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	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
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	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
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	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
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	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
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13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		
Sun reduction			0,50									0,50		
Oper. time red.			0,80									0,80		
Wind dir. red.			0,74									0,74		
Total reduction			0,29									0,29		
Total, real			66									67		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September	October		November		December
1	09:28	08:46		09:41 (22)		08:28 (24)	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:52		09:00 (22)	09:00
	15:53	16:56	3	09:44 (22)	19	08:47 (24)	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	24	09:24 (22)	15:51
2	09:28	08:44		09:37 (22)		08:27 (24)	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:01 (22)	09:02
	15:54	16:59	10	09:47 (22)	20	08:47 (24)	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	23	09:24 (22)	15:50
3	09:27	08:41		09:35 (22)		08:27 (24)	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:01 (22)	09:04
	15:56	17:01	15	09:50 (22)	20	08:47 (24)	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	23	09:24 (22)	15:49
4	09:27	08:39		09:34 (22)		08:27 (24)	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:02 (22)	09:05
	15:57	17:04	17	09:51 (22)	19	08:46 (24)	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	22	09:24 (22)	15:48
5	09:26	08:37		09:33 (22)		08:28 (24)	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:02 (22)	09:07
	15:59	17:06	20	09:53 (22)	17	08:45 (24)	20:26	21:35	22:37	22:46	21:52	20:28	19:02	3	09:14 (24)	21	09:23 (22)	15:47
6	09:25	08:35		09:32 (22)		08:28 (24)	06:53	05:31	04:34	04:37	05:35	06:44	07:51		09:06 (24)		09:03 (22)	09:09
	16:00	17:08	21	09:53 (22)	16	08:44 (24)	20:28	21:38	22:38	22:45	21:49	20:26	18:59	11	09:17 (24)	19	09:22 (22)	15:46
7	09:25	08:32		09:31 (22)		08:29 (24)	06:50	05:29	04:33	04:39	05:37	06:47	07:53		09:05 (24)		09:05 (22)	09:10
	16:02	17:11	22	09:53 (22)	13	08:42 (24)	20:31	21:40	22:39	22:44	21:47	20:23	18:56	15	09:20 (24)	17	09:22 (22)	15:46
8	09:24	08:30		09:32 (22)		08:31 (24)	06:47	05:27	04:32	04:40	05:40	06:49	07:55		09:03 (24)		09:05 (22)	09:12
	16:04	17:13	22	09:54 (22)	8	08:39 (24)	20:33	21:42	22:41	22:43	21:44	20:20	18:53	17	09:20 (24)	15	09:20 (22)	15:45
9	09:23	08:28		09:31 (22)			06:44	05:24	04:31	04:41	05:42	06:51	07:58		09:02 (24)		09:08 (22)	09:14
	16:05	17:16	23	09:54 (22)			20:35	21:44	22:42	22:42	21:42	20:17	18:50	18	09:20 (24)	10	09:18 (22)	15:44
10	09:22	08:25		09:32 (22)			06:41	05:22	04:30	04:43	05:44	06:53	08:00		09:02 (24)		09:13 (22)	09:15
	16:07	17:18	23	09:55 (22)			20:38	21:47	22:43	22:41	21:39	20:14	18:48	19	09:21 (24)	1	09:14 (22)	15:44
11	09:21	08:23		09:31 (22)			06:38	05:20	04:30	04:44	05:46	06:55	08:02		09:01 (24)			09:16
	16:09	17:21	24	09:55 (22)			20:40	21:49	22:44	22:39	21:37	20:11	18:45	20	09:21 (24)			15:43
12	09:20	08:20		09:31 (22)			06:36	05:17	04:29	04:46	05:49	06:58	08:04		09:01 (24)			09:18
	16:11	17:23	23	09:54 (22)			20:42	21:51	22:45	22:38	21:34	20:08	18:42	20	09:21 (24)			15:43
13	09:19	08:18		09:31 (22)			06:33	05:15	04:28	04:47	05:51	07:00	08:07		09:01 (24)			09:19
	16:13	17:26	23	09:54 (22)			20:44	21:53	22:46	22:37	21:32	20:05	18:39	19	09:20 (24)			15:43
14	09:17	08:15		09:33 (22)			06:30	05:13	04:28	04:49	05:53	07:02	08:09		09:01 (24)			09:20
	16:15	17:28	21	09:54 (22)			20:47	21:55	22:47	22:35	21:29	20:02	18:36	18	09:19 (24)			15:42
15	09:16	08:13		09:33 (22)			06:27	05:11	04:28	04:51	05:55	07:04	08:11		09:02 (24)			09:21
	16:17	17:31	20	09:53 (22)			20:49	21:58	22:47	22:34	21:26	20:00	18:34	16	09:18 (24)			15:42
16	09:15	08:10		09:34 (22)			06:24	05:08	04:27	04:53	05:57	07:06	08:14		09:03 (24)			09:22
	16:19	17:33	17	09:51 (22)			20:51	22:00	22:48	22:32	21:24	19:57	18:31	13	09:16 (24)			15:42
17	09:13	08:08		09:36 (22)			06:22	05:06	04:27	04:54	06:00	07:09	08:16		09:05 (24)			09:23
	16:21	17:36	14	09:50 (22)			20:54	22:02	22:49	22:31	21:21	19:54	18:28	10	09:15 (24)			15:42
18	09:12	08:05		09:39 (22)			06:19	05:04	04:27	04:56	06:02	07:11	08:18					09:24
	16:23	17:38	8	09:47 (22)			20:56	22:04	22:49	22:29	21:19	19:51	18:25					15:42
19	09:10	08:02			06:44		06:16	05:02	04:27	04:58	06:04	07:13	08:21					09:25
	16:26	17:41			18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23					15:42
20	09:09	08:00			06:42		06:13	05:00	04:27	05:00	06:06	07:15	08:23					09:26
	16:28	17:43			18:49		21:01	22:08	22:50	22:25	21:13	19:45	18:20					15:43
21	09:07	07:57			06:39		06:10	04:58	04:27	05:02	06:09	07:17	08:25					09:26
	16:30	17:45			18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17					15:43
22	09:05	07:54			06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28					09:27
	16:32	17:48			18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15					15:44
23	09:04	07:52			06:33		06:05	04:54	04:27	05:06	06:13	07:22	08:30					09:27
	16:35	17:50			18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12					15:44
24	09:02	07:49		08:36 (24)	06:30		06:02	04:53	04:28	05:08	06:15	07:24	08:32		10:07 (22)		08:45	09:28
	16:37	17:53	5	08:41 (24)	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09	10	10:17 (22)		16:01	15:45
25	09:00	07:46		08:32 (24)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		09:05 (22)		08:48	09:28
	16:39	17:55	12	08:44 (24)	19:01		21:12	22:18	22:51	22:16	20:59	19:30	17:07	15	09:20 (22)		15:59	15:45
26	08:58	07:44		08:30 (24)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	07:37		09:04 (22)		08:50	09:28
	16:42	17:58	15	08:45 (24)	19:03		21:14	22:20	22:51	22:14	20:57	19:28	17:04	18	09:22 (22)		15:58	15:46
27	08:56	07:41		08:29 (24)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	07:40		09:02 (22)		08:52	09:28
	16:44	18:00	17	08:46 (24)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	17:02	20	09:22 (22)		15:56	15:47
28	08:54	07:38		08:29 (24)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	07:42		09:02 (22)		08:54	09:29
	16:46	18:02	18	08:47 (24)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	16:59	21	09:23 (22)		15:55	15:48
29	08:52				07:16		05:49	04:44	04:30	05:18	06:27	07:35	07:44		09:02 (22)		08:56	09:29
	16:49				20:10		21:21	22:26	22:50	22:08	20:48	19:19	16:56	22	09:24 (22)		15:54	15:49
30	08:50				07:13		05:47	04:43	04:31	05:20	06:29	07:37	07:47		09:01 (22)		08:58	09:28
	16:51				20:12		21:24	22:27	22:49	22:05	20:45	19:16	16:54	23	09:24 (22)		15:53	15:50
31	08:48				07:10			04:41		05:22	06:31		07:49		09:01 (22)			09:28
	16:54				20:15			22:29		22:03	20:43		16:51	23	09:24 (22)			15:51
Potential sun hours	221	260			365		432	521	547	546	478	386	319			236		199
Total, worst case			393		132									351		175		
Sun reduction			0,50		0,50									0,50		0,50		
Oper. time red.			0,80		0,80									0,80		0,80		
Wind dir. red.			0,73		0,73									0,73		0,73		
Total reduction			0,29		0,29									0,29		0,29		
Total, real			114		38									102		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46	09:41 (22)	07:35	08:31 (24)	07:07	05:44	04:40
	15:53		16:56	14 09:55 (22)	18:05	20 08:51 (24)	20:17	21:26	22:31
2	09:28		08:44	09:40 (22)	07:33	08:31 (24)	07:04	05:41	04:39
	15:54		16:59	16 09:56 (22)	18:07	20 08:51 (24)	20:19	21:28	22:32
3	09:27		08:41	09:39 (22)	07:30	08:31 (24)	07:01	05:39	04:37
	15:56		17:01	19 09:58 (22)	18:10	19 08:50 (24)	20:21	21:31	22:34
4	09:27		08:39	09:38 (22)	07:27	08:31 (24)	06:58	05:36	04:36
	15:57		17:04	20 09:58 (22)	18:12	19 08:50 (24)	20:24	21:33	22:35
5	09:26		08:37	09:38 (22)	07:24	08:32 (24)	06:55	05:34	04:35
	15:59		17:06	22 10:00 (22)	18:14	16 08:48 (24)	20:26	21:35	22:37
6	09:25		08:35	09:37 (22)	07:22	08:33 (24)	06:53	05:31	04:34
	16:00		17:08	23 10:00 (22)	18:17	14 08:47 (24)	20:28	21:38	22:38
7	09:25		08:32	09:36 (22)	07:19	08:35 (24)	06:50	05:29	04:33
	16:02		17:11	24 10:00 (22)	18:19	9 08:44 (24)	20:31	21:40	22:39
8	09:24		08:30	09:37 (22)	07:16		06:47	05:27	04:32
	16:04		17:13	24 10:01 (22)	18:21		20:33	21:42	22:41
9	09:23		08:28	09:36 (22)	07:13		06:44	05:24	04:31
	16:05		17:16	24 10:00 (22)	18:24		20:35	21:44	22:42
10	09:22		08:25	09:37 (22)	07:10		06:41	05:22	04:30
	16:07		17:18	24 10:01 (22)	18:26		20:38	21:47	22:43
11	09:21		08:23	09:37 (22)	07:07		06:38	05:20	04:30
	16:09		17:21	23 10:00 (22)	18:28		20:40	21:49	22:44
12	09:20		08:20	09:37 (22)	07:05		06:36	05:17	04:29
	16:11		17:23	23 10:00 (22)	18:31		20:42	21:51	22:45
13	09:19		08:18	09:38 (22)	07:02		06:33	05:15	04:28
	16:13		17:26	21 09:59 (22)	18:33		20:44	21:53	22:46
14	09:17		08:15	09:39 (22)	06:59		06:30	05:13	04:28
	16:15		17:28	20 09:59 (22)	18:35		20:47	21:55	22:47
15	09:16		08:13	09:40 (22)	06:56		06:27	05:11	04:28
	16:17		17:31	17 09:57 (22)	18:38		20:49	21:58	22:47
16	09:15		08:10	09:42 (22)	06:53		06:24	05:08	04:27
	16:19		17:33	13 09:55 (22)	18:40		20:51	22:00	22:48
17	09:13		08:08	09:45 (22)	06:50		06:21	05:06	04:27
	16:21		17:36	8 09:53 (22)	18:42		20:54	22:02	22:49
18	09:12		08:05		06:47		06:19	05:04	04:27
	16:23		17:38		18:45		20:56	22:04	22:49
19	09:10		08:02		06:44		06:16	05:02	04:27
	16:26		17:41		18:47		20:58	22:06	22:50
20	09:09		08:00		06:42		06:13	05:00	04:27
	16:28		17:43		18:49		21:01	22:08	22:50
21	09:07		07:57		06:39		06:10	04:58	04:27
	16:30		17:45		18:52		21:03	22:10	22:50
22	09:05		07:54		06:36		06:08	04:56	04:27
	16:32		17:48		18:54		21:05	22:12	22:51
23	09:04		07:52	08:40 (24)	06:33		06:05	04:54	04:27
	16:35		17:50	5 08:45 (24)	18:56		21:08	22:14	22:51
24	09:02		07:49	08:36 (24)	06:30		06:02	04:53	04:28
	16:37		17:53	12 08:48 (24)	18:59		21:10	22:16	22:51
25	09:00		07:46	08:34 (24)	06:27		06:00	04:51	04:28
	16:39		17:55	15 08:49 (24)	19:01		21:12	22:18	22:51
26	08:58		07:44	08:33 (24)	06:24		05:57	04:49	04:29
	16:42		17:58	17 08:50 (24)	19:03		21:14	22:20	22:51
27	08:56		07:41	08:32 (24)	06:21		05:54	04:47	04:29
	16:44		18:00	18 08:50 (24)	19:05		21:17	22:22	22:50
28	08:54		07:38	08:32 (24)	06:18		05:52	04:46	04:30
	16:46		18:02	19 08:51 (24)	19:08		21:19	22:24	22:50
29	08:52				07:16		05:49	04:44	04:30
	16:49				20:10		21:21	22:26	22:50
30	08:50				07:13		05:47	04:43	04:31
	16:51				20:12		21:24	22:27	22:49
31	08:48	09:43 (22)			07:10			04:41	
	16:54	9 09:52 (22)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case		9		421		117			
Sun reduction		0,50		0,50		0,50			
Oper. time red.		0,80		0,80		0,80			
Wind dir. red.		0,72		0,73		0,73			
Total reduction		0,29		0,29		0,29			
Total, real		3		122		34			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		09:06 (22)	09:00
	22:49	22:01	20:40	19:13			16:49	24	09:30 (22)	15:51
2	04:33	05:26	06:35	07:42			07:54		09:06 (22)	09:02
	22:48	21:59	20:37	19:10			16:46	24	09:30 (22)	15:50
3	04:34	05:29	06:38	07:44			07:56		09:06 (22)	09:04
	22:47	21:56	20:34	19:07			16:44	24	09:30 (22)	15:49
4	04:35	05:31	06:40	07:46			07:59		09:07 (22)	09:05
	22:47	21:54	20:31	19:05			16:42	23	09:30 (22)	15:48
5	04:36	05:33	06:42	07:48			08:01		09:07 (22)	09:07
	22:46	21:52	20:28	19:02			16:39	22	09:29 (22)	15:47
6	04:37	05:35	06:44	07:51		09:12 (24)	08:04		09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7	09:19 (24)	16:37	21	09:29 (22)	15:46
7	04:39	05:37	06:47	07:53		09:10 (24)	08:06		09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12	09:22 (24)	16:35	20	09:29 (22)	15:46
8	04:40	05:40	06:49	07:55		09:08 (24)	08:08		09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15	09:23 (24)	16:32	18	09:27 (22)	15:45
9	04:41	05:42	06:51	07:58		09:06 (24)	08:11		09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18	09:24 (24)	16:30	17	09:27 (22)	15:44
10	04:43	05:44	06:53	08:00		09:06 (24)	08:13		09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19	09:25 (24)	16:28	13	09:25 (22)	15:44
11	04:44	05:46	06:55	08:02		09:05 (24)	08:16		09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19	09:24 (24)	16:26	9	09:23 (22)	15:43
12	04:46	05:49	06:58	08:04		09:05 (24)	08:18			09:18
	22:38	21:34	20:08	18:42	20	09:25 (24)	16:24			15:43
13	04:47	05:51	07:00	08:07		09:04 (24)	08:20			09:19
	22:37	21:32	20:05	18:39	20	09:24 (24)	16:21			15:43
14	04:49	05:53	07:02	08:09		09:04 (24)	08:23			09:20
	22:35	21:29	20:02	18:36	19	09:23 (24)	16:19			15:42
15	04:51	05:55	07:04	08:11		09:05 (24)	08:25			09:21
	22:34	21:26	20:00	18:34	18	09:23 (24)	16:17			15:42
16	04:53	05:57	07:06	08:14		09:05 (24)	08:27			09:22
	22:32	21:24	19:57	18:31	16	09:21 (24)	16:15			15:42
17	04:54	06:00	07:09	08:16		09:07 (24)	08:30			09:23
	22:31	21:21	19:54	18:28	14	09:21 (24)	16:13			15:42
18	04:56	06:02	07:11	08:18		09:08 (24)	08:32			09:24
	22:29	21:19	19:51	18:25	10	09:18 (24)	16:11			15:42
19	04:58	06:04	07:13	08:21			08:34			09:25
	22:27	21:16	19:48	18:23			16:10			15:42
20	05:00	06:06	07:15	08:23			08:37			09:26
	22:25	21:13	19:45	18:20			16:08			15:43
21	05:02	06:09	07:17	08:25			08:39			09:26
	22:24	21:10	19:42	18:17			16:06			15:43
22	05:04	06:11	07:20	08:28			08:41			09:27
	22:22	21:08	19:39	18:15			16:04			15:44
23	05:06	06:13	07:22	08:30			08:43			09:27
	22:20	21:05	19:36	18:12			16:03			15:44
24	05:08	06:15	07:24	08:32			08:45			09:28
	22:18	21:02	19:33	18:09			16:01			15:45
25	05:10	06:18	07:26	07:35		09:13 (22)	08:48			09:28
	22:16	20:59	19:30	17:07	10	09:23 (22)	15:59			15:45
26	05:12	06:20	07:28	07:37		09:11 (22)	08:50			09:28
	22:14	20:57	19:28	17:04	15	09:26 (22)	15:58			15:46
27	05:14	06:22	07:31	07:40		09:09 (22)	08:52			09:28
	22:12	20:54	19:25	17:01	18	09:27 (22)	15:56			15:47
28	05:16	06:24	07:33	07:42		09:08 (22)	08:54			09:29
	22:10	20:51	19:22	16:59	20	09:28 (22)	15:55			15:48
29	05:18	06:27	07:35	07:44		09:08 (22)	08:56			09:29
	22:08	20:48	19:19	16:56	21	09:29 (22)	15:54			15:49
30	05:20	06:29	07:37	07:47		09:07 (22)	08:58			09:28
	22:05	20:45	19:16	16:54	22	09:29 (22)	15:53			15:50
31	05:22	06:31		07:49		09:07 (22)				09:28
	22:03	20:43		16:51	23	09:30 (22)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					336			215		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,73			0,72		
Total reduction					0,29			0,29		
Total, real					98			62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	
Sun reduction			0,50									0,50		0,50	
Oper. time red.			0,80									0,80		0,80	
Wind dir. red.			0,74									0,74		0,74	
Total reduction			0,29									0,29		0,29	
Total, real			71									71		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (24)	08:46	10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (28)	09:00	10:51 (23)	
	15:53	20 12:41 (24)	16:56	20 10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (28)	15:51	28 12:23 (24)	
2	09:28	12:22 (24)	08:44	09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (28)	09:02	10:51 (23)	
	15:54	19 12:41 (24)	16:58	21 10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (28)	15:50	30 12:24 (24)	
3	09:27	12:22 (24)	08:41	10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (28)	09:04	10:52 (23)	
	15:55	19 12:41 (24)	17:01	20 10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (28)	15:49	29 12:25 (24)	
4	09:27	11:12 (23)	08:39	10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (28)	09:05	10:53 (23)	
	15:57	22 12:41 (24)	17:03	20 10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (28)	15:48	30 12:26 (24)	
5	09:26	11:11 (23)	08:37	10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (28)	09:07	10:54 (23)	
	15:58	26 12:42 (24)	17:06	19 10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (28)	15:47	29 12:27 (24)	
6	09:25	11:10 (23)	08:35	10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (28)	09:09	10:56 (23)	
	16:00	28 12:42 (24)	17:08	18 10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (28)	15:46	28 12:28 (24)	
7	09:25	11:09 (23)	08:32	10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (28)	09:10	10:58 (23)	
	16:02	29 12:42 (24)	17:11	17 10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (28)	15:45	26 12:29 (24)	
8	09:24	11:09 (23)	08:30	10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (28)	09:12	11:00 (23)	
	16:03	30 12:42 (24)	17:13	15 10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (28)	15:45	23 12:30 (24)	
9	09:23	11:09 (23)	08:27	10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (28)	09:13	12:11 (24)	
	16:05	30 12:42 (24)	17:16	12 10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (28)	15:44	19 12:30 (24)	
10	09:22	11:08 (23)	08:25	10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (28)	09:15	12:11 (24)	
	16:07	30 12:41 (24)	17:18	5 10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (28)	15:44	19 12:30 (24)	
11	09:21	11:09 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (28)	09:16	12:11 (24)	
	16:09	28 12:41 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (28)	15:43	20 12:31 (24)	
12	09:20	11:08 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (28)	09:18	12:11 (24)	
	16:11	27 12:40 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (23)	15:43	20 12:31 (24)	
13	09:19	11:08 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (28)	09:19	12:12 (24)	
	16:13	25 12:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (23)	15:42	21 12:33 (24)	
14	09:17	11:08 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (28)	09:20	12:12 (24)	
	16:15	20 11:28 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (23)	15:42	21 12:33 (24)	
15	09:16	11:08 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (28)	09:21	12:12 (24)	
	16:17	21 11:29 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (23)	15:42	21 12:33 (24)	
16	09:15	11:08 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (28)	09:22	12:13 (24)	
	16:19	21 11:29 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (23)	15:42	20 12:33 (24)	
17	09:13	11:09 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (28)	09:23	12:14 (24)	
	16:21	22 11:31 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (23)	15:42	21 12:35 (24)	
18	09:12	11:09 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (23)	09:24	12:14 (24)	
	16:23	22 11:31 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (23)	15:42	21 12:35 (24)	
19	09:10	11:09 (23)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (23)	09:25	12:14 (24)	
	16:25	22 11:31 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (23)	15:42	21 12:35 (24)	
20	09:09	11:09 (23)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (23)	09:26	12:15 (24)	
	16:28	23 11:32 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (23)	15:43	21 12:36 (24)	
21	09:07	11:09 (23)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (23)	09:26	12:16 (24)	
	16:30	23 11:32 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (23)	15:43	21 12:37 (24)	
22	09:05	11:10 (23)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (23)	09:27	12:16 (24)	
	16:32	22 11:32 (23)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (23)	15:43	21 12:37 (24)	
23	09:03	11:10 (23)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (23)	09:27	12:16 (24)	
	16:34	22 11:32 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (23)	15:44	21 12:37 (24)	
24	09:02	11:10 (23)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (23)	09:28	12:17 (24)	
	16:37	22 11:32 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (23)	15:45	21 12:38 (24)	
25	09:00	10:04 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (23)	09:28	12:17 (24)	
	16:39	28 11:32 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (23)	15:45	21 12:38 (24)	
26	08:58	10:03 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (23)	09:28	12:18 (24)	
	16:42	31 11:32 (23)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (23)	15:46	21 12:39 (24)	
27	08:56	10:02 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (23)	09:28	12:18 (24)	
	16:44	31 11:31 (23)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (23)	15:47	21 12:39 (24)	
28	08:54	10:00 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (23)	09:29	12:19 (24)	
	16:46	32 11:30 (23)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (23)	15:48	21 12:40 (24)	
29	08:52	10:00 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (23)	09:29	12:19 (24)	
	16:49	31 11:29 (23)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (24)	15:49	21 12:40 (24)	
30	08:50	09:59 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (23)	09:28	12:20 (24)	
	16:51	27 11:26 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (24)	15:50	20 12:40 (24)	
31	08:48	09:59 (28)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (24)	
	16:54	20 10:19 (28)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (24)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	22:07	20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:43	04:31	05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
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13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
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27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	22:07	20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:43	04:31	05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 1.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

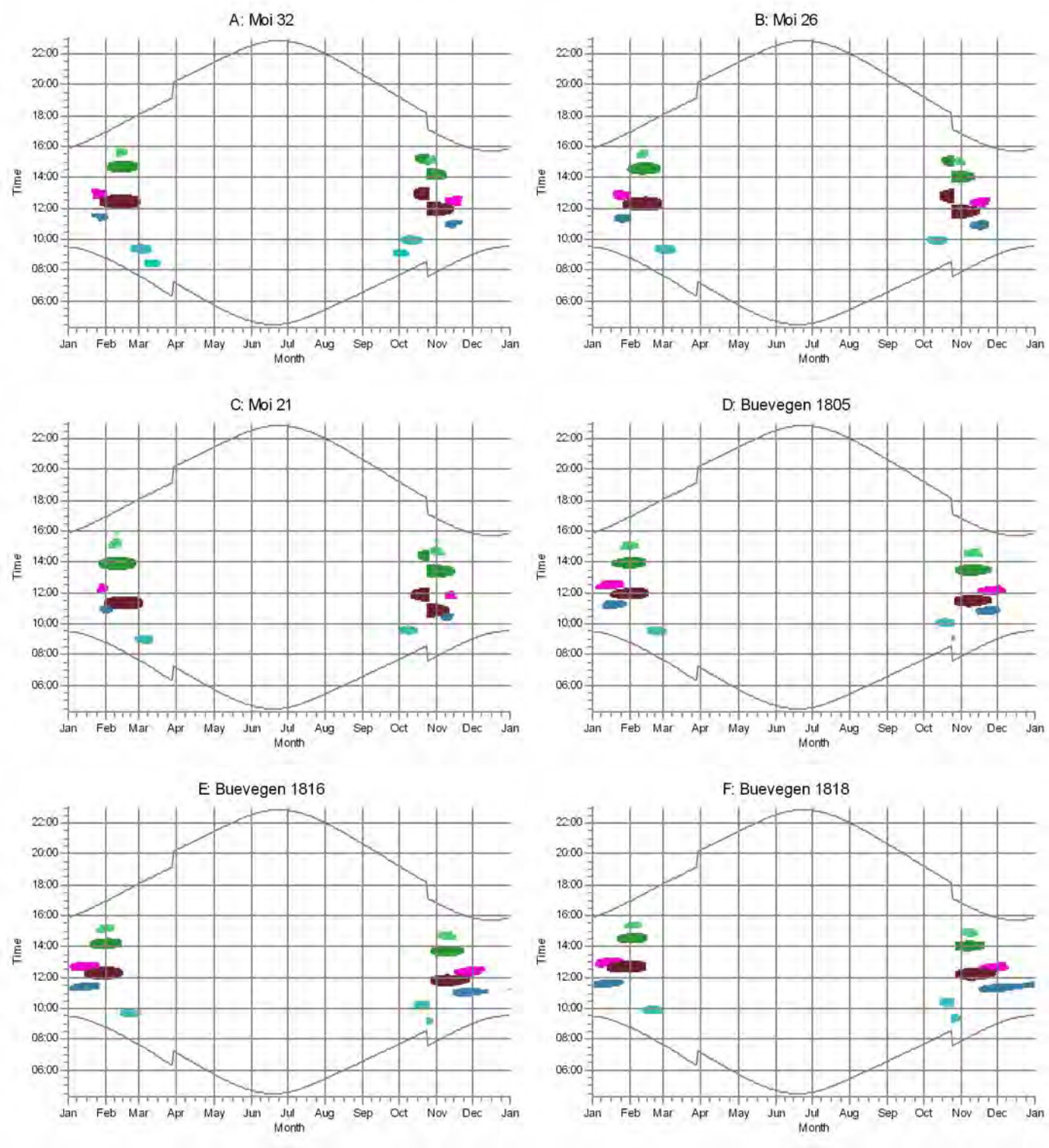
worst case

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere



WTGs

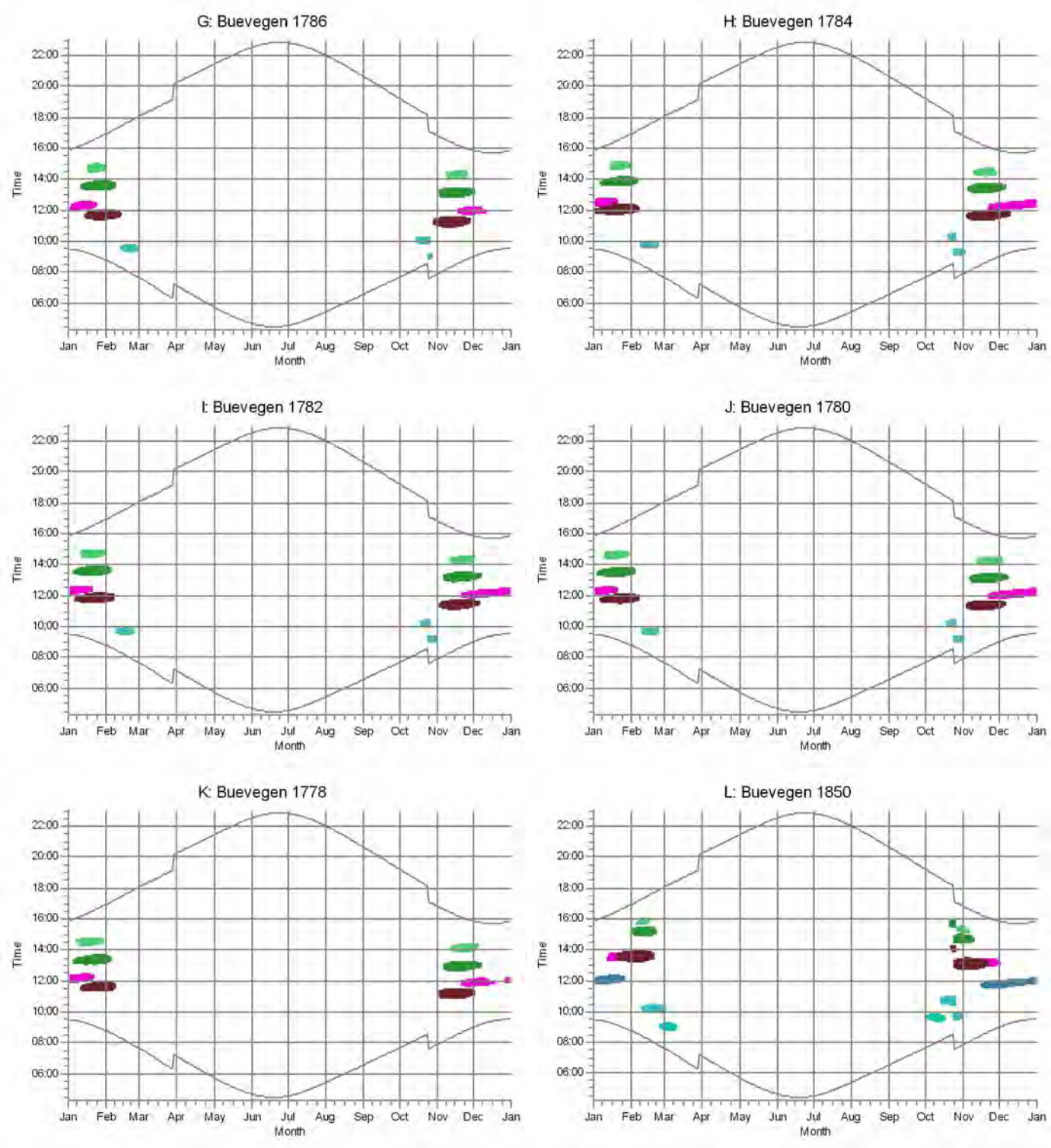
19: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2565
27: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

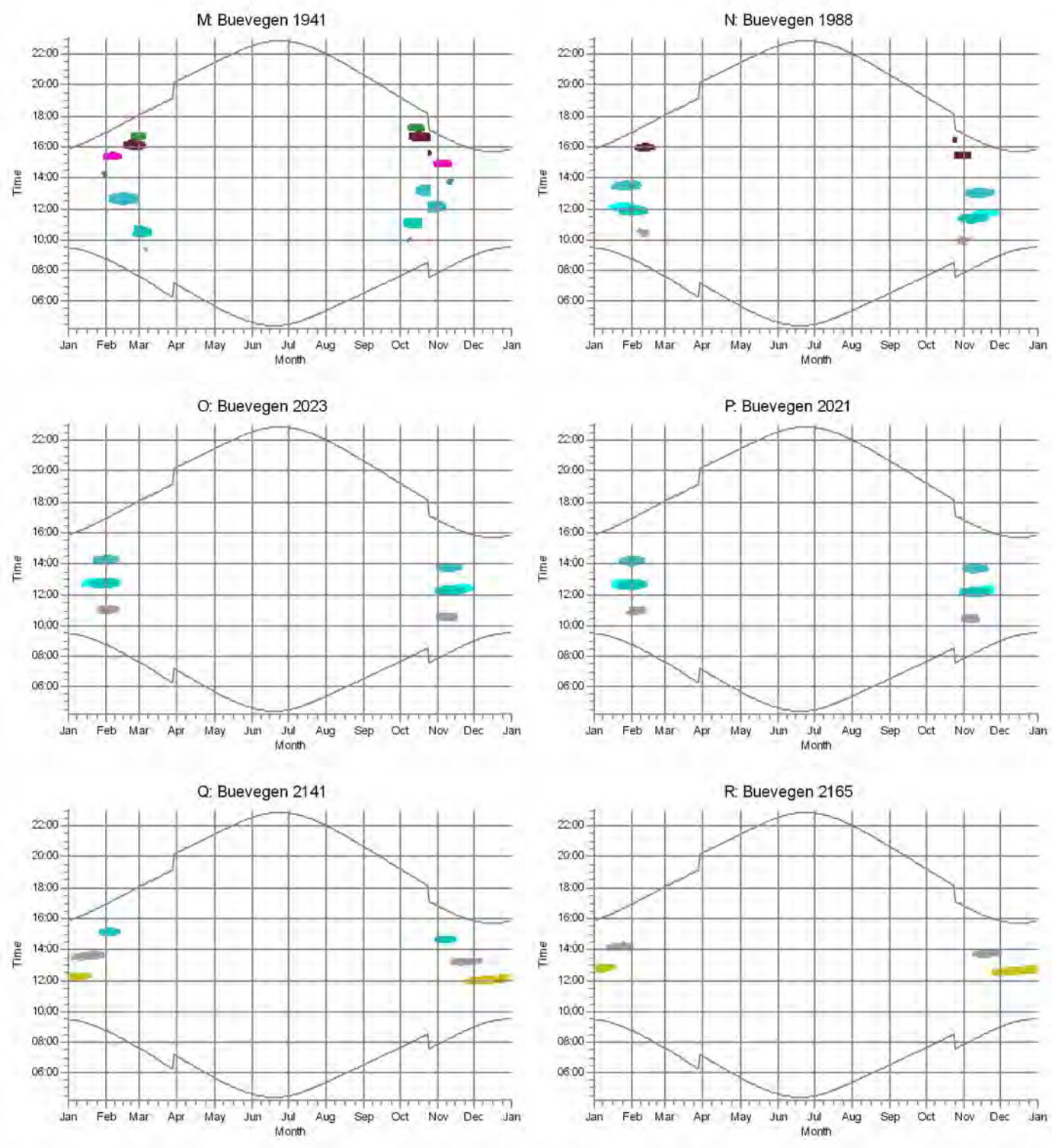


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

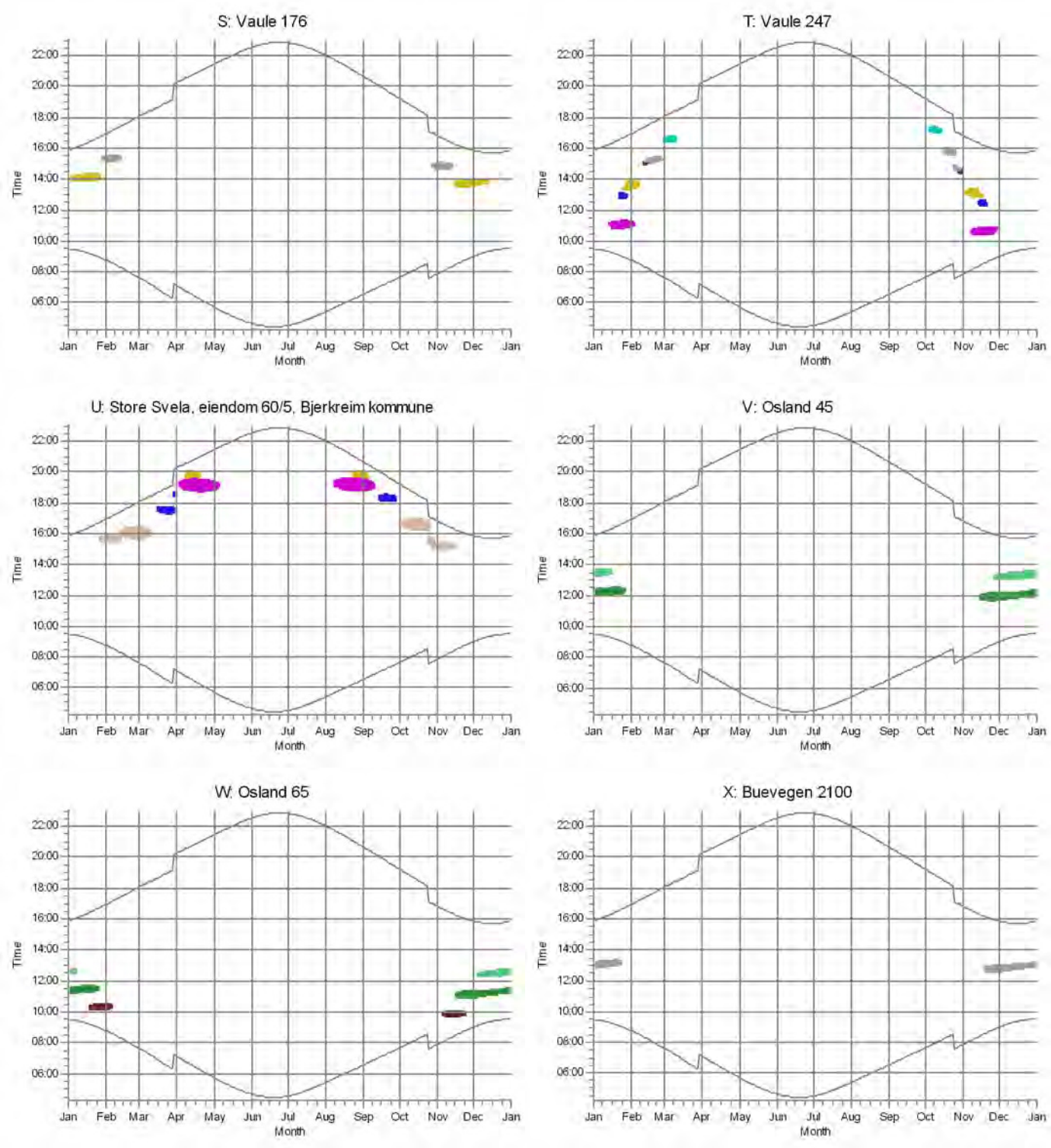


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere



WTGs

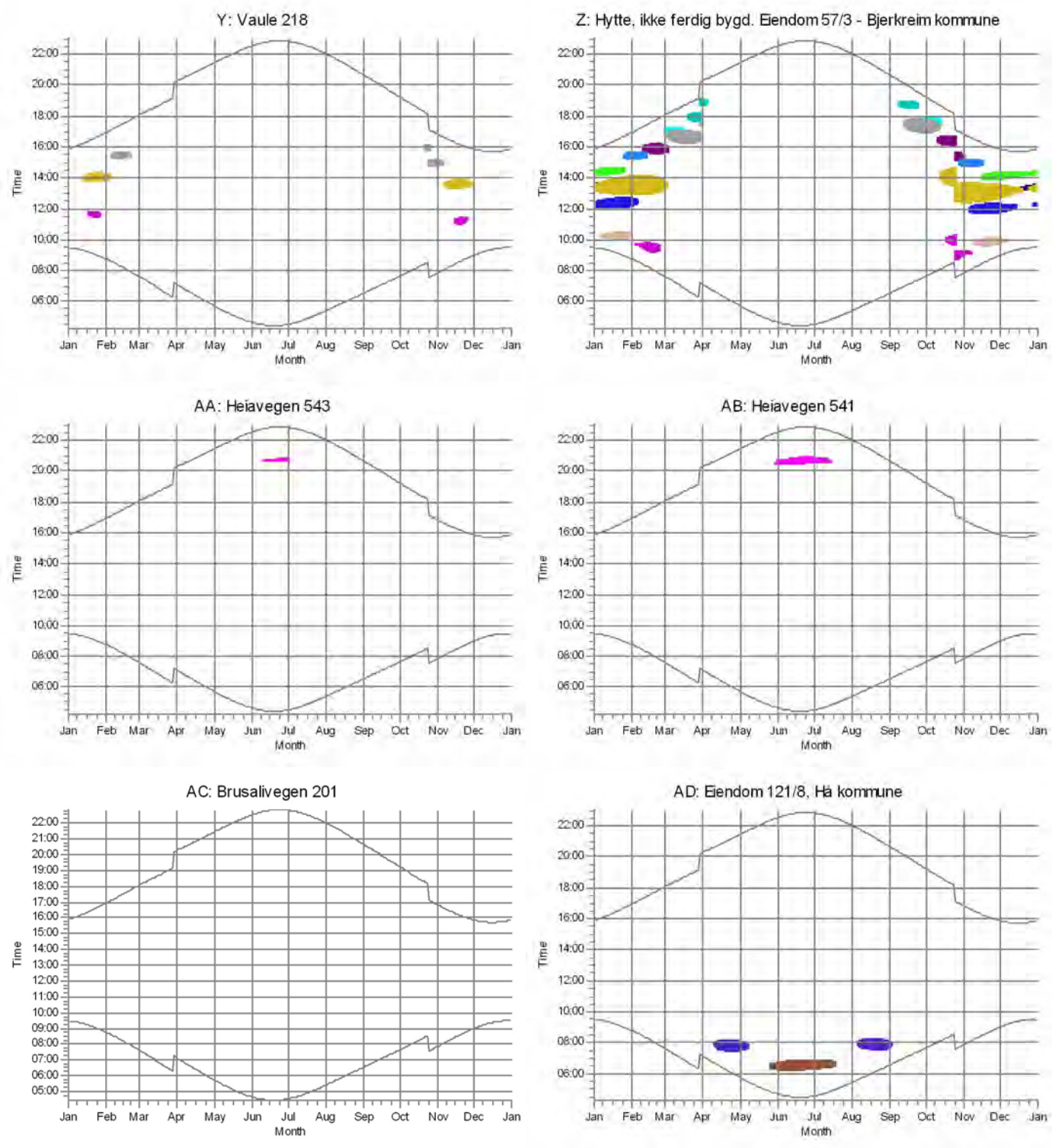
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
27: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere



WTGs

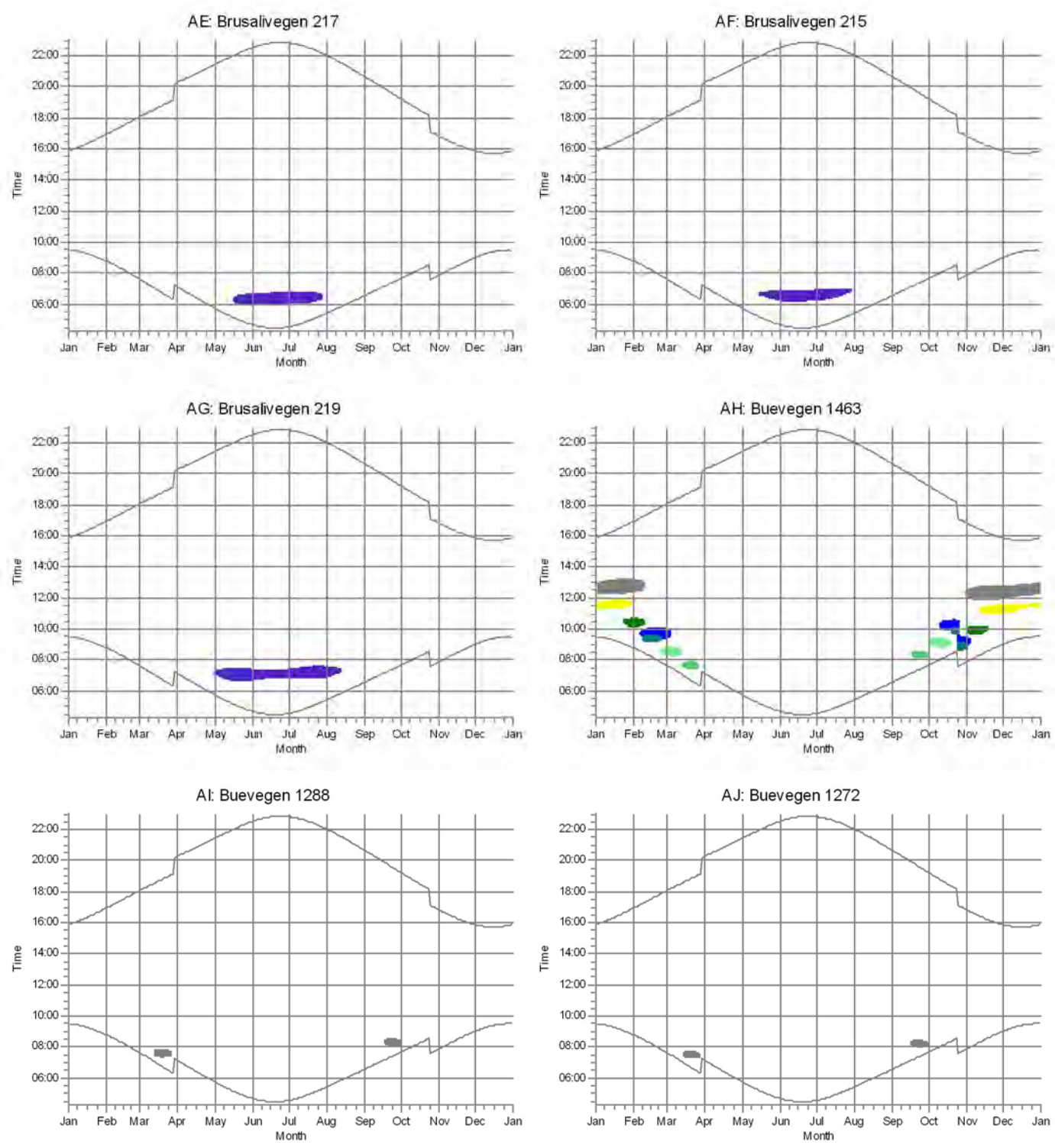
5: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544	17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556	39: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546	18: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557	40: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550	21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560	41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552	30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569	42: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555	36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575	

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

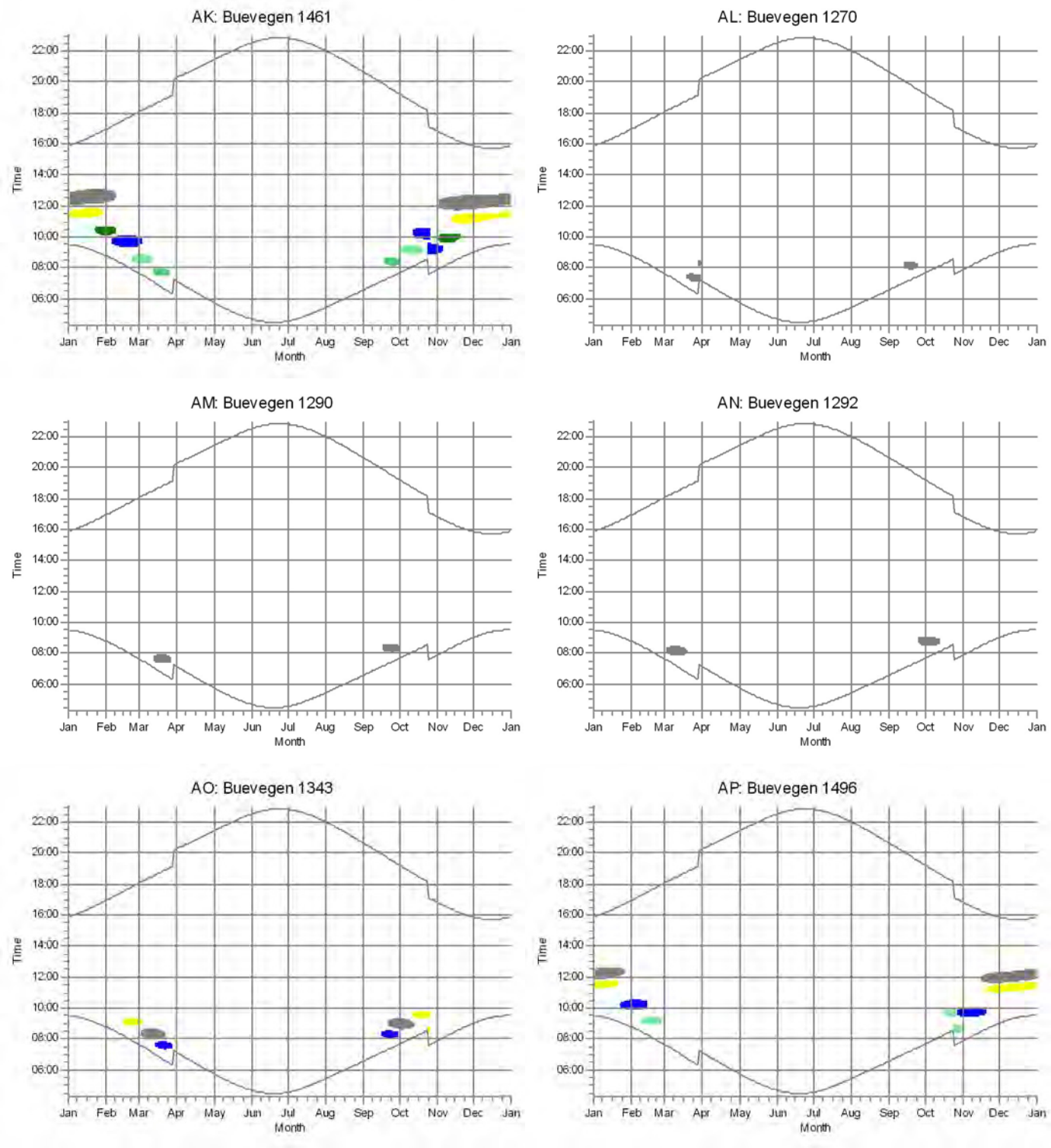


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

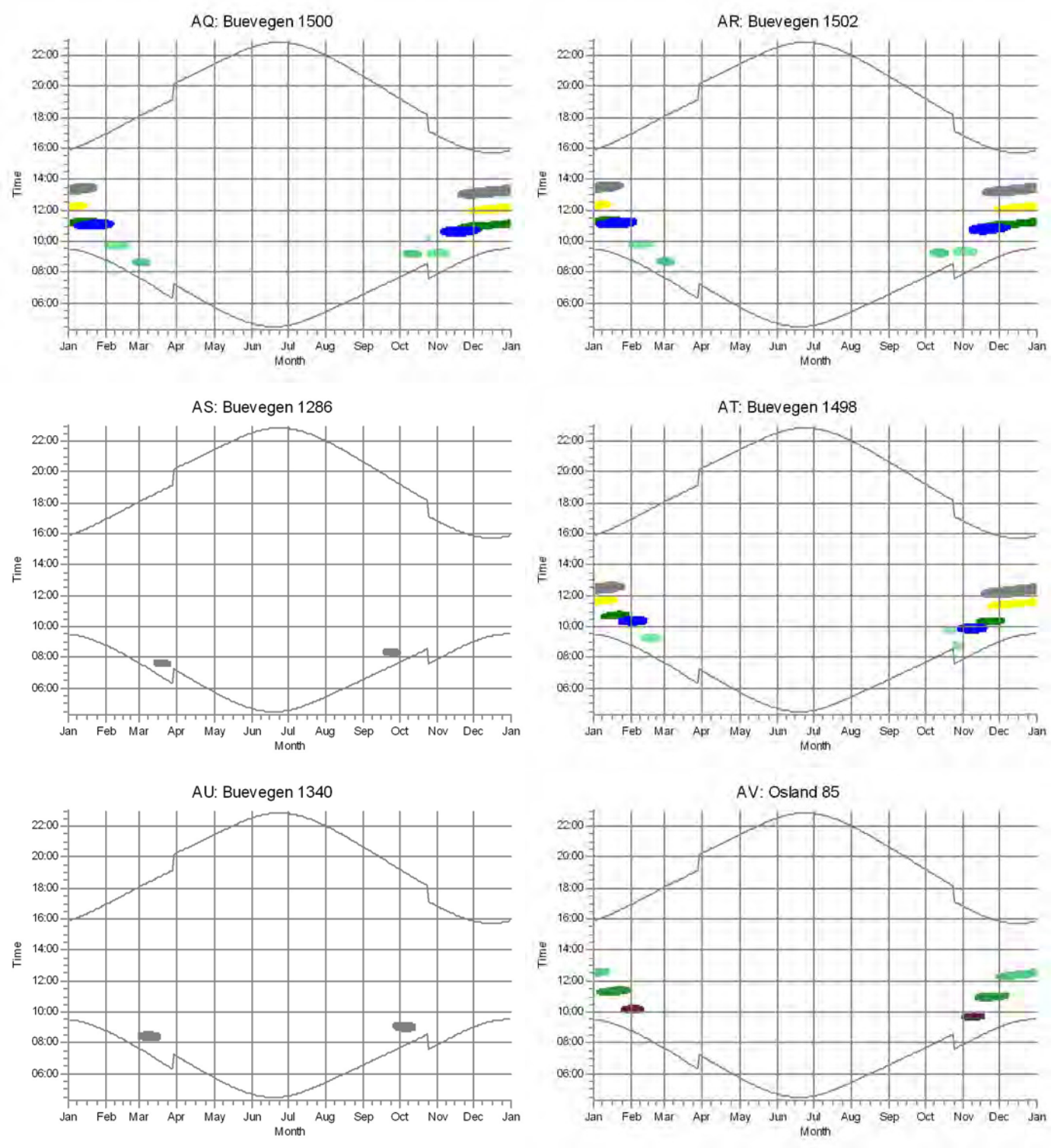


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Calculated:
19.11.2025 14:38/4.2.271

SHADOW - Calendar, graphical

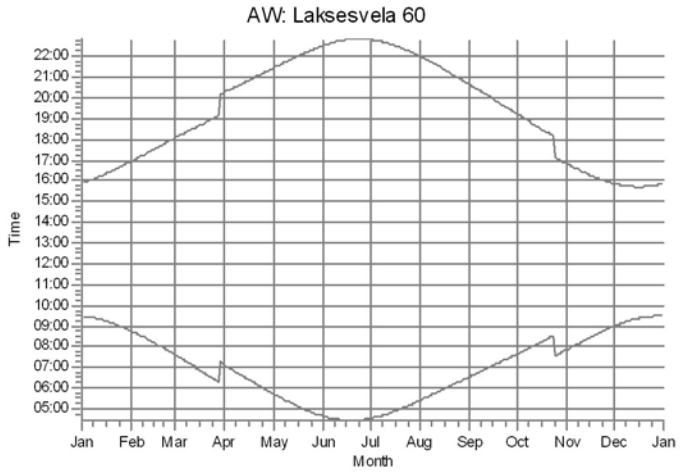
Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

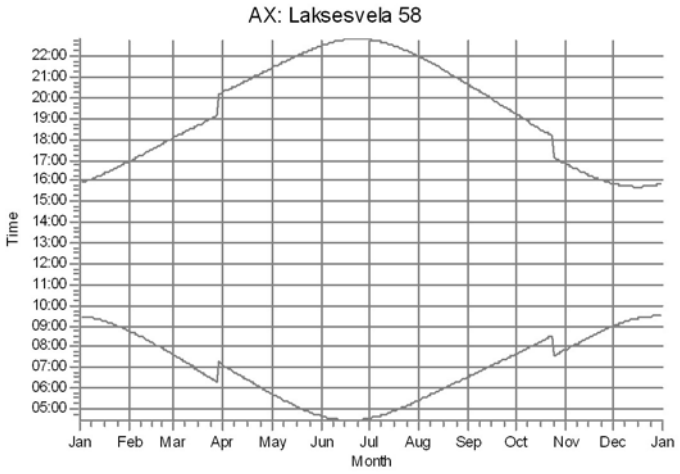


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere





WTGs

Vedlegg 2.1

Tabell Moifjellet og Mellomstrand vindkraftverk

realistic case

Project:

Moifjellet og Mellomstrand vrk

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Calculated:

19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (37)	07:35		09:10 (19)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (24)	18:05	24	09:34 (19)	20:17	21:26	22:30
2	09:27			08:43		11:24 (37)	07:33		09:10 (19)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (32)	18:07	25	09:35 (19)	20:19	21:28	22:32
3	09:27			08:41		12:08 (32)	07:30		09:10 (19)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (27)	18:09	24	09:34 (19)	20:21	21:30	22:34
4	09:26			08:39		12:07 (32)	07:27		09:10 (19)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (27)	18:12	24	09:34 (19)	20:24	21:33	22:35
5	09:26			08:37		12:06 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (27)	18:14	23	09:33 (19)	20:26	21:35	22:37
6	09:25			08:34		12:06 (32)	07:21		08:24 (21)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (27)	18:17	28	09:32 (19)	20:28	21:37	22:38
7	09:24			08:32		12:05 (32)	07:19		08:21 (21)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (27)	18:19	32	09:30 (19)	20:30	21:40	22:39
8	09:24			08:30		12:05 (32)	07:16		08:19 (21)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (27)	18:21	32	09:28 (19)	20:33	21:42	22:40
9	09:23			08:27		12:04 (32)	07:13		08:18 (21)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (27)	18:24	29	09:26 (19)	20:35	21:44	22:42
10	09:22			08:25		12:04 (32)	07:10		08:17 (21)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (28)	18:26	18	08:35 (21)	20:37	21:46	22:43
11	09:21			08:23		12:04 (32)	07:07		08:17 (21)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (28)	18:28	18	08:35 (21)	20:40	21:49	22:44
12	09:20			08:20		12:04 (32)	07:04		08:17 (21)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (28)	18:31	19	08:36 (21)	20:42	21:51	22:45
13	09:18			08:18		12:03 (32)	07:01		08:17 (21)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (28)	18:33	18	08:35 (21)	20:44	21:53	22:46
14	09:17			08:15		12:04 (32)	06:59		08:17 (21)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (28)	18:35	17	08:34 (21)	20:47	21:55	22:47
15	09:16			08:13		12:04 (32)	06:56		08:18 (21)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (28)	18:38	15	08:33 (21)	20:49	21:58	22:47
16	09:15			08:10		12:03 (32)	06:53		08:19 (21)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (28)	18:40	12	08:31 (21)	20:51	22:00	22:48
17	09:13			08:07		12:03 (32)	06:50		08:22 (21)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (28)	18:42	5	08:27 (21)	20:53	22:02	22:49
18	09:12			08:05		12:04 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (27)	18:49			21:00	22:08	22:50
21	09:07		11:29 (37)	07:57		12:05 (32)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (24)	17:45	71	14:56 (27)	18:51			21:03	22:10	22:50
22	09:05		11:28 (37)	07:54		12:06 (32)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (24)	17:48	66	14:55 (27)	18:54			21:05	22:12	22:50
23	09:03		11:29 (37)	07:52		09:20 (19)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (24)	17:50	69	14:54 (27)	18:56			21:07	22:14	22:50
24	09:02		11:28 (37)	07:49		09:16 (19)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (24)	17:53	69	14:52 (27)	18:58			21:10	22:16	22:51
25	09:00		11:27 (37)	07:46		09:14 (19)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (24)	17:55	64	14:49 (27)	19:01			21:12	22:18	22:50
26	08:58		11:22 (37)	07:44		09:13 (19)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (24)	17:57	54	14:45 (27)	19:03			21:14	22:20	22:50
27	08:56		11:14 (37)	07:41		09:12 (19)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (24)	18:00	41	12:35 (32)	19:05			21:17	22:22	22:50
28	08:54		11:14 (37)	07:38		09:11 (19)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (24)	18:02	33	12:29 (32)	19:07			21:19	22:24	22:50
29	08:52		11:15 (37)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (24)				20:10			21:21	22:25	22:50
30	08:50		11:15 (37)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (24)				20:12			21:24	22:27	22:49
31	08:48		11:17 (37)				07:10				04:41	
	16:54	57	13:05 (24)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (21)	07:51		11:33 (32)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (21)	16:49	78	14:57 (28)	15:51
2	04:33		05:26		06:35			07:42		08:56 (21)	07:54		11:34 (32)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (21)	16:46	74	14:26 (27)	15:50
3	04:34		05:28		06:37			07:44		08:55 (21)	07:56		11:35 (32)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (21)	16:44	71	14:25 (27)	15:49
4	04:35		05:31		06:40			07:46		08:55 (21)	07:59		11:35 (32)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (19)	16:41	69	14:24 (27)	15:48
5	04:36		05:33		06:42			07:48		08:56 (21)	08:01		11:36 (32)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (19)	16:39	64	14:23 (27)	15:47
6	04:37		05:35		06:44			07:51		08:57 (21)	08:03		11:37 (32)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (19)	16:37	61	14:22 (27)	15:46
7	04:39		05:37		06:46			07:53		08:58 (21)	08:06		11:37 (32)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (19)	16:34	53	14:17 (27)	15:45
8	04:40		05:39		06:49			07:55		09:03 (21)	08:08		11:39 (32)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (19)	16:32	42	14:11 (27)	15:45
9	04:41		05:42		06:51			07:57		09:45 (19)	08:11		10:53 (37)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (19)	16:30	37	12:12 (32)	15:44
10	04:43		05:44		06:53			08:00		09:45 (19)	08:13		10:50 (37)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (19)	16:28	52	12:34 (24)	15:44
11	04:44		05:46		06:55			08:02		09:44 (19)	08:15		10:48 (37)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (19)	16:25	57	12:36 (24)	15:43
12	04:46		05:48		06:57			08:04		09:43 (19)	08:18		10:47 (37)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (19)	16:23	58	12:37 (24)	15:43
13	04:47		05:51		07:00			08:07		09:44 (19)	08:20		10:47 (37)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (19)	16:21	57	12:39 (24)	15:42
14	04:49		05:53		07:02			08:09		09:44 (19)	08:22		10:46 (37)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (32)	16:19	52	12:39 (24)	15:42
15	04:51		05:55		07:04			08:11		09:45 (19)	08:25		10:47 (37)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (32)	16:17	43	12:40 (24)	15:42
16	04:52		05:57		07:06			08:13		09:45 (19)	08:27		10:55 (37)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (27)	16:15	37	12:41 (24)	15:42
17	04:54		06:00		07:08			08:16		09:47 (19)	08:29		11:00 (37)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (27)	16:13	33	12:41 (24)	15:42
18	04:56		06:02		07:11			08:18		09:48 (19)	08:32		11:02 (37)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (27)	16:11	33	12:42 (24)	15:42
19	04:58		06:04		07:13			08:20		09:52 (19)	08:34		11:04 (37)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (27)	16:09	21	12:43 (24)	15:42
20	05:00		06:06		07:15			08:23		12:37 (32)	08:36		11:03 (37)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (27)	16:08	22	12:42 (24)	15:43
21	05:01		06:08		07:17			08:25		12:36 (32)	08:39		11:04 (37)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (27)	16:06	8	12:43 (24)	15:43
22	05:03		06:11		07:19			08:27		12:35 (32)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (27)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (32)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (27)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (32)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (27)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (32)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (28)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (32)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (28)	15:58			15:46
27	05:13		06:22		07:30		09:02 (21)	07:39		11:33 (32)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (21)	17:01	97	15:16 (28)	15:56			15:47
28	05:16		06:24		07:33		09:00 (21)	07:42		11:33 (32)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (21)	16:59	101	15:18 (28)	15:55			15:48
29	05:18		06:26		07:35		08:58 (21)	07:44		11:33 (32)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (21)	16:56	102	15:18 (28)	15:54			15:49
30	05:20		06:29		07:37		08:56 (21)	07:47		11:33 (32)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (21)	16:54	99	15:15 (28)	15:52			15:50
31	05:22		06:31					07:49		11:34 (32)				09:28
	22:03		20:42					16:51	90	15:09 (28)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (37)	07:35		09:09 (19)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (27)	18:05	23	09:32 (19)	20:17	21:26	22:30
2	09:27			08:43		12:00 (32)	07:33		09:09 (19)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (27)	18:07	24	09:33 (19)	20:19	21:28	22:32
3	09:27			08:41		11:58 (32)	07:30		09:09 (19)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (27)	18:09	24	09:33 (19)	20:21	21:30	22:34
4	09:26			08:39		11:58 (32)	07:27		09:09 (19)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (27)	18:12	23	09:32 (19)	20:24	21:33	22:35
5	09:26			08:37		11:57 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (27)	18:14	21	09:31 (19)	20:26	21:35	22:37
6	09:25			08:34		11:57 (32)	07:21		09:10 (19)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (27)	18:17	20	09:30 (19)	20:28	21:37	22:38
7	09:24			08:32		11:56 (32)	07:19		09:11 (19)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (27)	18:19	17	09:28 (19)	20:30	21:40	22:39
8	09:24			08:30		11:56 (32)	07:16		09:13 (19)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (28)	18:21	12	09:25 (19)	20:33	21:42	22:40
9	09:23			08:27		11:56 (32)	07:13		09:16 (19)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (28)	18:24	5	09:21 (19)	20:35	21:44	22:42
10	09:22			08:25		11:55 (32)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (28)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (32)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (28)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (32)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (28)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (28)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (27)	18:45			20:56	22:04	22:49
19	09:10		12:54 (24)	08:02		11:57 (32)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (24)	17:40	70	14:48 (27)	18:47			20:58	22:06	22:50
20	09:08		11:12 (37)	08:00		11:57 (32)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (24)	17:43	68	14:47 (27)	18:49			21:00	22:08	22:50
21	09:07		11:11 (37)	07:57		11:58 (32)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (24)	17:45	64	14:46 (27)	18:51			21:03	22:10	22:50
22	09:05		11:11 (37)	07:54		11:59 (32)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (24)	17:48	58	14:44 (27)	18:54			21:05	22:12	22:50
23	09:03		11:11 (37)	07:52		09:17 (19)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (24)	17:50	62	14:43 (27)	18:56			21:07	22:14	22:50
24	09:02		11:10 (37)	07:49		09:14 (19)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (24)	17:53	57	14:39 (27)	18:58			21:10	22:16	22:51
25	09:00		11:08 (37)	07:46		09:13 (19)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (24)	17:55	42	12:28 (32)	19:01			21:12	22:18	22:50
26	08:58		11:09 (37)	07:44		09:11 (19)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (24)	17:57	38	12:24 (32)	19:03			21:14	22:20	22:50
27	08:56		11:09 (37)	07:41		09:10 (19)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (24)	18:00	22	09:32 (19)	19:05			21:17	22:22	22:50
28	08:54		11:10 (37)	07:38		09:09 (19)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (24)	18:02	23	09:32 (19)	19:07			21:19	22:24	22:50
29	08:52		11:12 (37)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (24)				20:10			21:21	22:25	22:50
30	08:50		11:12 (37)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (24)				20:12			21:24	22:27	22:49
31	08:48		11:14 (37)				07:10				04:41	
	16:54	56	14:29 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (32)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (28)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (32)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (28)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (32)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (28)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (32)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (27)	15:48
5	04:36	05:33	06:42	07:48		09:51 (19)	08:01		11:27 (32)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (19)	16:39	70	14:17 (27)	15:47
6	04:37	05:35	06:44	07:51		09:48 (19)	08:03		11:28 (32)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (19)	16:37	65	14:16 (27)	15:46
7	04:39	05:37	06:46	07:53		09:46 (19)	08:06		11:28 (32)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (19)	16:34	62	14:14 (27)	15:45
8	04:40	05:39	06:49	07:55		09:45 (19)	08:08		11:29 (32)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (19)	16:32	57	14:13 (27)	15:45
9	04:41	05:42	06:51	07:57		09:44 (19)	08:11		11:30 (32)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (19)	16:30	53	14:12 (27)	15:44
10	04:43	05:44	06:53	08:00		09:44 (19)	08:13		10:47 (37)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (19)	16:28	58	14:10 (27)	15:44
11	04:44	05:46	06:55	08:02		09:43 (19)	08:15		10:45 (37)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (19)	16:25	55	13:59 (27)	15:43
12	04:46	05:48	06:57	08:04		09:42 (19)	08:18		10:44 (37)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (19)	16:23	57	12:31 (24)	15:43
13	04:47	05:51	07:00	08:07		09:43 (19)	08:20		10:43 (37)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (19)	16:21	59	12:32 (24)	15:42
14	04:49	05:53	07:02	08:09		09:42 (19)	08:22		10:42 (37)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (19)	16:19	58	12:33 (24)	15:42
15	04:51	05:55	07:04	08:11		09:43 (19)	08:25		10:42 (37)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (32)	16:17	53	12:34 (24)	15:42
16	04:52	05:57	07:06	08:13		09:44 (19)	08:27		10:42 (37)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (32)	16:15	45	12:35 (24)	15:42
17	04:54	06:00	07:08	08:16		09:45 (19)	08:29		10:41 (37)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (27)	16:13	47	12:35 (24)	15:42
18	04:56	06:02	07:11	08:18		09:46 (19)	08:32		10:44 (37)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (27)	16:11	46	12:36 (24)	15:42
19	04:58	06:04	07:13	08:20		09:49 (19)	08:34		10:46 (37)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (27)	16:09	45	12:37 (24)	15:42
20	05:00	06:06	07:15	08:23		12:30 (32)	08:36		10:46 (37)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (27)	16:08	45	12:37 (24)	15:43
21	05:01	06:08	07:17	08:25		12:29 (32)	08:39		10:46 (37)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (27)	16:06	36	12:37 (24)	15:43
22	05:03	06:11	07:19	08:27		12:27 (32)	08:41		10:48 (37)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (27)	16:04	30	12:38 (24)	15:43
23	05:05	06:13	07:22	08:30		12:27 (32)	08:43		12:30 (24)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (27)	16:02	5	12:35 (24)	15:44
24	05:07	06:15	07:24	08:32		12:26 (32)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (27)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (32)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (27)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (32)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (32)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (28)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (32)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (28)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (32)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (28)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (32)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (28)	15:52			15:50
31	05:22	06:31		07:49		11:25 (32)				09:28
	22:03	20:42		16:51	101	15:13 (28)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (37)	07:35		08:50 (19)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (27)	18:05	39	11:29 (32)	20:17	21:26	22:30
2	09:27			08:43		10:44 (37)	07:33		08:50 (19)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (27)	18:07	31	11:25 (32)	20:19	21:28	22:32
3	09:27			08:41		10:46 (37)	07:30		08:49 (19)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (27)	18:09	21	09:10 (19)	20:21	21:31	22:34
4	09:26			08:39		10:47 (37)	07:27		08:48 (19)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (28)	18:12	22	09:10 (19)	20:24	21:33	22:35
5	09:26			08:37		10:50 (37)	07:24		08:48 (19)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (28)	18:14	21	09:09 (19)	20:26	21:35	22:37
6	09:25			08:34		11:05 (32)	07:21		08:48 (19)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (28)	18:17	21	09:09 (19)	20:28	21:37	22:38
7	09:24			08:32		11:03 (32)	07:19		08:48 (19)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (28)	18:19	20	09:08 (19)	20:30	21:40	22:39
8	09:24			08:30		11:03 (32)	07:16		08:48 (19)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (28)	18:21	19	09:07 (19)	20:33	21:42	22:40
9	09:23			08:27		11:02 (32)	07:13		08:48 (19)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (26)	18:24	18	09:06 (19)	20:35	21:44	22:42
10	09:22			08:25		11:01 (32)	07:10		08:49 (19)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (26)	18:26	15	09:04 (19)	20:37	21:46	22:43
11	09:21			08:23		11:01 (32)	07:07		08:51 (19)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (28)	18:28	10	09:01 (19)	20:40	21:49	22:44
12	09:20			08:20		11:00 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (32)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (27)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (27)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (27)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (32)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (27)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (32)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (27)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (32)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (27)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (32)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (27)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (32)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (32)	19:01			21:12	22:18	22:50
26	08:58		12:05 (24)	07:44		08:58 (19)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (24)	17:57	36	11:36 (32)	19:03			21:14	22:20	22:50
27	08:56		12:05 (24)	07:41		08:54 (19)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (27)	18:00	41	11:34 (32)	19:05			21:17	22:22	22:50
28	08:54		11:00 (37)	07:38		08:52 (19)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (27)	18:02	41	11:32 (32)	19:08			21:19	22:24	22:50
29	08:52		10:56 (37)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (27)				20:10			21:21	22:25	22:50
30	08:50		10:50 (37)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (27)				20:12			21:24	22:27	22:49
31	08:48		10:44 (37)				07:10				04:41	
	16:54	62	14:05 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (32)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (26)	15:51
2	04:33		05:26		06:35		07:42		09:32 (19)	07:54		10:32 (32)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (19)	16:46	110	15:25 (26)	15:50
3	04:34		05:28		06:37		07:44		09:28 (19)	07:56		10:33 (32)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (19)	16:44	97	14:53 (28)	15:49
4	04:35		05:31		06:40		07:46		09:26 (19)	07:59		10:33 (32)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (19)	16:41	89	14:46 (28)	15:48
5	04:36		05:33		06:42		07:48		09:25 (19)	08:01		10:35 (32)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (19)	16:39	81	14:41 (28)	15:47
6	04:37		05:35		06:44		07:51		09:24 (19)	08:03		10:20 (37)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (19)	16:37	77	14:35 (28)	15:46
7	04:39		05:37		06:46		07:53		09:23 (19)	08:06		10:16 (37)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (19)	16:34	77	14:32 (28)	15:45
8	04:40		05:39		06:49		07:55		09:23 (19)	08:08		10:15 (37)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (19)	16:32	71	13:39 (27)	15:45
9	04:41		05:42		06:51		07:57		09:22 (19)	08:11		10:15 (37)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (19)	16:30	72	13:39 (27)	15:44
10	04:43		05:44		06:53		08:00		09:23 (19)	08:13		10:14 (37)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (19)	16:28	71	13:38 (27)	15:44
11	04:44		05:46		06:55		08:02		09:23 (19)	08:15		10:15 (37)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (19)	16:25	61	13:36 (27)	15:43
12	04:46		05:48		06:57		08:04		09:23 (19)	08:18		10:24 (37)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (32)	16:23	52	13:35 (27)	15:43
13	04:47		05:51		07:00		08:07		09:24 (19)	08:20		10:28 (37)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (32)	16:21	47	13:33 (27)	15:42
14	04:49		05:53		07:02		08:09		09:25 (19)	08:22		10:32 (37)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (32)	16:19	39	13:30 (27)	15:42
15	04:51		05:55		07:04		08:11		09:28 (19)	08:25		11:38 (24)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (32)	16:17	19	13:26 (27)	15:42
16	04:52		05:57		07:06		08:13		11:35 (32)	08:27		11:38 (24)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (32)	16:15	4	11:42 (24)	15:42
17	04:54		06:00		07:08		08:16		11:34 (32)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (32)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (32)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (27)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (32)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (27)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (32)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (27)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (32)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (27)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (32)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (27)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (32)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (27)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (32)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (27)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (32)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (27)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (32)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (27)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (32)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (27)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (32)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (28)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (32)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (28)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (32)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (28)	15:52			15:50
31	05:22		06:31				07:49		10:31 (32)				09:28
	22:03		20:42				16:51	99	14:52 (28)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46		11:39 (32)	07:35	09:25 (19)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (28)	18:05	9 09:34 (19)	20:17	21:26	22:31
2	09:27		08:43		11:39 (32)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (28)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (32)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (28)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (32)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (28)	18:12		20:24	21:33	22:35
5	09:26	12:20 (24)	08:37		11:39 (32)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (24)	17:06	80	15:09 (28)	18:14		20:26	21:35	22:37
6	09:25	12:19 (24)	08:34		11:40 (32)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (24)	17:08	74	15:08 (28)	18:17		20:28	21:37	22:38
7	09:24	12:17 (24)	08:32		11:40 (32)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (24)	17:11	62	14:11 (27)	18:19		20:30	21:40	22:39
8	09:24	12:17 (24)	08:30		11:41 (32)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (24)	17:13	61	14:11 (27)	18:21		20:33	21:42	22:40
9	09:23	12:18 (24)	08:27		11:42 (32)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (24)	17:16	57	14:10 (27)	18:24		20:35	21:44	22:42
10	09:22	11:06 (37)	08:25		11:42 (32)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (24)	17:18	54	14:09 (27)	18:26		20:37	21:46	22:43
11	09:21	11:02 (37)	08:23		11:44 (32)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (24)	17:21	48	14:08 (27)	18:28		20:40	21:49	22:44
12	09:20	11:01 (37)	08:20		11:45 (32)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (24)	17:23	42	14:06 (27)	18:31		20:42	21:51	22:45
13	09:18	11:02 (37)	08:18		11:46 (32)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (24)	17:26	32	14:02 (27)	18:33		20:44	21:53	22:46
14	09:17	11:02 (37)	08:15		11:49 (32)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (24)	17:28	18	12:07 (32)	18:35		20:47	21:55	22:47
15	09:16	11:02 (37)	08:13		11:52 (32)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (24)	17:31	12	12:04 (32)	18:38		20:49	21:58	22:47
16	09:15	11:02 (37)	08:10		09:29 (19)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (24)	17:33	5	09:34 (19)	18:40		20:51	22:00	22:48
17	09:13	11:02 (37)	08:07		09:25 (19)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (24)	17:36	12	09:37 (19)	18:42		20:53	22:02	22:49
18	09:12	11:03 (37)	08:05		09:24 (19)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (27)	17:38	16	09:40 (19)	18:45		20:56	22:04	22:49
19	09:10	11:03 (37)	08:02		09:23 (19)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (27)	17:40	17	09:40 (19)	18:47		20:58	22:06	22:50
20	09:08	11:04 (37)	08:00		09:22 (19)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (27)	17:43	19	09:41 (19)	18:49		21:00	22:08	22:50
21	09:07	11:04 (37)	07:57		09:21 (19)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (27)	17:45	20	09:41 (19)	18:51		21:03	22:10	22:50
22	09:05	11:05 (37)	07:54		09:20 (19)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (27)	17:48	21	09:41 (19)	18:54		21:05	22:12	22:50
23	09:03	11:05 (37)	07:52		09:21 (19)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (27)	17:50	21	09:42 (19)	18:56		21:07	22:14	22:51
24	09:02	11:06 (37)	07:49		09:21 (19)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (27)	17:53	20	09:41 (19)	18:58		21:10	22:16	22:51
25	09:00	11:07 (37)	07:46		09:21 (19)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (28)	17:55	20	09:41 (19)	19:01		21:12	22:18	22:51
26	08:58	11:09 (37)	07:44		09:21 (19)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (28)	17:57	19	09:40 (19)	19:03		21:14	22:20	22:50
27	08:56	11:10 (37)	07:41		09:22 (19)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (28)	18:00	16	09:38 (19)	19:05		21:17	22:22	22:50
28	08:54	11:13 (37)	07:38		09:23 (19)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (28)	18:02	14	09:37 (19)	19:08		21:19	22:24	22:50
29	08:52	11:40 (32)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (28)				20:10		21:21	22:25	22:50
30	08:50	11:39 (32)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (28)				20:12		21:24	22:27	22:49
31	08:48	11:39 (32)				07:10			04:41	
	16:54	88 15:13 (28)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				
Sun reduction		0,50		0,50		0,50				
Oper. time red.		0,80		0,80		0,80				
Wind dir. red.		0,62		0,63		0,73				
Total reduction		0,25		0,25		0,29				
Total, real		371		276		3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (32)	09:00		10:44 (37)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (27)	15:51	31	12:23 (24)
2	04:33	05:26	06:35	07:42			07:54		11:11 (32)	09:02		10:48 (37)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (27)	15:50	27	12:23 (24)
3	04:34	05:28	06:37	07:44			07:56		11:11 (32)	09:03		12:01 (24)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (27)	15:49	17	12:18 (24)
4	04:35	05:31	06:40	07:46			07:59		11:10 (32)	09:05		12:01 (24)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (27)	15:48	13	12:14 (24)
5	04:36	05:33	06:42	07:48			08:01		11:10 (32)	09:07		12:02 (24)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (28)	15:47	11	12:13 (24)
6	04:37	05:35	06:44	07:51			08:03		11:10 (32)	09:09		12:05 (24)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (28)	15:46	5	12:10 (24)
7	04:39	05:37	06:46	07:53			08:06		11:09 (32)	09:10		12:07 (24)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (28)	15:45	2	12:09 (24)
8	04:40	05:39	06:49	07:55			08:08		11:09 (32)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (28)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (28)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (28)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (28)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (19)	08:18		11:11 (32)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (19)	16:23	88	14:45 (28)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (19)	08:20		11:12 (32)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (19)	16:21	86	14:45 (28)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (19)	08:22		10:45 (37)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (19)	16:19	89	14:45 (28)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (19)	08:25		10:42 (37)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (19)	16:17	87	14:45 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (19)	08:27		10:41 (37)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (19)	16:15	81	14:30 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (19)	08:30		10:41 (37)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (19)	16:13	83	14:25 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (19)	08:32		10:40 (37)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (19)	16:11	84	13:41 (27)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (19)	08:34		10:40 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (19)	16:09	83	13:40 (27)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (19)	08:36		10:39 (37)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (19)	16:08	82	13:39 (27)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (19)	08:39		10:39 (37)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (19)	16:06	80	13:38 (27)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		10:40 (37)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (19)	16:04	75	13:37 (27)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		10:39 (37)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (19)	16:02	69	13:35 (27)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (19)	08:45		10:40 (37)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (19)	16:01	58	13:32 (27)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (19)	08:47		10:40 (37)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (19)	15:59	45	12:20 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		10:41 (37)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (19)	15:58	43	12:21 (24)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (32)	08:52		10:41 (37)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (32)	15:56	43	12:21 (24)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (32)	08:54		10:42 (37)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (32)	15:55	42	12:22 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (32)	08:56		10:42 (37)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (27)	15:54	42	12:22 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (32)	08:58		10:42 (37)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (27)	15:52	40	12:22 (24)	15:50		
31	05:22	06:31		07:49		11:13 (32)				09:28		
	22:03	20:42		16:51	50	13:38 (27)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (37)	08:46		11:58 (32)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (37)	16:56	88	15:21 (28)	18:05	20:17	21:26	22:30
2	09:27		11:11 (37)	08:43		11:59 (32)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (37)	16:58	85	15:21 (28)	18:07	20:19	21:28	22:32
3	09:27		11:11 (37)	08:41		12:00 (32)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (24)	17:01	84	15:21 (28)	18:09	20:21	21:31	22:34
4	09:27		11:11 (37)	08:39		11:59 (32)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (24)	17:03	82	15:20 (28)	18:12	20:24	21:33	22:35
5	09:26		11:11 (37)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (24)	17:06	81	15:19 (28)	18:14	20:26	21:35	22:37
6	09:25		11:11 (37)	08:34		12:00 (32)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (24)	17:08	75	15:18 (28)	18:17	20:28	21:37	22:38
7	09:24		11:11 (37)	08:32		12:01 (32)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (24)	17:11	64	15:14 (28)	18:19	20:30	21:40	22:39
8	09:24		11:11 (37)	08:30		12:02 (32)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (24)	17:13	57	14:25 (27)	18:21	20:33	21:42	22:40
9	09:23		11:12 (37)	08:27		12:03 (32)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (24)	17:16	53	14:24 (27)	18:24	20:35	21:44	22:42
10	09:22		11:11 (37)	08:25		12:04 (32)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (24)	17:18	48	14:23 (27)	18:26	20:37	21:46	22:43
11	09:21		11:12 (37)	08:23		12:06 (32)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (24)	17:21	43	14:22 (27)	18:28	20:40	21:49	22:44
12	09:20		11:12 (37)	08:20		12:07 (32)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (24)	17:23	35	14:20 (27)	18:31	20:42	21:51	22:45
13	09:18		11:12 (37)	08:18		12:10 (32)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (24)	17:26	22	14:16 (27)	18:33	20:44	21:53	22:46
14	09:17		11:12 (37)	08:15		09:38 (19)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (24)	17:28	10	12:19 (32)	18:35	20:47	21:55	22:47
15	09:16		11:12 (37)	08:13		09:35 (19)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (24)	17:31	12	09:47 (19)	18:38	20:49	21:58	22:47
16	09:15		11:12 (37)	08:10		09:33 (19)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (24)	17:33	16	09:49 (19)	18:40	20:51	22:00	22:48
17	09:13		11:13 (37)	08:07		09:32 (19)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (24)	17:36	18	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:14 (37)	08:05		09:31 (19)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (24)	17:38	20	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:15 (37)	08:02		09:31 (19)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (24)	17:40	20	09:51 (19)	18:47	20:58	22:06	22:50
20	09:08		11:15 (37)	08:00		09:30 (19)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (27)	17:43	21	09:51 (19)	18:49	21:00	22:08	22:50
21	09:07		11:16 (37)	07:57		09:30 (19)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (27)	17:45	21	09:51 (19)	18:51	21:03	22:10	22:50
22	09:05		11:16 (37)	07:54		09:29 (19)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (27)	17:48	22	09:51 (19)	18:54	21:05	22:12	22:50
23	09:03		11:17 (37)	07:52		09:30 (19)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (27)	17:50	21	09:51 (19)	18:56	21:07	22:14	22:51
24	09:02		11:19 (37)	07:49		09:31 (19)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (27)	17:53	19	09:50 (19)	18:58	21:10	22:16	22:51
25	09:00		11:20 (37)	07:46		09:31 (19)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (27)	17:55	18	09:49 (19)	19:01	21:12	22:18	22:51
26	08:58		11:23 (37)	07:44		09:32 (19)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (28)	17:57	15	09:47 (19)	19:03	21:14	22:20	22:50
27	08:56		11:58 (32)	07:41		09:34 (19)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (28)	18:00	11	09:45 (19)	19:05	21:17	22:22	22:50
28	08:54		11:58 (32)	07:38		09:38 (19)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (28)	18:02	2	09:40 (19)	19:07	21:19	22:24	22:50
29	08:52		11:59 (32)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (28)				20:10	21:21	22:25	22:50
30	08:50		11:58 (32)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (28)				20:12	21:24	22:27	22:49
31	08:48		11:58 (32)				07:10		04:41	
	16:54	88	15:22 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (32)	09:00		10:54 (37)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (27)	15:51	43	12:35 (24)
2	04:33		05:26		06:35		07:42			07:54		11:32 (32)	09:02		10:54 (37)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (27)	15:50	42	12:35 (24)
3	04:34		05:28		06:37		07:44			07:56		11:32 (32)	09:03		10:55 (37)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (27)	15:49	40	12:35 (24)
4	04:35		05:31		06:40		07:46			07:59		11:30 (32)	09:05		10:56 (37)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (28)	15:48	39	12:35 (24)
5	04:36		05:33		06:42		07:48			08:01		11:30 (32)	09:07		10:56 (37)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (28)	15:47	39	12:36 (24)
6	04:37		05:35		06:44		07:51			08:03		11:30 (32)	09:09		10:57 (37)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (28)	15:46	30	12:36 (24)
7	04:39		05:37		06:46		07:53			08:06		11:29 (32)	09:10		10:58 (37)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (28)	15:45	29	12:36 (24)
8	04:40		05:39		06:49		07:55			08:08		11:29 (32)	09:12		10:59 (37)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (28)	15:45	15	12:33 (24)
9	04:41		05:42		06:51		07:57			08:11		11:29 (32)	09:13		11:00 (37)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (28)	15:44	12	12:34 (24)
10	04:43		05:44		06:53		08:00			08:13		11:30 (32)	09:15		11:00 (37)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (28)	15:43	4	12:31 (24)
11	04:44		05:46		06:55		08:02			08:15		11:29 (32)	09:16		11:02 (37)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (28)	15:43	2	11:04 (37)
12	04:46		05:48		06:57		08:04			08:18		11:30 (32)	09:18		11:02 (37)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (28)	15:43	2	11:04 (37)
13	04:47		05:51		07:00		08:07			08:20		11:30 (32)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (28)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (19)	08:22		11:30 (32)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (19)	16:19	74	14:42 (28)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (19)	08:25		11:31 (32)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (19)	16:17	68	14:38 (28)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (19)	08:27		10:56 (37)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (19)	16:15	69	14:36 (28)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (19)	08:30		10:54 (37)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (19)	16:13	73	13:55 (27)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (19)	08:32		10:52 (37)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (19)	16:11	78	13:54 (27)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (19)	08:34		10:52 (37)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (19)	16:09	81	13:54 (27)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (19)	08:36		10:51 (37)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (19)	16:08	80	13:52 (27)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (19)	08:39		10:51 (37)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (19)	16:06	78	13:51 (27)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (19)	08:41		10:51 (37)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (19)	16:04	75	13:50 (27)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (19)	08:43		10:51 (37)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (19)	16:02	64	12:31 (24)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (19)	08:45		10:51 (37)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (19)	16:01	63	12:32 (24)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (19)	08:47		10:51 (37)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (19)	15:59	60	12:32 (24)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (19)	08:50		10:52 (37)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (19)	15:58	56	12:33 (24)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (19)	08:52		10:51 (37)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (19)	15:56	53	12:33 (24)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (19)	08:54		10:52 (37)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (32)	15:55	44	12:34 (24)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (32)	08:56		10:53 (37)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (27)	15:54	43	12:34 (24)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (32)	08:58		10:53 (37)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (27)	15:52	43	12:34 (24)	15:50		
31	05:22		06:31				07:49		11:35 (32)				09:28		11:11 (37)
	22:03		20:42				16:51	44	13:52 (27)				15:51	1	11:12 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (37)	08:46	12:23 (32)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (37)	16:56	82	15:30 (28)	18:05	20:17	21:26	22:30
2	09:27		11:23 (37)	08:43	12:24 (32)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (37)	16:58	86	15:34 (28)	18:07	20:19	21:28	22:32
3	09:27		11:23 (37)	08:41	12:25 (32)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (37)	17:01	84	15:34 (28)	18:09	20:21	21:31	22:34
4	09:26		11:23 (37)	08:39	12:25 (32)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (24)	17:03	85	15:34 (28)	18:12	20:24	21:33	22:35
5	09:26		11:23 (37)	08:37	12:25 (32)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (24)	17:06	82	15:33 (28)	18:14	20:26	21:35	22:37
6	09:25		11:24 (37)	08:34	12:26 (32)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (24)	17:08	79	15:33 (28)	18:17	20:28	21:37	22:38
7	09:24		11:24 (37)	08:32	12:26 (32)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (24)	17:11	74	15:31 (28)	18:19	20:30	21:40	22:39
8	09:24		11:24 (37)	08:30	12:28 (32)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (24)	17:13	68	15:30 (28)	18:21	20:33	21:42	22:40
9	09:23		11:24 (37)	08:27	12:28 (32)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (24)	17:16	60	15:26 (28)	18:24	20:35	21:44	22:42
10	09:22		11:25 (37)	08:25	12:29 (32)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (24)	17:18	51	14:44 (27)	18:26	20:37	21:46	22:43
11	09:21		11:25 (37)	08:23	12:32 (32)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (24)	17:21	45	14:43 (27)	18:28	20:40	21:49	22:44
12	09:20		11:25 (37)	08:20	09:49 (19)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (24)	17:23	45	14:42 (27)	18:31	20:42	21:51	22:45
13	09:18		11:26 (37)	08:18	09:45 (19)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (24)	17:26	43	14:40 (27)	18:33	20:44	21:53	22:46
14	09:17		11:26 (37)	08:15	09:44 (19)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (24)	17:28	27	14:38 (27)	18:35	20:47	21:55	22:47
15	09:16		11:26 (37)	08:13	09:43 (19)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (24)	17:31	18	10:01 (19)	18:38	20:49	21:58	22:47
16	09:15		11:27 (37)	08:10	09:42 (19)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (24)	17:33	20	10:02 (19)	18:40	20:51	22:00	22:48
17	09:13		11:27 (37)	08:07	09:41 (19)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (24)	17:35	21	10:02 (19)	18:42	20:53	22:02	22:49
18	09:12		11:28 (37)	08:05	09:41 (19)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (24)	17:38	22	10:03 (19)	18:45	20:56	22:04	22:49
19	09:10		11:29 (37)	08:02	09:40 (19)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (24)	17:40	23	10:03 (19)	18:47	20:58	22:06	22:50
20	09:08		11:30 (37)	08:00	09:40 (19)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (24)	17:43	23	10:03 (19)	18:49	21:00	22:08	22:50
21	09:07		11:31 (37)	07:57	09:40 (19)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (24)	17:45	22	10:02 (19)	18:51	21:03	22:10	22:50
22	09:05		11:31 (37)	07:54	09:40 (19)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (24)	17:48	22	10:02 (19)	18:54	21:05	22:12	22:50
23	09:03		11:33 (37)	07:52	09:42 (19)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (27)	17:50	20	10:02 (19)	18:56	21:07	22:14	22:50
24	09:02		11:35 (37)	07:49	09:42 (19)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (27)	17:53	18	10:00 (19)	18:58	21:10	22:16	22:51
25	09:00		11:39 (37)	07:46	09:43 (19)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (27)	17:55	16	09:59 (19)	19:01	21:12	22:18	22:50
26	08:58		12:24 (32)	07:44	09:45 (19)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (27)	17:57	11	09:56 (19)	19:03	21:14	22:20	22:50
27	08:56		12:23 (32)	07:41	09:49 (19)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (27)	18:00	2	09:51 (19)	19:05	21:17	22:22	22:50
28	08:54		12:23 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	61	15:15 (28)	18:02		19:07	21:19	22:24	22:50
29	08:52		12:24 (32)			07:15	05:49	04:44	04:30
	16:49	67	15:19 (28)			20:10	21:21	22:25	22:50
30	08:50		12:23 (32)			07:12	05:46	04:42	04:31
	16:51	74	15:23 (28)			20:12	21:24	22:27	22:49
31	08:48		12:24 (32)			07:10		04:41	
	16:53	77	15:26 (28)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1549		1149					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,62		0,62					
Total reduction		0,25		0,25					
Total, real		386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:59 (32)	09:00		11:07 (37)
	22:49	22:01	20:40	19:13			16:49	51	14:13 (27)	15:51	43	12:51 (24)
2	04:33	05:26	06:35	07:42			07:54		11:58 (32)	09:02		11:08 (37)
	22:48	21:58	20:37	19:10			16:46	61	14:57 (28)	15:50	42	12:51 (24)
3	04:34	05:28	06:37	07:44			07:56		11:57 (32)	09:03		11:08 (37)
	22:47	21:56	20:34	19:07			16:44	71	15:00 (28)	15:49	42	12:51 (24)
4	04:35	05:31	06:40	07:46			07:59		11:56 (32)	09:05		11:09 (37)
	22:47	21:54	20:31	19:04			16:41	76	15:01 (28)	15:48	41	12:52 (24)
5	04:36	05:33	06:42	07:48			08:01		11:55 (32)	09:07		11:09 (37)
	22:46	21:51	20:28	19:02			16:39	80	15:02 (28)	15:47	35	12:52 (24)
6	04:37	05:35	06:44	07:51			08:03		11:55 (32)	09:09		11:10 (37)
	22:45	21:49	20:25	18:59			16:37	82	15:03 (28)	15:46	31	12:52 (24)
7	04:38	05:37	06:46	07:53			08:06		11:54 (32)	09:10		11:11 (37)
	22:44	21:47	20:22	18:56			16:34	84	15:03 (28)	15:45	24	12:40 (24)
8	04:40	05:39	06:49	07:55			08:08		11:54 (32)	09:12		11:11 (37)
	22:43	21:44	20:20	18:53			16:32	87	15:04 (28)	15:45	24	12:41 (24)
9	04:41	05:42	06:51	07:57			08:11		11:55 (32)	09:13		11:12 (37)
	22:42	21:42	20:17	18:50			16:30	87	15:05 (28)	15:44	20	12:37 (24)
10	04:43	05:44	06:53	08:00			08:13		11:55 (32)	09:15		11:12 (37)
	22:40	21:39	20:14	18:47			16:28	81	15:01 (28)	15:43	17	11:29 (37)
11	04:44	05:46	06:55	08:02			08:15		11:54 (32)	09:16		11:14 (37)
	22:39	21:37	20:11	18:45			16:25	78	14:57 (28)	15:43	16	11:30 (37)
12	04:46	05:48	06:57	08:04			08:18		11:55 (32)	09:18		11:14 (37)
	22:38	21:34	20:08	18:42			16:23	74	14:55 (28)	15:43	15	11:29 (37)
13	04:47	05:51	07:00	08:07			08:20		11:56 (32)	09:19		11:15 (37)
	22:37	21:31	20:05	18:39			16:21	67	14:51 (28)	15:42	15	11:30 (37)
14	04:49	05:53	07:02	08:09			08:22		11:55 (32)	09:20		11:16 (37)
	22:35	21:29	20:02	18:36			16:19	62	14:47 (28)	15:42	14	11:30 (37)
15	04:51	05:55	07:04	08:11		10:19 (19)	08:25		11:56 (32)	09:21		11:16 (37)
	22:34	21:26	19:59	18:33	8	10:27 (19)	16:17	57	14:13 (27)	15:42	14	11:30 (37)
16	04:52	05:57	07:06	08:13		10:16 (19)	08:27		11:57 (32)	09:22		11:17 (37)
	22:32	21:24	19:56	18:31	13	10:29 (19)	16:15	54	14:12 (27)	15:42	12	11:29 (37)
17	04:54	06:00	07:08	08:16		10:15 (19)	08:29		11:12 (37)	09:23		11:17 (37)
	22:30	21:21	19:54	18:28	16	10:31 (19)	16:13	58	14:11 (27)	15:42	12	11:29 (37)
18	04:56	06:02	07:11	08:18		10:13 (19)	08:32		11:09 (37)	09:24		11:18 (37)
	22:29	21:18	19:51	18:25	19	10:32 (19)	16:11	67	14:10 (27)	15:42	11	11:29 (37)
19	04:58	06:04	07:13	08:20		10:12 (19)	08:34		11:08 (37)	09:25		11:19 (37)
	22:27	21:16	19:48	18:22	21	10:33 (19)	16:09	66	14:08 (27)	15:42	11	11:30 (37)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:06 (37)	09:26		11:20 (37)
	22:25	21:13	19:45	18:20	22	10:33 (19)	16:08	60	12:44 (24)	15:43	10	11:30 (37)
21	05:01	06:08	07:17	08:25		10:11 (19)	08:39		11:06 (37)	09:26		11:20 (37)
	22:24	21:10	19:42	18:17	23	10:34 (19)	16:06	62	12:46 (24)	15:43	10	11:30 (37)
22	05:03	06:11	07:19	08:27		10:10 (19)	08:41		11:06 (37)	09:27		11:21 (37)
	22:22	21:08	19:39	18:14	23	10:33 (19)	16:04	63	12:47 (24)	15:43	10	11:31 (37)
23	05:05	06:13	07:22	08:30		10:11 (19)	08:43		11:05 (37)	09:27		11:21 (37)
	22:20	21:05	19:36	18:12	22	10:33 (19)	16:02	63	12:47 (24)	15:44	10	11:31 (37)
24	05:07	06:15	07:24	08:32		10:10 (19)	08:45		11:05 (37)	09:28		11:22 (37)
	22:18	21:02	19:33	18:09	22	10:32 (19)	16:01	64	12:48 (24)	15:44	10	11:32 (37)
25	05:09	06:17	07:26	07:35		09:11 (19)	08:47		11:05 (37)	09:28		11:22 (37)
	22:16	20:59	19:30	17:06	21	09:32 (19)	15:59	63	12:48 (24)	15:45	11	11:33 (37)
26	05:11	06:20	07:28	07:37		09:11 (19)	08:50		11:06 (37)	09:28		11:22 (37)
	22:14	20:56	19:27	17:04	20	09:31 (19)	15:58	59	12:49 (24)	15:46	12	11:34 (37)
27	05:13	06:22	07:30	07:39		09:12 (19)	08:52		11:05 (37)	09:28		11:23 (37)
	22:12	20:54	19:25	17:01	18	09:30 (19)	15:56	57	12:49 (24)	15:47	11	11:34 (37)
28	05:16	06:24	07:33	07:42		09:14 (19)	08:54		11:06 (37)	09:28		11:23 (37)
	22:10	20:51	19:22	16:59	28	14:08 (27)	15:55	53	12:50 (24)	15:48	13	11:36 (37)
29	05:18	06:26	07:35	07:44		09:15 (19)	08:56		11:06 (37)	09:28		11:22 (37)
	22:07	20:48	19:19	16:56	44	14:10 (27)	15:54	44	12:50 (24)	15:49	14	11:36 (37)
30	05:20	06:29	07:37	07:47		09:19 (19)	08:58		11:06 (37)	09:28		11:23 (37)
	22:05	20:45	19:16	16:54	44	14:11 (27)	15:52	43	12:50 (24)	15:50	15	11:38 (37)
31	05:22	06:31		07:49		12:01 (32)				09:28		11:23 (37)
	22:03	20:42		16:51	46	14:13 (27)				15:51	15	11:38 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					410			1974			580	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,68			0,61			0,65	
Total reduction					0,27			0,24			0,26	
Total, real					112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		08:46		11:27 (32)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (28)	18:05	20:17	21:26	22:31
2	09:27	12:04 (24)	08:43		11:27 (32)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (24)	16:58	60	13:50 (27)	18:07	20:19	21:28	22:32
3	09:27	12:04 (24)	08:41		11:28 (32)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (24)	17:01	58	13:50 (27)	18:09	20:21	21:31	22:34
4	09:27	12:04 (24)	08:39		11:28 (32)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (24)	17:03	54	13:48 (27)	18:12	20:24	21:33	22:35
5	09:26	12:04 (24)	08:37		11:28 (32)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (24)	17:06	52	13:47 (27)	18:14	20:26	21:35	22:37
6	09:25	12:05 (24)	08:34		11:29 (32)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (24)	17:08	49	13:47 (27)	18:17	20:28	21:37	22:38
7	09:24	12:05 (24)	08:32		11:29 (32)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (24)	17:11	43	13:44 (27)	18:19	20:30	21:40	22:39
8	09:24	12:05 (24)	08:30		11:31 (32)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (24)	17:13	35	13:42 (27)	18:21	20:33	21:42	22:40
9	09:23	12:06 (24)	08:27		11:32 (32)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (24)	17:16	22	11:54 (32)	18:24	20:35	21:44	22:42
10	09:22	12:06 (24)	08:25		11:34 (32)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (24)	17:18	18	11:52 (32)	18:26	20:37	21:46	22:43
11	09:21	12:07 (24)	08:23		11:37 (32)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (24)	17:21	14	11:51 (32)	18:28	20:40	21:49	22:44
12	09:20	12:07 (24)	08:20		11:41 (32)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (27)	17:23	4	11:45 (32)	18:31	20:42	21:51	22:45
13	09:18	12:08 (24)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (27)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (24)	08:15		09:30 (19)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (27)	17:28	5	09:35 (19)	18:35	20:47	21:55	22:47
15	09:16	11:34 (32)	08:13		09:27 (19)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (27)	17:31	11	09:38 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10		09:25 (19)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (27)	17:33	14	09:39 (19)	18:40	20:51	22:00	22:48
17	09:13	11:31 (32)	08:07		09:23 (19)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (27)	17:36	17	09:40 (19)	18:42	20:53	22:02	22:49
18	09:12	11:30 (32)	08:05		09:23 (19)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (28)	17:38	18	09:41 (19)	18:45	20:56	22:04	22:49
19	09:10	11:29 (32)	08:02		09:22 (19)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (28)	17:40	19	09:41 (19)	18:47	20:58	22:06	22:50
20	09:09	11:28 (32)	08:00		09:22 (19)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (28)	17:43	19	09:41 (19)	18:49	21:00	22:08	22:50
21	09:07	11:28 (32)	07:57		09:22 (19)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (28)	17:45	19	09:41 (19)	18:51	21:03	22:10	22:50
22	09:05	11:28 (32)	07:54		09:22 (19)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (28)	17:48	19	09:41 (19)	18:54	21:05	22:12	22:50
23	09:03	11:26 (32)	07:52		09:23 (19)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (28)	17:50	18	09:41 (19)	18:56	21:07	22:14	22:51
24	09:02	11:26 (32)	07:49		09:23 (19)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (28)	17:53	17	09:40 (19)	18:58	21:10	22:16	22:51
25	09:00	11:26 (32)	07:46		09:24 (19)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (28)	17:55	14	09:38 (19)	19:01	21:12	22:18	22:51
26	08:58	11:26 (32)	07:44		09:25 (19)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (28)	17:57	11	09:36 (19)	19:03	21:14	22:20	22:50
27	08:56	11:25 (32)	07:41		09:30 (19)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (28)	18:00	1	09:31 (19)	19:05	21:17	22:22	22:50
28	08:54	11:26 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (32)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (28)				20:10	21:21	22:25	22:50
30	08:50	11:26 (32)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (28)				20:12	21:24	22:27	22:49
31	08:48	11:26 (32)				07:10		04:41	
	16:54	76 14:52 (28)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,66					
Total reduction		0,24		0,26					
Total, real		382		180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:03 (32)	09:00		11:49 (24)
	22:49	22:01	20:40	19:13			16:49	19	11:22 (32)	15:51	22	12:11 (24)
2	04:33	05:26	06:35	07:42			07:54		11:01 (32)	09:02		11:49 (24)
	22:48	21:59	20:37	19:10			16:46	23	11:24 (32)	15:50	22	12:11 (24)
3	04:34	05:28	06:37	07:44			07:56		11:01 (32)	09:03		11:49 (24)
	22:47	21:56	20:34	19:07			16:44	36	13:12 (27)	15:49	22	12:11 (24)
4	04:35	05:31	06:40	07:46			07:59		10:59 (32)	09:05		11:50 (24)
	22:47	21:54	20:31	19:04			16:41	43	13:14 (27)	15:48	21	12:11 (24)
5	04:36	05:33	06:42	07:48			08:01		10:59 (32)	09:07		11:50 (24)
	22:46	21:51	20:28	19:02			16:39	48	13:16 (27)	15:47	21	12:11 (24)
6	04:37	05:35	06:44	07:51			08:03		10:58 (32)	09:09		11:51 (24)
	22:45	21:49	20:25	18:59			16:37	53	13:18 (27)	15:46	16	12:07 (24)
7	04:39	05:37	06:46	07:53			08:06		10:57 (32)	09:10		11:51 (24)
	22:44	21:47	20:23	18:56			16:34	55	13:18 (27)	15:45	17	12:08 (24)
8	04:40	05:39	06:49	07:55			08:08		10:57 (32)	09:12		11:52 (24)
	22:43	21:44	20:20	18:53			16:32	58	13:19 (27)	15:45	8	12:00 (24)
9	04:41	05:42	06:51	07:57			08:11		10:57 (32)	09:13		11:53 (24)
	22:42	21:42	20:17	18:50			16:30	63	14:18 (28)	15:44	4	11:57 (24)
10	04:43	05:44	06:53	08:00			08:13		10:58 (32)	09:15		11:53 (24)
	22:41	21:39	20:14	18:47			16:28	71	14:22 (28)	15:43	1	11:54 (24)
11	04:44	05:46	06:55	08:02			08:15		10:57 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	76	14:23 (28)	15:43		
12	04:46	05:48	06:57	08:04			08:18		10:57 (32)	09:18		
	22:38	21:34	20:08	18:42			16:23	80	14:25 (28)	15:43		
13	04:47	05:51	07:00	08:07			08:20		10:58 (32)	09:19		
	22:37	21:32	20:05	18:39			16:21	81	14:26 (28)	15:42		
14	04:49	05:53	07:02	08:09			08:22		10:58 (32)	09:20		
	22:35	21:29	20:02	18:36			16:19	82	14:26 (28)	15:42		
15	04:51	05:55	07:04	08:11		10:00 (19)	08:25		10:58 (32)	09:21		
	22:34	21:26	19:59	18:33	7	10:07 (19)	16:17	83	14:27 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:57 (19)	08:27		10:59 (32)	09:22		
	22:32	21:24	19:56	18:31	12	10:09 (19)	16:15	83	14:28 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:56 (19)	08:30		11:00 (32)	09:23		
	22:31	21:21	19:54	18:28	15	10:11 (19)	16:13	83	14:29 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:54 (19)	08:32		11:00 (32)	09:24		
	22:29	21:18	19:51	18:25	17	10:11 (19)	16:11	81	14:29 (28)	15:42		
19	04:58	06:04	07:13	08:20		09:54 (19)	08:34		11:01 (32)	09:25		
	22:27	21:16	19:48	18:22	18	10:12 (19)	16:09	87	14:29 (28)	15:42		
20	05:00	06:06	07:15	08:23		09:53 (19)	08:36		11:02 (32)	09:26		
	22:25	21:13	19:45	18:20	19	10:12 (19)	16:08	88	14:29 (28)	15:43		
21	05:01	06:08	07:17	08:25		09:53 (19)	08:39		11:03 (32)	09:26		
	22:24	21:10	19:42	18:17	19	10:12 (19)	16:06	88	14:29 (28)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		11:04 (32)	09:27		
	22:22	21:08	19:39	18:14	20	10:12 (19)	16:04	88	14:30 (28)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		11:05 (32)	09:27		
	22:20	21:05	19:36	18:12	19	10:12 (19)	16:02	84	14:29 (28)	15:44		
24	05:07	06:15	07:24	08:32		09:53 (19)	08:45		11:07 (32)	09:28		
	22:18	21:02	19:33	18:09	17	10:10 (19)	16:01	72	14:30 (28)	15:44		
25	05:09	06:17	07:26	07:35		08:54 (19)	08:47		11:08 (32)	09:28		
	22:16	20:59	19:30	17:06	16	09:10 (19)	15:59	58	13:20 (27)	15:45		
26	05:11	06:20	07:28	07:37		08:55 (19)	08:50		11:11 (32)	09:28		
	22:14	20:57	19:27	17:04	14	09:09 (19)	15:58	53	13:20 (27)	15:46		
27	05:13	06:22	07:30	07:39		08:56 (19)	08:52		11:13 (32)	09:28		
	22:12	20:54	19:25	17:01	10	09:06 (19)	15:56	47	13:19 (27)	15:47		
28	05:16	06:24	07:33	07:42			08:54		11:48 (24)	09:28		
	22:10	20:51	19:22	16:59			15:55	35	13:18 (27)	15:48		
29	05:18	06:26	07:35	07:44			08:56		11:48 (24)	09:28		
	22:07	20:48	19:19	16:56			15:54	33	13:17 (27)	15:49		
30	05:20	06:29	07:37	07:47		11:09 (32)	08:58		11:48 (24)	09:28		
	22:05	20:45	19:16	16:54	7	11:16 (32)	15:52	30	13:15 (27)	15:50		
31	05:22	06:31		07:49		11:06 (32)				09:28		
	22:03	20:42		16:51	15	11:21 (32)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					225			1881			154	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,64	
Total reduction					0,29			0,25			0,25	
Total, real					65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (24)	08:46	11:53 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (24)	16:56	49	14:04 (27)	18:05	20:17	21:26	22:31
2	09:27		12:18 (24)	08:43	11:54 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (24)	16:58	44	14:02 (27)	18:07	20:19	21:28	22:32
3	09:27		11:54 (32)	08:41	11:56 (32)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (24)	17:01	39	14:01 (27)	18:09	20:21	21:31	22:34
4	09:27		11:52 (32)	08:39	11:57 (32)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (24)	17:03	32	13:59 (27)	18:12	20:24	21:33	22:35
5	09:26		11:51 (32)	08:37	11:59 (32)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (24)	17:06	19	13:55 (27)	18:14	20:26	21:35	22:37
6	09:25		11:50 (32)	08:34	12:04 (32)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (24)	17:08	5	12:09 (32)	18:17	20:28	21:37	22:38
7	09:24		11:50 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (27)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (32)	08:27	09:42 (19)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (27)	17:16	7	09:49 (19)	18:24	20:35	21:44	22:42
10	09:22		11:49 (32)	08:25	09:40 (19)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (27)	17:18	12	09:52 (19)	18:26	20:37	21:46	22:43
11	09:21		11:49 (32)	08:23	09:39 (19)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (27)	17:21	15	09:54 (19)	18:28	20:40	21:49	22:44
12	09:20		11:48 (32)	08:20	09:37 (19)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (27)	17:23	17	09:54 (19)	18:31	20:42	21:51	22:45
13	09:18		11:49 (32)	08:18	09:36 (19)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (27)	17:26	19	09:55 (19)	18:33	20:44	21:53	22:46
14	09:17		11:48 (32)	08:15	09:37 (19)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (27)	17:28	19	09:56 (19)	18:35	20:47	21:55	22:47
15	09:16		11:48 (32)	08:13	09:36 (19)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (28)	17:31	20	09:56 (19)	18:38	20:49	21:58	22:47
16	09:15		11:47 (32)	08:10	09:36 (19)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (28)	17:33	20	09:56 (19)	18:40	20:51	22:00	22:48
17	09:13		11:48 (32)	08:07	09:36 (19)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (28)	17:36	19	09:55 (19)	18:42	20:53	22:02	22:49
18	09:12		11:48 (32)	08:05	09:37 (19)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (28)	17:38	19	09:56 (19)	18:45	20:56	22:04	22:49
19	09:10		11:48 (32)	08:02	09:37 (19)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (28)	17:40	18	09:55 (19)	18:47	20:58	22:06	22:50
20	09:08		11:48 (32)	08:00	09:38 (19)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (28)	17:43	15	09:53 (19)	18:49	21:00	22:08	22:50
21	09:07		11:48 (32)	07:57	09:39 (19)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (28)	17:45	13	09:52 (19)	18:51	21:03	22:10	22:50
22	09:05		11:48 (32)	07:54	09:41 (19)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (28)	17:48	8	09:49 (19)	18:54	21:05	22:12	22:50
23	09:03		11:48 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (32)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (28)			20:10	21:21	22:25	22:50
30	08:50		11:51 (32)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (28)			20:12	21:24	22:27	22:49
31	08:48		11:52 (32)			07:10		04:41	
	16:54	55	14:55 (28)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (19)	09:00		11:31 (32)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (19)	15:51	60	13:37 (27)
2	04:33	05:26	06:35	07:42			07:54		09:12 (19)	09:02		11:32 (32)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (19)	15:50	56	13:36 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (27)
5	04:36	05:33	06:42	07:48			08:01		11:32 (32)	09:07		11:35 (32)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (32)	15:47	43	13:32 (27)
6	04:37	05:35	06:44	07:51			08:03		11:29 (32)	09:09		11:37 (32)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (27)	15:46	36	12:27 (24)
7	04:38	05:37	06:46	07:53			08:06		11:27 (32)	09:10		11:38 (32)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (27)	15:45	34	12:27 (24)
8	04:40	05:39	06:49	07:55			08:08		11:25 (32)	09:12		11:40 (32)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (27)	15:45	32	12:28 (24)
9	04:41	05:42	06:51	07:57			08:11		11:25 (32)	09:13		11:42 (32)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (27)	15:44	28	12:28 (24)
10	04:43	05:44	06:53	08:00			08:13		11:24 (32)	09:15		12:07 (24)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (27)	15:43	21	12:28 (24)
11	04:44	05:46	06:55	08:02			08:15		11:23 (32)	09:16		12:08 (24)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (28)	15:43	21	12:29 (24)
12	04:46	05:48	06:57	08:04			08:18		11:23 (32)	09:18		12:08 (24)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (28)	15:43	21	12:29 (24)
13	04:47	05:51	07:00	08:07			08:20		11:23 (32)	09:19		12:09 (24)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (28)	15:42	21	12:30 (24)
14	04:49	05:53	07:02	08:09			08:22		11:22 (32)	09:20		12:09 (24)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (28)	15:42	21	12:30 (24)
15	04:51	05:55	07:04	08:11			08:25		11:22 (32)	09:21		12:09 (24)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (28)	15:42	21	12:30 (24)
16	04:52	05:57	07:06	08:13			08:27		11:22 (32)	09:22		12:10 (24)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (28)	15:42	20	12:30 (24)
17	04:54	06:00	07:08	08:16			08:30		11:23 (32)	09:23		12:10 (24)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (28)	15:42	21	12:31 (24)
18	04:56	06:02	07:11	08:18			08:32		11:22 (32)	09:24		12:11 (24)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (28)	15:42	20	12:31 (24)
19	04:58	06:04	07:13	08:20			08:34		11:23 (32)	09:25		12:12 (24)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (28)	15:42	20	12:32 (24)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:22 (32)	09:26		12:12 (24)
	22:25	21:13	19:45	18:20	10	10:21 (19)	16:08	82	14:37 (28)	15:43	20	12:32 (24)
21	05:01	06:08	07:17	08:25		10:10 (19)	08:39		11:23 (32)	09:26		12:12 (24)
	22:24	21:10	19:42	18:17	13	10:23 (19)	16:06	80	14:37 (28)	15:43	20	12:32 (24)
22	05:03	06:11	07:19	08:27		10:08 (19)	08:41		11:24 (32)	09:27		12:13 (24)
	22:22	21:08	19:39	18:14	16	10:24 (19)	16:04	79	14:38 (28)	15:43	20	12:33 (24)
23	05:05	06:13	07:22	08:30		10:07 (19)	08:43		11:24 (32)	09:27		12:13 (24)
	22:20	21:05	19:36	18:12	18	10:25 (19)	16:02	84	14:38 (28)	15:44	20	12:33 (24)
24	05:07	06:15	07:24	08:32		10:06 (19)	08:45		11:25 (32)	09:28		12:14 (24)
	22:18	21:02	19:33	18:09	19	10:25 (19)	16:01	88	14:38 (28)	15:44	21	12:35 (24)
25	05:09	06:17	07:26	07:35		09:06 (19)	08:47		11:25 (32)	09:28		12:15 (24)
	22:16	20:59	19:30	17:06	20	09:26 (19)	15:59	88	14:38 (28)	15:45	20	12:35 (24)
26	05:11	06:20	07:28	07:37		09:06 (19)	08:50		11:26 (32)	09:28		12:15 (24)
	22:14	20:57	19:27	17:04	20	09:26 (19)	15:58	81	14:37 (28)	15:46	20	12:35 (24)
27	05:13	06:22	07:30	07:39		09:06 (19)	08:52		11:27 (32)	09:28		12:16 (24)
	22:12	20:54	19:25	17:01	19	09:25 (19)	15:56	73	14:26 (28)	15:47	20	12:36 (24)
28	05:16	06:24	07:33	07:42		09:06 (19)	08:54		11:28 (32)	09:28		12:16 (24)
	22:10	20:51	19:22	16:59	19	09:25 (19)	15:55	65	13:38 (27)	15:48	21	12:37 (24)
29	05:18	06:26	07:35	07:44		09:06 (19)	08:56		11:29 (32)	09:28		12:16 (24)
	22:07	20:48	19:19	16:56	18	09:24 (19)	15:54	64	13:37 (27)	15:49	20	12:36 (24)
30	05:20	06:29	07:37	07:47		09:07 (19)	08:58		11:29 (32)	09:28		12:17 (24)
	22:05	20:45	19:16	16:54	17	09:24 (19)	15:52	62	13:37 (27)	15:50	20	12:37 (24)
31	05:22	06:31		07:49		09:08 (19)				09:28		12:16 (24)
	22:03	20:42		16:51	15	09:23 (19)				15:51	21	12:37 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:08 (24)	08:46	11:39 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (24)	16:56	49	13:50 (27)	18:05	20:17	21:26	22:31
2	09:27		12:08 (24)	08:43	11:40 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (24)	16:58	44	13:48 (27)	18:07	20:19	21:28	22:32
3	09:27		12:09 (24)	08:41	11:41 (32)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (24)	17:01	39	13:47 (27)	18:09	20:21	21:31	22:34
4	09:27		12:09 (24)	08:39	11:42 (32)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (24)	17:03	32	13:45 (27)	18:12	20:24	21:33	22:35
5	09:26		12:09 (24)	08:37	11:43 (32)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (24)	17:06	19	12:02 (32)	18:14	20:26	21:35	22:37
6	09:25		12:10 (24)	08:34	11:46 (32)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (27)	17:08	14	12:00 (32)	18:17	20:28	21:37	22:38
7	09:24		11:43 (32)	08:32	11:50 (32)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (27)	17:11	6	11:56 (32)	18:19	20:30	21:40	22:39
8	09:24		11:41 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	41	13:37 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23		11:40 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	47	13:39 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22		11:38 (32)	08:25		09:39 (19)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (27)	17:18	3	09:42 (19)	18:26	20:37	21:46	22:43
11	09:21		11:38 (32)	08:23		09:36 (19)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (27)	17:21	10	09:46 (19)	18:28	20:40	21:49	22:44
12	09:20		11:37 (32)	08:20		09:34 (19)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (28)	17:23	14	09:48 (19)	18:31	20:42	21:51	22:45
13	09:18		11:37 (32)	08:18		09:33 (19)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (28)	17:26	16	09:49 (19)	18:33	20:44	21:53	22:46
14	09:17		11:36 (32)	08:15		09:33 (19)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (28)	17:28	17	09:50 (19)	18:35	20:47	21:55	22:47
15	09:16		11:36 (32)	08:13		09:32 (19)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (28)	17:31	18	09:50 (19)	18:38	20:49	21:58	22:47
16	09:15		11:35 (32)	08:10		09:31 (19)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (28)	17:33	19	09:50 (19)	18:40	20:51	22:00	22:48
17	09:13		11:36 (32)	08:07		09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (28)	17:36	19	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:36 (32)	08:05		09:32 (19)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (28)	17:38	19	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:36 (32)	08:02		09:32 (19)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (28)	17:40	18	09:50 (19)	18:47	20:58	22:06	22:50
20	09:09		11:35 (32)	08:00		09:32 (19)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (28)	17:43	17	09:49 (19)	18:49	21:00	22:08	22:50
21	09:07		11:35 (32)	07:57		09:33 (19)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (28)	17:45	15	09:48 (19)	18:51	21:03	22:10	22:50
22	09:05		11:36 (32)	07:54		09:34 (19)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (28)	17:48	12	09:46 (19)	18:54	21:05	22:12	22:50
23	09:03		11:35 (32)	07:52		09:38 (19)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (28)	17:50	6	09:44 (19)	18:56	21:07	22:14	22:51
24	09:02		11:35 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (32)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (28)				20:10	21:21	22:25	22:50
30	08:50		11:37 (32)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (28)				20:12	21:24	22:27	22:49
31	08:48		11:38 (32)				07:10		04:41	
	16:54	51	13:50 (27)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1881		406					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,68					
Total reduction		0,24		0,27					
Total, real		457		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (32)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (27)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (27)
4	04:35	05:31	06:40	07:46			07:59		11:18 (32)	09:05		11:25 (32)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (32)	15:48	42	13:22 (27)
5	04:36	05:33	06:42	07:48			08:01		11:15 (32)	09:07		11:28 (32)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (32)	15:47	34	13:21 (27)
6	04:37	05:35	06:44	07:51			08:03		11:14 (32)	09:09		11:56 (24)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (32)	15:46	26	13:19 (27)
7	04:38	05:37	06:46	07:53			08:06		11:12 (32)	09:10		11:56 (24)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (27)	15:45	21	12:17 (24)
8	04:40	05:39	06:49	07:55			08:08		11:11 (32)	09:12		11:57 (24)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (27)	15:45	21	12:18 (24)
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		11:58 (24)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (27)	15:44	20	12:18 (24)
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		11:58 (24)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (27)	15:43	20	12:18 (24)
11	04:44	05:46	06:55	08:02			08:15		11:09 (32)	09:16		11:58 (24)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (27)	15:43	21	12:19 (24)
12	04:46	05:48	06:57	08:04			08:18		11:09 (32)	09:18		11:58 (24)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (28)	15:43	21	12:19 (24)
13	04:47	05:51	07:00	08:07			08:20		11:09 (32)	09:19		12:00 (24)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (28)	15:42	20	12:20 (24)
14	04:49	05:53	07:02	08:09			08:23		11:08 (32)	09:20		12:00 (24)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (28)	15:42	20	12:20 (24)
15	04:51	05:55	07:04	08:11			08:25		11:08 (32)	09:21		12:00 (24)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (28)	15:42	20	12:20 (24)
16	04:52	05:57	07:06	08:13			08:27		11:09 (32)	09:22		12:01 (24)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (28)	15:42	19	12:20 (24)
17	04:54	06:00	07:08	08:16			08:30		11:09 (32)	09:23		12:01 (24)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (28)	15:42	20	12:21 (24)
18	04:56	06:02	07:11	08:18			08:32		11:09 (32)	09:24		12:02 (24)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (28)	15:42	19	12:21 (24)
19	04:58	06:04	07:13	08:20		10:07 (19)	08:34		11:10 (32)	09:25		12:02 (24)
	22:27	21:16	19:48	18:22	9	10:16 (19)	16:09	79	14:27 (28)	15:42	20	12:22 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:10 (32)	09:26		12:03 (24)
	22:25	21:13	19:45	18:20	13	10:18 (19)	16:08	79	14:27 (28)	15:43	19	12:22 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:10 (32)	09:26		12:03 (24)
	22:24	21:10	19:42	18:17	15	10:19 (19)	16:06	79	14:28 (28)	15:43	19	12:22 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:11 (32)	09:27		12:04 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	84	14:29 (28)	15:43	19	12:23 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:12 (32)	09:27		12:04 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:28 (28)	15:44	19	12:23 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:13 (32)	09:28		12:05 (24)
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	88	14:29 (28)	15:44	19	12:24 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:13 (32)	09:28		12:06 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	88	14:29 (28)	15:45	19	12:25 (24)
26	05:11	06:20	07:28	07:37		09:02 (19)	08:50		11:14 (32)	09:28		12:06 (24)
	22:14	20:57	19:27	17:04	19	09:21 (19)	15:58	87	14:29 (28)	15:46	19	12:25 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:15 (32)	09:28		12:06 (24)
	22:12	20:54	19:25	17:01	19	09:20 (19)	15:56	86	14:29 (28)	15:47	20	12:26 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:16 (32)	09:28		12:07 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	82	14:29 (28)	15:48	20	12:27 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:17 (32)	09:28		12:07 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	72	14:29 (28)	15:49	19	12:26 (24)
30	05:20	06:29	07:37	07:47		09:04 (19)	08:58		11:18 (32)	09:28		12:07 (24)
	22:05	20:45	19:16	16:54	13	09:17 (19)	15:52	60	14:28 (28)	15:50	20	12:27 (24)
31	05:22	06:31		07:49		09:06 (19)				09:28		12:07 (24)
	22:03	20:42		16:51	9	09:15 (19)				15:51	20	12:27 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:05 (24)	08:46	11:36 (32)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (24)	16:56	45 13:44 (27)	18:05	20:17	21:26	22:31
2	09:27	12:06 (24)	08:43	11:37 (32)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (24)	16:58	40 13:42 (27)	18:07	20:19	21:28	22:32
3	09:27	12:06 (24)	08:41	11:38 (32)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (24)	17:01	34 13:40 (27)	18:09	20:21	21:31	22:34
4	09:27	12:06 (24)	08:39	11:39 (32)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (24)	17:03	20 11:59 (32)	18:12	20:24	21:33	22:35
5	09:26	12:06 (24)	08:37	11:41 (32)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (27)	17:06	16 11:57 (32)	18:14	20:26	21:35	22:37
6	09:25	12:07 (24)	08:34	11:44 (32)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (27)	17:08	11 11:55 (32)	18:17	20:28	21:37	22:38
7	09:24	11:39 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (32)	08:25	09:37 (19)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (28)	17:18	6 09:43 (19)	18:26	20:37	21:46	22:43
11	09:21	11:34 (32)	08:23	09:35 (19)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (28)	17:21	11 09:46 (19)	18:28	20:40	21:49	22:44
12	09:20	11:33 (32)	08:20	09:33 (19)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (28)	17:23	15 09:48 (19)	18:31	20:42	21:51	22:45
13	09:18	11:34 (32)	08:18	09:32 (19)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (28)	17:26	16 09:48 (19)	18:33	20:44	21:53	22:46
14	09:17	11:33 (32)	08:15	09:32 (19)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (28)	17:28	18 09:50 (19)	18:35	20:47	21:55	22:47
15	09:16	11:32 (32)	08:13	09:31 (19)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (28)	17:31	19 09:50 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (28)	17:33	19 09:50 (19)	18:40	20:51	22:00	22:48
17	09:13	11:32 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (28)	17:36	19 09:50 (19)	18:42	20:53	22:02	22:49
18	09:12	11:32 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (28)	17:38	18 09:50 (19)	18:45	20:56	22:04	22:49
19	09:10	11:32 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (28)	17:40	17 09:49 (19)	18:47	20:58	22:06	22:50
20	09:09	11:32 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (28)	17:43	16 09:48 (19)	18:49	21:00	22:08	22:50
21	09:07	11:32 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (28)	17:45	14 09:47 (19)	18:51	21:03	22:10	22:50
22	09:05	11:32 (32)	07:54	09:35 (19)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (28)	17:48	10 09:45 (19)	18:54	21:05	22:12	22:50
23	09:03	11:31 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (32)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (28)			20:10	21:21	22:25	22:50
30	08:50	11:34 (32)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (27)			20:12	21:24	22:27	22:49
31	08:48	11:35 (32)			07:10		04:41	
	16:54	48 13:44 (27)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,69				
Total reduction		0,24		0,27				
Total, real		467		100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (19)	09:00		11:16 (32)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (19)	15:51	74	14:26 (28)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (28)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (27)
5	04:36	05:33	06:42	07:48			08:01		11:13 (32)	09:07		11:23 (32)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (32)	15:47	39	13:18 (27)
6	04:37	05:35	06:44	07:51			08:03		11:11 (32)	09:09		11:53 (24)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (32)	15:46	32	13:17 (27)
7	04:38	05:37	06:46	07:53			08:06		11:10 (32)	09:10		11:54 (24)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (27)	15:45	28	13:16 (27)
8	04:40	05:39	06:49	07:55			08:08		11:08 (32)	09:12		11:54 (24)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (27)	15:45	22	13:13 (27)
9	04:41	05:42	06:51	07:57			08:11		11:07 (32)	09:13		11:55 (24)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (27)	15:44	20	12:15 (24)
10	04:43	05:44	06:53	08:00			08:13		11:07 (32)	09:15		11:55 (24)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (27)	15:43	20	12:15 (24)
11	04:44	05:46	06:55	08:02			08:15		11:06 (32)	09:16		11:56 (24)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (27)	15:43	20	12:16 (24)
12	04:46	05:48	06:57	08:04			08:18		11:06 (32)	09:18		11:56 (24)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (27)	15:43	20	12:16 (24)
13	04:47	05:51	07:00	08:07			08:20		11:06 (32)	09:19		11:57 (24)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (28)	15:42	20	12:17 (24)
14	04:49	05:53	07:02	08:09			08:23		11:05 (32)	09:20		11:57 (24)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (28)	15:42	20	12:17 (24)
15	04:51	05:55	07:04	08:11			08:25		11:05 (32)	09:21		11:57 (24)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (28)	15:42	20	12:17 (24)
16	04:52	05:57	07:06	08:13			08:27		11:06 (32)	09:22		11:58 (24)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (28)	15:42	19	12:17 (24)
17	04:54	06:00	07:08	08:16			08:30		11:06 (32)	09:23		11:58 (24)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (28)	15:42	19	12:17 (24)
18	04:56	06:02	07:11	08:18			08:32		11:06 (32)	09:24		11:59 (24)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (28)	15:42	19	12:18 (24)
19	04:58	06:04	07:13	08:20		10:09 (19)	08:34		11:06 (32)	09:25		11:59 (24)
	22:27	21:16	19:48	18:22	5	10:14 (19)	16:09	78	14:23 (28)	15:42	20	12:19 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:06 (32)	09:26		12:00 (24)
	22:25	21:13	19:45	18:20	11	10:16 (19)	16:08	79	14:23 (28)	15:43	19	12:19 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:07 (32)	09:26		12:00 (24)
	22:24	21:10	19:42	18:17	14	10:18 (19)	16:06	77	14:23 (28)	15:43	19	12:19 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:08 (32)	09:27		12:01 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	77	14:24 (28)	15:43	19	12:20 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:08 (32)	09:27		12:01 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:24 (28)	15:44	19	12:20 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:09 (32)	09:28		12:02 (24)
	22:18	21:02	19:33	18:09	18	10:19 (19)	16:01	87	14:25 (28)	15:44	19	12:21 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:10 (32)	09:28		12:03 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	87	14:25 (28)	15:45	19	12:22 (24)
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		11:11 (32)	09:28		12:03 (24)
	22:14	20:57	19:27	17:04	19	09:20 (19)	15:58	87	14:25 (28)	15:46	19	12:22 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:11 (32)	09:28		12:03 (24)
	22:12	20:54	19:25	17:01	18	09:19 (19)	15:56	86	14:25 (28)	15:47	20	12:23 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:13 (32)	09:28		12:04 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	85	14:26 (28)	15:48	20	12:24 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:14 (32)	09:28		12:04 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	82	14:25 (28)	15:49	19	12:23 (24)
30	05:20	06:29	07:37	07:47		09:03 (19)	08:58		11:14 (32)	09:28		12:04 (24)
	22:05	20:45	19:16	16:54	14	09:17 (19)	15:52	80	14:25 (28)	15:50	20	12:24 (24)
31	05:22	06:31		07:49		09:05 (19)				09:28		12:04 (24)
	22:03	20:42		16:51	11	09:16 (19)				15:51	20	12:24 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	11:58 (24)	08:46	11:24 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00	11:44 (24)
	15:53 16	12:14 (24)	16:56 49	13:35 (27)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51 57	14:20 (28)
2	09:28	11:58 (24)	08:43	11:24 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02	11:44 (24)
	15:54 18	12:16 (24)	16:58 47	13:34 (27)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50 50	14:19 (28)
3	09:27	11:58 (24)	08:41	11:25 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (32)	09:03	11:44 (24)
	15:55 20	12:18 (24)	17:01 42	13:33 (27)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44 12	11:14 (32)	15:49 40	14:19 (28)
4	09:27	11:58 (24)	08:39	11:26 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (32)	09:05	11:44 (24)
	15:57 21	12:19 (24)	17:03 35	13:30 (27)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41 17	11:16 (32)	15:48 34	14:19 (28)
5	09:26	11:59 (24)	08:37	11:26 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (32)	09:07	11:45 (24)
	15:58 20	12:19 (24)	17:06 23	11:49 (32)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39 20	11:18 (32)	15:47 31	13:06 (27)
6	09:25	11:59 (24)	08:34	11:28 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (32)	09:09	11:45 (24)
	16:00 26	13:18 (27)	17:08 20	11:48 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 23	11:20 (32)	15:46 27	13:05 (27)
7	09:25	12:00 (24)	08:32	11:30 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (32)	09:10	11:46 (24)
	16:02 30	13:21 (27)	17:11 16	11:46 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34 37	13:01 (27)	15:45 20	12:06 (24)
8	09:24	12:00 (24)	08:30	11:33 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (32)	09:12	11:47 (24)
	16:03 34	14:35 (28)	17:13 11	11:44 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 43	13:03 (27)	15:45 20	12:07 (24)
9	09:23	12:01 (24)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (32)	09:13	11:47 (24)
	16:05 41	14:36 (28)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 48	13:05 (27)	15:44 20	12:07 (24)
10	09:22	12:01 (24)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (32)	09:15	11:47 (24)
	16:07 50	14:36 (28)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28 51	13:06 (27)	15:43 19	12:07 (24)
11	09:21	12:02 (24)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (32)	09:16	11:48 (24)
	16:09 57	14:37 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25 52	13:06 (27)	15:43 16	12:04 (24)
12	09:20	11:28 (32)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (32)	09:18	11:48 (24)
	16:11 68	14:38 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 55	13:08 (27)	15:43 11	11:59 (24)
13	09:18	11:26 (32)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (32)	09:19	11:49 (24)
	16:13 75	14:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 62	14:08 (28)	15:42 11	12:00 (24)
14	09:17	11:25 (32)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (32)	09:20	11:50 (24)
	16:15 78	14:39 (28)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 69	14:10 (28)	15:42 7	12:00 (24)
15	09:16	11:24 (32)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (32)	09:21	11:50 (24)
	16:17 82	14:40 (28)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 71	14:12 (28)	15:42 3	11:53 (24)
16	09:15	11:23 (32)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (32)	09:22	11:50 (24)
	16:19 85	14:40 (28)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 75	14:14 (28)	15:42 3	11:53 (24)
17	09:13	11:23 (32)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (32)	09:23	11:51 (24)
	16:21 86	14:41 (28)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 77	14:15 (28)	15:42 1	11:52 (24)
18	09:12	11:23 (32)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (32)	09:24	
	16:23 87	14:42 (28)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 76	14:15 (28)	15:42	
19	09:10	11:22 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (32)	09:25	
	16:25 88	14:42 (28)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09 77	14:16 (28)	15:42	
20	09:09	11:22 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (32)	09:26	
	16:28 86	14:42 (28)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08 77	14:16 (28)	15:43	
21	09:07	11:22 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (32)	09:26	
	16:30 83	14:42 (28)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 83	14:17 (28)	15:43	
22	09:05	11:22 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (32)	09:27	
	16:32 77	14:42 (28)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04 86	14:18 (28)	15:43	
23	09:03	11:21 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (32)	09:27	
	16:34 77	14:41 (28)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 88	14:18 (28)	15:44	
24	09:02	11:21 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (32)	09:28	
	16:37 76	14:41 (28)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 87	14:19 (28)	15:44	
25	09:00	11:21 (32)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (32)	09:28	
	16:39 77	14:41 (28)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59 86	14:18 (28)	15:45	
26	08:58	11:22 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (32)	09:28	
	16:41 74	14:41 (28)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58 85	14:19 (28)	15:46	
27	08:56	11:21 (32)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (32)	09:28	11:56 (24)
	16:44 71	14:39 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 83	14:19 (28)	15:47 3	11:59 (24)
28	08:54	11:21 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (32)	09:28	11:57 (24)
	16:46 69	14:38 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 79	14:19 (28)	15:48 3	12:00 (24)
29	08:52	11:22 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (32)	09:28	11:56 (24)
	16:49 61	14:36 (28)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54 73	14:19 (28)	15:49 5	12:07 (24)
30	08:50	11:22 (32)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (32)	09:28	11:57 (24)
	16:51 55	13:36 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 69	14:19 (28)	15:50 11	12:08 (24)
31	08:48	11:23 (32)			07:10		04:41		05:22	06:31		07:49			09:28	11:57 (24)
	16:54 53	13:36 (27)			20:14		22:29		22:03	20:42		16:51			15:51 11	12:08 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case	1841		243										1761		403	
Sun reduction	0,50		0,50										0,50		0,50	
Oper. time red.	0,80		0,80										0,80		0,80	
Wind dir. red.	0,62		0,65										0,62		0,62	
Total reduction	0,25		0,26										0,25		0,25	
Total, real	452		63										435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (37)	08:46		13:17 (32)	07:35		08:53 (21)	07:07	05:44	04:40
	15:53	17	12:09 (37)	16:56	36	13:53 (32)	18:05	19	09:12 (21)	20:17	21:26	22:30
2	09:27		11:51 (37)	08:43		13:18 (32)	07:32		08:53 (21)	07:04	05:41	04:38
	15:54	19	12:10 (37)	16:58	43	15:13 (27)	18:07	20	09:13 (21)	20:19	21:28	22:32
3	09:27		11:51 (37)	08:41		13:17 (32)	07:30		08:52 (21)	07:01	05:39	04:37
	15:55	19	12:10 (37)	17:01	52	15:18 (27)	18:09	21	09:13 (21)	20:21	21:30	22:34
4	09:26		11:51 (37)	08:39		13:18 (32)	07:27		08:52 (21)	06:58	05:36	04:36
	15:57	20	12:11 (37)	17:03	54	15:20 (27)	18:12	20	09:12 (21)	20:24	21:33	22:35
5	09:26		11:52 (37)	08:37		13:17 (32)	07:24		08:52 (21)	06:55	05:34	04:35
	15:58	20	12:12 (37)	17:06	58	15:21 (27)	18:14	20	09:12 (21)	20:26	21:35	22:37
6	09:25		11:52 (37)	08:34		13:18 (32)	07:21		08:52 (21)	06:52	05:31	04:34
	16:00	20	12:12 (37)	17:08	62	15:43 (28)	18:16	19	09:11 (21)	20:28	21:37	22:38
7	09:24		11:52 (37)	08:32		13:17 (32)	07:19		08:53 (21)	06:49	05:29	04:33
	16:02	21	12:13 (37)	17:11	68	15:46 (28)	18:19	17	09:10 (21)	20:30	21:40	22:39
8	09:24		11:53 (37)	08:30		13:18 (32)	07:16		08:54 (21)	06:47	05:26	04:32
	16:03	21	12:14 (37)	17:13	72	15:51 (28)	18:21	14	09:08 (21)	20:33	21:42	22:40
9	09:23		11:52 (37)	08:27		13:18 (32)	07:13		08:55 (21)	06:44	05:24	04:31
	16:05	22	12:14 (37)	17:16	78	15:59 (28)	18:24	10	09:05 (21)	20:35	21:44	22:42
10	09:22		11:53 (37)	08:25		13:18 (32)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (37)	17:18	82	16:00 (28)	18:26			20:37	21:46	22:43
11	09:21		11:54 (37)	08:23		10:11 (19)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (37)	17:21	84	16:00 (28)	18:28			20:40	21:49	22:44
12	09:20		11:53 (37)	08:20		10:06 (19)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (37)	17:23	89	15:59 (28)	18:31			20:42	21:51	22:45
13	09:18		11:53 (37)	08:18		10:04 (19)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (24)	17:26	90	15:58 (28)	18:33			20:44	21:53	22:46
14	09:17		11:54 (37)	08:15		10:03 (19)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (24)	17:28	87	15:57 (28)	18:35			20:47	21:55	22:46
15	09:16		11:55 (37)	08:13		10:02 (19)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (24)	17:31	81	15:54 (28)	18:38			20:49	21:57	22:47
16	09:15		11:55 (37)	08:10		10:01 (19)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (24)	17:33	72	15:24 (27)	18:40			20:51	22:00	22:48
17	09:13		11:55 (37)	08:07		10:00 (19)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (24)	17:35	67	15:23 (27)	18:42			20:53	22:02	22:49
18	09:12		11:57 (37)	08:05		10:00 (19)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (24)	17:38	61	15:23 (27)	18:45			20:56	22:04	22:49
19	09:10		11:57 (37)	08:02		10:00 (19)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (24)	17:40	43	15:21 (27)	18:47			20:58	22:06	22:50
20	09:08		11:58 (37)	08:00		09:59 (19)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (24)	17:43	41	15:19 (27)	18:49			21:00	22:08	22:50
21	09:07		11:59 (37)	07:57		09:59 (19)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (24)	17:45	32	15:15 (27)	18:51			21:03	22:10	22:50
22	09:05		11:59 (37)	07:54		09:59 (19)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (24)	17:48	25	10:24 (19)	18:54			21:05	22:12	22:50
23	09:03		12:01 (37)	07:52		10:00 (19)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (24)	17:50	24	10:24 (19)	18:56			21:07	22:14	22:50
24	09:02		12:03 (37)	07:49		10:01 (19)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (24)	17:53	22	10:23 (19)	18:58			21:10	22:16	22:51
25	09:00		12:05 (37)	07:46		09:00 (21)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (32)	17:55	27	10:22 (19)	19:01			21:12	22:18	22:50
26	08:58		13:21 (32)	07:43		08:57 (21)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (32)	17:57	30	10:20 (19)	19:03			21:14	22:20	22:50
27	08:56		13:20 (32)	07:41		08:55 (21)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (32)	18:00	28	10:17 (19)	19:05			21:17	22:22	22:50
28	08:54		13:19 (32)	07:38		08:54 (21)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (32)	18:02	22	10:13 (19)	19:07			21:19	22:24	22:50
29	08:52		13:19 (32)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (32)				20:10			21:21	22:25	22:50
30	08:50		13:18 (32)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (32)				20:12			21:24	22:27	22:49
31	08:48		13:18 (32)				07:10				04:41	
	16:53	34	13:52 (32)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		12:48 (32)	09:00		11:36 (37)
	22:49		22:01		20:40		19:13			16:49	83	15:30 (28)	15:51	22	11:58 (37)
2	04:33		05:26		06:35		07:42			07:54		12:48 (32)	09:02		11:36 (37)
	22:48		21:58		20:37		19:10			16:46	76	15:28 (28)	15:50	22	11:58 (37)
3	04:34		05:28		06:37		07:44			07:56		12:48 (32)	09:03		11:36 (37)
	22:47		21:56		20:34		19:07			16:44	71	15:20 (28)	15:49	22	11:58 (37)
4	04:35		05:31		06:40		07:46		09:34 (21)	07:59		12:47 (32)	09:05		11:37 (37)
	22:47		21:54		20:31		19:04	7	09:41 (21)	16:41	66	15:15 (28)	15:48	21	11:58 (37)
5	04:36		05:33		06:42		07:48		09:32 (21)	08:01		12:47 (32)	09:07		11:37 (37)
	22:46		21:51		20:28		19:01	12	09:44 (21)	16:39	62	15:13 (28)	15:47	21	11:58 (37)
6	04:37		05:35		06:44		07:51		09:30 (21)	08:03		12:48 (32)	09:09		11:38 (37)
	22:45		21:49		20:25		18:59	15	09:45 (21)	16:37	57	14:51 (27)	15:46	21	11:59 (37)
7	04:38		05:37		06:46		07:53		09:28 (21)	08:06		12:47 (32)	09:10		11:39 (37)
	22:44		21:47		20:22		18:56	18	09:46 (21)	16:34	55	14:50 (27)	15:45	20	11:59 (37)
8	04:40		05:39		06:48		07:55		09:28 (21)	08:08		12:48 (32)	09:12		11:40 (37)
	22:43		21:44		20:20		18:53	19	09:47 (21)	16:32	50	14:48 (27)	15:45	19	11:59 (37)
9	04:41		05:42		06:51		07:57		09:27 (21)	08:11		12:48 (32)	09:13		11:41 (37)
	22:42		21:42		20:17		18:50	20	09:47 (21)	16:30	42	14:43 (27)	15:44	19	12:00 (37)
10	04:43		05:44		06:53		08:00		09:27 (21)	08:13		12:49 (32)	09:15		11:41 (37)
	22:40		21:39		20:14		18:47	20	09:47 (21)	16:28	35	13:24 (32)	15:43	18	11:59 (37)
11	04:44		05:46		06:55		08:02		09:26 (21)	08:15		12:49 (32)	09:16		11:42 (37)
	22:39		21:37		20:11		18:45	20	09:46 (21)	16:25	34	13:23 (32)	15:43	18	12:00 (37)
12	04:46		05:48		06:57		08:04		09:26 (21)	08:18		12:50 (32)	09:18		11:42 (37)
	22:38		21:34		20:08		18:42	19	09:45 (21)	16:23	33	13:23 (32)	15:43	17	11:59 (37)
13	04:47		05:51		07:00		08:06		09:27 (21)	08:20		12:51 (32)	09:19		11:43 (37)
	22:37		21:31		20:05		18:39	18	09:45 (21)	16:21	32	13:23 (32)	15:42	17	12:00 (37)
14	04:49		05:53		07:02		08:09		09:27 (21)	08:22		12:51 (32)	09:20		11:44 (37)
	22:35		21:29		20:02		18:36	26	10:48 (19)	16:19	31	13:22 (32)	15:42	16	12:00 (37)
15	04:51		05:55		07:04		08:11		09:29 (21)	08:25		12:53 (32)	09:21		11:44 (37)
	22:34		21:26		19:59		18:33	29	10:51 (19)	16:17	28	13:21 (32)	15:42	16	12:00 (37)
16	04:52		05:57		07:06		08:13		09:30 (21)	08:27		12:54 (32)	09:22		11:45 (37)
	22:32		21:24		19:56		18:31	28	10:52 (19)	16:15	27	13:21 (32)	15:42	15	12:00 (37)
17	04:54		05:59		07:08		08:16		10:33 (19)	08:29		11:38 (37)	09:23		11:45 (37)
	22:30		21:21		19:54		18:28	21	10:54 (19)	16:13	32	13:19 (32)	15:42	15	12:00 (37)
18	04:56		06:02		07:10		08:18		10:31 (19)	08:32		11:36 (37)	09:24		11:46 (37)
	22:29		21:18		19:51		18:25	23	10:54 (19)	16:11	35	13:20 (24)	15:42	15	12:01 (37)
19	04:58		06:04		07:13		08:20		10:31 (19)	08:34		11:36 (37)	09:25		11:47 (37)
	22:27		21:16		19:48		18:22	24	10:55 (19)	16:09	36	13:21 (24)	15:42	14	12:01 (37)
20	05:00		06:06		07:15		08:23		10:30 (19)	08:36		11:34 (37)	09:26		11:48 (37)
	22:25		21:13		19:45		18:20	25	10:55 (19)	16:08	40	13:21 (24)	15:42	14	12:02 (37)
21	05:01		06:08		07:17		08:25		10:30 (19)	08:39		11:34 (37)	09:26		11:48 (37)
	22:24		21:10		19:42		18:17	37	15:48 (27)	16:06	40	13:21 (24)	15:43	14	12:02 (37)
22	05:03		06:11		07:19		08:27		10:29 (19)	08:41		11:34 (37)	09:27		11:49 (37)
	22:22		21:08		19:39		18:14	42	15:50 (27)	16:04	43	13:22 (24)	15:43	14	12:03 (37)
23	05:05		06:13		07:22		08:30		10:30 (19)	08:43		11:33 (37)	09:27		11:49 (37)
	22:20		21:05		19:36		18:12	50	15:52 (27)	16:02	44	13:22 (24)	15:44	14	12:03 (37)
24	05:07		06:15		07:24		08:32		10:29 (19)	08:45		11:34 (37)	09:28		11:50 (37)
	22:18		21:02		19:33		18:09	63	15:52 (27)	16:01	44	13:23 (24)	15:44	14	12:04 (37)
25	05:09		06:17		07:26		07:35		09:30 (19)	08:47		11:33 (37)	09:28		11:50 (37)
	22:16		20:59		19:30		17:06	69	14:54 (27)	15:59	44	13:22 (24)	15:45	14	12:04 (37)
26	05:11		06:20		07:28		07:37		09:30 (19)	08:50		11:34 (37)	09:28		11:50 (37)
	22:14		20:56		19:27		17:04	74	14:54 (27)	15:58	44	13:23 (24)	15:46	15	12:05 (37)
27	05:13		06:22		07:30		07:39		09:31 (19)	08:52		11:34 (37)	09:28		11:50 (37)
	22:12		20:54		19:24		17:01	82	15:24 (28)	15:56	44	13:23 (24)	15:47	16	12:06 (37)
28	05:16		06:24		07:33		07:42		09:33 (19)	08:54		11:35 (37)	09:28		11:50 (37)
	22:10		20:51		19:22		16:59	89	15:27 (28)	15:55	37	13:17 (24)	15:48	16	12:06 (37)
29	05:18		06:26		07:35		07:44		09:34 (19)	08:56		11:35 (37)	09:28		11:50 (37)
	22:07		20:48		19:19		16:56	90	15:28 (28)	15:54	29	13:09 (24)	15:49	16	12:06 (37)
30	05:20		06:29		07:37		07:47		09:36 (19)	08:58		11:35 (37)	09:28		11:51 (37)
	22:05		20:45		19:16		16:54	90	15:29 (28)	15:52	23	13:03 (24)	15:50	17	12:08 (37)
31	05:22		06:31				07:49		12:49 (32)				09:28		11:51 (37)
	22:03		20:42				16:51	81	15:30 (28)				15:51	17	12:08 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								1111			1317			529	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,64			0,59			0,64	
Total reduction								0,26			0,23			0,26	
Total, real								286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (37)	07:35		10:14 (21)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (24)	18:05	73	16:49 (27)	20:17	21:26	22:30
2	09:27			08:43		15:15 (24)	07:32		10:15 (21)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (24)	18:07	70	16:50 (27)	20:19	21:28	22:32
3	09:27			08:41		15:14 (24)	07:30		10:16 (21)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (24)	18:09	63	16:48 (27)	20:21	21:30	22:34
4	09:26			08:39		12:33 (19)	07:27		10:16 (21)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (24)	18:12	54	16:47 (27)	20:23	21:33	22:35
5	09:26			08:37		12:30 (19)	07:24		09:25 (16)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (24)	18:14	37	16:44 (27)	20:26	21:35	22:36
6	09:25			08:34		12:29 (19)	07:21		09:21 (16)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (24)	18:16	27	10:42 (21)	20:28	21:37	22:38
7	09:24			08:32		12:27 (19)	07:18		10:19 (21)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (24)	18:19	20	10:39 (21)	20:30	21:40	22:39
8	09:24			08:30		12:26 (19)	07:16		10:21 (21)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (24)	18:21	15	10:36 (21)	20:33	21:42	22:40
9	09:23			08:27		12:25 (19)	07:13		10:24 (21)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (24)	18:24	8	10:32 (21)	20:35	21:44	22:42
10	09:22			08:25		12:24 (19)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (24)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (19)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (19)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (19)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (19)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (19)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (19)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (19)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (19)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (19)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (32)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (19)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (32)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (19)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (32)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (19)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (32)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (19)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (32)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (19)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (32)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (19)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (27)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (19)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (27)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (21)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (27)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (21)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (27)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (21)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (27)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (21)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (27)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (21)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (27)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (37)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (37)				20:12			21:23	22:27	22:49
31	08:48		14:08 (37)				07:10				04:41	
	16:53	21	15:27 (24)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (19)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (24)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (19)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (19)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (24)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (19)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (24)	15:48
5	04:36	05:33	06:42	07:48		10:59 (21)	08:01		11:58 (19)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (21)	16:39	41	15:03 (24)	15:47
6	04:37	05:35	06:44	07:50		10:56 (21)	08:03		12:01 (19)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (21)	16:37	36	15:04 (24)	15:46
7	04:38	05:37	06:46	07:53		09:54 (16)	08:06		12:03 (19)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (21)	16:34	31	15:03 (24)	15:45
8	04:40	05:39	06:48	07:55		09:58 (16)	08:08		14:45 (24)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (27)	16:32	18	15:03 (24)	15:45
9	04:41	05:42	06:51	07:57		10:01 (16)	08:10		14:46 (24)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (27)	16:30	17	15:03 (24)	15:44
10	04:43	05:44	06:53	08:00		10:49 (21)	08:13		13:42 (37)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (27)	16:28	20	15:03 (24)	15:43
11	04:44	05:46	06:55	08:02		10:49 (21)	08:15		13:39 (37)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (27)	16:25	20	14:58 (24)	15:43
12	04:46	05:48	06:57	08:04		10:48 (21)	08:18		13:48 (37)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (27)	16:23	3	13:51 (37)	15:43
13	04:47	05:50	06:59	08:06		10:48 (21)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (27)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (21)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (27)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (21)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (27)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (21)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (27)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (21)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (27)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (19)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (27)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (19)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (27)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (19)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (27)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (19)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (32)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (19)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (32)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (19)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (32)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (19)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (32)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (19)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (32)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (19)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (32)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (19)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (19)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (19)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (19)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (19)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (19)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (19)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (24)	15:52			15:50
31	05:22	06:31		07:49		11:53 (19)				09:28
	22:03	20:42		16:51	44	15:00 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	11:38 (21)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:44 (16)	09:00
	15:53	16:56 63	13:43 (19)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49 56	15:37 (32)	15:51
2	09:27	08:43	11:39 (21)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:56 (16)	09:01
	15:54	16:58 59	13:43 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46 51	15:37 (32)	15:50
3	09:27	08:41	11:38 (21)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	09:57 (16)	09:03
	15:55	17:01 51	13:42 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07	16:44 55	15:36 (32)	15:49
4	09:26	08:39	11:39 (21)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46	07:58	10:02 (16)	09:05
	15:57	17:03 51	15:59 (32)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41 56	15:35 (32)	15:48
5	09:26	08:37	11:39 (21)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:04 (16)	09:07
	15:58	17:06 56	16:02 (32)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39 58	15:34 (32)	15:47
6	09:25	08:34	10:34 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	11:10 (21)	09:09
	16:00	17:08 57	16:05 (32)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 55	15:33 (32)	15:46
7	09:24	08:32	10:32 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53	08:06	11:09 (21)	09:10
	16:02	17:11 55	16:05 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56	16:34 49	13:12 (19)	15:45
8	09:24	08:30	10:27 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55	08:08	11:09 (21)	09:12
	16:03	17:13 53	16:07 (32)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32 50	13:13 (19)	15:45
9	09:23	08:27	10:26 (16)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:10	11:09 (21)	09:13
	16:05	17:16 49	16:07 (32)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 60	13:14 (19)	15:44
10	09:22	08:25	10:15 (16)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	11:10 (21)	09:15
	16:07	17:18 58	16:07 (32)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:28 61	13:14 (19)	15:43
11	09:21	08:22	10:16 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	11:10 (21)	09:16
	16:09	17:21 55	16:08 (32)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44	16:25 63	13:14 (19)	15:43
12	09:20	08:20	10:17 (16)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	11:10 (21)	09:17
	16:11	17:23 48	16:08 (32)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 66	13:15 (19)	15:43
13	09:18	08:17	10:18 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	11:11 (21)	09:19
	16:13	17:26 33	16:07 (32)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 65	13:15 (19)	15:42
14	09:17	12:02 (13) 08:15	10:21 (16)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09	08:22	11:11 (21)	09:20
	16:15 8	12:10 (13) 17:28 28	16:08 (32)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 66	13:15 (19)	15:42
15	09:16	12:02 (13) 08:12	15:50 (32)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	11:13 (21)	09:21
	16:17 9	12:11 (13) 17:30 17	16:07 (32)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17 64	13:15 (19)	15:42
16	09:14	12:02 (13) 08:10	15:51 (32)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	11:14 (21)	09:22
	16:19 11	12:13 (13) 17:33 14	16:05 (32)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 62	13:15 (19)	15:42
17	09:13	12:02 (13) 08:07	15:52 (32)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	11:15 (21)	09:23
	16:21 20	13:30 (19) 17:35 12	16:04 (32)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 61	13:14 (19)	15:42
18	09:12	11:58 (13) 08:05	15:56 (32)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:32	11:16 (21)	09:24
	16:23 30	13:34 (19) 17:38 6	16:02 (32)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 60	13:14 (19)	15:42
19	09:10	11:58 (13) 08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20	08:34	11:19 (21)	09:25
	16:25 33	13:35 (19) 17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22	16:09 55	13:14 (19)	15:42
20	09:08	11:58 (13) 08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	11:21 (21)	09:25
	16:27 36	13:37 (19) 17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 47	13:13 (19)	15:42
21	09:07	11:58 (13) 07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	11:33 (13)	09:26
	16:30 39	13:38 (19) 17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 39	13:13 (19)	15:43
22	09:05	11:46 (21) 07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41	11:34 (13)	09:27
	16:32 47	13:38 (19) 17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 36	13:13 (19)	15:43
23	09:03	11:44 (21) 07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	11:34 (13)	09:27
	16:34 55	13:39 (19) 17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 33	13:12 (19)	15:44
24	09:01	11:42 (21) 07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (32) 08:45	11:35 (13)	09:28
	16:37 60	13:40 (19) 17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09 8	16:32 (32) 16:01	30	13:11 (19)	15:44
25	09:00	11:42 (21) 07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (32) 08:47	11:41 (13)	09:28
	16:39 61	13:41 (19) 17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06 12	15:34 (32) 15:59	20	13:09 (19)	15:45
26	08:58	11:41 (21) 07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (32) 08:49	11:41 (13)	09:28
	16:41 62	13:42 (19) 17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 15	15:35 (32) 15:58	11	11:52 (13)	15:46
27	08:56	11:40 (21) 07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (32) 08:52	11:41 (13)	09:28
	16:44 64	13:42 (19) 18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01 17	15:36 (32) 15:56	10	11:51 (13)	15:47
28	08:54	11:40 (21) 07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (16) 08:54	11:42 (13)	09:28
	16:46 65	13:43 (19) 18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59 28	15:37 (32) 15:55	8	11:50 (13)	15:48
29	08:52	11:39 (21)		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (16) 08:56		09:28
	16:49 65	13:43 (19)		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56 37	15:37 (32) 15:53		15:49
30	08:50	11:39 (21)		07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (16) 08:58		09:28
	16:51 65	13:43 (19)		20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54 49	15:37 (32) 15:52		15:50
31	08:48	11:39 (21)		07:09		04:41		05:22	06:31		07:49	09:46 (16)		09:28
	16:53 63	13:43 (19)		20:14		22:29		22:03	20:42		16:51 55	15:38 (32)		15:51
Potential sun hours	221	260	365	432	521	547	546	478	386	319	236		199
Total, worst case	793	765								221	1347		
Sun reduction	0,50	0,50								0,50	0,50		
Oper. time red.	0,80	0,80								0,80	0,80		
Wind dir. red.	0,62	0,61								0,60	0,62		
Total reduction	0,25	0,24								0,24	0,25		
Total, real	197	187								53	334		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (16)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (16)	09:00
	15:53		16:56	74	14:26 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (19)	15:51
2	09:27		08:43		10:51 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (16)	09:01
	15:54		16:58	73	14:27 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (19)	15:50
3	09:27		08:41		10:50 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (16)	09:03
	15:55		17:01	74	14:27 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (19)	15:49
4	09:26		08:39		10:51 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (16)	09:05
	15:57		17:03	71	14:27 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (19)	15:48
5	09:26		08:37		10:51 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (16)	09:07
	15:58		17:06	68	14:26 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (19)	15:47
6	09:25		08:34		10:53 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (16)	09:09
	16:00		17:08	64	14:26 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (19)	15:46
7	09:24		08:32		10:53 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (16)	09:10
	16:02		17:11	59	14:25 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (19)	15:45
8	09:24		08:30		10:55 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (16)	09:12
	16:03		17:13	52	14:24 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (19)	15:45
9	09:23		08:27		10:56 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (16)	09:13
	16:05		17:16	43	14:22 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (19)	15:44
10	09:22		08:25		10:58 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (16)	09:15
	16:07		17:18	26	14:18 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (19)	15:43
11	09:21		08:22		12:44 (21)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (16)	09:16
	16:09		17:21	5	12:49 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (19)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (16)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (19)	15:42
13	09:18	12:39 (13)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (16)	09:19
	16:13	5 12:44 (13)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (19)	15:42
14	09:17	12:39 (13)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (16)	09:20
	16:15	7 12:46 (13)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (19)	15:42
15	09:16	12:39 (13)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (16)	09:21
	16:17	15 12:54 (13)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (19)	15:42
16	09:14	12:38 (13)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (16)	09:22
	16:19	17 12:55 (13)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (19)	15:42
17	09:13	12:38 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (21)	09:23
	16:21	18 12:56 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (19)	15:42
18	09:12	12:37 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (21)	09:24
	16:23	19 12:56 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (19)	15:42
19	09:10	12:38 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (21)	09:25
	16:25	20 12:58 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (19)	15:42
20	09:08	12:37 (21)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (21)	09:25
	16:27	22 12:59 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (19)	15:42
21	09:07	12:35 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (21)	09:26
	16:30	23 12:58 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (13)	15:43
22	09:05	12:34 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (21)	09:27
	16:32	33 14:16 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (13)	15:43
23	09:03	12:33 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (13)	09:27
	16:34	39 14:19 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (13)	15:44
24	09:01	12:33 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (13)	09:28
	16:37	42 14:21 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (13)	15:44
25	09:00	12:32 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (13)	09:28
	16:39	45 14:22 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (13)	15:45
26	08:58	10:57 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (13)	09:28
	16:41	50 14:24 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (13)	15:46
27	08:56	10:51 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (13)	09:28
	16:44	64 14:24 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (13)	15:47
28	08:54	10:51 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (13)	09:28
	16:46	69 14:25 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (13)	15:48
29	08:52	10:51 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (13)	09:28
	16:49	70 14:26 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (13)	15:49
30	08:50	10:50 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (16)				07:09		04:41		05:22	06:31		07:49	12:13 (21)			09:28
	16:53	74 14:27 (19)				20:14		22:29		22:03	20:42		16:51	7 12:20 (21)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236			199
Total, worst case		704		609									7		1322		
Sun reduction		0,50		0,50									0,50		0,50		
Oper. time red.		0,80		0,80									0,80		0,80		
Wind dir. red.		0,62		0,63									0,63		0,62		
Total reduction		0,25		0,25									0,25		0,25		
Total, real		174		153									2		328		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (16)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (16)	09:00
	15:53		16:56	73	14:22 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (19)	15:51
2	09:27		08:43		10:46 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (16)	09:01
	15:54		16:58	74	14:23 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (19)	15:50
3	09:27		08:41		10:45 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (16)	09:03
	15:55		17:01	74	14:22 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (19)	15:49
4	09:26		08:39		10:46 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (16)	09:05
	15:57		17:03	73	14:23 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (19)	15:48
5	09:26		08:37		10:46 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (16)	09:07
	15:58		17:06	71	14:22 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (19)	15:47
6	09:25		08:34		10:47 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (16)	09:09
	16:00		17:08	68	14:22 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (19)	15:46
7	09:24		08:32		10:47 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (16)	09:10
	16:02		17:11	65	14:21 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (19)	15:45
8	09:24		08:30		10:48 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (16)	09:12
	16:03		17:13	58	14:20 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (19)	15:45
9	09:23		08:27		10:49 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (16)	09:13
	16:05		17:16	50	14:18 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (19)	15:44
10	09:22		08:25		10:50 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (16)	09:15
	16:07		17:18	40	14:16 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (19)	15:43
11	09:21		08:22		10:53 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (16)	09:16
	16:09		17:21	22	12:47 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (19)	15:43
12	09:20		08:20		12:38 (21)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (16)	09:17
	16:11		17:23	4	12:42 (21)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (19)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (16)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (19)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (21)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (19)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (21)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (19)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (21)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (19)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (21)	09:23
	16:21	5	12:50 (13)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (19)	15:42
18	09:12		12:33 (13)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (21)	09:24
	16:23	18	12:51 (13)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (19)	15:42
19	09:10		12:34 (13)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (21)	09:25
	16:25	19	12:53 (13)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (19)	15:42
20	09:08		12:34 (13)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (21)	09:25
	16:27	20	12:54 (13)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (19)	15:42
21	09:07		12:31 (21)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (21)	09:26
	16:30	22	12:53 (13)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (13)	15:43
22	09:05		12:29 (21)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (13)	09:27
	16:32	27	14:06 (19)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (13)	15:43
23	09:03		12:28 (21)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (13)	09:27
	16:34	38	14:14 (19)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (13)	15:44
24	09:01		12:27 (21)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (13)	09:28
	16:37	43	14:16 (19)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (13)	15:44
25	09:00		12:27 (21)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (13)	09:28
	16:39	45	14:17 (19)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (13)	15:45
26	08:58		12:26 (21)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (19)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (21)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (19)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (21)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (19)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (16)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (19)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (21)	08:58			09:28
	16:51	55	14:21 (19)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (21)	15:52			15:50
31	08:48		10:46 (16)			07:09		04:41		05:22	06:31		07:49	10:22 (16)				09:28
	16:53	69	14:22 (19)			20:14		22:29		22:03	20:42		16:51	25 12:17 (21)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319			236			199
Total, worst case		564		672									32			1221		
Sun reduction		0,50		0,50									0,50			0,50		
Oper. time red.		0,80		0,80									0,80			0,80		
Wind dir. red.		0,61		0,63									0,66			0,62		
Total reduction		0,24		0,25									0,26			0,25		
Total, real		138		169									8			303		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (30)	08:45	14:59 (21)	07:35	07:07	05:44	04:39
	15:52	20 12:23 (30)	16:56	18 15:17 (21)	18:04	20:16	21:26	22:30
2	09:27	12:03 (30)	08:43	14:59 (21)	07:32	07:04	05:41	04:38
	15:54	20 12:23 (30)	16:58	19 15:18 (21)	18:07	20:19	21:28	22:32
3	09:27	12:03 (30)	08:41	14:58 (21)	07:30	07:01	05:38	04:37
	15:55	20 12:23 (30)	17:01	19 15:17 (21)	18:09	20:21	21:30	22:33
4	09:26	12:03 (30)	08:39	14:59 (21)	07:27	06:58	05:36	04:36
	15:57	21 12:24 (30)	17:03	19 15:18 (21)	18:12	20:23	21:33	22:35
5	09:26	12:04 (30)	08:37	14:59 (21)	07:24	06:55	05:33	04:34
	15:58	26 13:33 (16)	17:06	19 15:18 (21)	18:14	20:26	21:35	22:36
6	09:25	12:04 (30)	08:34	15:00 (21)	07:21	06:52	05:31	04:33
	16:00	29 13:35 (16)	17:08	18 15:18 (21)	18:16	20:28	21:37	22:38
7	09:24	12:05 (30)	08:32	15:00 (21)	07:18	06:49	05:29	04:32
	16:01	31 13:37 (16)	17:11	17 15:17 (21)	18:19	20:30	21:39	22:39
8	09:23	12:06 (30)	08:30	15:00 (21)	07:16	06:46	05:26	04:31
	16:03	33 13:39 (16)	17:13	16 15:16 (21)	18:21	20:33	21:42	22:40
9	09:23	12:06 (30)	08:27	15:02 (21)	07:13	06:44	05:24	04:31
	16:05	33 13:39 (16)	17:15	14 15:16 (21)	18:23	20:35	21:44	22:42
10	09:22	12:07 (30)	08:25	15:03 (21)	07:10	06:41	05:21	04:30
	16:07	35 13:41 (16)	17:18	11 15:14 (21)	18:26	20:37	21:46	22:43
11	09:21	12:07 (30)	08:22	15:07 (21)	07:07	06:38	05:19	04:29
	16:09	35 13:41 (16)	17:20	5 15:12 (21)	18:28	20:39	21:49	22:44
12	09:19	12:08 (30)	08:20		07:04	06:35	05:17	04:29
	16:11	35 13:42 (16)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (30)	08:17		07:01	06:32	05:15	04:28
	16:12	35 13:43 (16)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (30)	08:15		06:58	06:29	05:12	04:28
	16:14	35 13:44 (16)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (30)	08:12		06:56	06:27	05:10	04:27
	16:17	34 13:45 (16)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (30)	08:10		06:53	06:24	05:08	04:27
	16:19	32 13:45 (16)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (30)	08:07		06:50	06:21	05:06	04:27
	16:21	29 13:45 (16)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (30)	08:05		06:47	06:18	05:04	04:26
	16:23	26 13:46 (16)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (16)	08:02		06:44	06:16	05:02	04:26
	16:25	21 13:46 (16)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (16)	07:59		06:41	06:13	05:00	04:26
	16:27	22 13:47 (16)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (16)	07:57		06:38	06:10	04:58	04:26
	16:30	21 13:47 (16)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (16)	07:54		06:35	06:07	04:56	04:27
	16:32	21 13:47 (16)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (16)	07:51		06:33	06:05	04:54	04:27
	16:34	20 13:47 (16)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (16)	07:49		06:30	06:02	04:52	04:27
	16:37	19 13:47 (16)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (16)	07:46		06:27	05:59	04:50	04:28
	16:39	18 13:47 (16)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (16)	07:43		06:24	05:57	04:49	04:28
	16:41	17 13:47 (16)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (16)	07:41		06:21	05:54	04:47	04:29
	16:44	20 15:09 (21)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (16)	07:38		06:18	05:51	04:45	04:29
	16:46	23 15:12 (21)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (16)			07:15	05:49	04:44	04:30
	16:48	21 15:14 (21)			20:10	21:21	22:25	22:49
30	08:50	15:00 (21)			07:12	05:46	04:42	04:31
	16:51	15 15:15 (21)			20:12	21:23	22:27	22:49
31	08:48	15:00 (21)			07:09		04:41	
	16:53	16 15:16 (21)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (21)	08:59		11:49 (30)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (21)	15:51	35	13:23 (16)
2	04:33	05:26	06:35	07:41			07:54		14:31 (21)	09:01		11:50 (30)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (21)	15:50	35	13:24 (16)
3	04:34	05:28	06:37	07:44			07:56		14:31 (21)	09:03		11:50 (30)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (21)	15:49	33	13:23 (16)
4	04:35	05:30	06:39	07:46			07:58		14:29 (21)	09:05		11:50 (30)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (21)	15:48	33	13:23 (16)
5	04:36	05:33	06:42	07:48			08:01		14:29 (21)	09:07		11:50 (30)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (21)	15:47	31	13:22 (16)
6	04:37	05:35	06:44	07:50			08:03		14:29 (21)	09:08		11:50 (30)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (21)	15:46	30	13:22 (16)
7	04:38	05:37	06:46	07:53			08:06		14:29 (21)	09:10		11:51 (30)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (21)	15:45	27	13:21 (16)
8	04:40	05:39	06:48	07:55			08:08		14:29 (21)	09:12		11:51 (30)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (21)	15:44	21	12:12 (30)
9	04:41	05:41	06:51	07:57			08:10		14:30 (21)	09:13		11:51 (30)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (21)	15:44	21	12:12 (30)
10	04:42	05:44	06:53	07:59			08:13		14:29 (21)	09:15		11:52 (30)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (21)	15:43	20	12:12 (30)
11	04:44	05:46	06:55	08:02			08:15		14:30 (21)	09:16		11:53 (30)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (21)	15:43	20	12:13 (30)
12	04:45	05:48	06:57	08:04			08:18		14:32 (21)	09:17		11:53 (30)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (21)	15:42	20	12:13 (30)
13	04:47	05:50	06:59	08:06			08:20		13:07 (16)	09:19		11:54 (30)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (21)	15:42	20	12:14 (30)
14	04:49	05:53	07:02	08:09			08:22		13:04 (16)	09:20		11:54 (30)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (21)	15:42	20	12:14 (30)
15	04:50	05:55	07:04	08:11			08:25		13:03 (16)	09:21		11:54 (30)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (21)	15:42	20	12:14 (30)
16	04:52	05:57	07:06	08:13			08:27		13:03 (16)	09:22		11:55 (30)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (16)	15:42	20	12:15 (30)
17	04:54	05:59	07:08	08:16			08:29		13:02 (16)	09:23		11:55 (30)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (16)	15:42	20	12:15 (30)
18	04:56	06:02	07:10	08:18			08:32		13:02 (16)	09:24		11:56 (30)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (16)	15:42	19	12:15 (30)
19	04:57	06:04	07:13	08:20			08:34		13:02 (16)	09:25		11:56 (30)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (16)	15:42	20	12:16 (30)
20	04:59	06:06	07:15	08:23			08:36		13:01 (16)	09:25		11:57 (30)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (16)	15:42	20	12:17 (30)
21	05:01	06:08	07:17	08:25			08:38		13:02 (16)	09:26		11:57 (30)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (16)	15:43	20	12:17 (30)
22	05:03	06:10	07:19	08:27			08:41		13:02 (16)	09:27		11:58 (30)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (16)	15:43	20	12:18 (30)
23	05:05	06:13	07:21	08:30			08:43		13:02 (16)	09:27		11:58 (30)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (16)	15:44	20	12:18 (30)
24	05:07	06:15	07:24	08:32			08:45		11:55 (30)	09:27		11:58 (30)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (16)	15:44	20	12:18 (30)
25	05:09	06:17	07:26	07:34			08:47		11:52 (30)	09:28		11:59 (30)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (16)	15:45	20	12:19 (30)
26	05:11	06:19	07:28	07:37			08:49		11:51 (30)	09:28		12:00 (30)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (16)	15:46	20	12:20 (30)
27	05:13	06:22	07:30	07:39			08:51		11:50 (30)	09:28		12:00 (30)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (16)	15:47	20	12:20 (30)
28	05:15	06:24	07:32	07:42			08:54		11:49 (30)	09:28		12:00 (30)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (16)	15:48	20	12:20 (30)
29	05:17	06:26	07:35	07:44			08:56		11:50 (30)	09:28		12:01 (30)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (16)	15:49	20	12:21 (30)
30	05:20	06:28	07:37	07:46			08:58		11:49 (30)	09:28		12:01 (30)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (16)	15:50	21	12:22 (30)
31	05:22	06:31		07:49		14:35 (21)				09:28		12:01 (30)
	22:03	20:42		16:51	6	14:41 (21)				15:51	21	12:22 (30)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (30)	08:45	14:09 (16)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (30)
	15:52 20	12:55 (30)	16:56 5	14:14 (16)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (30)
2	09:27	12:36 (30)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (30)
	15:54 21	12:57 (30)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (30)
3	09:27	12:36 (30)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (30)
	15:55 21	12:57 (30)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (30)
4	09:26	12:37 (30)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (30)
	15:57 20	12:57 (30)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (30)
5	09:26	12:37 (30)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (30)
	15:58 20	12:57 (30)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (30)
6	09:25	12:38 (30)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (30)
	16:00 20	12:58 (30)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (30)
7	09:24	12:38 (30)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (30)
	16:01 20	12:58 (30)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (30)
8	09:23	12:39 (30)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (30)
	16:03 20	12:59 (30)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (30)
9	09:23	12:39 (30)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (30)
	16:05 19	12:58 (30)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (30)
10	09:22	12:40 (30)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (16)	09:15		12:25 (30)
	16:07 19	12:59 (30)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (16)	15:43	21	12:46 (30)
11	09:21	12:40 (30)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (16)	09:16		12:26 (30)
	16:09 19	12:59 (30)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (16)	15:43	21	12:47 (30)
12	09:19	12:42 (30)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (16)	09:17		12:26 (30)
	16:10 24	14:10 (16)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (16)	15:42	20	12:46 (30)
13	09:18	12:42 (30)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (16)	09:19		12:27 (30)
	16:12 27	14:11 (16)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (16)	15:42	20	12:47 (30)
14	09:17	12:44 (30)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (16)	09:20		12:27 (30)
	16:14 27	14:13 (16)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (16)	15:42	21	12:48 (30)
15	09:16	12:45 (30)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (16)	09:21		12:27 (30)
	16:17 27	14:14 (16)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (16)	15:42	21	12:48 (30)
16	09:14	12:46 (30)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (16)	09:22		12:28 (30)
	16:19 27	14:15 (16)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (16)	15:42	20	12:48 (30)
17	09:13	12:48 (30)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (16)	09:23		12:28 (30)
	16:21 25	14:16 (16)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (16)	15:42	20	12:48 (30)
18	09:11	13:59 (16)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (16)	09:24		12:29 (30)
	16:23 18	14:17 (16)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (16)	15:42	20	12:49 (30)
19	09:10	13:59 (16)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (16)	09:25		12:30 (30)
	16:25 19	14:18 (16)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (16)	15:42	20	12:50 (30)
20	09:08	13:59 (16)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (16)	09:25		12:30 (30)
	16:27 19	14:18 (16)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (16)	15:42	20	12:50 (30)
21	09:07	13:59 (16)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (16)	09:26		12:30 (30)
	16:30 20	14:19 (16)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (16)	15:43	20	12:50 (30)
22	09:05	13:59 (16)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (16)	09:27		12:31 (30)
	16:32 20	14:19 (16)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (16)	15:43	20	12:51 (30)
23	09:03	13:59 (16)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (16)	09:27		12:31 (30)
	16:34 21	14:20 (16)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (16)	15:44	20	12:51 (30)
24	09:01	14:00 (16)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (16)	09:27		12:31 (30)
	16:36 20	14:20 (16)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (16)	15:44	21	12:52 (30)
25	09:00	14:00 (16)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (30)	09:28		12:33 (30)
	16:39 21	14:21 (16)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (16)	15:45	20	12:53 (30)
26	08:58	14:01 (16)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (30)	09:28		12:33 (30)
	16:41 20	14:21 (16)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (16)	15:46	20	12:53 (30)
27	08:56	14:01 (16)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (30)	09:28		12:34 (30)
	16:44 19	14:20 (16)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (16)	15:47	20	12:54 (30)
28	08:54	14:02 (16)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (30)	09:28		12:33 (30)
	16:46 18	14:20 (16)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (16)	15:47	21	12:54 (30)
29	08:52	14:04 (16)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (30)	09:28		12:34 (30)
	16:48 16	14:20 (16)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (16)	15:49	20	12:54 (30)
30	08:50	14:04 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (30)	09:28		12:35 (30)
	16:51 14	14:18 (16)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (16)	15:50	20	12:55 (30)
31	08:48	14:07 (16)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (30)
	16:53 10	14:17 (16)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (30)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (30)	08:45		15:12 (16)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (30)	16:56	14	15:26 (16)	18:04	20:16	21:26	22:30
2	09:27		13:54 (30)	08:43		15:12 (16)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (30)	16:58	16	15:28 (16)	18:07	20:19	21:28	22:32
3	09:27		13:54 (30)	08:41		15:11 (16)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (30)	17:01	17	15:28 (16)	18:09	20:21	21:30	22:33
4	09:26		13:54 (30)	08:39		15:11 (16)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (30)	17:03	18	15:29 (16)	18:12	20:23	21:33	22:35
5	09:26		13:53 (30)	08:37		15:11 (16)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (30)	17:06	18	15:29 (16)	18:14	20:26	21:35	22:36
6	09:25		13:53 (30)	08:34		15:11 (16)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (30)	17:08	19	15:30 (16)	18:16	20:28	21:37	22:38
7	09:24		13:54 (30)	08:32		15:11 (16)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (30)	17:10	19	15:30 (16)	18:19	20:30	21:39	22:39
8	09:23		13:54 (30)	08:30		15:11 (16)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (30)	17:13	18	15:29 (16)	18:21	20:32	21:42	22:40
9	09:23		13:53 (30)	08:27		15:12 (16)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (30)	17:15	18	15:30 (16)	18:23	20:35	21:44	22:41
10	09:22		13:53 (30)	08:25		15:12 (16)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (30)	17:18	17	15:29 (16)	18:26	20:37	21:46	22:43
11	09:20		13:53 (30)	08:22		15:13 (16)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (30)	17:20	14	15:27 (16)	18:28	20:39	21:48	22:44
12	09:19		13:54 (30)	08:20		15:16 (16)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (30)	17:23	11	15:27 (16)	18:30	20:42	21:51	22:45
13	09:18		13:53 (30)	08:17		15:18 (16)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (30)	17:25	5	15:23 (16)	18:33	20:44	21:53	22:45
14	09:17		13:54 (30)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (30)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (30)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (30)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (30)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (30)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (30)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (30)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (30)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (30)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (30)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (30)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (30)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (30)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (30)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (30)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (30)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (30)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (30)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (30)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (30)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (30)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (30)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (30)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (30)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (16)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (16)				20:12	21:23	22:27	22:49
31	08:48		15:14 (16)				07:09		04:41	
	16:53	11	15:25 (16)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		14:42 (16)	08:59		13:35 (30)
	22:48		22:01		20:39		19:13			16:48	16	14:58 (16)	15:51	19	13:54 (30)
2	04:33		05:26		06:35		07:41			07:53		14:41 (16)	09:01		13:37 (30)
	22:48		21:58		20:37		19:10			16:46	18	14:59 (16)	15:50	18	13:55 (30)
3	04:34		05:28		06:37		07:44			07:56		14:40 (16)	09:03		13:37 (30)
	22:47		21:56		20:34		19:07			16:44	19	14:59 (16)	15:49	18	13:55 (30)
4	04:35		05:30		06:39		07:46			07:58		14:40 (16)	09:05		13:38 (30)
	22:46		21:54		20:31		19:04			16:41	20	15:00 (16)	15:48	17	13:55 (30)
5	04:36		05:32		06:42		07:48			08:01		14:41 (16)	09:07		13:39 (30)
	22:45		21:51		20:28		19:01			16:39	19	15:00 (16)	15:47	16	13:55 (30)
6	04:37		05:35		06:44		07:50			08:03		14:41 (16)	09:08		13:40 (30)
	22:45		21:49		20:25		18:58			16:36	19	15:00 (16)	15:46	15	13:55 (30)
7	04:38		05:37		06:46		07:53			08:06		14:41 (16)	09:10		13:41 (30)
	22:44		21:46		20:22		18:56			16:34	18	14:59 (16)	15:45	14	13:55 (30)
8	04:40		05:39		06:48		07:55			08:08		14:42 (16)	09:12		13:42 (30)
	22:43		21:44		20:19		18:53			16:32	17	14:59 (16)	15:44	13	13:55 (30)
9	04:41		05:41		06:50		07:57			08:10		14:43 (16)	09:13		13:42 (30)
	22:41		21:41		20:16		18:50			16:30	16	14:59 (16)	15:44	12	13:54 (30)
10	04:42		05:44		06:53		07:59			08:13		14:43 (16)	09:15		13:43 (30)
	22:40		21:39		20:14		18:47			16:27	14	14:57 (16)	15:43	11	13:54 (30)
11	04:44		05:46		06:55		08:02			08:15		14:45 (16)	09:16		13:45 (30)
	22:39		21:36		20:11		18:44			16:25	11	14:56 (16)	15:43	9	13:54 (30)
12	04:45		05:48		06:57		08:04			08:18		14:47 (16)	09:17		13:46 (30)
	22:38		21:34		20:08		18:41			16:23	7	14:54 (16)	15:42	7	13:53 (30)
13	04:47		05:50		06:59		08:06			08:20			09:19		13:48 (30)
	22:36		21:31		20:05		18:39			16:21			15:42	5	13:53 (30)
14	04:49		05:53		07:01		08:09			08:22			09:20		13:49 (30)
	22:35		21:29		20:02		18:36			16:19			15:42	3	13:52 (30)
15	04:50		05:55		07:04		08:11			08:25		13:37 (30)	09:21		
	22:33		21:26		19:59		18:33			16:17	7	13:44 (30)	15:42		
16	04:52		05:57		07:06		08:13			08:27		13:36 (30)	09:22		
	22:32		21:23		19:56		18:30			16:15	11	13:47 (30)	15:42		
17	04:54		05:59		07:08		08:16			08:29		13:34 (30)	09:23		
	22:30		21:21		19:53		18:28			16:13	14	13:48 (30)	15:42		
18	04:56		06:01		07:10		08:18			08:32		13:33 (30)	09:24		
	22:29		21:18		19:50		18:25			16:11	17	13:50 (30)	15:42		
19	04:57		06:04		07:12		08:20			08:34		13:33 (30)	09:25		
	22:27		21:15		19:47		18:22			16:09	18	13:51 (30)	15:42		
20	04:59		06:06		07:15		08:23			08:36		13:32 (30)	09:25		
	22:25		21:13		19:45		18:19			16:07	19	13:51 (30)	15:42		
21	05:01		06:08		07:17		08:25			08:38		13:32 (30)	09:26		
	22:23		21:10		19:42		18:17			16:06	20	13:52 (30)	15:43		
22	05:03		06:10		07:19		08:27			08:41		13:32 (30)	09:27		
	22:21		21:07		19:39		18:14			16:04	20	13:52 (30)	15:43		
23	05:05		06:13		07:21		08:30			08:43		13:32 (30)	09:27		
	22:20		21:05		19:36		18:11			16:02	21	13:53 (30)	15:44		
24	05:07		06:15		07:23		08:32			08:45		13:33 (30)	09:27		
	22:18		21:02		19:33		18:09			16:00	21	13:54 (30)	15:44		
25	05:09		06:17		07:26		07:34			08:47		13:33 (30)	09:28		
	22:16		20:59		19:30		17:06			15:59	21	13:54 (30)	15:45		
26	05:11		06:19		07:28		07:37			08:49		13:33 (30)	09:28		
	22:14		20:56		19:27		17:04			15:57	21	13:54 (30)	15:46		
27	05:13		06:22		07:30		07:39			08:51		13:33 (30)	09:28		
	22:11		20:53		19:24		17:01			15:56	21	13:54 (30)	15:47		
28	05:15		06:24		07:32		07:41			08:53		13:33 (30)	09:28		
	22:09		20:51		19:21		16:58			15:55	21	13:54 (30)	15:47		
29	05:17		06:26		07:35		07:44		14:47 (16)	08:55		13:35 (30)	09:28		
	22:07		20:48		19:18		16:56	7	14:54 (16)	15:53	20	13:55 (30)	15:48		
30	05:19		06:28		07:37		07:46		14:45 (16)	08:57		13:35 (30)	09:28		13:56 (30)
	22:05		20:45		19:16		16:53	11	14:56 (16)	15:52	20	13:55 (30)	15:50	4	14:00 (30)
31	05:22		06:31				07:49		14:42 (16)				09:28		13:55 (30)
	22:03		20:42				16:51	15	14:57 (16)				15:51	6	14:01 (30)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								33			486			187	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,55			0,55			0,55	
Total reduction								0,22			0,22			0,22	
Total, real								7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:45		10:57 (41)	07:35		16:28 (21)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (30)	18:04	11	16:39 (21)	20:16	21:26	22:30
2	09:27			08:43		10:59 (41)	07:32		16:27 (21)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (30)	18:07	13	16:40 (21)	20:19	21:28	22:32
3	09:27			08:41		11:02 (41)	07:30		16:27 (21)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (30)	18:09	14	16:41 (21)	20:21	21:30	22:33
4	09:26			08:39		13:29 (30)	07:27		16:27 (21)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (30)	18:12	17	16:44 (21)	20:23	21:33	22:35
5	09:26			08:37		13:30 (30)	07:24		16:27 (21)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (30)	18:14	19	16:46 (21)	20:26	21:35	22:36
6	09:25			08:34		13:33 (30)	07:21		16:28 (21)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (30)	18:16	17	16:45 (21)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (21)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (21)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (21)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (21)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (21)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (21)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (11)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (11)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (11)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (11)	18:33			20:44	21:53	22:45
14	09:17		11:05 (41)	08:15		15:02 (11)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (41)	17:28	12	15:14 (16)	18:35			20:46	21:55	22:46
15	09:16		10:59 (41)	08:12		15:06 (16)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (41)	17:30	12	15:18 (16)	18:37			20:49	21:57	22:47
16	09:14		10:52 (41)	08:10		15:06 (16)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (41)	17:33	15	15:21 (16)	18:40			20:51	21:59	22:48
17	09:13		10:51 (41)	08:07		15:05 (16)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (41)	17:35	16	15:21 (16)	18:42			20:53	22:02	22:48
18	09:11		10:51 (41)	08:05		15:05 (16)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (41)	17:38	15	15:20 (16)	18:44			20:56	22:04	22:49
19	09:10		10:51 (41)	08:02		15:06 (16)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (41)	17:40	16	15:22 (16)	18:47			20:58	22:06	22:49
20	09:08		10:51 (41)	07:59		15:07 (16)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (41)	17:43	17	15:24 (16)	18:49			21:00	22:08	22:50
21	09:07		10:51 (41)	07:57		15:07 (16)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (41)	17:45	20	15:27 (16)	18:51			21:02	22:10	22:50
22	09:05		10:51 (41)	07:54		15:08 (16)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (36)	17:47	20	15:28 (16)	18:53			21:05	22:12	22:50
23	09:03		10:51 (41)	07:51		15:09 (16)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (36)	17:50	18	15:27 (16)	18:56			21:07	22:14	22:50
24	09:01		10:52 (41)	07:49		15:12 (16)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (36)	17:52	13	15:25 (16)	18:58			21:09	22:16	22:50
25	08:59		10:52 (41)	07:46		15:16 (16)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (36)	17:55	5	15:21 (16)	19:00			21:12	22:18	22:50
26	08:58		10:52 (41)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (30)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (41)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (30)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (41)	07:38		16:32 (21)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (30)	18:02	4	16:36 (21)	19:07			21:19	22:23	22:50
29	08:52		10:54 (41)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (30)				20:10			21:21	22:25	22:49
30	08:50		10:55 (41)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (30)				20:12			21:23	22:27	22:49
31	08:48		10:56 (41)				07:09				04:41	
	16:53	42	13:49 (30)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,67			0,57			0,57				
Total reduction		0,27			0,23			0,23				
Total, real		139			81			28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (30)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (30)	15:48
5	04:36	05:33	06:42	07:48		17:09 (21)	08:01		13:02 (30)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (21)	16:39	13	13:15 (30)	15:47
6	04:37	05:35	06:44	07:50		17:06 (21)	08:03		13:01 (30)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (21)	16:36	17	13:18 (30)	15:46
7	04:38	05:37	06:46	07:53		17:04 (21)	08:06		12:58 (30)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (21)	16:34	21	13:19 (30)	15:45
8	04:40	05:39	06:48	07:55		17:03 (21)	08:08		10:32 (41)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (21)	16:32	29	13:20 (30)	15:44
9	04:41	05:41	06:50	07:57		17:02 (21)	08:10		10:30 (41)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (21)	16:30	37	13:22 (30)	15:44
10	04:42	05:44	06:53	07:59		17:01 (21)	08:13		10:28 (41)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (21)	16:27	40	13:21 (30)	15:43
11	04:44	05:46	06:55	08:02		17:01 (21)	08:15		10:27 (41)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (21)	16:25	41	13:19 (30)	15:43
12	04:45	05:48	06:57	08:04		17:01 (21)	08:18		10:27 (41)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (21)	16:23	42	13:19 (30)	15:42
13	04:47	05:50	06:59	08:06		17:02 (21)	08:20		10:25 (41)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (21)	16:21	41	13:15 (30)	15:42
14	04:49	05:53	07:01	08:09		17:06 (21)	08:22		10:25 (41)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (21)	16:19	41	13:07 (30)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (41)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (30)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (41)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (30)	15:42
17	04:54	05:59	07:08	08:16		15:45 (16)	08:29		10:25 (41)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (16)	16:13	39	12:37 (36)	15:42
18	04:56	06:02	07:10	08:18		15:42 (16)	08:32		10:26 (41)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (16)	16:11	40	12:38 (36)	15:42
19	04:57	06:04	07:12	08:20		15:40 (16)	08:34		10:26 (41)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (16)	16:09	39	12:37 (36)	15:42
20	04:59	06:06	07:15	08:23		15:39 (16)	08:36		10:26 (41)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (16)	16:07	28	12:25 (36)	15:42
21	05:01	06:08	07:17	08:25		15:37 (16)	08:38		10:27 (41)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (16)	16:06	22	10:49 (41)	15:43
22	05:03	06:10	07:19	08:27		15:37 (16)	08:41		10:27 (41)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (16)	16:04	22	10:49 (41)	15:43
23	05:05	06:13	07:21	08:30		15:36 (16)	08:43		10:28 (41)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (16)	16:02	21	10:49 (41)	15:44
24	05:07	06:15	07:24	08:32		15:35 (16)	08:45		10:29 (41)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (16)	16:01	20	10:49 (41)	15:44
25	05:09	06:17	07:26	07:34		14:36 (16)	08:47		10:29 (41)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (16)	15:59	19	10:48 (41)	15:45
26	05:11	06:19	07:28	07:37		14:35 (16)	08:49		10:31 (41)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (16)	15:57	18	10:49 (41)	15:46
27	05:13	06:22	07:30	07:39		14:35 (16)	08:51		10:38 (41)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (16)	15:56	10	10:48 (41)	15:47
28	05:15	06:24	07:32	07:41		14:30 (11)	08:53		10:44 (41)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (16)	15:55	3	10:47 (41)	15:48
29	05:17	06:26	07:35	07:44		14:27 (11)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (11)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (11)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (11)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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NO-0276 Oslo
+47 21 58 60 15
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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June
1	09:27			08:45		15:29 (12)	07:35		15:43 (17)	07:06			05:43		18:54 (41)	04:39
	15:52			16:56	22	15:51 (12)	18:04	38	16:21 (17)	20:16			21:25	25	19:19 (41)	22:30
2	09:27			08:43		15:29 (12)	07:32		15:44 (17)	07:04			05:41		18:56 (41)	04:38
	15:54			16:58	23	15:52 (12)	18:07	36	16:20 (17)	20:19			21:28	20	19:16 (41)	22:32
3	09:27			08:41		15:29 (12)	07:29		15:44 (17)	07:01		19:08 (41)	05:38		18:59 (41)	04:37
	15:55			17:01	23	15:52 (12)	18:09	35	16:19 (17)	20:21	9	19:17 (41)	21:30	15	19:14 (41)	22:33
4	09:26			08:39		15:29 (12)	07:27		15:45 (17)	06:58		19:03 (41)	05:36		19:04 (41)	04:36
	15:57			17:03	24	15:53 (12)	18:11	33	16:18 (17)	20:23	18	19:21 (41)	21:32	5	19:09 (41)	22:35
5	09:25			08:36		15:29 (12)	07:24		15:46 (17)	06:55		18:59 (41)	05:33			04:35
	15:58			17:06	23	15:52 (12)	18:14	32	16:18 (17)	20:25	24	19:23 (41)	21:35			22:36
6	09:25			08:34		15:28 (12)	07:21		15:48 (17)	06:52		18:57 (41)	05:31			04:33
	16:00			17:08	24	15:52 (12)	18:16	28	16:16 (17)	20:28	28	19:25 (41)	21:37			22:37
7	09:24			08:32		15:29 (12)	07:18		15:49 (17)	06:49		18:55 (41)	05:29			04:32
	16:01			17:10	24	15:53 (12)	18:19	25	16:14 (17)	20:30	31	19:26 (41)	21:39			22:39
8	09:23			08:29		15:29 (12)	07:15		15:51 (17)	06:46		18:53 (41)	05:26			04:32
	16:03			17:13	23	15:52 (12)	18:21	21	16:12 (17)	20:32	35	19:42 (30)	21:42			22:40
9	09:22			08:27		15:31 (12)	07:13		15:54 (17)	06:43		18:52 (41)	05:24			04:31
	16:05			17:15	21	15:52 (12)	18:23	15	16:09 (17)	20:35	54	19:59 (30)	21:44			22:41
10	09:21			08:25		15:31 (12)	07:10			06:41		18:51 (41)	05:21			04:30
	16:07			17:18	20	15:51 (12)	18:26			20:37	57	19:59 (30)	21:46			22:42
11	09:20			08:22		15:32 (12)	07:07			06:38		18:49 (41)	05:19			04:29
	16:09			17:20	18	15:50 (12)	18:28			20:39	60	19:59 (30)	21:48			22:43
12	09:19			08:20		15:34 (12)	07:04			06:35		18:48 (41)	05:17			04:29
	16:11			17:23	15	15:49 (12)	18:30			20:42	62	19:58 (30)	21:50			22:44
13	09:18			08:17		15:36 (12)	07:01			06:32		18:48 (41)	05:15			04:28
	16:12			17:25	22	16:09 (17)	18:33			20:44	64	19:59 (30)	21:53			22:45
14	09:17			08:15		15:54 (17)	06:58			06:29		18:47 (41)	05:12			04:28
	16:14			17:28	18	16:12 (17)	18:35			20:46	63	19:58 (30)	21:55			22:46
15	09:15			08:12		15:52 (17)	06:55			06:27		18:46 (41)	05:10			04:27
	16:17			17:30	22	16:14 (17)	18:37			20:48	63	19:57 (30)	21:57			22:47
16	09:14			08:10		15:51 (17)	06:53		17:30 (36)	06:24		18:47 (41)	05:08			04:27
	16:19			17:33	26	16:17 (17)	18:40	8	17:38 (36)	20:51	62	19:57 (30)	21:59			22:47
17	09:13			08:07		15:49 (17)	06:50		17:27 (36)	06:21		18:46 (41)	05:06			04:27
	16:21			17:35	29	16:18 (17)	18:42	13	17:40 (36)	20:53	60	19:55 (30)	22:01			22:48
18	09:11			08:04		15:47 (17)	06:47		17:25 (36)	06:18		18:45 (41)	05:04			04:26
	16:23			17:38	32	16:19 (17)	18:44	17	17:42 (36)	20:55	58	19:53 (30)	22:04			22:49
19	09:10			08:02		15:46 (17)	06:44		17:23 (36)	06:15		18:46 (41)	05:02			04:26
	16:25			17:40	33	16:19 (17)	18:46	19	17:42 (36)	20:58	53	19:52 (30)	22:06			22:49
20	09:08			07:59		15:46 (17)	06:41		17:22 (36)	06:13		18:45 (41)	05:00			04:26
	16:27			17:43	35	16:21 (17)	18:49	21	17:43 (36)	21:00	44	19:29 (41)	22:08			22:49
21	09:06			07:57		15:45 (17)	06:38		17:21 (36)	06:10		18:45 (41)	04:58			04:26
	16:30			17:45	36	16:21 (17)	18:51	22	17:43 (36)	21:02	43	19:28 (41)	22:10			22:50
22	09:05			07:54		15:44 (17)	06:35		17:21 (36)	06:07		18:46 (41)	04:56			04:27
	16:32			17:47	37	16:21 (17)	18:53	22	17:43 (36)	21:05	43	19:29 (41)	22:12			22:50
23	09:03			07:51		15:44 (17)	06:32		17:20 (36)	06:05		18:46 (41)	04:54			04:27
	16:34			17:50	38	16:22 (17)	18:56	22	17:42 (36)	21:07	41	19:27 (41)	22:14			22:50
24	09:01			07:49		15:43 (17)	06:29		17:20 (36)	06:02		18:47 (41)	04:52			04:27
	16:36			17:52	39	16:22 (17)	18:58	22	17:42 (36)	21:09	40	19:27 (41)	22:16			22:50
25	08:59			07:46		15:44 (17)	06:27		17:20 (36)	05:59		18:47 (41)	04:50			04:28
	16:39			17:55	38	16:22 (17)	19:00	21	17:41 (36)	21:12	39	19:26 (41)	22:18			22:50
26	08:57			07:43		15:43 (17)	06:24		17:20 (36)	05:57		18:48 (41)	04:49			04:28
	16:41			17:57	39	16:22 (17)	19:03	20	17:40 (36)	21:14	37	19:25 (41)	22:20			22:50
27	08:55		15:34 (12)	07:40		15:43 (17)	06:21		17:22 (36)	05:54		18:48 (41)	04:47			04:29
	16:44	10	15:44 (12)	18:00	39	16:22 (17)	19:05	17	17:39 (36)	21:16	36	19:24 (41)	22:21			22:50
28	08:54		15:33 (12)	07:38		15:43 (17)	06:18		17:24 (36)	05:51		18:50 (41)	04:45			04:29
	16:46	13	15:46 (12)	18:02	38	16:21 (17)	19:07	13	17:37 (36)	21:19	33	19:23 (41)	22:23			22:49
29	08:51		15:31 (12)				07:15		18:26 (36)	05:49		18:50 (41)	04:44			04:30
	16:48	16	15:47 (12)				20:09	8	18:34 (36)	21:21	31	19:21 (41)	22:25			22:49
30	08:49		15:31 (12)				07:12			05:46		18:52 (41)	04:42			04:31
	16:51	18	15:49 (12)				20:12			21:23	28	19:20 (41)	22:27			22:49
31	08:47		15:29 (12)				07:09						04:41			
	16:53	20	15:49 (12)				20:14						22:28			
Potential sun hours	221			260			365			432			521			547
Total, worst case		77			781			508			1216			65		
Sun reduction		0,50			0,50			0,50			0,50			0,50		
Oper. time red.		0,80			0,80			0,80			0,80			0,80		
Wind dir. red.		0,53			0,54			0,58			0,68			0,68		
Total reduction		0,21			0,22			0,23			0,27			0,27		
Total, real		16			169			118			331			18		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (41)	07:39			07:51		15:00 (12)	08:59
	22:48	22:00			20:39	60	19:58 (30)	19:13			16:48	21	15:21 (12)	15:51
2	04:33	05:26			06:35		18:49 (41)	07:41			07:53		15:00 (12)	09:01
	22:47	21:58			20:36	57	19:57 (30)	19:10			16:46	22	15:22 (12)	15:50
3	04:34	05:28			06:37		18:49 (41)	07:43			07:56		14:59 (12)	09:03
	22:47	21:56			20:34	54	19:56 (30)	19:07			16:44	23	15:22 (12)	15:49
4	04:35	05:30			06:39		18:51 (41)	07:46		16:33 (17)	07:58		14:59 (12)	09:05
	22:46	21:53			20:31	35	19:40 (30)	19:04	11	16:44 (17)	16:41	23	15:22 (12)	15:48
5	04:36	05:33			06:42		18:52 (41)	07:48		16:29 (17)	08:01		14:59 (12)	09:07
	22:45	21:51			20:28	31	19:23 (41)	19:01	18	16:47 (17)	16:39	24	15:23 (12)	15:47
6	04:37	05:35			06:44		18:53 (41)	07:50		16:26 (17)	08:03		14:58 (12)	09:08
	22:44	21:49			20:25	28	19:21 (41)	18:58	24	16:50 (17)	16:36	24	15:22 (12)	15:46
7	04:38	05:37			06:46		18:54 (41)	07:52		16:24 (17)	08:05		14:59 (12)	09:10
	22:43	21:46			20:22	25	19:19 (41)	18:55	27	16:51 (17)	16:34	23	15:22 (12)	15:45
8	04:40	05:39			06:48		18:57 (41)	07:55		16:21 (17)	08:08		14:59 (12)	09:11
	22:42	21:44			20:19	18	19:15 (41)	18:53	30	16:51 (17)	16:32	23	15:22 (12)	15:44
9	04:41	05:41		19:10 (41)	06:50		19:00 (41)	07:57		16:21 (17)	08:10		14:59 (12)	09:13
	22:41	21:41	10	19:20 (41)	20:16	11	19:11 (41)	18:50	32	16:53 (17)	16:30	23	15:22 (12)	15:44
10	04:42	05:44		19:07 (41)	06:53			07:59		16:19 (17)	08:13		15:00 (12)	09:14
	22:40	21:39	17	19:24 (41)	20:13			18:47	34	16:53 (17)	16:27	21	15:21 (12)	15:43
11	04:44	05:46		19:04 (41)	06:55			08:02		16:18 (17)	08:15		15:01 (12)	09:16
	22:39	21:36	22	19:26 (41)	20:11			18:44	36	16:54 (17)	16:25	20	15:21 (12)	15:43
12	04:45	05:48		19:02 (41)	06:57			08:04		16:17 (17)	08:17		15:02 (12)	09:17
	22:37	21:34	26	19:28 (41)	20:08			18:41	37	16:54 (17)	16:23	19	15:21 (12)	15:42
13	04:47	05:50		19:00 (41)	06:59			08:06		16:16 (17)	08:20		15:03 (12)	09:18
	22:36	21:31	29	19:29 (41)	20:05			18:39	38	16:54 (17)	16:21	16	15:19 (12)	15:42
14	04:49	05:53		18:58 (41)	07:01		18:17 (36)	08:08		16:16 (17)	08:22		15:05 (12)	09:20
	22:35	21:28	32	19:30 (41)	20:02	7	18:24 (36)	18:36	38	16:54 (17)	16:19	13	15:18 (12)	15:42
15	04:50	05:55		18:57 (41)	07:04		18:13 (36)	08:11		16:15 (17)	08:24		15:07 (12)	09:21
	22:33	21:26	34	19:31 (41)	19:59	13	18:26 (36)	18:33	39	16:54 (17)	16:17	10	15:17 (12)	15:42
16	04:52	05:57		18:56 (41)	07:06		18:11 (36)	08:13		16:15 (17)	08:27			09:22
	22:32	21:23	36	19:32 (41)	19:56	16	18:27 (36)	18:30	39	16:54 (17)	16:15			15:42
17	04:54	05:59		18:54 (41)	07:08		18:09 (36)	08:15		16:15 (17)	08:29			09:23
	22:30	21:21	38	19:32 (41)	19:53	19	18:28 (36)	18:28	38	16:53 (17)	16:13			15:42
18	04:56	06:01		18:53 (41)	07:10		18:08 (36)	08:18		16:15 (17)	08:31			09:24
	22:28	21:18	40	19:33 (41)	19:50	20	18:28 (36)	18:25	39	16:54 (17)	16:11			15:42
19	04:57	06:04		18:52 (41)	07:12		18:08 (36)	08:20		16:15 (17)	08:34			09:24
	22:27	21:15	41	19:33 (41)	19:47	21	18:29 (36)	18:22	38	16:53 (17)	16:09			15:42
20	04:59	06:06		18:51 (41)	07:15		18:07 (36)	08:22		16:16 (17)	08:36			09:25
	22:25	21:13	42	19:33 (41)	19:44	22	18:29 (36)	18:19	36	16:52 (17)	16:07			15:42
21	05:01	06:08		18:50 (41)	07:17		18:06 (36)	08:25		16:16 (17)	08:38			09:26
	22:23	21:10	43	19:33 (41)	19:42	22	18:28 (36)	18:17	35	16:51 (17)	16:06			15:43
22	05:03	06:10		18:50 (41)	07:19		18:06 (36)	08:27		16:17 (17)	08:40			09:26
	22:21	21:07	43	19:33 (41)	19:39	22	18:28 (36)	18:14	34	16:51 (17)	16:04			15:43
23	05:05	06:13		18:49 (41)	07:21		18:06 (36)	08:29		16:17 (17)	08:43			09:27
	22:19	21:04	44	19:33 (41)	19:36	21	18:27 (36)	18:11	32	16:49 (17)	16:02			15:44
24	05:07	06:15		18:49 (41)	07:23		18:07 (36)	08:32		16:18 (17)	08:45			09:27
	22:17	21:02	54	19:55 (30)	19:33	19	18:26 (36)	18:09	31	16:49 (17)	16:01			15:44
25	05:09	06:17		18:49 (41)	07:26		18:07 (36)	07:34		15:18 (17)	08:47			09:28
	22:15	20:59	58	19:57 (30)	19:30	18	18:25 (36)	17:06	29	15:47 (17)	15:59			15:45
26	05:11	06:19		18:49 (41)	07:28		18:08 (36)	07:37		15:20 (17)	08:49			09:28
	22:13	20:56	60	19:58 (30)	19:27	15	18:23 (36)	17:04	25	15:45 (17)	15:57			15:46
27	05:13	06:22		18:48 (41)	07:30		18:09 (36)	07:39		15:22 (17)	08:51			09:28
	22:11	20:53	63	19:59 (30)	19:24	11	18:20 (36)	17:01	22	15:44 (17)	15:56			15:47
28	05:15	06:24		18:48 (41)	07:32			07:41		15:08 (12)	08:53			09:28
	22:09	20:51	63	19:59 (30)	19:21			16:58	22	15:41 (17)	15:55			15:48
29	05:17	06:26		18:48 (41)	07:34			07:44		15:05 (12)	08:55			09:28
	22:07	20:48	63	19:59 (30)	19:18			16:56	21	15:37 (17)	15:53			15:49
30	05:20	06:28		18:48 (41)	07:37			07:46		15:03 (12)	08:57			09:28
	22:05	20:45	63	19:59 (30)	19:16			16:53	16	15:19 (12)	15:52			15:50
31	05:22	06:30		18:48 (41)				07:49		15:01 (12)				09:28
	22:03	20:42	62	19:58 (30)				16:51	18	15:19 (12)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (27)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (27)
	15:53	39	13:36 (28)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (28)
2	09:28		12:01 (27)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (27)
	15:54	41	13:36 (28)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (28)
3	09:27		12:01 (27)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (27)
	15:55	41	13:36 (28)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (28)
4	09:27		12:01 (27)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (27)
	15:57	41	13:36 (28)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (28)
5	09:26		12:01 (27)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (27)
	15:58	43	13:37 (28)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (28)
6	09:25		12:02 (27)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (27)
	16:00	41	13:37 (28)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (28)
7	09:25		12:02 (27)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (27)
	16:02	41	13:37 (28)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (28)
8	09:24		12:02 (27)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (27)
	16:03	42	13:38 (28)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (28)
9	09:23		12:03 (27)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (27)
	16:05	41	13:38 (28)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (28)
10	09:22		12:03 (27)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (27)
	16:07	40	13:37 (28)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (28)
11	09:21		12:03 (27)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (27)
	16:09	41	13:38 (28)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (28)
12	09:20		12:03 (27)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (27)
	16:11	39	13:37 (28)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (28)
13	09:19		12:04 (27)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (27)
	16:13	37	13:37 (28)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (28)
14	09:17		12:04 (27)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (27)
	16:15	35	13:36 (28)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (28)
15	09:16		12:04 (27)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (27)	09:21		11:54 (27)
	16:17	32	13:35 (28)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (27)	15:42	38	13:27 (28)
16	09:15		12:04 (27)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (27)	09:22		11:55 (27)
	16:19	24	12:28 (27)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (27)	15:42	37	13:28 (28)
17	09:13		12:06 (27)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (27)	09:23		11:55 (27)
	16:21	24	12:30 (27)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (27)	15:42	37	13:28 (28)
18	09:12		12:06 (27)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (27)	09:24		11:56 (27)
	16:23	24	12:30 (27)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (27)	15:42	36	13:29 (28)
19	09:10		12:06 (27)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (27)	09:25		11:57 (27)
	16:25	24	12:30 (27)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (27)	15:42	36	13:29 (28)
20	09:09		12:07 (27)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (27)	09:26		11:58 (27)
	16:28	23	12:30 (27)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (27)	15:43	36	13:30 (28)
21	09:07		12:08 (27)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (27)	09:26		11:59 (27)
	16:30	21	12:29 (27)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (27)	15:43	35	13:31 (28)
22	09:05		12:09 (27)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (27)	09:27		11:58 (27)
	16:32	20	12:29 (27)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (27)	15:43	36	13:31 (28)
23	09:03		12:09 (27)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (27)	09:27		11:59 (27)
	16:34	19	12:28 (27)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (27)	15:44	36	13:31 (28)
24	09:02		12:10 (27)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (27)	09:28		12:00 (27)
	16:37	17	12:27 (27)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (27)	15:44	36	13:32 (28)
25	09:00		12:12 (27)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (27)	09:28		12:00 (27)
	16:39	15	12:27 (27)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (27)	15:45	37	13:33 (28)
26	08:58		12:14 (27)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (27)	09:28		12:00 (27)
	16:41	11	12:25 (27)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (27)	15:46	37	13:33 (28)
27	08:56		12:17 (27)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (27)	09:28		12:00 (27)
	16:44	4	12:21 (27)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (28)	15:47	38	13:33 (28)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (27)	09:29		12:01 (27)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (28)	15:48	37	13:34 (28)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (27)	09:28		12:00 (27)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (28)	15:49	38	13:34 (28)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (27)	09:28		12:01 (27)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (28)	15:50	39	13:35 (28)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (27)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (28)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (27)	08:46	10:11 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (27)
	15:53 31	12:43 (28)	16:56 18	10:29 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (27)
2	09:28	11:14 (27)	08:44	10:11 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (27)
	15:54 30	12:43 (28)	16:58 17	10:28 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (27)
3	09:27	11:13 (27)	08:41	10:13 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (27)
	15:55 31	12:43 (28)	17:01 14	10:27 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (27)
4	09:27	11:13 (27)	08:39	10:14 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (27)
	15:57 30	12:43 (28)	17:03 11	10:25 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (27)
5	09:26	11:14 (27)	08:37	10:17 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (27)
	15:58 28	12:42 (28)	17:06 7	10:24 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (28)
6	09:25	11:14 (27)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (32)	09:09		11:00 (27)
	16:00 28	12:42 (28)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (32)	15:46	28	12:28 (28)
7	09:25	11:14 (27)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (32)	09:10		11:01 (27)
	16:02 26	12:41 (28)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (32)	15:45	29	12:30 (28)
8	09:24	11:14 (27)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (32)	09:12		11:02 (27)
	16:03 21	11:35 (27)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (32)	15:45	30	12:31 (28)
9	09:23	11:15 (27)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (32)	09:14		11:03 (27)
	16:05 21	11:36 (27)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (32)	15:44	30	12:32 (28)
10	09:22	11:15 (27)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (32)	09:15		11:03 (27)
	16:07 21	11:36 (27)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (32)	15:44	30	12:32 (28)
11	09:21	11:15 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (32)	09:16		11:04 (27)
	16:09 22	11:37 (27)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (32)	15:43	30	12:33 (28)
12	09:20	11:15 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (32)	09:18		11:04 (27)
	16:11 22	11:37 (27)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (32)	15:43	31	12:34 (28)
13	09:19	11:16 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (32)	09:19		11:05 (27)
	16:13 22	11:38 (27)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (32)	15:42	31	12:35 (28)
14	09:17	11:16 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (32)	09:20		11:06 (27)
	16:15 22	11:38 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (32)	15:42	30	12:35 (28)
15	09:16	11:16 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (32)	09:21		11:06 (27)
	16:17 22	11:38 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (32)	15:42	31	12:36 (28)
16	09:15	11:16 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (32)	09:22		11:08 (27)
	16:19 22	11:38 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (32)	15:42	30	12:37 (28)
17	09:13	11:18 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (32)	09:23		11:09 (27)
	16:21 21	11:39 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (27)	15:42	30	12:38 (28)
18	09:12	11:18 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (32)	09:24		11:08 (27)
	16:23 21	11:39 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (27)	15:42	30	12:37 (28)
19	09:10	10:13 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (32)	09:25		11:09 (27)
	16:25 27	11:39 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (27)	15:42	29	12:38 (28)
20	09:09	10:12 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (32)	09:26		11:10 (27)
	16:28 30	11:39 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (27)	15:43	30	12:39 (28)
21	09:07	10:11 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (32)	09:26		11:11 (27)
	16:30 32	11:39 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (27)	15:43	29	12:40 (28)
22	09:05	10:10 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (32)	09:27		11:11 (27)
	16:32 32	11:38 (27)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (27)	15:43	29	12:40 (28)
23	09:03	10:09 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (32)	09:27		11:11 (27)
	16:34 31	11:37 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (27)	15:44	30	12:40 (28)
24	09:02	10:09 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (27)	09:28		11:12 (27)
	16:37 29	11:36 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (27)	15:45	30	12:41 (28)
25	09:00	10:09 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (27)	09:28		11:12 (27)
	16:39 26	11:34 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (27)	15:45	29	12:41 (28)
26	08:58	10:09 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (27)	09:28		11:13 (27)
	16:41 19	10:28 (32)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (27)	15:46	30	12:42 (28)
27	08:56	10:09 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (27)	09:28		11:13 (27)
	16:44 20	10:29 (32)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (27)	15:47	30	12:42 (28)
28	08:54	10:09 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (27)	09:29		11:13 (27)
	16:46 19	10:28 (32)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (27)	15:48	31	12:43 (28)
29	08:52	10:09 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (27)	09:29		11:13 (27)
	16:49 20	10:29 (32)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (27)	15:49	30	12:42 (28)
30	08:50	10:09 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (27)	09:28		11:13 (27)
	16:51 19	10:28 (32)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (27)	15:50	31	12:43 (28)
31	08:48	10:10 (32)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (27)
	16:54 19	10:29 (32)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (28)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (16)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (16)
	15:52	16	13:11 (16)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (16)
2	09:27		12:55 (16)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (16)
	15:54	16	13:11 (16)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (16)
3	09:27		12:55 (16)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (16)
	15:55	17	13:12 (16)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (16)
4	09:26		12:55 (16)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (16)
	15:57	17	13:12 (16)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (16)
5	09:26		12:55 (16)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (16)
	15:58	18	13:13 (16)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (16)
6	09:25		12:55 (16)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (16)
	16:00	19	13:14 (16)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (16)
7	09:24		12:55 (16)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (16)
	16:01	20	13:15 (16)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (16)
8	09:24		12:56 (16)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (16)
	16:03	19	13:15 (16)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (16)
9	09:23		12:55 (16)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (16)
	16:05	20	13:15 (16)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (16)
10	09:22		12:56 (16)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (16)
	16:07	20	13:16 (16)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (16)
11	09:21		12:57 (16)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (16)
	16:09	20	13:17 (16)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (16)
12	09:19		12:57 (16)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (16)
	16:11	20	13:17 (16)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (16)
13	09:18		12:57 (16)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (16)
	16:12	20	13:17 (16)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (16)
14	09:17		12:58 (16)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (16)
	16:14	20	13:18 (16)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (16)
15	09:16		12:58 (16)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (16)
	16:17	20	13:18 (16)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (16)
16	09:14		12:58 (16)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (16)
	16:19	20	13:18 (16)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (16)
17	09:13		12:59 (16)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (16)
	16:21	19	13:18 (16)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (16)
18	09:11		12:59 (16)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (16)
	16:23	19	13:18 (16)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (16)
19	09:10		13:01 (16)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (16)	09:25		12:50 (16)
	16:25	18	13:19 (16)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (16)	15:42	13	13:03 (16)
20	09:08		13:02 (16)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (16)	09:25		12:51 (16)
	16:27	16	13:18 (16)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (16)	15:42	12	13:03 (16)
21	09:07		13:02 (16)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (16)	09:26		12:51 (16)
	16:30	15	13:17 (16)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (16)	15:43	12	13:03 (16)
22	09:05		13:04 (16)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (16)	09:27		12:52 (16)
	16:32	12	13:16 (16)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (16)	15:43	12	13:04 (16)
23	09:03		13:06 (16)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (16)	09:27		12:52 (16)
	16:34	9	13:15 (16)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (16)	15:44	12	13:04 (16)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (16)	09:28		12:52 (16)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (16)	15:44	12	13:04 (16)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (16)	09:28		12:53 (16)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (16)	15:45	13	13:06 (16)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (16)	09:28		12:53 (16)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (16)	15:46	13	13:06 (16)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (16)	09:28		12:54 (16)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (16)	15:47	13	13:07 (16)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (16)	09:28		12:53 (16)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (16)	15:48	14	13:07 (16)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (16)	09:28		12:53 (16)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (16)	15:49	15	13:08 (16)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (16)	09:28		12:54 (16)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (16)	15:50	15	13:09 (16)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (16)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (16)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (30)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (16)	08:59
	15:52		16:56 19	14:13 (30)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (16)	15:51
2	09:27		08:43	13:56 (30)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (16)	09:01
	15:54		16:58 16	14:12 (30)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (16)	15:50
3	09:27		08:41	13:58 (30)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (16)	09:03
	15:55		17:01 12	14:10 (30)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (16)	15:49
4	09:26		08:39	14:02 (30)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (16)	09:05
	15:57		17:03 5	14:07 (30)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (16)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (16)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (16)	15:47
6	09:25		08:34	15:25 (16)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (16)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (16)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (30)	09:10
	16:01		17:11 11	15:33 (16)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (30)	15:45
8	09:23		08:30	15:20 (16)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (30)	09:12
	16:03		17:13 15	15:35 (16)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (30)	15:44
9	09:23		08:27	15:19 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (30)	09:13
	16:05		17:15 18	15:37 (16)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (30)	15:44
10	09:22		08:25	15:18 (16)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (30)	09:15
	16:07		17:18 19	15:37 (16)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (30)	15:43
11	09:20		08:22	15:17 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (30)	09:16
	16:09		17:20 21	15:38 (16)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (30)	15:43
12	09:19		08:20	15:17 (16)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (30)	09:17
	16:10		17:23 22	15:39 (16)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (30)	15:42
13	09:18	13:53 (30)	08:17	15:17 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (30)	09:19
	16:12 5	13:58 (30)	17:25 22	15:39 (16)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (30)	15:42
14	09:17	13:51 (30)	08:15	15:16 (16)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (30)	09:20
	16:14 9	14:00 (30)	17:28 23	15:39 (16)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (30)	15:42
15	09:16	13:50 (30)	08:12	15:17 (16)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (41)	09:21
	16:17 11	14:01 (30)	17:30 22	15:39 (16)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (30)	15:42
16	09:14	13:50 (30)	08:10	15:17 (16)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (41)	09:22
	16:19 17	14:07 (30)	17:33 22	15:39 (16)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (30)	15:42
17	09:13	13:49 (30)	08:07	15:17 (16)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (41)	09:23
	16:21 21	14:10 (30)	17:35 21	15:38 (16)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (30)	15:42
18	09:11	11:38 (41)	08:05	15:18 (16)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (41)	09:24
	16:23 27	14:11 (30)	17:38 19	15:37 (16)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (30)	15:42
19	09:10	11:35 (41)	08:02	15:20 (16)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (41)	09:25
	16:25 32	14:12 (30)	17:40 17	15:37 (16)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (30)	15:42
20	09:08	11:32 (41)	07:59	15:21 (16)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (41)	09:25
	16:27 36	14:12 (30)	17:43 14	15:35 (16)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (30)	15:42
21	09:07	11:29 (41)	07:57	15:24 (16)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (16)	08:38	11:05 (41)	09:26
	16:30 42	14:13 (30)	17:45 8	15:32 (16)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (16)	16:06 42	13:49 (30)	15:43
22	09:05	11:27 (41)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (16)	08:41	11:08 (41)	09:27
	16:32 45	14:14 (30)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (16)	16:04 36	13:48 (30)	15:43
23	09:03	11:28 (41)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (16)	08:43	11:12 (41)	09:27
	16:34 44	14:14 (30)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (16)	16:02 32	13:49 (30)	15:44
24	09:01	11:29 (41)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (16)	08:45	11:16 (41)	09:27
	16:36 42	14:15 (30)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (16)	16:01 28	13:49 (30)	15:44
25	08:59	11:31 (41)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (16)	08:47	13:27 (30)	09:28
	16:39 40	14:15 (30)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (16)	15:59 21	13:48 (30)	15:45
26	08:58	11:32 (41)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (16)	08:49	13:29 (30)	09:28
	16:41 37	14:15 (30)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (16)	15:57 17	13:46 (30)	15:46
27	08:56	11:34 (41)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (16)	08:51	13:29 (30)	09:28
	16:44 33	14:15 (30)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (16)	15:56 12	13:41 (30)	15:47
28	08:54	13:51 (30)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (16)	08:53	13:30 (30)	09:28
	16:46 24	14:15 (30)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (16)	15:55 9	13:39 (30)	15:47
29	08:52	13:51 (30)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (16)	08:55	13:35 (30)	09:28
	16:48 23	14:14 (30)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (16)	15:53 5	13:40 (30)	15:49
30	08:50	13:52 (30)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (16)	08:57		09:28
	16:51 22	14:14 (30)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (16)	15:52		15:50
31	08:48	13:54 (30)			07:09		04:41		05:22	06:31		07:49	14:47 (16)			09:28
	16:53 20	14:14 (30)			20:14		22:29		22:03	20:42		16:51 20	15:07 (16)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (36) | 08:45		10:15 (17) | 07:35		13:26 (30) | 07:07		18:42 (21) | 05:44	| 04:39
	15:52	47	14:26 (18) | 16:56	119	15:37 (39) | 18:04	35	17:05 (13) | 20:16	19	19:01 (21) | 21:26	| 22:30
2	09:27		12:11 (36) | 08:43		12:16 (36) | 07:32		15:45 (11) | 07:04		18:43 (21) | 05:41	| 04:38
	15:54	53	14:28 (18) | 16:58	114	15:38 (39) | 18:07	27	17:09 (13) | 20:19	16	18:59 (21) | 21:28	| 22:32
3	09:27		12:10 (36) | 08:41		12:17 (36) | 07:30		16:34 (16) | 07:01		18:46 (21) | 05:38	| 04:37
	15:55	58	14:29 (18) | 17:01	113	15:38 (39) | 18:09	33	17:12 (13) | 20:21	11	18:57 (21) | 21:30	| 22:33
4	09:26		12:10 (36) | 08:39		09:39 (41) | 07:27		16:31 (16) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (18) | 17:03	109	15:39 (39) | 18:12	43	17:15 (13) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (36) | 08:36		09:39 (41) | 07:24		16:29 (16) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (18) | 17:06	105	15:39 (39) | 18:14	46	17:15 (13) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (36) | 08:34		09:40 (41) | 07:21		16:26 (16) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (18) | 17:08	95	15:39 (39) | 18:16	49	17:15 (13) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (17) | 08:32		09:40 (41) | 07:18		16:25 (16) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (18) | 17:11	96	15:39 (39) | 18:19	50	17:15 (13) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (17) | 08:30		09:38 (41) | 07:15		16:23 (16) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (18) | 17:13	96	15:38 (39) | 18:21	52	17:15 (13) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (17) | 08:27		09:36 (41) | 07:13		16:22 (16) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (18) | 17:16	98	15:38 (39) | 18:23	53	17:15 (13) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (17) | 08:25		09:33 (41) | 07:10		16:20 (16) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (18) | 17:18	107	15:57 (11) | 18:26	54	17:14 (13) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (17) | 08:22		09:29 (41) | 07:07		16:19 (16) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (18) | 17:20	114	16:00 (11) | 18:28	54	17:13 (13) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (17) | 08:20		09:27 (41) | 07:04		16:18 (16) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (18) | 17:23	118	16:03 (11) | 18:30	54	17:12 (13) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (17) | 08:17		09:24 (41) | 07:01		16:18 (16) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (18) | 17:25	118	16:04 (11) | 18:33	52	17:10 (13) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (17) | 08:15		09:21 (41) | 06:58		16:17 (16) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (18) | 17:28	114	16:05 (11) | 18:35	51	17:08 (13) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (17) | 08:12		09:18 (41) | 06:56		16:17 (16) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (18) | 17:30	120	16:07 (11) | 18:37	47	17:04 (13) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (17) | 08:10		09:13 (41) | 06:53		16:17 (16) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (18) | 17:33	125	16:08 (11) | 18:40	46	17:03 (16) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (17) | 08:07		09:13 (41) | 06:50		16:17 (16) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (18) | 17:35	123	16:08 (11) | 18:42	46	17:03 (16) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (17) | 08:05		09:13 (41) | 06:47		16:16 (16) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (18) | 17:38	121	16:08 (11) | 18:44	46	17:02 (16) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (17) | 08:02		09:15 (41) | 06:44		16:16 (16) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (18) | 17:40	118	16:09 (11) | 18:47	56	18:01 (21) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (17) | 07:59		09:16 (41) | 06:41		16:16 (16) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (18) | 17:43	114	16:09 (11) | 18:49	60	18:03 (21) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (17) | 07:57		09:17 (41) | 06:38		16:16 (16) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (18) | 17:45	110	16:09 (11) | 18:51	64	18:05 (21) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (17) | 07:54		09:18 (41) | 06:35		16:17 (16) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (18) | 17:48	104	16:08 (11) | 18:54	63	18:05 (21) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (17) | 07:51		09:20 (41) | 06:32		16:17 (16) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (18) | 17:50	95	16:08 (11) | 18:56	64	18:06 (21) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (17) | 07:49		13:09 (30) | 06:30		16:18 (16) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (18) | 17:52	77	16:08 (11) | 18:58	64	18:06 (21) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (17) | 07:46		13:11 (30) | 06:27		16:18 (16) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (18) | 17:55	71	16:07 (11) | 19:00	62	18:06 (21) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (17) | 07:43		13:13 (30) | 06:24		16:20 (16) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (39) | 17:57	66	16:06 (11) | 19:03	61	18:07 (21) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (17) | 07:41		13:16 (30) | 06:21		16:22 (16) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (39) | 18:00	58	16:05 (11) | 19:05	57	18:07 (21) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (17) | 07:38		13:19 (30) | 06:18		16:23 (16) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (39) | 18:02	49	16:04 (11) | 19:07	54	18:06 (21) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (17) |		| 07:15		17:26 (16) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (39) |		| 20:10	47	19:05 (21) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (17) |		| 07:12		17:29 (16) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (39) |		| 20:12	38	19:04 (21) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (17) |		| 07:09		18:41 (21) |			| 04:41	|
	16:53	126	15:37 (39) |		| 20:14	22	19:03 (21) |			| 22:29	|
Potential sun hours	221		260		365		432		521	547
Total, worst case		3257		2867		1550		46		
Sun reduction		0,50		0,50		0,50		0,50		
Oper. time red.		0,80		0,80		0,80		0,80		
Wind dir. red.		0,60		0,59		0,58		0,62		
Total reduction		0,24		0,24		0,23		0,25		
Total, real		786		675		361		11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October			November			December		
1	04:32		05:24		06:33			07:39			16:57 (16)	07:51		09:03 (41)	08:59		09:52 (17)
	22:48		22:01		20:39			19:13	53		17:50 (13)	16:49	107	15:26 (11)	15:51	96	14:16 (18)
2	04:33		05:26		06:35			07:41			16:58 (16)	07:53		09:06 (41)	09:01		09:53 (17)
	22:48		21:58		20:37			19:10	54		17:52 (13)	16:46	98	15:08 (39)	15:50	91	14:16 (18)
3	04:34		05:28		06:37			07:44			16:58 (16)	07:56		09:08 (41)	09:03		09:54 (17)
	22:47		21:56		20:34			19:07	54		17:52 (13)	16:44	96	15:08 (39)	15:49	88	14:17 (18)
4	04:35		05:30		06:39			07:46			16:58 (16)	07:58		09:10 (41)	09:05		09:54 (17)
	22:46		21:54		20:31			19:04	54		17:52 (13)	16:41	94	15:08 (39)	15:48	83	14:17 (18)
5	04:36		05:33		06:42			07:48			17:00 (16)	08:01		09:10 (41)	09:07		09:55 (17)
	22:45		21:51		20:28			19:01	52		17:52 (13)	16:39	95	15:09 (39)	15:47	77	14:17 (18)
6	04:37		05:35		06:44			07:50			17:00 (16)	08:03		09:10 (41)	09:08		09:57 (17)
	22:45		21:49		20:25			18:58	52		17:52 (13)	16:37	105	15:09 (39)	15:46	71	14:17 (18)
7	04:38		05:37		06:46			07:53			17:01 (16)	08:06		09:08 (41)	09:10		11:57 (36)
	22:44		21:46		20:22			18:56	50		17:51 (13)	16:34	111	15:09 (39)	15:45	64	14:17 (18)
8	04:40		05:39		06:48			07:55			17:03 (16)	08:08		11:48 (36)	09:12		11:57 (36)
	22:43		21:44		20:19			18:53	48		17:51 (13)	16:32	112	15:09 (39)	15:44	62	14:17 (18)
9	04:41		05:41		06:51		18:40 (21)	07:57			17:04 (16)	08:10		11:47 (36)	09:13		11:59 (36)
	22:41		21:41		20:16	10	18:50 (21)	18:50	46		17:50 (13)	16:30	113	15:09 (39)	15:44	57	14:17 (18)
10	04:42		05:44		06:53		18:37 (21)	07:59			17:06 (16)	08:13		09:45 (17)	09:15		12:00 (36)
	22:40		21:39		20:14	15	18:52 (21)	18:47	40		17:48 (13)	16:27	121	15:08 (39)	15:43	53	14:17 (18)
11	04:44		05:46		06:55		18:35 (21)	08:02			16:22 (11)	08:15		09:42 (17)	09:16		12:01 (36)
	22:39		21:36		20:11	19	18:54 (21)	18:44	36		17:45 (13)	16:25	127	15:08 (39)	15:43	47	14:16 (18)
12	04:45		05:48		06:57		18:34 (21)	08:04			16:18 (11)	08:17		09:41 (17)	09:17		12:03 (36)
	22:38		21:34		20:08	21	18:55 (21)	18:42	25		17:41 (13)	16:23	130	15:08 (39)	15:42	44	14:17 (18)
13	04:47		05:50		06:59		17:21 (16)	08:06			13:56 (30)	08:20		09:39 (17)	09:19		12:04 (36)
	22:36		21:31		20:05	37	18:55 (21)	18:39	42		17:38 (13)	16:21	131	15:06 (39)	15:42	39	14:17 (18)
14	04:49		05:53		07:02		17:17 (16)	08:09			13:50 (30)	08:22		09:39 (17)	09:20		12:07 (36)
	22:35		21:29		20:02	45	18:55 (21)	18:36	53		16:37 (11)	16:19	131	15:05 (39)	15:42	34	14:17 (18)
15	04:50		05:55		07:04		17:13 (16)	08:11			13:46 (30)	08:25		09:39 (17)	09:21		13:06 (30)
	22:33		21:26		19:59	52	18:55 (21)	18:33	62		16:37 (11)	16:17	128	15:03 (39)	15:42	26	14:16 (18)
16	04:52		05:57		07:06		17:11 (16)	08:13			13:44 (30)	08:27		09:39 (17)	09:22		13:08 (30)
	22:32		21:23		19:56	56	18:55 (21)	18:30	69		16:39 (11)	16:15	124	15:02 (39)	15:42	22	14:15 (18)
17	04:54		05:59		07:08		17:08 (16)	08:16			13:41 (30)	08:29		09:38 (17)	09:23		13:10 (30)
	22:30		21:21		19:53	59	18:54 (21)	18:28	75		16:39 (11)	16:13	125	14:07 (18)	15:42	18	14:15 (18)
18	04:56		06:02		07:10		17:07 (16)	08:18			09:55 (41)	08:32		09:38 (17)	09:24		13:12 (30)
	22:29		21:18		19:50	63	18:55 (21)	18:25	86		16:39 (11)	16:11	129	14:09 (18)	15:42	16	14:15 (18)
19	04:58		06:04		07:12		17:06 (16)	08:20			09:51 (41)	08:34		09:39 (17)	09:25		13:16 (7)
	22:27		21:15		19:47	63	18:54 (21)	18:22	98		16:39 (11)	16:09	131	14:11 (18)	15:42	11	14:15 (18)
20	04:59		06:06		07:15		17:04 (16)	08:23			09:49 (41)	08:36		09:38 (17)	09:25		13:16 (7)
	22:25		21:13		19:45	65	18:53 (21)	18:20	106		16:40 (11)	16:07	129	14:11 (18)	15:42	9	14:14 (18)
21	05:01		06:08		07:17		17:03 (16)	08:25			09:46 (41)	08:38		09:39 (17)	09:26		13:17 (7)
	22:23		21:10		19:42	64	18:51 (21)	18:17	113		16:39 (11)	16:06	131	14:13 (18)	15:43	9	14:15 (18)
22	05:03		06:11		07:19		17:01 (16)	08:27			09:45 (41)	08:41		09:38 (17)	09:26		13:18 (7)
	22:21		21:07		19:39	64	18:50 (21)	18:14	116		16:39 (11)	16:04	131	14:13 (18)	15:43	9	14:16 (18)
23	05:05		06:13		07:21		17:00 (16)	08:30			09:44 (41)	08:43		09:39 (17)	09:27		13:18 (7)
	22:19		21:05		19:36	62	18:48 (21)	18:12	119		16:38 (11)	16:02	128	14:14 (18)	15:44	9	14:16 (18)
24	05:07		06:15		07:24		17:00 (16)	08:32			09:43 (41)	08:45		09:39 (17)	09:27		13:18 (7)
	22:18		21:02		19:33	58	18:46 (21)	18:09	122		16:38 (11)	16:01	127	14:14 (18)	15:44	11	14:17 (18)
25	05:09		06:17		07:26		16:59 (16)	07:34			08:43 (41)	08:47		09:40 (17)	09:28		13:15 (30)
	22:16		20:59		19:30	46	17:45 (16)	17:06	123		15:38 (11)	15:59	124	14:15 (18)	15:45	14	14:17 (18)
26	05:11		06:19		07:28		16:58 (16)	07:37			08:44 (41)	08:49		09:40 (17)	09:28		13:14 (30)
	22:14		20:56		19:27	47	17:45 (16)	17:04	122		15:37 (11)	15:58	119	14:15 (18)	15:46	17	14:18 (18)
27	05:13		06:22		07:30		16:58 (16)	07:39			08:48 (41)	08:51		09:49 (17)	09:28		13:13 (30)
	22:11		20:53		19:24	46	17:44 (16)	17:01	118		15:36 (11)	15:56	112	14:16 (18)	15:47	20	14:19 (18)
28	05:15		06:24		07:32		16:58 (16)	07:41			08:51 (41)	08:53		09:49 (17)	09:28		13:12 (30)
	22:09		20:51		19:21	46	17:44 (16)	16:59	115		15:35 (11)	15:55	109	14:16 (18)	15:48	24	14:21 (18)
29	05:17		06:26		07:35		16:58 (16)	07:44			08:54 (41)	08:55		09:50 (17)	09:28		12:14 (36)
	22:07		20:48		19:19	50	17:48 (13)	16:56	119		15:34 (11)	15:53	106	14:16 (18)	15:49	31	14:23 (18)
30	05:20		06:28		07:37		16:57 (16)	07:46			08:57 (41)	08:57		09:50 (17)	09:28		12:13 (36)
	22:05		20:45		19:16	52	17:49 (13)	16:53	117		15:32 (11)	15:52	103	14:16 (18)	15:50	37	14:25 (18)
31	05:22		06:31					07:49			08:59 (41)				09:28		12:12 (36)
	22:03		20:42					16:51	115		15:29 (11)				15:51	41	14:25 (18)
Potential sun hours	546		478		386			319				236			199		
Total, worst case						1040			2454				3527			1230	
Sun reduction						0,50			0,50				0,50			0,50	
Oper. time red.						0,80			0,80				0,80			0,80	
Wind dir. red.						0,59			0,59				0,60			0,59	
Total reduction						0,24			0,24				0,24			0,24	
Total, real						245			577				846			289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (5)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43 1	20:40 (5)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (5)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44 1	20:41 (5)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (5)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45 1	20:40 (5)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (5)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46 1	20:41 (5)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47 2	20:42 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47 2	20:42 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48 2	20:42 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48 2	20:43 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (5)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49 2	20:43 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49 2	20:43 (5)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49 2	20:43 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50 2	20:43 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50 2	20:44 (5)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50 2	20:44 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50 2	20:44 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50 2	20:44 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49 2	20:44 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49 1	20:44 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49 2	20:45 (5)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48 1	20:44 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (5) 04:32	20:33 (5) 05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (5) 22:48	15 20:48 (5) 22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (5) 04:33	20:33 (5) 05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (5) 22:47	15 20:48 (5) 21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (5) 04:34	20:33 (5) 05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (5) 22:47	15 20:48 (5) 21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (5) 04:35	20:33 (5) 05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (5) 22:46	14 20:47 (5) 21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (5) 04:36	20:33 (5) 05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (5) 22:45	14 20:47 (5) 21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (5) 04:37	20:34 (5) 05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (5) 22:44	13 20:47 (5) 21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (5) 04:39	20:34 (5) 05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (5) 22:43	12 20:46 (5) 21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (5) 04:40	20:34 (5) 05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (5) 22:42	12 20:46 (5) 21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (5) 04:41	20:35 (5) 05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (5) 22:41	11 20:46 (5) 21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (5) 04:43	20:35 (5) 05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (5) 22:40	11 20:46 (5) 21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (5) 04:44	20:35 (5) 05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (5) 22:39	9 20:44 (5) 21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (5) 04:46	20:35 (5) 05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (5) 22:37	4 20:39 (5) 21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (5) 04:47	20:35 (5) 05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (5) 22:36	3 20:38 (5) 21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (5) 04:49	20:35 (5) 05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (5) 22:34	2 20:37 (5) 21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (5) 04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (5) 22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (5) 04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (5) 22:31	21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (5) 04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (5) 22:30	21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (5) 04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (5) 22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (5) 04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (5) 22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (5) 05:00	06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (5) 22:25	21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (5) 05:01	06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (5) 22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (5) 05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (5) 22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (5) 05:05	06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (5) 22:19	21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (5) 05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (5) 22:17	21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (5) 05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (5) 22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (5) 05:11	06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (5) 22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (5) 05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (5) 22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (5) 05:15	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (5) 22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (5) 05:18	06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (5) 22:07	20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (5) 04:31	20:32 (5) 05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (5) 22:48	17 20:49 (5) 22:05	20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (5)	05:22	06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (5)	22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					5	469	150					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,73	0,73	0,73					
Total reduction					0,29	0,29	0,29					
Total, real					1	138	44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April		May		June	
1	09:28	08:46	07:35	07:07		05:44	07:31 (42)	04:40	06:17 (40)
	15:53	16:56	18:05	20:17		21:26	31 08:02 (42)	22:30	23 06:40 (40)
2	09:27	08:43	07:33	07:04		05:42	07:32 (42)	04:39	06:16 (40)
	15:54	16:59	18:07	20:19		21:28	29 08:01 (42)	22:32	24 06:40 (40)
3	09:27	08:41	07:30	07:01		05:39	07:32 (42)	04:37	06:16 (40)
	15:56	17:01	18:10	20:21		21:31	27 07:59 (42)	22:34	25 06:41 (40)
4	09:26	08:39	07:27	06:58		05:36	07:34 (42)	04:36	06:16 (40)
	15:57	17:04	18:12	20:24		21:33	24 07:58 (42)	22:35	26 06:42 (40)
5	09:26	08:37	07:24	06:55		05:34	07:36 (42)	04:35	06:16 (40)
	15:59	17:06	18:14	20:26		21:35	20 07:56 (42)	22:36	27 06:43 (40)
6	09:25	08:34	07:21	06:53		05:32	07:38 (42)	04:34	06:16 (40)
	16:00	17:09	18:17	20:28		21:37	16 07:54 (42)	22:38	27 06:43 (40)
7	09:24	08:32	07:19	06:50		05:29	07:40 (42)	04:33	06:16 (40)
	16:02	17:11	18:19	20:31		21:40	10 07:50 (42)	22:39	27 06:43 (40)
8	09:24	08:30	07:16	06:47		05:27		04:32	06:15 (40)
	16:04	17:14	18:21	20:33		21:42		22:40	29 06:44 (40)
9	09:23	08:27	07:13	06:44		05:24		04:31	06:16 (40)
	16:06	17:16	18:24	20:35		21:44		22:42	29 06:45 (40)
10	09:22	08:25	07:10	06:41	07:48 (42)	05:22		04:31	06:15 (40)
	16:07	17:18	18:26	20:37	10 07:58 (42)	21:46		22:43	30 06:45 (40)
11	09:21	08:23	07:07	06:38	07:45 (42)	05:20		04:30	06:16 (40)
	16:09	17:21	18:28	20:40	17 08:02 (42)	21:49		22:44	29 06:45 (40)
12	09:20	08:20	07:04	06:36	07:41 (42)	05:17		04:29	06:15 (40)
	16:11	17:23	18:31	20:42	22 08:03 (42)	21:51		22:45	30 06:45 (40)
13	09:18	08:18	07:02	06:33	07:37 (42)	05:15		04:29	06:16 (40)
	16:13	17:26	18:33	20:44	27 08:04 (42)	21:53		22:46	30 06:46 (40)
14	09:17	08:15	06:59	06:30	07:35 (42)	05:13		04:28	06:16 (40)
	16:15	17:28	18:35	20:47	30 08:05 (42)	21:55		22:46	30 06:46 (40)
15	09:16	08:13	06:56	06:27	07:34 (42)	05:11		04:28	06:15 (40)
	16:17	17:31	18:38	20:49	33 08:07 (42)	21:57		22:47	31 06:46 (40)
16	09:14	08:10	06:53	06:24	07:33 (42)	05:09		04:28	06:16 (40)
	16:19	17:33	18:40	20:51	34 08:07 (42)	22:00		22:48	30 06:46 (40)
17	09:13	08:07	06:50	06:22	07:32 (42)	05:06		04:27	06:16 (40)
	16:21	17:36	18:42	20:54	35 08:07 (42)	22:02		22:48	31 06:47 (40)
18	09:12	08:05	06:47	06:19	07:31 (42)	05:04		04:27	06:16 (40)
	16:24	17:38	18:45	20:56	37 08:08 (42)	22:04		22:49	31 06:47 (40)
19	09:10	08:02	06:44	06:16	07:30 (42)	05:02		04:27	06:16 (40)
	16:26	17:41	18:47	20:58	38 08:08 (42)	22:06		22:49	31 06:47 (40)
20	09:08	08:00	06:42	06:13	07:30 (42)	05:00		04:27	06:16 (40)
	16:28	17:43	18:49	21:00	39 08:09 (42)	22:08		22:50	31 06:47 (40)
21	09:07	07:57	06:39	06:11	07:30 (42)	04:58		04:27	06:16 (40)
	16:30	17:46	18:52	21:03	38 08:08 (42)	22:10		22:50	31 06:47 (40)
22	09:05	07:54	06:36	06:08	07:29 (42)	04:56		04:27	06:17 (40)
	16:32	17:48	18:54	21:05	39 08:08 (42)	22:12		22:50	31 06:48 (40)
23	09:03	07:52	06:33	06:05	07:29 (42)	04:55		04:28	06:17 (40)
	16:35	17:50	18:56	21:07	39 08:08 (42)	22:14		22:50	31 06:48 (40)
24	09:02	07:49	06:30	06:02	07:29 (42)	04:53		04:28	06:17 (40)
	16:37	17:53	18:58	21:10	38 08:07 (42)	22:16		22:50	31 06:48 (40)
25	09:00	07:46	06:27	06:00	07:29 (42)	04:51		04:28	06:18 (40)
	16:39	17:55	19:01	21:12	38 08:07 (42)	22:18		22:50	31 06:49 (40)
26	08:58	07:44	06:24	05:57	07:29 (42)	04:49	06:24 (40)	04:29	06:18 (40)
	16:42	17:58	19:03	21:14	37 08:06 (42)	22:20	8 06:32 (40)	22:50	31 06:49 (40)
27	08:56	07:41	06:21	05:54	07:29 (42)	04:48	06:21 (40)	04:29	06:19 (40)
	16:44	18:00	19:05	21:17	37 08:06 (42)	22:22	13 06:34 (40)	22:50	30 06:49 (40)
28	08:54	07:38	06:18	05:52	07:29 (42)	04:46	06:20 (40)	04:30	06:18 (40)
	16:47	18:02	19:08	21:19	36 08:05 (42)	22:24	16 06:36 (40)	22:50	31 06:49 (40)
29	08:52		07:16	05:49	07:30 (42)	04:44	06:19 (40)	04:31	06:19 (40)
	16:49		20:10	21:21	34 08:04 (42)	22:25	18 06:37 (40)	22:49	30 06:49 (40)
30	08:50		07:13	05:47	07:30 (42)	04:43	06:19 (40)	04:31	06:19 (40)
	16:51		20:12	21:24	33 08:03 (42)	22:27	20 06:39 (40)	22:49	30 06:49 (40)
31	08:48		07:10			04:41	06:17 (40)		
	16:54		20:14			22:29	22 06:39 (40)		
Potential sun hours	221	260	365	432		521		547	
Total, worst case					691		254		878
Sun reduction					0,50		0,50		0,50
Oper. time red.					0,80		0,80		0,80
Wind dir. red.					0,65		0,62		0,58
Total reduction					0,26		0,25		0,23
Total, real					178		63		204

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October	November	December
1	04:32		06:20 (40)	05:24			06:33		07:44 (42)	07:39	07:51	09:00
	22:48	30	06:50 (40)	22:01			20:40	17	08:01 (42)	19:13	16:49	15:51
2	04:33		06:20 (40)	05:27			06:35		07:47 (42)	07:42	07:54	09:01
	22:48	30	06:50 (40)	21:58			20:37	10	07:57 (42)	19:10	16:47	15:50
3	04:34		06:20 (40)	05:29			06:38			07:44	07:56	09:03
	22:47	29	06:49 (40)	21:56			20:34			19:07	16:44	15:49
4	04:35		06:20 (40)	05:31			06:40			07:46	07:59	09:05
	22:46	29	06:49 (40)	21:54			20:31			19:05	16:42	15:48
5	04:36		06:21 (40)	05:33			06:42			07:48	08:01	09:07
	22:46	28	06:49 (40)	21:51			20:28			19:02	16:39	15:47
6	04:38		06:21 (40)	05:35		07:49 (42)	06:44			07:51	08:03	09:09
	22:45	28	06:49 (40)	21:49	13	08:02 (42)	20:25			18:59	16:37	15:47
7	04:39		06:23 (40)	05:38		07:46 (42)	06:47			07:53	08:06	09:10
	22:44	27	06:50 (40)	21:47	18	08:04 (42)	20:23			18:56	16:35	15:46
8	04:40		06:23 (40)	05:40		07:44 (42)	06:49			07:55	08:08	09:12
	22:43	26	06:49 (40)	21:44	22	08:06 (42)	20:20			18:53	16:32	15:45
9	04:42		06:23 (40)	05:42		07:43 (42)	06:51			07:57	08:11	09:13
	22:42	26	06:49 (40)	21:42	25	08:08 (42)	20:17			18:50	16:30	15:44
10	04:43		06:24 (40)	05:44		07:41 (42)	06:53			08:00	08:13	09:15
	22:40	24	06:48 (40)	21:39	28	08:09 (42)	20:14			18:48	16:28	15:44
11	04:45		06:25 (40)	05:46		07:40 (42)	06:55			08:02	08:15	09:16
	22:39	23	06:48 (40)	21:37	30	08:10 (42)	20:11			18:45	16:26	15:43
12	04:46		06:25 (40)	05:49		07:39 (42)	06:58			08:04	08:18	09:17
	22:38	23	06:48 (40)	21:34	32	08:11 (42)	20:08			18:42	16:24	15:43
13	04:48		06:26 (40)	05:51		07:38 (42)	07:00			08:07	08:20	09:19
	22:36	21	06:47 (40)	21:32	33	08:11 (42)	20:05			18:39	16:22	15:43
14	04:49		06:28 (40)	05:53		07:37 (42)	07:02			08:09	08:22	09:20
	22:35	18	06:46 (40)	21:29	35	08:12 (42)	20:02			18:36	16:19	15:43
15	04:51		06:28 (40)	05:55		07:36 (42)	07:04			08:11	08:25	09:21
	22:34	17	06:45 (40)	21:26	36	08:12 (42)	19:59			18:34	16:17	15:42
16	04:53		06:30 (40)	05:58		07:36 (42)	07:06			08:14	08:27	09:22
	22:32	14	06:44 (40)	21:24	37	08:13 (42)	19:57			18:31	16:15	15:42
17	04:54		06:31 (40)	06:00		07:35 (42)	07:09			08:16	08:29	09:23
	22:30	11	06:42 (40)	21:21	38	08:13 (42)	19:54			18:28	16:13	15:42
18	04:56		06:35 (40)	06:02		07:36 (42)	07:11			08:18	08:32	09:24
	22:29	5	06:40 (40)	21:18	38	08:14 (42)	19:51			18:25	16:12	15:42
19	04:58			06:04		07:35 (42)	07:13			08:21	08:34	09:25
	22:27			21:16	39	08:14 (42)	19:48			18:23	16:10	15:43
20	05:00			06:07		07:35 (42)	07:15			08:23	08:36	09:25
	22:25			21:13	38	08:13 (42)	19:45			18:20	16:08	15:43
21	05:02			06:09		07:34 (42)	07:17			08:25	08:39	09:26
	22:23			21:10	39	08:13 (42)	19:42			18:17	16:06	15:43
22	05:04			06:11		07:34 (42)	07:20			08:28	08:41	09:27
	22:22			21:08	39	08:13 (42)	19:39			18:15	16:04	15:44
23	05:06			06:13		07:34 (42)	07:22			08:30	08:43	09:27
	22:20			21:05	38	08:12 (42)	19:36			18:12	16:03	15:44
24	05:08			06:15		07:34 (42)	07:24			08:32	08:45	09:28
	22:18			21:02	37	08:11 (42)	19:33			18:09	16:01	15:45
25	05:10			06:18		07:34 (42)	07:26			07:35	08:47	09:28
	22:16			20:59	37	08:11 (42)	19:30			17:07	16:00	15:46
26	05:12			06:20		07:34 (42)	07:28			07:37	08:50	09:28
	22:14			20:57	36	08:10 (42)	19:28			17:04	15:58	15:46
27	05:14			06:22		07:35 (42)	07:31			07:39	08:52	09:28
	22:12			20:54	34	08:09 (42)	19:25			17:02	15:57	15:47
28	05:16			06:24		07:35 (42)	07:33			07:42	08:54	09:28
	22:10			20:51	32	08:07 (42)	19:22			16:59	15:55	15:48
29	05:18			06:27		07:36 (42)	07:35			07:44	08:56	09:28
	22:07			20:48	30	08:06 (42)	19:19			16:56	15:54	15:49
30	05:20			06:29		07:38 (42)	07:37			07:47	08:58	09:28
	22:05			20:45	27	08:05 (42)	19:16			16:54	15:53	15:50
31	05:22			06:31		07:41 (42)				07:49		09:28
	22:03			20:43	22	08:03 (42)				16:51		15:51
Potential sun hours	545			478			386			319	236	200
Total, worst case		409			833			27				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,58			0,65			0,65				
Total reduction		0,23			0,26			0,26				
Total, real		95			215			7				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		06:01 (42)	04:32	06:06 (42)	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	34	06:35 (42)	22:48	37 06:43 (42)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:01 (42)	04:33	06:07 (42)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	35	06:36 (42)	22:48	36 06:43 (42)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:01 (42)	04:34	06:06 (42)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30		22:33	35	06:36 (42)	22:47	37 06:43 (42)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:00 (42)	04:35	06:06 (42)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	36	06:36 (42)	22:46	37 06:43 (42)	21:54	20:31	19:05	16:42	15:48
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	15:59	17:06	18:14	20:26	21:35		22:36	36	06:37 (42)	22:46	37 06:43 (42)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:01 (42)	04:38	06:08 (42)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	36	06:37 (42)	22:45	36 06:44 (42)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:01 (42)	04:39	06:08 (42)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	36	06:37 (42)	22:44	36 06:44 (42)	21:47	20:23	18:56	16:35	15:46
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	16:06	17:16	18:24	20:35	21:44		22:41	36	06:38 (42)	22:42	36 06:44 (42)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:01 (42)	04:43	06:08 (42)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	37	06:38 (42)	22:40	35 06:43 (42)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:02 (42)	04:45	06:09 (42)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	37	06:39 (42)	22:39	35 06:44 (42)	21:37	20:11	18:45	16:26	15:43
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	16:11	17:23	18:31	20:42	21:51		22:45	36	06:38 (42)	22:38	35 06:44 (42)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:02 (42)	04:48	06:09 (42)	05:51	07:00	08:07	08:20	09:19
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14	09:17	08:15	06:59	06:30	05:13		04:28		06:03 (42)	04:49	06:10 (42)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	36	06:39 (42)	22:35	33 06:43 (42)	21:29	20:02	18:36	16:19	15:43
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16	09:14	08:10	06:53	06:24	05:09		04:28		06:02 (42)	04:53	06:11 (42)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00		22:48	37	06:39 (42)	22:32	32 06:43 (42)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	06:12 (42)	04:27		06:03 (42)	04:54	06:11 (42)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	10 06:22 (42)	22:48	37	06:40 (42)	22:30	31 06:42 (42)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	06:11 (42)	04:27		06:03 (42)	04:56	06:12 (42)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	14 06:25 (42)	22:49	37	06:40 (42)	22:29	30 06:42 (42)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	06:09 (42)	04:27		06:03 (42)	04:58	06:13 (42)	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	18 06:27 (42)	22:49	37	06:40 (42)	22:27	29 06:42 (42)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	06:08 (42)	04:27		06:03 (42)	05:00	06:13 (42)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	20 06:28 (42)	22:50	37	06:40 (42)	22:25	28 06:41 (42)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	06:06 (42)	04:27		06:03 (42)	05:02	06:14 (42)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	23 06:29 (42)	22:50	37	06:40 (42)	22:23	27 06:41 (42)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	06:05 (42)	04:27		06:04 (42)	05:04	06:16 (42)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	25 06:30 (42)	22:50	37	06:41 (42)	22:22	24 06:40 (42)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	06:03 (42)	04:28		06:04 (42)	05:06	06:17 (42)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	28 06:31 (42)	22:50	37	06:41 (42)	22:20	21 06:38 (42)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	06:03 (42)	04:28		06:04 (42)	05:08	06:18 (42)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	29 06:32 (42)	22:50	37	06:41 (42)	22:18	19 06:37 (42)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	06:02 (42)	04:28		06:05 (42)	05:10	06:20 (42)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	30 06:32 (42)	22:50	37	06:42 (42)	22:16	16 06:36 (42)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	06:02 (42)	04:29		06:05 (42)	05:12	06:22 (42)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	31 06:33 (42)	22:50	36	06:41 (42)	22:14	12 06:34 (42)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	06:01 (42)	04:29		06:05 (42)	05:14	06:25 (42)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	32 06:33 (42)	22:50	37	06:42 (42)	22:12	6 06:31 (42)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	06:01 (42)	04:30		06:05 (42)	05:16		06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	33 06:34 (42)	22:50	37	06:42 (42)	22:10		20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	06:01 (42)	04:31		06:05 (42)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	34 06:35 (42)	22:49	37	06:42 (42)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	06:01 (42)	04:32		06:06 (42)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34 06:35 (42)	22:49	37	06:43 (42)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41	06:01 (42)				05:22		06:31		07:49		09:28
	16:54		20:14		22:29	34 06:35 (42)				22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						395		1094		808						
Sun reduction						0,50		0,50		0,50						
Oper. time red.						0,80		0,80		0,80						
Wind dir. red.						0,58		0,58		0,58						
Total reduction						0,23		0,23		0,23						
Total, real						91		252		186						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		04:32		05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:46 (42)	33	06:51 (42)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (42)		06:19 (42)	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	28	06:46 (42)	33	06:52 (42)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:17 (42)		06:18 (42)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:46 (42)	33	06:51 (42)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:16 (42)		06:18 (42)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:46 (42)	33	06:51 (42)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:16 (42)		06:19 (42)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:47 (42)	33	06:52 (42)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:15 (42)		06:21 (42)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:47 (42)	32	06:53 (42)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:14 (42)		06:22 (42)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:46 (42)	31	06:53 (42)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:13 (42)		06:23 (42)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	33	06:46 (42)	30	06:53 (42)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:14 (42)		06:24 (42)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	33	06:47 (42)	29	06:53 (42)	21:42	20:17	18:50	16:30	15:44
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	16:11	17:23	18:31	20:42	21:51		22:45	32	06:46 (42)	27	06:54 (42)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:14 (42)		06:28 (42)	05:51	07:00	08:07	08:20	09:19
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14	09:17	08:15	06:59	06:30	05:13		04:28		06:15 (42)		06:30 (42)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	32	06:47 (42)	24	06:54 (42)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:15 (42)		06:31 (42)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	32	06:47 (42)	23	06:54 (42)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:39 (42)		04:28		06:15 (42)	04:53	06:33 (42)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	2	06:41 (42)		22:48	32	06:47 (42)	22:32	22	06:55 (42)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:37 (42)		04:27		06:15 (42)	04:54	06:33 (42)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	4	06:41 (42)		22:48	32	06:47 (42)	22:30	21	06:54 (42)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04		06:36 (42)		04:27		06:16 (42)	04:56	06:35 (42)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	7	06:43 (42)		22:49	31	06:47 (42)	22:29	20	06:55 (42)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:35 (42)		04:27		06:16 (42)	04:58	06:37 (42)	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	8	06:43 (42)		22:49	31	06:47 (42)	22:27	18	06:55 (42)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:33 (42)		04:27		06:16 (42)	05:00	06:38 (42)	06:07	07:15	08:23	08:36	09:25
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21	09:07	07:57	06:39	06:11	04:58		06:31 (42)		04:27		06:16 (42)	05:02	06:39 (42)	06:09	07:17	08:25	08:39	09:26
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22	09:05	07:54	06:36	06:08	04:56		06:30 (42)		04:27		06:17 (42)	05:04	06:41 (42)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	14	06:44 (42)		22:50	31	06:48 (42)	22:22	13	06:54 (42)	21:08	19:39	18:15	16:04	15:44
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	16:39	17:55	19:01	21:12	22:18	19	06:45 (42)		22:50	31	06:49 (42)	22:16	8	06:53 (42)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:25 (42)		04:29		06:17 (42)	05:12	06:47 (42)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	20	06:45 (42)		22:50	32	06:49 (42)	22:14	6	06:53 (42)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:23 (42)		04:29		06:18 (42)	05:14	06:49 (42)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22	06:45 (42)		22:50	32	06:50 (42)	22:12	3	06:52 (42)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:23 (42)		04:30		06:17 (42)	05:16	06:51 (42)	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	22	06:45 (42)		22:50	32	06:49 (42)	22:10	1	06:52 (42)	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:22 (42)		04:31		06:18 (42)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	24	06:46 (42)		22:49	32	06:50 (42)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:21 (42)		04:32		06:18 (42)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	25	06:46 (42)		22:49	33	06:51 (42)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:19 (42)					05:22		06:31		07:49		09:28
	16:54		20:14		22:29	26	06:45 (42)					22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521			547		545			478	386	319	236	200
Total, worst case						247			944		606							
Sun reduction						0,50			0,50		0,50							
Oper. time red.						0,80			0,80		0,80							
Wind dir. red.						0,58			0,58		0,58							
Total reduction						0,23			0,23		0,23							
Total, real						58			220		141							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	07:08 (42)	04:40	06:45 (42)	04:32	06:56 (42)	05:24	06:57 (42)	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	1	07:09 (42)	22:30	32	07:17 (42)	22:48	23	07:19 (42)	22:01	33	07:30 (42)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		07:06 (42)	04:39		06:46 (42)	04:33		06:56 (42)	05:27		06:59 (42)	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	6	07:12 (42)	22:32	31	07:17 (42)	22:48	24	07:20 (42)	21:58	31	07:30 (42)	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		07:04 (42)	04:38		06:46 (42)	04:34		06:55 (42)	05:29		07:01 (42)	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31	9	07:13 (42)	22:33	31	07:17 (42)	22:47	25	07:20 (42)	21:56	28	07:29 (42)	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		07:02 (42)	04:36		06:47 (42)	04:35		06:55 (42)	05:31		07:03 (42)	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	13	07:15 (42)	22:35	29	07:16 (42)	22:46	25	07:20 (42)	21:54	26	07:29 (42)	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		07:00 (42)	04:35		06:48 (42)	04:37		06:54 (42)	05:33		07:05 (42)	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	16	07:16 (42)	22:36	29	07:17 (42)	22:46	27	07:21 (42)	21:51	23	07:28 (42)	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		06:58 (42)	04:34		06:49 (42)	04:38		06:55 (42)	05:35		07:06 (42)	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37	19	07:17 (42)	22:38	27	07:16 (42)	22:45	28	07:23 (42)	21:49	21	07:27 (42)	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		06:55 (42)	04:33		06:49 (42)	04:39		06:55 (42)	05:38		07:08 (42)	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22	07:17 (42)	22:39	27	07:16 (42)	22:44	28	07:23 (42)	21:47	18	07:26 (42)	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		06:54 (42)	04:32		06:49 (42)	04:40		06:54 (42)	05:40		07:10 (42)	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	24	07:18 (42)	22:40	26	07:15 (42)	22:43	30	07:24 (42)	21:44	15	07:25 (42)	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		06:52 (42)	04:31		06:50 (42)	04:42		06:54 (42)	05:42		07:12 (42)	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	27	07:19 (42)	22:42	26	07:16 (42)	22:42	30	07:24 (42)	21:42	12	07:24 (42)	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		06:50 (42)	04:31		06:51 (42)	04:43		06:53 (42)	05:44		07:13 (42)	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	29	07:19 (42)	22:43	24	07:15 (42)	22:40	31	07:24 (42)	21:39	9	07:22 (42)	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		06:48 (42)	04:30		06:52 (42)	04:45		06:54 (42)	05:46		07:15 (42)	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	32	07:20 (42)	22:44	23	07:15 (42)	22:39	32	07:26 (42)	21:37	5	07:20 (42)	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		06:46 (42)	04:29		06:52 (42)	04:46		06:53 (42)	05:49			06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	34	07:20 (42)	22:45	22	07:14 (42)	22:38	33	07:26 (42)	21:34			20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		06:45 (42)	04:29		06:53 (42)	04:48		06:53 (42)	05:51			07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	35	07:20 (42)	22:46	21	07:14 (42)	22:36	33	07:26 (42)	21:32			20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		06:43 (42)	04:28		06:53 (42)	04:49		06:53 (42)	05:53			07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	37	07:20 (42)	22:46	22	07:15 (42)	22:35	34	07:27 (42)	21:29			20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		06:41 (42)	04:28		06:53 (42)	04:51		06:52 (42)	05:55			07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	39	07:20 (42)	22:47	21	07:14 (42)	22:34	35	07:27 (42)	21:26			19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:41 (42)	04:28		06:54 (42)	04:53		06:52 (42)	05:58			07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	39	07:20 (42)	22:48	20	07:14 (42)	22:32	36	07:28 (42)	21:24			19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:40 (42)	04:27		06:54 (42)	04:54		06:52 (42)	06:00			07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	40	07:20 (42)	22:48	20	07:14 (42)	22:30	36	07:28 (42)	21:21			19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04		06:41 (42)	04:27		06:55 (42)	04:56		06:52 (42)	06:02			07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	40	07:21 (42)	22:49	19	07:14 (42)	22:29	37	07:29 (42)	21:18			19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:41 (42)	04:27		06:55 (42)	04:58		06:52 (42)	06:04			07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	40	07:21 (42)	22:49	19	07:14 (42)	22:27	38	07:30 (42)	21:16			19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:41 (42)	04:27		06:55 (42)	05:00		06:51 (42)	06:07			07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	39	07:20 (42)	22:50	19	07:14 (42)	22:25	38	07:29 (42)	21:13			19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:41 (42)	04:27		06:55 (42)	05:02		06:51 (42)	06:09			07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	39	07:20 (42)	22:50	19	07:14 (42)	22:23	39	07:30 (42)	21:10			19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:41 (42)	04:27		06:56 (42)	05:04		06:52 (42)	06:11			07:19	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	39	07:20 (42)	22:50	19	07:15 (42)	22:22	39	07:31 (42)	21:08			19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:41 (42)	04:28		06:56 (42)	05:06		06:51 (42)	06:13			07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	39	07:20 (42)	22:50	19	07:15 (42)	22:20	39	07:30 (42)	21:05			19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:42 (42)	04:28		06:56 (42)	05:08		06:51 (42)	06:15			07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	38	07:20 (42)	22:50	19	07:15 (42)	22:18	40	07:31 (42)	21:02			19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:42 (42)	04:28		06:57 (42)	05:10		06:51 (42)	06:18			07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	37	07:19 (42)	22:50	19	07:16 (42)	22:16	40	07:31 (42)	20:59			19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:43 (42)	04:29		06:56 (42)	05:12		06:51 (42)	06:20			07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	37	07:20 (42)	22:50	20	07:16 (42)	22:14	40	07:31 (42)	20:57			19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:43 (42)	04:29		06:56 (42)	05:14		06:52 (42)	06:22			07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	36	07:19 (42)	22:50	21	07:17 (42)	22:12	39	07:31 (42)	20:54			19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:43 (42)	04:30		06:56 (42)	05:16		06:52 (42)	06:24			07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	36	07:19 (42)	22:50	21	07:17 (42)	22:10	39	07:31 (42)	20:51			19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:44 (42)	04:31		06:56 (42)	05:18		06:52 (42)	06:27			07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	35	07:19 (42)	22:49	21	07:17 (42)	22:07	38	07:30 (42)	20:48			19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:45 (42)	04:32		06:56 (42)	05:20		06:54 (42)	06:29			07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34	07:19 (42)	22:49	22	07:18 (42)	22:05	36	07:30 (42)	20:45			19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:44 (42)				05:22		06:55 (42)	06:31				07:49		09:28
	16:54		20:14		22:29	34	07:18 (42)				22:03	35	07:30 (42)	20:43				16:51		15:51
Potential sun hours	221	260	365	432	521		547		545		478		386	319	236	200
Total, worst case						945		688		1047		221				
Sun reduction						0,50		0,50		0,50		0,50				
Oper. time red.						0,80		0,80		0,80		0,80				
Wind dir. red.						0,59		0,59		0,59		0,59				
Total reduction						0,24		0,24		0,24		0,24				
Total, real						224		163		248		52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:24 (2)	08:46	10:12 (1)	07:35	08:22 (26)	07:07	05:44	04:40
	15:53 50	12:55 (4)	16:56 65	13:08 (4)	18:05 42	09:51 (3)	20:17	21:26	22:31
2	09:28	11:22 (2)	08:44	10:12 (1)	07:33	08:21 (26)	07:04	05:41	04:39
	15:54 54	12:56 (4)	16:59 63	13:07 (4)	18:07 37	09:47 (3)	20:19	21:28	22:32
3	09:27	11:20 (2)	08:41	10:13 (1)	07:30	08:21 (26)	07:01	05:39	04:37
	15:56 57	12:56 (4)	17:01 61	13:07 (4)	18:10 24	08:45 (26)	20:21	21:31	22:34
4	09:27	11:20 (2)	08:39	10:13 (1)	07:27	08:20 (26)	06:58	05:36	04:36
	15:57 58	12:57 (4)	17:04 57	13:05 (4)	18:12 25	08:45 (26)	20:24	21:33	22:35
5	09:26	11:20 (2)	08:37	10:14 (1)	07:24	08:20 (26)	06:55	05:34	04:35
	15:59 60	12:58 (4)	17:06 54	13:05 (4)	18:14 24	08:44 (26)	20:26	21:35	22:37
6	09:25	11:20 (2)	08:35	10:15 (1)	07:22	08:20 (26)	06:53	05:31	04:34
	16:00 61	12:58 (4)	17:09 49	13:03 (4)	18:17 24	08:44 (26)	20:28	21:38	22:38
7	09:25	11:20 (2)	08:32	09:40 (3)	07:19	08:20 (26)	06:50	05:29	04:33
	16:02 62	12:59 (4)	17:11 47	13:01 (4)	18:19 23	08:43 (26)	20:31	21:40	22:39
8	09:24	11:21 (2)	08:30	09:36 (3)	07:16	08:21 (26)	06:47	05:27	04:32
	16:04 63	13:00 (4)	17:13 49	12:59 (4)	18:21 20	08:41 (26)	20:33	21:42	22:41
9	09:23	11:21 (2)	08:28	09:21 (6)	07:13	08:22 (26)	06:44	05:24	04:31
	16:05 65	13:01 (4)	17:16 44	12:56 (4)	18:24 19	08:41 (26)	20:35	21:44	22:42
10	09:22	11:21 (2)	08:25	09:18 (6)	07:10	08:24 (26)	06:41	05:22	04:30
	16:07 65	13:01 (4)	17:18 32	09:54 (3)	18:26 15	08:39 (26)	20:38	21:47	22:43
11	09:21	11:21 (2)	08:23	09:16 (6)	07:07	08:26 (26)	06:38	05:20	04:30
	16:09 68	13:03 (4)	17:21 39	09:56 (3)	18:28 10	08:36 (26)	20:40	21:49	22:44
12	09:20	11:21 (2)	08:20	09:14 (6)	07:05		06:36	05:17	04:29
	16:11 68	13:03 (4)	17:23 42	09:56 (3)	18:31		20:42	21:51	22:45
13	09:19	11:22 (2)	08:18	09:13 (6)	07:02		06:33	05:15	04:29
	16:13 68	13:04 (4)	17:26 44	09:57 (3)	18:33		20:44	21:53	22:46
14	09:17	11:22 (2)	08:15	09:13 (6)	06:59	07:37 (28)	06:30	05:13	04:28
	16:15 68	13:04 (4)	17:28 46	09:59 (3)	18:35 4	07:41 (28)	20:47	21:55	22:47
15	09:16	11:22 (2)	08:13	09:13 (6)	06:56	07:33 (28)	06:27	05:11	04:28
	16:17 70	13:05 (4)	17:31 46	09:59 (3)	18:38 11	07:44 (28)	20:49	21:58	22:47
16	09:15	11:22 (2)	08:10	09:12 (6)	06:53	07:31 (28)	06:24	05:08	04:27
	16:19 71	13:05 (4)	17:33 47	09:59 (3)	18:40 15	07:46 (28)	20:51	22:00	22:48
17	09:13	11:23 (2)	08:08	09:13 (6)	06:50	07:30 (28)	06:22	05:06	04:27
	16:21 71	13:06 (4)	17:36 47	10:00 (3)	18:42 16	07:46 (28)	20:54	22:02	22:49
18	09:12	11:23 (2)	08:05	09:13 (6)	06:47	07:29 (28)	06:19	05:04	04:27
	16:23 72	13:07 (4)	17:38 47	10:00 (3)	18:45 18	07:47 (28)	20:56	22:04	22:49
19	09:10	11:24 (2)	08:02	09:14 (6)	06:44	07:28 (28)	06:16	05:02	04:27
	16:26 70	13:07 (4)	17:41 46	10:00 (3)	18:47 19	07:47 (28)	20:58	22:06	22:50
20	09:09	11:24 (2)	08:00	09:14 (6)	06:42	07:27 (28)	06:13	05:00	04:27
	16:28 71	13:08 (4)	17:43 46	10:00 (3)	18:49 19	07:46 (28)	21:01	22:08	22:50
21	09:07	11:25 (2)	07:57	09:15 (6)	06:39	07:28 (28)	06:11	04:58	04:27
	16:30 70	13:08 (4)	17:46 44	09:59 (3)	18:52 19	07:47 (28)	21:03	22:10	22:50
22	09:05	11:25 (2)	07:54	09:19 (6)	06:36	07:28 (28)	06:08	04:56	04:27
	16:32 70	13:08 (4)	17:48 40	10:00 (3)	18:54 18	07:46 (28)	21:05	22:12	22:50
23	09:04	11:25 (2)	07:52	09:26 (3)	06:33	07:28 (28)	06:05	04:54	04:27
	16:35 69	13:08 (4)	17:50 33	09:59 (3)	18:56 17	07:45 (28)	21:08	22:14	22:51
24	09:02	11:26 (2)	07:49	08:32 (26)	06:30	07:29 (28)	06:02	04:53	04:28
	16:37 68	13:08 (4)	17:53 35	09:58 (3)	18:59 14	07:43 (28)	21:10	22:16	22:51
25	09:00	10:27 (1)	07:46	08:28 (26)	06:27	07:31 (28)	06:00	04:51	04:28
	16:39 72	13:09 (4)	17:55 42	09:57 (3)	19:01 10	07:41 (28)	21:12	22:18	22:51
26	08:58	10:23 (1)	07:44	08:25 (26)	06:24		05:57	04:49	04:29
	16:42 74	13:09 (4)	17:58 45	09:56 (3)	19:03		21:14	22:20	22:50
27	08:56	10:20 (1)	07:41	08:23 (26)	06:21		05:54	04:47	04:29
	16:44 75	13:09 (4)	18:00 45	09:54 (3)	19:05		21:17	22:22	22:50
28	08:54	10:15 (1)	07:38	08:23 (26)	06:18		05:52	04:46	04:30
	16:46 76	13:08 (4)	18:02 44	09:53 (3)	19:08		21:19	22:24	22:50
29	08:52	10:11 (1)			07:16		05:49	04:44	04:31
	16:49 73	13:09 (4)			20:10		21:21	22:26	22:50
30	08:50	10:11 (1)			07:13		05:47	04:43	04:31
	16:51 67	13:08 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54 67	13:08 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	2073		1299		443				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,64		0,71		0,71				
Total reduction	0,26		0,28		0,29				
Total, real	532		366		126				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:40		07:52	08:47 (6)	09:00	11:03 (2)
	22:49	22:01	20:40		19:13		16:49 36	12:20 (4)	15:51 67	12:45 (4)
2	04:33	05:26	06:35		07:42	09:06 (26)	07:54	09:03 (3)	09:02	11:04 (2)
	22:48	21:59	20:37		19:10 6	09:12 (26)	16:46 43	12:26 (4)	15:50 66	12:45 (4)
3	04:34	05:29	06:38		07:44	09:02 (26)	07:56	09:06 (3)	09:04	11:04 (2)
	22:47	21:56	20:34		19:07 13	09:15 (26)	16:44 50	12:29 (4)	15:49 64	12:44 (4)
4	04:35	05:31	06:40		07:46	09:00 (26)	07:59	09:46 (1)	09:05	11:05 (2)
	22:47	21:54	20:31		19:05 17	09:17 (26)	16:42 44	12:32 (4)	15:48 63	12:44 (4)
5	04:36	05:33	06:42		07:48	08:58 (26)	08:01	09:44 (1)	09:07	11:05 (2)
	22:46	21:52	20:28		19:02 20	09:18 (26)	16:39 51	12:33 (4)	15:47 62	12:44 (4)
6	04:38	05:35	06:44		07:51	08:57 (26)	08:04	09:44 (1)	09:09	11:06 (2)
	22:45	21:49	20:26		18:59 22	09:19 (26)	16:37 55	12:35 (4)	15:46 61	12:45 (4)
7	04:39	05:37	06:47		07:53	08:57 (26)	08:06	09:44 (1)	09:10	11:07 (2)
	22:44	21:47	20:23		18:56 23	09:20 (26)	16:35 58	12:36 (4)	15:46 60	12:45 (4)
8	04:40	05:40	06:49		07:55	08:55 (26)	08:08	09:43 (1)	09:12	11:08 (2)
	22:43	21:44	20:20		18:53 24	09:19 (26)	16:32 60	12:36 (4)	15:45 58	12:45 (4)
9	04:41	05:42	06:51		07:58	08:55 (26)	08:11	09:43 (1)	09:14	11:09 (2)
	22:42	21:42	20:17		18:50 24	09:19 (26)	16:30 64	12:38 (4)	15:44 57	12:45 (4)
10	04:43	05:44	06:53		08:00	08:55 (26)	08:13	09:43 (1)	09:15	11:11 (2)
	22:41	21:39	20:14		18:48 24	09:19 (26)	16:28 65	12:39 (4)	15:44 54	12:45 (4)
11	04:44	05:46	06:55		08:02	08:54 (26)	08:16	09:42 (1)	09:16	11:14 (2)
	22:39	21:37	20:11		18:45 32	10:18 (3)	16:26 67	12:39 (4)	15:43 51	12:45 (4)
12	04:46	05:49	06:58		08:04	08:55 (26)	08:18	09:43 (1)	09:18	11:15 (2)
	22:38	21:34	20:08		18:42 39	10:23 (3)	16:24 67	12:40 (4)	15:43 48	12:45 (4)
13	04:48	05:51	07:00		08:07	08:55 (26)	08:20	09:43 (1)	09:19	11:18 (2)
	22:37	21:32	20:05		18:39 43	10:25 (3)	16:21 73	12:41 (4)	15:43 46	12:46 (4)
14	04:49	05:53	07:02		08:09	08:55 (26)	08:23	09:48 (1)	09:20	11:20 (2)
	22:35	21:29	20:02		18:36 46	10:26 (3)	16:19 75	12:41 (4)	15:42 44	12:46 (4)
15	04:51	05:55	07:04		08:11	08:57 (26)	08:25	09:52 (1)	09:21	11:21 (2)
	22:34	21:26	20:00		18:34 46	10:28 (3)	16:17 75	12:41 (4)	15:42 42	12:46 (4)
16	04:53	05:58	07:06		08:14	08:58 (26)	08:27	09:56 (1)	09:22	11:22 (2)
	22:32	21:24	19:57		18:31 44	10:28 (3)	16:15 74	12:42 (4)	15:42 41	12:46 (4)
17	04:54	06:00	07:09		08:16	09:01 (26)	08:30	10:01 (1)	09:23	11:24 (2)
	22:31	21:21	19:54		18:28 41	10:29 (3)	16:13 71	12:42 (4)	15:42 38	12:46 (4)
18	04:56	06:02	07:11	08:19 (28)	08:18	09:57 (3)	08:32	11:00 (2)	09:24	11:25 (2)
	22:29	21:19	19:51 9	08:28 (28)	18:25 32	10:29 (3)	16:11 68	12:42 (4)	15:42 37	12:47 (4)
19	04:58	06:04	07:13	08:16 (28)	08:21	09:57 (3)	08:34	11:00 (2)	09:25	11:27 (2)
	22:27	21:16	19:48 13	08:29 (28)	18:23 33	10:30 (3)	16:10 69	12:43 (4)	15:43 36	12:47 (4)
20	05:00	06:06	07:15	08:14 (28)	08:23	09:48 (6)	08:37	11:00 (2)	09:26	11:28 (2)
	22:25	21:13	19:45 16	08:30 (28)	18:20 42	10:30 (3)	16:08 70	12:43 (4)	15:43 35	12:48 (4)
21	05:02	06:09	07:17	08:14 (28)	08:25	09:46 (6)	08:39	11:00 (2)	09:26	11:28 (2)
	22:24	21:10	19:42 17	08:31 (28)	18:17 45	10:31 (3)	16:06 70	12:43 (4)	15:43 35	12:48 (4)
22	05:04	06:11	07:20	08:13 (28)	08:28	09:44 (6)	08:41	11:00 (2)	09:27	11:29 (2)
	22:22	21:08	19:39 18	08:31 (28)	18:15 46	10:30 (3)	16:04 71	12:44 (4)	15:44 35	12:49 (4)
23	05:06	06:13	07:22	08:12 (28)	08:30	09:44 (6)	08:43	11:00 (2)	09:27	11:29 (2)
	22:20	21:05	19:36 19	08:31 (28)	18:12 46	10:30 (3)	16:03 70	12:43 (4)	15:44 35	12:49 (4)
24	05:08	06:15	07:24	08:12 (28)	08:32	09:42 (6)	08:45	11:00 (2)	09:28	11:30 (2)
	22:18	21:02	19:33 19	08:31 (28)	18:09 47	10:29 (3)	16:01 72	12:44 (4)	15:45 35	12:50 (4)
25	05:10	06:18	07:26	08:11 (28)	07:35	08:42 (6)	08:48	11:00 (2)	09:28	11:29 (2)
	22:16	20:59	19:31 19	08:30 (28)	17:07 47	09:29 (3)	15:59 71	12:43 (4)	15:45 36	12:50 (4)
26	05:12	06:20	07:28	08:12 (28)	07:37	08:43 (6)	08:50	11:01 (2)	09:28	11:29 (2)
	22:14	20:57	19:28 17	08:29 (28)	17:04 46	09:29 (3)	15:58 71	12:44 (4)	15:46 37	12:51 (4)
27	05:14	06:22	07:31	08:13 (28)	07:40	08:42 (6)	08:52	11:01 (2)	09:28	11:29 (2)
	22:12	20:54	19:25 15	08:28 (28)	17:02 46	09:28 (3)	15:57 71	12:44 (4)	15:47 39	12:52 (4)
28	05:16	06:24	07:33	08:14 (28)	07:42	08:43 (6)	08:54	11:02 (2)	09:29	11:28 (2)
	22:10	20:51	19:22 12	08:26 (28)	16:59 45	09:28 (3)	15:55 68	12:44 (4)	15:48 40	12:52 (4)
29	05:18	06:27	07:35	08:15 (28)	07:44	08:44 (6)	08:56	11:02 (2)	09:29	11:27 (2)
	22:08	20:48	19:19 8	08:23 (28)	16:56 43	09:27 (3)	15:54 68	12:44 (4)	15:49 42	12:52 (4)
30	05:20	06:29	07:37		07:47	08:44 (6)	08:58	11:02 (2)	09:28	11:26 (2)
	22:05	20:45	19:16		16:54 42	09:26 (3)	15:53 68	12:44 (4)	15:50 44	12:53 (4)
31	05:22	06:31			07:49	08:45 (6)			09:28	11:25 (2)
	22:03	20:43			16:51 38	09:25 (3)			15:51 48	12:54 (4)
Potential sun hours	545	478	386		319		236		200	
Total, worst case			182		1062		1935		1456	
Sun reduction			0,50		0,50		0,50		0,50	
Oper. time red.			0,80		0,80		0,80		0,80	
Wind dir. red.			0,70		0,73		0,65		0,63	
Total reduction			0,28		0,29		0,26		0,25	
Total, real			51		310		503		369	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:34 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	5	07:39 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:30 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	12	07:42 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:28 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	15	07:43 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:26 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:44 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50		07:25 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	19	07:44 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:24 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:16 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:44 (4)	20:56	22:04	22:49	22:29	21:19	19:51	8 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:24 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:13 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	20	07:44 (4)	20:58	22:06	22:50	22:27	21:16	19:48	13 08:26 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:25 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:11 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:45 (4)	21:01	22:08	22:50	22:26	21:13	19:45	16 08:27 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:25 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:11 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19	07:44 (4)	21:03	22:10	22:50	22:24	21:11	19:42	17 08:28 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:25 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18	07:43 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:29 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:25 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:08 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:42 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:28 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:26 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	14	07:40 (4)	21:10	22:16	22:51	22:18	21:02	19:34	20 08:28 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:28 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:07 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	9	07:37 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:27 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:29	08:08 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	19 08:27 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:08 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	18 08:26 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:08 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	17 08:25 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:09 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	14 08:23 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	8 08:21 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				206							210			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				57							58			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:25 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38 10	07:35 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:18	15:42
16	09:15	08:10	06:53	07:23 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40 13	07:36 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50	07:21 (4)	06:22	05:06	04:27	04:54	06:00	07:09	08:13 (4)	08:16	08:30	09:23
	16:21	17:36	18:43 16	07:37 (4)	20:54	22:02	22:49	22:31	21:21	19:54 4	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47	07:20 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:09 (4)	08:18	08:32	09:24
	16:24	17:38	18:45 18	07:38 (4)	20:56	22:04	22:49	22:29	21:19	19:51 11	08:20 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:19 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:07 (4)	08:21	08:34	09:25
	16:26	17:41	18:47 19	07:38 (4)	20:58	22:06	22:50	22:27	21:16	19:48 14	08:21 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:19 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (4)	08:23	08:37	09:26
	16:28	17:43	18:49 20	07:39 (4)	21:01	22:08	22:50	22:26	21:13	19:45 17	08:22 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (4)	08:25	08:39	09:26
	16:30	17:46	18:52 19	07:38 (4)	21:03	22:10	22:50	22:24	21:11	19:42 18	08:23 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:19 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:04 (4)	08:28	08:41	09:27
	16:33	17:48	18:54 18	07:37 (4)	21:05	22:12	22:51	22:22	21:08	19:39 19	08:23 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:19 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:03 (4)	08:30	08:43	09:27
	16:35	17:51	18:56 17	07:36 (4)	21:08	22:14	22:51	22:20	21:05	19:36 19	08:22 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:20 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:03 (4)	08:32	08:46	09:28
	16:37	17:53	18:59 15	07:35 (4)	21:10	22:16	22:51	22:18	21:02	19:34 19	08:22 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:21 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:02 (4)	07:35	08:48	09:28
	16:40	17:55	19:01 12	07:33 (4)	21:12	22:18	22:51	22:16	21:00	19:31 19	08:21 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24	07:23 (4)	05:57	04:49	04:29	05:12	06:20	07:29	08:04 (4)	07:37	08:50	09:28
	16:42	17:58	19:03 7	07:30 (4)	21:15	22:20	22:51	22:14	20:57	19:28 16	08:20 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:04 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25 15	08:19 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:25	07:33	08:05 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22 11	08:16 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:08 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19 4	08:12 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37		07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:06	20:46	19:16		16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49		09:28
	16:54		20:15			22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				184							186			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,28							0,28			
Total, real				51							51			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:17 (2)	08:46	10:11 (1)	07:35	08:24 (26)	07:07	05:44	04:40
	15:53 54	12:46 (4)	16:56 61	12:57 (4)	18:05 32	09:46 (3)	20:17	21:26	22:31
2	09:28	11:17 (2)	08:44	10:11 (1)	07:33	08:23 (26)	07:04	05:41	04:39
	15:54 54	12:46 (4)	16:59 58	12:56 (4)	18:07 24	08:47 (26)	20:19	21:28	22:32
3	09:27	11:17 (2)	08:41	10:12 (1)	07:30	08:23 (26)	07:01	05:39	04:37
	15:56 56	12:47 (4)	17:01 55	12:55 (4)	18:10 24	08:47 (26)	20:21	21:31	22:34
4	09:27	11:17 (2)	08:39	10:12 (1)	07:27	08:23 (26)	06:58	05:36	04:36
	15:57 57	12:48 (4)	17:04 52	12:54 (4)	18:12 23	08:46 (26)	20:24	21:33	22:35
5	09:26	11:17 (2)	08:37	10:14 (1)	07:24	08:23 (26)	06:55	05:34	04:35
	15:59 58	12:48 (4)	17:06 46	12:53 (4)	18:14 22	08:45 (26)	20:26	21:35	22:37
6	09:25	11:17 (2)	08:35	10:14 (1)	07:22	08:23 (26)	06:53	05:31	04:34
	16:00 59	12:49 (4)	17:09 41	12:50 (4)	18:17 22	08:45 (26)	20:28	21:38	22:38
7	09:25	11:17 (2)	08:32	09:37 (3)	07:19	08:24 (26)	06:50	05:29	04:33
	16:02 61	12:50 (4)	17:11 43	12:47 (4)	18:19 19	08:43 (26)	20:31	21:40	22:39
8	09:24	11:17 (2)	08:30	09:35 (3)	07:16	08:24 (26)	06:47	05:27	04:32
	16:04 63	12:51 (4)	17:13 36	12:44 (4)	18:21 18	08:42 (26)	20:33	21:42	22:41
9	09:23	11:18 (2)	08:28	09:32 (3)	07:13	08:27 (26)	06:44	05:24	04:31
	16:05 63	12:52 (4)	17:16 21	09:53 (3)	18:24 13	08:40 (26)	20:35	21:44	22:42
10	09:22	11:17 (2)	08:25	09:31 (3)	07:10	08:30 (26)	06:41	05:22	04:30
	16:07 65	12:52 (4)	17:18 24	09:55 (3)	18:26 7	08:37 (26)	20:38	21:47	22:43
11	09:21	11:18 (2)	08:23	09:30 (3)	07:07		06:38	05:20	04:30
	16:09 65	12:53 (4)	17:21 26	09:56 (3)	18:28		20:40	21:49	22:44
12	09:20	11:18 (2)	08:20	09:29 (3)	07:05		06:36	05:17	04:29
	16:11 66	12:53 (4)	17:23 28	09:57 (3)	18:31		20:42	21:51	22:45
13	09:19	11:18 (2)	08:18	09:28 (3)	07:02	07:40 (28)	06:33	05:15	04:29
	16:13 67	12:54 (4)	17:26 29	09:57 (3)	18:33 5	07:45 (28)	20:44	21:53	22:46
14	09:17	11:18 (2)	08:15	09:28 (3)	06:59	07:36 (28)	06:30	05:13	04:28
	16:15 68	12:55 (4)	17:28 31	09:59 (3)	18:35 11	07:47 (28)	20:47	21:55	22:47
15	09:16	11:18 (2)	08:13	09:27 (3)	06:56	07:34 (28)	06:27	05:11	04:28
	16:17 69	12:55 (4)	17:31 32	09:59 (3)	18:38 15	07:49 (28)	20:49	21:58	22:47
16	09:15	11:19 (2)	08:10	09:26 (3)	06:53	07:33 (28)	06:24	05:08	04:27
	16:19 68	12:55 (4)	17:33 33	09:59 (3)	18:40 16	07:49 (28)	20:51	22:00	22:48
17	09:13	11:20 (2)	08:08	09:27 (3)	06:50	07:32 (28)	06:22	05:06	04:27
	16:21 69	12:57 (4)	17:36 33	10:00 (3)	18:42 18	07:50 (28)	20:54	22:02	22:49
18	09:12	11:20 (2)	08:05	09:26 (3)	06:47	07:31 (28)	06:19	05:04	04:27
	16:23 69	12:57 (4)	17:38 34	10:00 (3)	18:45 19	07:50 (28)	20:56	22:04	22:49
19	09:10	11:20 (2)	08:02	09:26 (3)	06:44	07:31 (28)	06:16	05:02	04:27
	16:26 69	12:57 (4)	17:41 33	09:59 (3)	18:47 18	07:49 (28)	20:58	22:06	22:50
20	09:09	11:21 (2)	08:00	09:26 (3)	06:42	07:30 (28)	06:13	05:00	04:27
	16:28 69	12:58 (4)	17:43 33	09:59 (3)	18:49 19	07:49 (28)	21:01	22:08	22:50
21	09:07	11:22 (2)	07:57	09:26 (3)	06:39	07:32 (28)	06:11	04:58	04:27
	16:30 67	12:58 (4)	17:46 32	09:58 (3)	18:52 17	07:49 (28)	21:03	22:10	22:50
22	09:05	11:22 (2)	07:54	09:27 (3)	06:36	07:32 (28)	06:08	04:56	04:27
	16:32 67	12:58 (4)	17:48 32	09:59 (3)	18:54 15	07:47 (28)	21:05	22:12	22:50
23	09:04	11:22 (2)	07:52	09:27 (3)	06:33	07:33 (28)	06:05	04:54	04:27
	16:35 66	12:58 (4)	17:50 31	09:58 (3)	18:56 13	07:46 (28)	21:08	22:14	22:51
24	09:02	10:25 (1)	07:49	08:30 (26)	06:30	07:35 (28)	06:02	04:53	04:28
	16:37 70	12:58 (4)	17:53 41	09:57 (3)	18:59 8	07:43 (28)	21:10	22:16	22:51
25	09:00	10:21 (1)	07:46	08:28 (26)	06:27		06:00	04:51	04:28
	16:39 72	12:58 (4)	17:55 42	09:55 (3)	19:01		21:12	22:18	22:51
26	08:58	10:18 (1)	07:44	08:26 (26)	06:24		05:57	04:49	04:29
	16:42 74	12:59 (4)	17:58 44	09:54 (3)	19:03		21:14	22:20	22:50
27	08:56	10:14 (1)	07:41	08:25 (26)	06:21		05:54	04:47	04:29
	16:44 76	12:59 (4)	18:00 41	09:52 (3)	19:05		21:17	22:22	22:50
28	08:54	10:10 (1)	07:38	08:25 (26)	06:18		05:52	04:46	04:30
	16:46 74	12:58 (4)	18:02 38	09:50 (3)	19:08		21:19	22:24	22:50
29	08:52	10:10 (1)			07:16		05:49	04:44	04:31
	16:49 65	12:58 (4)			20:10		21:21	22:26	22:50
30	08:50	10:10 (1)			07:13		05:47	04:43	04:31
	16:51 63	12:57 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54 61	12:57 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	2024		1050		378				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,65		0,71		0,71				
Total reduction	0,26		0,28		0,29				
Total, real	524		297		108				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September			October		November			December		
1	04:32	05:24	06:33			07:40		07:52		09:00 (3)	09:00		11:00 (2)
	22:49	22:01	20:40			19:13		16:49	23	09:23 (3)	15:51	65	12:35 (4)
2	04:33	05:26	06:35			07:42		07:54		09:02 (3)	09:02		11:00 (2)
	22:48	21:59	20:37			19:10		16:46	23	09:54 (1)	15:50	65	12:35 (4)
3	04:34	05:29	06:38			07:44		07:56		09:05 (3)	09:04		11:01 (2)
	22:47	21:56	20:34			19:07		16:44	38	12:14 (4)	15:49	63	12:35 (4)
4	04:35	05:31	06:40			07:46		09:05 (26)	07:59		09:08 (3)	09:05		11:01 (2)
	22:47	21:54	20:31			19:05	11	09:16 (26)	16:42	44	12:19 (4)	15:48	63	12:35 (4)
5	04:36	05:33	06:42			07:48		09:02 (26)	08:01		09:44 (1)	09:07		11:02 (2)
	22:46	21:52	20:28			19:02	16	09:18 (26)	16:39	42	12:20 (4)	15:47	61	12:35 (4)
6	04:38	05:35	06:44			07:51		09:00 (26)	08:04		09:43 (1)	09:09		11:03 (2)
	22:45	21:49	20:26			18:59	19	09:19 (26)	16:37	48	12:23 (4)	15:46	59	12:35 (4)
7	04:39	05:37	06:47			07:53		09:00 (26)	08:06		09:43 (1)	09:10		11:04 (2)
	22:44	21:47	20:23			18:56	20	09:20 (26)	16:35	51	12:24 (4)	15:46	58	12:35 (4)
8	04:40	05:40	06:49			07:55		08:58 (26)	08:08		09:42 (1)	09:12		11:05 (2)
	22:43	21:44	20:20			18:53	23	09:21 (26)	16:32	55	12:25 (4)	15:45	58	12:36 (4)
9	04:41	05:42	06:51			07:58		08:57 (26)	08:11		09:42 (1)	09:14		11:06 (2)
	22:42	21:42	20:17			18:50	23	09:20 (26)	16:30	59	12:27 (4)	15:44	56	12:36 (4)
10	04:43	05:44	06:53			08:00		08:57 (26)	08:13		09:42 (1)	09:15		11:06 (2)
	22:41	21:39	20:14			18:48	24	09:21 (26)	16:28	60	12:28 (4)	15:44	55	12:36 (4)
11	04:44	05:46	06:55			08:02		08:57 (26)	08:16		09:41 (1)	09:16		11:07 (2)
	22:39	21:37	20:11			18:45	23	09:20 (26)	16:26	62	12:28 (4)	15:43	54	12:36 (4)
12	04:46	05:49	06:58			08:04		08:57 (26)	08:18		09:42 (1)	09:18		11:07 (2)
	22:38	21:34	20:08			18:42	24	09:21 (26)	16:24	63	12:29 (4)	15:43	52	12:36 (4)
13	04:48	05:51	07:00			08:07		08:57 (26)	08:20		09:42 (1)	09:19		11:10 (2)
	22:37	21:32	20:05			18:39	35	10:20 (3)	16:21	65	12:30 (4)	15:43	50	12:37 (4)
14	04:49	05:53	07:02			08:09		08:57 (26)	08:23		09:43 (1)	09:20		11:11 (2)
	22:35	21:29	20:02			18:36	39	10:23 (3)	16:19	74	12:31 (4)	15:42	49	12:37 (4)
15	04:51	05:55	07:04			08:11		08:58 (26)	08:25		09:46 (1)	09:21		11:13 (2)
	22:34	21:26	20:00			18:34	42	10:25 (3)	16:17	76	12:31 (4)	15:42	46	12:37 (4)
16	04:53	05:58	07:06			08:14		08:58 (26)	08:27		09:51 (1)	09:22		11:14 (2)
	22:32	21:24	19:57			18:31	43	10:26 (3)	16:15	74	12:32 (4)	15:42	45	12:37 (4)
17	04:54	06:00	07:09			08:16		09:00 (26)	08:30		09:55 (1)	09:23		11:15 (2)
	22:31	21:21	19:54			18:28	43	10:28 (3)	16:13	72	12:32 (4)	15:42	43	12:37 (4)
18	04:56	06:02	07:11			08:18		09:02 (26)	08:32		09:59 (1)	09:24		11:17 (2)
	22:29	21:19	19:51			18:25	39	10:28 (3)	16:11	70	12:32 (4)	15:42	40	12:37 (4)
19	04:58	06:04	07:13		08:22 (28)	08:21		09:58 (3)	08:34		10:57 (2)	09:25		11:18 (2)
	22:27	21:16	19:48	7	08:29 (28)	18:23	31	10:29 (3)	16:10	66	12:33 (4)	15:43	41	12:38 (4)
20	05:00	06:06	07:15		08:19 (28)	08:23		09:57 (3)	08:37		10:57 (2)	09:26		11:19 (2)
	22:25	21:13	19:45	12	08:31 (28)	18:20	32	10:29 (3)	16:08	67	12:33 (4)	15:43	40	12:39 (4)
21	05:02	06:09	07:17		08:18 (28)	08:25		09:57 (3)	08:39		10:57 (2)	09:26		11:19 (2)
	22:24	21:10	19:42	15	08:33 (28)	18:17	33	10:30 (3)	16:06	67	12:33 (4)	15:43	39	12:38 (4)
22	05:04	06:11	07:20		08:16 (28)	08:28		09:56 (3)	08:41		10:57 (2)	09:27		11:20 (2)
	22:22	21:08	19:39	17	08:33 (28)	18:15	33	10:29 (3)	16:04	68	12:34 (4)	15:44	39	12:39 (4)
23	05:06	06:13	07:22		08:15 (28)	08:30		09:56 (3)	08:43		10:57 (2)	09:27		11:20 (2)
	22:20	21:05	19:36	18	08:33 (28)	18:12	34	10:30 (3)	16:03	68	12:33 (4)	15:44	40	12:40 (4)
24	05:08	06:15	07:24		08:14 (28)	08:32		09:56 (3)	08:45		10:57 (2)	09:28		11:21 (2)
	22:18	21:02	19:33	19	08:33 (28)	18:09	33	10:29 (3)	16:01	69	12:34 (4)	15:45	41	12:41 (4)
25	05:10	06:18	07:26		08:14 (28)	07:35		08:56 (3)	08:48		10:57 (2)	09:28		11:21 (2)
	22:16	20:59	19:31	18	08:32 (28)	17:07	33	09:29 (3)	15:59	69	12:34 (4)	15:45	41	12:41 (4)
26	05:12	06:20	07:28		08:14 (28)	07:37		08:57 (3)	08:50		10:58 (2)	09:28		11:21 (2)
	22:14	20:57	19:28	19	08:33 (28)	17:04	32	09:29 (3)	15:58	68	12:34 (4)	15:46	42	12:42 (4)
27	05:14	06:22	07:31		08:14 (28)	07:40		08:56 (3)	08:52		10:57 (2)	09:28		11:20 (2)
	22:12	20:54	19:25	18	08:32 (28)	17:02	32	09:28 (3)	15:57	69	12:34 (4)	15:47	43	12:42 (4)
28	05:16	06:24	07:33		08:15 (28)	07:42		08:57 (3)	08:54		10:58 (2)	09:29		11:20 (2)
	22:10	20:51	19:22	15	08:30 (28)	16:59	31	09:28 (3)	15:55	68	12:35 (4)	15:48	44	12:43 (4)
29	05:18	06:27	07:35		08:15 (28)	07:44		08:58 (3)	08:56		10:59 (2)	09:29		11:18 (2)
	22:08	20:48	19:19	13	08:28 (28)	16:56	29	09:27 (3)	15:54	67	12:35 (4)	15:49	47	12:43 (4)
30	05:20	06:29	07:37		08:18 (28)	07:47		08:58 (3)	08:58		10:59 (2)	09:28		11:18 (2)
	22:05	20:45	19:16	8	08:26 (28)	16:54	28	09:26 (3)	15:53	65	12:34 (4)	15:50	49	12:44 (4)
31	05:22	06:31				07:49		09:00 (3)				09:28		11:16 (2)
	22:03	20:43				16:51	25	09:25 (3)				15:51	52	12:44 (4)
Potential sun hours	545	478	386			319		236			200			
Total, worst case				179			830		1810			1540		
Sun reduction				0,50			0,50		0,50			0,50		
Oper. time red.				0,80			0,80		0,80			0,80		
Wind dir. red.				0,70			0,73		0,66			0,64		
Total reduction				0,28			0,29		0,26			0,26		
Total, real				50			242		475			394		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:05 (4)	08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03	10	08:15 (4)	18:37	16:20	15:43
15	09:16	08:13	06:56		06:27	05:11	04:28	04:51	05:55	07:04		08:02 (4)	08:11	08:25	09:21
	16:17	17:31	18:38		20:49	21:58	22:47	22:34	21:27	20:00	14	08:16 (4)	18:34	16:18	15:42
16	09:15	08:10	06:53		06:24	05:09	04:28	04:53	05:58	07:06		08:00 (4)	08:14	08:27	09:22
	16:19	17:33	18:40		20:51	22:00	22:48	22:32	21:24	19:57	17	08:17 (4)	18:31	16:16	15:42
17	09:13	08:08	06:50		06:22	05:06	04:27	04:54	06:00	07:09		07:59 (4)	08:16	08:30	09:23
	16:21	17:36	18:43		20:54	22:02	22:49	22:31	21:21	19:54	18	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11		07:58 (4)	08:18	08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	19	08:17 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13		07:57 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	3 07:28 (4)	20:58	22:06	22:50	22:27	21:16	19:48	20	08:17 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:22 (4)	06:13	05:00	04:27	05:00	06:07	07:15		07:57 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	8 07:30 (4)	21:01	22:08	22:50	22:26	21:13	19:45	19	08:16 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:00 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	11 07:30 (4)	21:03	22:10	22:50	22:24	21:11	19:42	16	08:16 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:15 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:02 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	16 07:31 (4)	21:05	22:12	22:51	22:22	21:08	19:39	13	08:15 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:11 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:05 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	20 07:31 (4)	21:08	22:14	22:51	22:20	21:05	19:36	9	08:14 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:11 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	19 07:30 (4)	21:10	22:16	22:51	22:18	21:02	19:34	4	08:12 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:10 (4)	06:00	04:51	04:28	05:10	06:18	07:26			07:35	08:48	09:28
	16:40	17:55	19:01	20 07:30 (4)	21:12	22:18	22:51	22:16	21:00	19:31			17:07	16:00	15:46
26	08:58	07:44	06:24	07:10 (4)	05:57	04:49	04:29	05:12	06:20	07:29			07:37	08:50	09:28
	16:42	17:58	19:03	19 07:29 (4)	21:15	22:20	22:51	22:14	20:57	19:28			17:04	15:58	15:46
27	08:56	07:41	06:21	07:11 (4)	05:55	04:48	04:29	05:14	06:22	07:31			07:40	08:52	09:29
	16:44	18:00	19:06	17 07:28 (4)	21:17	22:22	22:50	22:12	20:54	19:25			17:02	15:57	15:47
28	08:54	07:38	06:19	07:12 (4)	05:52	04:46	04:30	05:16	06:25	07:33			07:42	08:54	09:29
	16:47	18:03	19:08	14 07:26 (4)	21:19	22:24	22:50	22:10	20:51	19:22			16:59	15:55	15:48
29	08:52		07:16	08:13 (4)	05:49	04:44	04:31	05:18	06:27	07:35			07:44	08:56	09:29
	16:49		20:10	11 08:24 (4)	21:22	22:26	22:50	22:08	20:48	19:19			16:57	15:54	15:49
30	08:50		07:13	08:18 (4)	05:47	04:43	04:32	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12	2 08:20 (4)	21:24	22:27	22:49	22:05	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:52
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				160							159			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,27							0,27			
Total, real				44							44			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:35 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	8	07:43 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:32 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13	07:45 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:30 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16	07:46 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	19	07:47 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:15	15:42
17	09:13	08:08	06:50		07:27 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20	07:47 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	21	07:47 (4)	20:56	22:04	22:49	22:29	21:19	19:51	9 08:27 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:26 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21	07:47 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:29 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:27 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	21	07:48 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:30 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:13 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	21	07:47 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18 08:31 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:27 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19	07:46 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:31 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:44 (4)	21:08	22:14	22:51	22:20	21:05	19:36	21 08:31 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:10 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15	07:43 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21 08:31 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	10	07:40 (4)	21:12	22:18	22:51	22:16	21:00	19:31	21 08:30 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28	08:10 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	20 08:30 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:10 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	19 08:29 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:10 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18 08:28 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:11 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	15 08:26 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	11 08:24 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				221							224			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				61							62			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:36 (4)	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	24	09:00 (4)	16:49	15:51
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:35 (4)	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	25	09:00 (4)	16:47	15:50
3	09:27	08:41	07:30	08:05 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:34 (4)	07:56	09:04
	15:56	17:01	18:10	12 08:17 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	25	08:59 (4)	16:44	15:49
4	09:27	08:39	07:27	08:02 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:34 (4)	07:59	09:05
	15:57	17:04	18:12	17 08:19 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	26	09:00 (4)	16:42	15:48
5	09:26	08:37	07:24	08:01 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:34 (4)	08:01	09:07
	15:59	17:06	18:14	19 08:20 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	25	08:59 (4)	16:39	15:47
6	09:25	08:35	07:22	07:59 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:34 (4)	08:04	09:09
	16:00	17:09	18:17	22 08:21 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	24	08:58 (4)	16:37	15:47
7	09:25	08:32	07:19	07:58 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:35 (4)	08:06	09:10
	16:02	17:11	18:19	23 08:21 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	22	08:57 (4)	16:35	15:46
8	09:24	08:30	07:16	07:58 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:35 (4)	08:08	09:12
	16:04	17:14	18:22	24 08:22 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	21	08:56 (4)	16:32	15:45
9	09:23	08:28	07:13	07:57 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:36 (4)	08:11	09:14
	16:06	17:16	18:24	25 08:22 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	08:54 (4)	16:30	15:44
10	09:22	08:25	07:10	07:57 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:38 (4)	08:13	09:15
	16:07	17:19	18:26	25 08:22 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	08:53 (4)	16:28	15:44
11	09:21	08:23	07:07	07:57 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:41 (4)	08:16	09:16
	16:09	17:21	18:29	25 08:22 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	8	08:49 (4)	16:26	15:43
12	09:20	08:20	07:05	07:57 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:24	18:31	24 08:21 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18	07:02	07:57 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07			08:20	09:19
	16:13	17:26	18:33	23 08:20 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39			16:22	15:43
14	09:17	08:15	06:59	07:57 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09			08:23	09:20
	16:15	17:28	18:36	22 08:19 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36			16:19	15:42
15	09:16	08:13	06:56	07:58 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11			08:25	09:21
	16:17	17:31	18:38	20 08:18 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34			16:17	15:42
16	09:15	08:10	06:53	07:59 (4)	06:24	05:09	04:27	04:53	05:58	07:06		08:14			08:27	09:22
	16:19	17:33	18:40	17 08:16 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31			16:15	15:42
17	09:13	08:08	06:50	08:00 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16			08:30	09:23
	16:21	17:36	18:43	14 08:14 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28			16:14	15:42
18	09:12	08:05	06:47	08:04 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:18			08:32	09:24
	16:24	17:38	18:45	5 08:09 (4)	20:56	22:04	22:49	22:29	21:19	19:51		18:25			16:12	15:42
19	09:10	08:02	06:45		06:16	05:02	04:27	04:58	06:04	07:13		08:21			08:34	09:25
	16:26	17:41	18:47		20:58	22:06	22:50	22:27	21:16	19:48		18:23			16:10	15:43
20	09:09	08:00	06:42		06:13	05:00	04:27	05:00	06:07	07:15		08:23			08:37	09:26
	16:28	17:43	18:49		21:01	22:08	22:50	22:26	21:13	19:45		18:20			16:08	15:43
21	09:07	07:57	06:39		06:11	04:58	04:27	05:02	06:09	07:17		08:25			08:39	09:26
	16:30	17:46	18:52		21:03	22:10	22:50	22:24	21:11	19:42		18:17			16:06	15:43
22	09:05	07:55	06:36		06:08	04:56	04:27	05:04	06:11	07:20		08:28			08:41	09:27
	16:32	17:48	18:54		21:05	22:12	22:51	22:22	21:08	19:39		18:15			16:04	15:44
23	09:04	07:52	06:33		06:05	04:55	04:28	05:06	06:13	07:22		08:30			08:43	09:27
	16:35	17:50	18:56		21:08	22:14	22:51	22:20	21:05	19:36		18:12			16:03	15:44
24	09:02	07:49	06:30		06:03	04:53	04:28	05:08	06:16	07:24		08:32			08:45	09:28
	16:37	17:53	18:59		21:10	22:16	22:51	22:18	21:02	19:34		18:09			16:01	15:45
25	09:00	07:47	06:27		06:00	04:51	04:28	05:10	06:18	07:26		07:35			08:48	09:28
	16:39	17:55	19:01		21:12	22:18	22:51	22:16	21:00	19:31		17:07			16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:44 (4)	07:37			08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28	11 08:55 (4)	17:04			15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:41 (4)	07:40			08:52	09:29
	16:44	18:00	19:05		21:17	22:22	22:50	22:12	20:54	19:25	16 08:57 (4)	17:02			15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:24	07:33	08:39 (4)	07:42			08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	19 08:58 (4)	16:59			15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:37 (4)	07:44			08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	22 08:59 (4)	16:57			15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:37 (4)	07:47			08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16	23 09:00 (4)	16:54			15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49				09:28
	16:54		20:15			22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236		200
Total, worst case				317							91		233			
Sun reduction				0,50							0,50		0,50			
Oper. time red.				0,80							0,80		0,80			
Wind dir. red.				0,71							0,71		0,71			
Total reduction				0,28							0,28		0,28			
Total, real				90							26		66			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 - 15:53	08:46 - 16:56	07:36 - 18:05 (4)	09:02 (2) - 09:06 (2)	07:07 - 20:17	05:44 - 21:26	04:40 - 22:31	04:32 - 22:49	05:24 - 22:01	06:33 - 20:40	07:40 - 19:13 (28)	08:45 (4) - 09:13 (4)	07:52 - 16:49	09:00 - 15:51
2	09:28 - 15:54	08:44 - 16:59	07:33 - 18:07		07:04 - 20:19	05:42 - 21:28	04:39 - 22:32	04:33 - 22:48	05:27 - 21:59	06:36 - 20:37	07:42 - 19:10 (29)	08:44 (4) - 09:13 (4)	07:54 - 16:47	09:02 - 15:50
3	09:27 - 15:56	08:41 - 17:01	07:30 - 18:10 (10)	08:17 (4) - 08:27 (4)	07:01 - 20:22	05:39 - 21:31	04:37 - 22:34	04:34 - 22:47	05:29 - 21:56	06:38 - 20:34	07:44 - 19:08 (29)	08:43 (4) - 09:12 (4)	07:56 - 16:44	09:04 - 15:49
4	09:27 - 15:57	08:39 - 17:04	07:27 - 18:12 (17)	08:13 (4) - 08:30 (4)	06:58 - 20:24	05:37 - 21:33	04:36 - 22:35	04:35 - 22:47	05:31 - 21:54	06:40 - 20:31	07:46 - 19:05 (28)	08:44 (4) - 09:12 (4)	07:59 - 16:42	09:05 - 15:48
5	09:26 - 15:59	08:37 - 17:06	07:24 - 18:14 (20)	08:11 (4) - 08:31 (4)	06:56 - 20:26	05:34 - 21:35	04:35 - 22:37	04:36 - 22:46	05:33 - 21:52	06:42 - 20:28	07:49 - 19:02 (27)	08:44 (4) - 09:11 (4)	08:01 - 16:39	09:07 - 15:47
6	09:25 - 16:00	08:35 - 17:09	07:22 - 18:17 (24)	08:09 (4) - 08:33 (4)	06:53 - 20:28	05:32 - 21:38	04:34 - 22:38	04:38 - 22:45	05:35 - 21:49	06:44 - 20:26	07:51 - 18:59 (26)	08:44 (4) - 09:10 (4)	08:04 - 16:37	09:09 - 15:47
7	09:25 - 16:02	08:32 - 17:11	07:19 - 18:19 (25)	08:08 (4) - 08:33 (4)	06:50 - 20:31	05:29 - 21:40	04:33 - 22:39	04:39 - 22:44	05:38 - 21:47	06:47 - 20:23	07:53 - 18:56 (24)	08:45 (4) - 09:09 (4)	08:06 - 16:35	09:10 - 15:46
8	09:24 - 16:04	08:30 - 17:14	07:16 - 18:22 (27)	08:07 (4) - 08:34 (4)	06:47 - 20:33	05:27 - 21:42	04:32 - 22:41	04:40 - 22:43	05:40 - 21:44	06:49 - 20:20	07:55 - 18:53 (22)	08:46 (4) - 09:08 (4)	08:08 - 16:32	09:12 - 15:45
9	09:23 - 16:06	08:28 - 17:16	07:13 - 18:24 (28)	08:07 (4) - 08:35 (4)	06:44 - 20:35	05:24 - 21:44	04:31 - 22:42	04:42 - 22:42	05:42 - 21:42	06:51 - 20:17	07:58 - 18:50 (18)	08:47 (4) - 09:05 (4)	08:11 - 16:30	09:14 - 15:44
10	09:22 - 16:07	08:25 - 17:19	07:10 - 18:26 (29)	08:06 (4) - 08:35 (4)	06:41 - 20:38	05:22 - 21:47	04:31 - 22:43	04:43 - 22:41	05:44 - 21:39	06:53 - 20:14	08:00 - 18:48 (15)	08:49 (4) - 09:04 (4)	08:13 - 16:28	09:15 - 15:44
11	09:21 - 16:09	08:23 - 17:21	07:07 - 18:29 (29)	08:06 (4) - 08:35 (4)	06:38 - 20:40	05:20 - 21:49	04:30 - 22:44	04:45 - 22:39	05:46 - 21:37	06:55 - 20:11	08:02 - 18:45 (6)	08:53 (4) - 08:59 (4)	08:16 - 16:26	09:16 - 15:43
12	09:20 - 16:11	08:20 - 17:23	07:05 - 18:31 (29)	08:05 (4) - 08:34 (4)	06:36 - 20:42	05:17 - 21:51	04:29 - 22:45	04:46 - 22:38	05:49 - 21:34	06:58 - 20:08	08:04 - 18:42		08:18 - 16:24	09:18 - 15:43
13	09:19 - 16:13	08:18 - 17:26	07:02 - 18:33 (29)	08:04 (4) - 08:34 (4)	06:33 - 20:44	05:15 - 21:53	04:29 - 22:46	04:48 - 22:37	05:51 - 21:32	07:00 - 20:05	08:07 - 18:39 (7)	09:33 (2) - 09:40 (2)	08:20 - 16:22	09:19 - 15:43
14	09:17 - 16:15	08:15 - 17:28	06:59 - 18:36 (28)	08:05 (4) - 08:33 (4)	06:30 - 20:47	05:13 - 21:56	04:28 - 22:47	04:49 - 22:35	05:53 - 21:29	07:02 - 20:03	08:09 - 18:36 (12)	09:30 (2) - 09:42 (2)	08:23 - 16:19	09:20 - 15:42
15	09:16 - 16:17	08:13 - 17:31	06:56 - 18:38 (32)	07:33 (3) - 08:32 (4)	06:27 - 20:49	05:11 - 21:58	04:28 - 22:47	04:51 - 22:34	05:55 - 21:27	07:04 - 20:00	08:11 - 18:34 (15)	09:29 (2) - 09:44 (2)	08:25 - 16:17	09:21 - 15:42
16	09:15 - 16:19	08:10 - 17:33	06:53 - 18:40 (36)	07:30 (3) - 08:31 (4)	06:24 - 20:51	05:09 - 22:00	04:27 - 22:48	04:53 - 22:32	05:58 - 21:24	07:06 - 19:57	08:14 - 18:31 (17)	09:27 (2) - 09:44 (2)	08:27 - 16:15	09:22 - 15:42
17	09:13 - 16:21	08:08 - 17:36 (9)	09:01 (2) - 09:10 (2)	06:50 - 07:28 (3) - 08:30 (4)	06:22 - 20:54	05:06 - 22:02	04:27 - 22:49	04:54 - 22:31	06:00 - 21:21	07:09 - 19:54 (5)	08:18 (3) - 08:23 (3)	08:16 - 18:28 (18)	09:27 (2) - 09:45 (2)	08:30 - 16:14	09:23 - 15:42
18	09:12 - 16:24	08:05 - 17:38 (14)	08:58 (2) - 09:12 (2)	06:47 - 07:27 (3) - 08:28 (4)	06:19 - 20:56	05:04 - 22:04	04:27 - 22:49	04:56 - 22:29	06:02 - 21:19	07:11 - 19:51 (11)	08:14 (3) - 08:25 (3)	08:18 - 18:25 (19)	09:26 (2) - 09:45 (2)	08:32 - 16:12	09:24 - 15:42
19	09:10 - 16:26	08:02 - 17:41 (16)	08:57 (2) - 09:13 (2)	06:45 - 07:25 (3) - 08:25 (4)	06:16 - 20:58	05:02 - 22:06	04:27 - 22:50	04:58 - 22:27	06:04 - 21:16	07:13 - 19:48 (14)	08:12 (3) - 08:26 (3)	08:21 - 18:23 (19)	09:26 (2) - 09:45 (2)	08:34 - 16:10	09:25 - 15:43
20	09:09 - 16:28	08:00 - 17:43 (17)	08:56 (2) - 09:13 (2)	06:42 - 07:25 (3) - 08:23 (4)	06:13 - 21:01	05:00 - 22:08	04:27 - 22:50	05:00 - 22:26	06:07 - 21:13	07:15 - 19:45 (17)	08:10 (3) - 08:27 (3)	08:23 - 18:20 (19)	09:25 (2) - 09:44 (2)	08:37 - 16:08	09:26 - 15:43
21	09:07 - 16:30	07:57 - 17:46 (18)	08:55 (2) - 09:13 (2)	06:39 - 07:25 (3) - 07:43 (3)	06:11 - 21:03	04:58 - 22:10	04:27 - 22:50	05:02 - 22:24	06:09 - 21:10	07:17 - 19:42 (18)	08:10 (3) - 08:28 (3)	08:25 - 18:17 (18)	09:26 (2) - 09:44 (2)	08:39 - 16:06	09:26 - 15:43
22	09:05 - 16:32	07:55 - 17:48 (19)	08:55 (2) - 09:14 (2)	06:36 - 07:24 (3) - 07:42 (3)	06:08 - 21:05	04:56 - 22:12	04:27 - 22:51	05:04 - 22:22	06:11 - 21:08	07:20 - 19:39 (19)	08:09 (3) - 08:28 (3)	08:28 - 18:15 (17)	09:26 (2) - 09:43 (2)	08:41 - 16:04	09:27 - 15:44
23	09:04 - 16:35	07:52 - 17:50 (19)	08:55 (2) - 09:14 (2)	06:33 - 07:25 (3) - 07:41 (3)	06:05 - 21:08	04:55 - 22:14	04:28 - 22:51	05:06 - 22:20	06:13 - 21:05	07:22 - 19:36 (27)	08:09 (3) - 09:06 (4)	08:30 - 18:12 (15)	09:27 (2) - 09:42 (2)	08:43 - 16:03	09:27 - 15:44
24	09:02 - 16:37	07:49 - 17:53 (19)	08:55 (2) - 09:14 (2)	06:30 - 07:25 (3) - 07:40 (3)	06:02 - 21:10	04:53 - 22:16	04:28 - 22:51	05:08 - 22:18	06:16 - 21:02	07:24 - 19:33 (35)	08:08 (3) - 09:09 (4)	08:32 - 18:09 (12)	09:29 (2) - 09:41 (2)	08:45 - 16:01	09:28 - 15:45
25	09:00 - 16:39	07:46 - 17:55 (18)	08:55 (2) - 09:13 (2)	06:27 - 07:26 (3) - 07:38 (3)	06:00 - 21:12	04:51 - 22:18	04:28 - 22:51	05:10 - 22:16	06:18 - 21:00	07:26 - 19:31 (35)	08:09 (3) - 09:10 (4)	07:35 - 17:07 (7)	08:31 (2) - 08:38 (2)	08:48 - 16:00	09:28 - 15:46
26	08:58 - 16:42	07:44 - 17:58 (17)	08:55 (2) - 09:12 (2)	06:24 - 07:28 (3) - 07:35 (3)	05:57 - 21:15	04:49 - 22:20	04:29 - 22:51	05:12 - 22:14	06:20 - 20:57	07:28 - 19:28 (36)	08:11 (3) - 09:12 (4)	07:37 - 17:04		08:50 - 15:58	09:28 - 15:46
27	08:56 - 16:44	07:41 - 18:00 (15)	08:56 (2) - 09:11 (2)	06:21 - 19:05	05:55 - 21:17	04:48 - 22:22	04:29 - 22:50	05:14 - 22:12	06:22 - 20:54	07:31 - 19:25 (37)	08:11 (3) - 09:13 (4)	07:40 - 17:02		08:52 - 15:57	09:29 - 15:47
28	08:54 - 16:47	07:38 - 18:03 (11)	08:58 (2) - 09:09 (2)	06:19 - 19:08	05:52 - 21:19	04:46 - 22:24	04:30 - 22:50	05:16 - 22:10	06:24 - 20:51	07:33 - 19:22 (34)	08:13 (3) - 09:13 (4)	07:42 - 16:59		08:54 - 15:55	09:29 - 15:48
29	08:52 - 16:49			07:16 - 20:10	05:49 - 21:21	04:44 - 22:26	04:31 - 22:50	05:18 - 22:08	06:27 - 20:48	07:35 - 19:19 (28)	08:45 (4) - 09:13 (4)	07:44 - 16:57		08:56 - 15:54	09:29 - 15:49
30	08:50 - 16:51			07:13 - 20:12	05:47 - 21:24	04:43 - 22:27	04:31 - 22:49	05:20 - 22:05	06:29 - 20:46	07:37 - 19:16 (29)	08:45 (4) - 09:14 (4)	07:47 - 16:54		08:58 - 15:53	09:28 - 15:50
31	08:48 - 16:54			07:10 - 20:15	04:41 - 22:29		05:22 - 22:03	06:31 - 20:43			07:49 - 16:52			09:28 - 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case		192	591						345	447		
Sun reduction		0,50	0,50						0,50	0,50		
Oper. time red.		0,80	0,80						0,80	0,80		
Wind dir. red.		0,74	0,71						0,71	0,73		
Total reduction		0,29	0,28						0,28	0,29		
Total, real		57	168						97	130		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:18 (2)	08:46	10:00 (3)	07:35	07:07	05:44	04:40
	15:53	49	12:27 (4)	16:56	25	10:25 (3)	18:05	20:17	21:26	22:31
2	09:28		11:18 (2)	08:44	09:59 (3)	07:33	07:04	05:41	04:39
	15:54	50	12:28 (4)	16:59	25	10:24 (3)	18:07	20:19	21:28	22:32
3	09:27		11:18 (2)	08:41	10:00 (3)	07:30	07:01	05:39	04:37
	15:56	51	12:28 (4)	17:01	25	10:25 (3)	18:10	20:21	21:31	22:34
4	09:27		11:18 (2)	08:39	09:59 (3)	07:27	06:58	05:36	04:36
	15:57	51	12:28 (4)	17:04	26	10:25 (3)	18:12	20:24	21:33	22:35
5	09:26		11:19 (2)	08:37	10:00 (3)	07:24	06:55	05:34	04:35
	15:59	51	12:29 (4)	17:06	26	10:26 (3)	18:14	20:26	21:35	22:37
6	09:25		11:19 (2)	08:35	10:00 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:29 (4)	17:09	25	10:25 (3)	18:17	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32	10:00 (3)	07:19	06:50	05:29	04:33
	16:02	51	12:30 (4)	17:11	25	10:25 (3)	18:19	20:31	21:40	22:39
8	09:24		11:20 (2)	08:30	10:01 (3)	07:16	06:47	05:27	04:32
	16:04	51	12:30 (4)	17:13	24	10:25 (3)	18:21	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28	10:01 (3)	07:13	06:44	05:24	04:31
	16:05	51	12:31 (4)	17:16	23	10:24 (3)	18:24	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25	10:03 (3)	07:10	06:41	05:22	04:30
	16:07	51	12:31 (4)	17:18	21	10:24 (3)	18:26	20:38	21:47	22:43
11	09:21		11:22 (2)	08:23	09:07 (26)	07:07	06:38	05:20	04:30
	16:09	50	12:31 (4)	17:21	25	10:22 (3)	18:28	20:40	21:49	22:44
12	09:20		11:22 (2)	08:20	09:04 (26)	07:05	06:36	05:17	04:29
	16:11	49	12:31 (4)	17:23	27	10:20 (3)	18:31	20:42	21:51	22:45
13	09:19		11:23 (2)	08:18	09:03 (26)	07:02	06:33	05:15	04:28
	16:13	49	12:32 (4)	17:26	26	10:18 (3)	18:33	20:44	21:53	22:46
14	09:17		11:24 (2)	08:15	09:02 (26)	06:59	06:30	05:13	04:28
	16:15	47	12:32 (4)	17:28	17	09:19 (26)	18:35	20:47	21:56	22:47
15	09:16		11:24 (2)	08:13	09:01 (26)	06:56	06:27	05:11	04:28
	16:17	47	12:32 (4)	17:31	19	09:20 (26)	18:38	20:49	21:58	22:47
16	09:15		11:25 (2)	08:10	09:00 (26)	06:53	06:24	05:08	04:27
	16:19	44	12:31 (4)	17:33	20	09:20 (26)	18:40	20:51	22:00	22:48
17	09:13		11:27 (2)	08:08	09:01 (26)	06:50	06:22	05:06	04:27
	16:21	42	12:32 (4)	17:36	20	09:21 (26)	18:42	20:54	22:02	22:49
18	09:12		11:28 (2)	08:05	09:00 (26)	06:47	06:19	05:04	04:27
	16:23	39	12:32 (4)	17:38	21	09:21 (26)	18:45	20:56	22:04	22:49
19	09:10		11:29 (2)	08:02	09:00 (26)	06:44	06:16	05:02	04:27
	16:26	35	12:31 (4)	17:41	20	09:20 (26)	18:47	20:58	22:06	22:50
20	09:09		11:31 (2)	08:00	09:00 (26)	06:42	06:13	05:00	04:27
	16:28	30	12:31 (4)	17:43	19	09:19 (26)	18:49	21:01	22:08	22:50
21	09:07		12:09 (4)	07:57	09:01 (26)	06:39	06:11	04:58	04:27
	16:30	21	12:30 (4)	17:46	17	09:18 (26)	18:52	21:03	22:10	22:50
22	09:05		12:11 (4)	07:55	09:02 (26)	06:36	06:08	04:56	04:27
	16:32	19	12:30 (4)	17:48	16	09:18 (26)	18:54	21:05	22:12	22:51
23	09:04		12:12 (4)	07:52	09:04 (26)	06:33	06:05	04:54	04:27
	16:35	17	12:29 (4)	17:50	12	09:16 (26)	18:56	21:08	22:14	22:51
24	09:02		10:08 (3)	07:49	09:06 (26)	06:30	06:02	04:53	04:28
	16:37	16	12:26 (4)	17:53	7	09:13 (26)	18:59	21:10	22:16	22:51
25	09:00		10:05 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	14	12:22 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:03 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	15	10:18 (3)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:03 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	17	10:20 (3)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:01 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	20	10:21 (3)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:01 (3)			07:16	05:49	04:44	04:31
	16:49	21	10:22 (3)			20:10	21:21	22:26	22:50
30	08:50		10:01 (3)			07:13	05:47	04:43	04:31
	16:51	22	10:23 (3)			20:12	21:24	22:27	22:49
31	08:48		10:00 (3)			07:10		04:41	
	16:54	24	10:24 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1145			511				
Sun reduction		0,50			0,50				
Oper. time red.		0,80			0,80				
Wind dir. red.		0,66			0,73				
Total reduction		0,26			0,29				
Total, real		300			149				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:40			07:52		09:32 (3)	09:00		11:04 (2)
	22:49	22:01	20:40	19:13			16:49	21	09:53 (3)	15:51	51	12:14 (4)
2	04:33	05:26	06:35	07:42			07:54		09:31 (3)	09:02		11:04 (2)
	22:48	21:59	20:37	19:10			16:46	22	09:53 (3)	15:50	51	12:14 (4)
3	04:34	05:29	06:38	07:44			07:56		09:31 (3)	09:04		11:04 (2)
	22:47	21:56	20:34	19:07			16:44	23	09:54 (3)	15:49	51	12:14 (4)
4	04:35	05:31	06:40	07:46			07:59		09:30 (3)	09:05		11:04 (2)
	22:47	21:54	20:31	19:05			16:42	25	09:55 (3)	15:48	51	12:14 (4)
5	04:36	05:33	06:42	07:49			08:01		09:29 (3)	09:07		11:05 (2)
	22:46	21:52	20:28	19:02			16:39	26	09:55 (3)	15:47	51	12:15 (4)
6	04:38	05:35	06:44	07:51			08:04		09:30 (3)	09:09		11:05 (2)
	22:45	21:49	20:26	18:59			16:37	25	09:55 (3)	15:46	51	12:15 (4)
7	04:39	05:37	06:47	07:53			08:06		09:30 (3)	09:10		11:06 (2)
	22:44	21:47	20:23	18:56			16:35	26	09:56 (3)	15:46	51	12:16 (4)
8	04:40	05:40	06:49	07:55			08:08		09:29 (3)	09:12		11:06 (2)
	22:43	21:44	20:20	18:53			16:32	26	09:55 (3)	15:45	51	12:16 (4)
9	04:41	05:42	06:51	07:58			08:11		09:30 (3)	09:14		11:07 (2)
	22:42	21:42	20:17	18:50			16:30	25	09:55 (3)	15:44	51	12:17 (4)
10	04:43	05:44	06:53	08:00			08:13		09:31 (3)	09:15		11:07 (2)
	22:41	21:39	20:14	18:48			16:28	24	09:55 (3)	15:44	51	12:17 (4)
11	04:44	05:46	06:55	08:02			08:16		09:31 (3)	09:16		11:08 (2)
	22:39	21:37	20:11	18:45			16:26	23	09:54 (3)	15:43	49	12:17 (4)
12	04:46	05:49	06:58	08:04			08:18		09:32 (3)	09:18		11:08 (2)
	22:38	21:34	20:08	18:42			16:24	22	09:54 (3)	15:43	49	12:17 (4)
13	04:48	05:51	07:00	08:07			08:20		09:33 (3)	09:19		11:09 (2)
	22:37	21:32	20:05	18:39			16:21	21	09:54 (3)	15:43	49	12:18 (4)
14	04:49	05:53	07:02	08:09			08:23		09:34 (3)	09:20		11:09 (2)
	22:35	21:29	20:02	18:36			16:19	20	09:54 (3)	15:42	49	12:18 (4)
15	04:51	05:55	07:04	08:11			08:25		09:35 (3)	09:21		11:10 (2)
	22:34	21:26	20:00	18:34			16:17	17	09:52 (3)	15:42	49	12:19 (4)
16	04:53	05:58	07:06	08:14			08:27		09:36 (3)	09:22		11:11 (2)
	22:32	21:24	19:57	18:31			16:15	15	09:51 (3)	15:42	48	12:20 (4)
17	04:54	06:00	07:09	08:16			08:30		09:39 (3)	09:23		11:12 (2)
	22:31	21:21	19:54	18:28			16:13	15	11:56 (4)	15:42	48	12:20 (4)
18	04:56	06:02	07:11	08:18		09:36 (26)	08:32		09:42 (3)	09:24		11:11 (2)
	22:29	21:19	19:51	18:25	10	09:46 (26)	16:11	16	12:00 (4)	15:42	48	12:20 (4)
19	04:58	06:04	07:13	08:21		09:34 (26)	08:34		11:46 (4)	09:25		11:12 (2)
	22:27	21:16	19:48	18:23	14	09:48 (26)	16:10	17	12:03 (4)	15:42	47	12:20 (4)
20	05:00	06:06	07:15	08:23		09:32 (26)	08:37		11:46 (4)	09:26		11:13 (2)
	22:26	21:13	19:45	18:20	17	09:49 (26)	16:08	19	12:05 (4)	15:43	48	12:21 (4)
21	05:02	06:09	07:17	08:25		09:32 (26)	08:39		11:44 (4)	09:26		11:14 (2)
	22:24	21:10	19:42	18:17	18	09:50 (26)	16:06	21	12:05 (4)	15:43	47	12:22 (4)
22	05:04	06:11	07:20	08:28		09:30 (26)	08:41		11:07 (2)	09:27		11:14 (2)
	22:22	21:08	19:39	18:15	20	09:50 (26)	16:04	30	12:07 (4)	15:44	47	12:22 (4)
23	05:06	06:13	07:22	08:30		09:30 (26)	08:43		11:05 (2)	09:27		11:14 (2)
	22:20	21:05	19:36	18:12	20	09:50 (26)	16:03	36	12:08 (4)	15:44	48	12:22 (4)
24	05:08	06:15	07:24	08:32		09:31 (26)	08:45		11:05 (2)	09:28		11:15 (2)
	22:18	21:02	19:33	18:09	20	09:51 (26)	16:01	39	12:09 (4)	15:45	48	12:23 (4)
25	05:10	06:18	07:26	07:35		08:30 (26)	08:48		11:04 (2)	09:28		11:15 (2)
	22:16	20:59	19:31	17:07	20	08:50 (26)	15:59	42	12:09 (4)	15:45	48	12:24 (4)
26	05:12	06:20	07:28	07:37		08:31 (26)	08:50		11:04 (2)	09:28		11:16 (2)
	22:14	20:57	19:28	17:04	19	08:50 (26)	15:58	43	12:10 (4)	15:46	48	12:24 (4)
27	05:14	06:22	07:31	07:40		08:30 (26)	08:52		11:03 (2)	09:29		11:16 (2)
	22:12	20:54	19:25	17:02	19	08:49 (26)	15:57	47	12:11 (4)	15:47	48	12:25 (4)
28	05:16	06:24	07:33	07:42		08:31 (26)	08:54		11:04 (2)	09:29		11:17 (2)
	22:10	20:51	19:22	16:59	17	08:48 (26)	15:55	47	12:12 (4)	15:48	48	12:25 (4)
29	05:18	06:27	07:35	07:44		08:33 (26)	08:56		11:03 (2)	09:29		11:16 (2)
	22:08	20:48	19:19	16:56	26	09:48 (3)	15:54	49	12:12 (4)	15:49	49	12:25 (4)
30	05:20	06:29	07:37	07:47		08:34 (26)	08:58		11:03 (2)	09:28		11:17 (2)
	22:05	20:45	19:16	16:54	27	09:50 (3)	15:53	50	12:12 (4)	15:50	49	12:26 (4)
31	05:22	06:31		07:49		08:37 (26)				09:28		11:18 (2)
	22:03	20:43		16:51	25	09:52 (3)				15:51	49	12:27 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					272			832			1523	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,68			0,65	
Total reduction					0,29			0,27			0,26	
Total, real					80			226			394	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:00 (1)	08:46		09:41 (26)	07:35	08:28 (28)	07:07	05:44	04:40
	15:53	67 13:34 (4)	16:56	27	11:17 (3)	18:05	19 08:47 (28)	20:17	21:26	22:31
2	09:28	11:00 (1)	08:44		09:37 (26)	07:33	08:27 (28)	07:04	05:41	04:39
	15:54	68 13:34 (4)	16:59	32	11:16 (3)	18:07	20 08:47 (28)	20:19	21:28	22:32
3	09:27	11:00 (1)	08:41		09:35 (26)	07:30	08:27 (28)	07:01	05:39	04:37
	15:56	69 13:34 (4)	17:01	35	11:15 (3)	18:10	20 08:47 (28)	20:21	21:31	22:34
4	09:27	11:00 (1)	08:39		09:34 (26)	07:27	08:27 (28)	06:58	05:36	04:36
	15:57	69 13:35 (4)	17:04	33	11:13 (3)	18:12	19 08:46 (28)	20:24	21:33	22:35
5	09:26	11:00 (1)	08:37		09:33 (26)	07:24	08:28 (28)	06:55	05:34	04:35
	15:59	69 13:35 (4)	17:06	33	11:12 (3)	18:14	17 08:45 (28)	20:26	21:35	22:37
6	09:25	11:00 (1)	08:35		09:32 (26)	07:22	08:28 (28)	06:53	05:31	04:34
	16:00	69 13:35 (4)	17:08	23	11:06 (3)	18:17	16 08:44 (28)	20:28	21:38	22:38
7	09:25	10:54 (3)	08:32		09:31 (26)	07:19	08:29 (28)	06:50	05:29	04:33
	16:02	75 13:36 (4)	17:11	22	09:53 (26)	18:19	13 08:42 (28)	20:31	21:40	22:39
8	09:24	10:53 (3)	08:30		09:32 (26)	07:16	08:31 (28)	06:47	05:27	04:32
	16:04	77 13:37 (4)	17:13	22	09:54 (26)	18:21	8 08:39 (28)	20:33	21:42	22:41
9	09:23	10:52 (3)	08:28		09:31 (26)	07:13		06:44	05:24	04:31
	16:05	76 13:37 (4)	17:16	23	09:54 (26)	18:24		20:35	21:44	22:42
10	09:22	10:51 (3)	08:25		09:32 (26)	07:10		06:41	05:22	04:30
	16:07	78 13:37 (4)	17:18	23	09:55 (26)	18:26		20:38	21:47	22:43
11	09:21	10:50 (3)	08:23		09:31 (26)	07:07		06:38	05:20	04:30
	16:09	78 13:38 (4)	17:21	24	09:55 (26)	18:28		20:40	21:49	22:44
12	09:20	10:49 (3)	08:20		09:31 (26)	07:05		06:36	05:17	04:29
	16:11	76 13:37 (4)	17:23	23	09:54 (26)	18:31		20:42	21:51	22:45
13	09:19	10:50 (3)	08:18		09:31 (26)	07:02		06:33	05:15	04:28
	16:13	74 13:38 (4)	17:26	23	09:54 (26)	18:33		20:44	21:53	22:46
14	09:17	10:49 (3)	08:15		09:33 (26)	06:59		06:30	05:13	04:28
	16:15	73 13:38 (4)	17:28	21	09:54 (26)	18:35		20:47	21:55	22:47
15	09:16	10:48 (3)	08:13		09:33 (26)	06:56		06:27	05:11	04:28
	16:17	69 13:38 (4)	17:31	20	09:53 (26)	18:38		20:49	21:58	22:47
16	09:15	10:48 (3)	08:10		09:34 (26)	06:53		06:24	05:08	04:27
	16:19	62 13:37 (4)	17:33	17	09:51 (26)	18:40		20:51	22:00	22:48
17	09:13	10:49 (3)	08:08		09:36 (26)	06:50		06:22	05:06	04:27
	16:21	61 13:38 (4)	17:36	14	09:50 (26)	18:42		20:54	22:02	22:49
18	09:12	10:48 (3)	08:05		09:39 (26)	06:47		06:19	05:04	04:27
	16:23	61 13:38 (4)	17:38	8	09:47 (26)	18:45		20:56	22:04	22:49
19	09:10	10:48 (3)	08:02			06:44		06:16	05:02	04:27
	16:26	58 13:37 (4)	17:41			18:47		20:58	22:06	22:50
20	09:09	10:48 (3)	08:00			06:42		06:13	05:00	04:27
	16:28	57 13:37 (4)	17:43			18:49		21:01	22:08	22:50
21	09:07	10:48 (3)	07:57			06:39		06:10	04:58	04:27
	16:30	53 13:36 (4)	17:45			18:52		21:03	22:10	22:50
22	09:05	10:49 (3)	07:54			06:36		06:08	04:56	04:27
	16:32	49 13:35 (4)	17:48			18:54		21:05	22:12	22:51
23	09:04	10:49 (3)	07:52			06:33		06:05	04:54	04:27
	16:35	43 13:33 (4)	17:50			18:56		21:08	22:14	22:51
24	09:02	10:48 (3)	07:49		08:36 (28)	06:30		06:02	04:53	04:28
	16:37	29 11:17 (3)	17:53	5	08:41 (28)	18:59		21:10	22:16	22:51
25	09:00	10:49 (3)	07:46		08:32 (28)	06:27		06:00	04:51	04:28
	16:39	29 11:18 (3)	17:55	12	08:44 (28)	19:01		21:12	22:18	22:51
26	08:58	10:49 (3)	07:44		08:30 (28)	06:24		05:57	04:49	04:29
	16:42	29 11:18 (3)	17:58	15	08:45 (28)	19:03		21:14	22:20	22:51
27	08:56	10:50 (3)	07:41		08:29 (28)	06:21		05:54	04:47	04:29
	16:44	29 11:19 (3)	18:00	17	08:46 (28)	19:05		21:17	22:22	22:50
28	08:54	10:50 (3)	07:38		08:29 (28)	06:18		05:52	04:46	04:30
	16:46	28 11:18 (3)	18:02	18	08:47 (28)	19:08		21:19	22:24	22:50
29	08:52	10:51 (3)				07:16		05:49	04:44	04:30
	16:49	27 11:18 (3)				20:10		21:21	22:26	22:50
30	08:50	10:51 (3)				07:13		05:47	04:43	04:31
	16:51	26 11:17 (3)				20:12		21:24	22:27	22:49
31	08:48	10:52 (3)				07:10			04:41	
	16:54	25 11:17 (3)				20:15			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1753		490			132			
Sun reduction		0,50		0,50			0,50			
Oper. time red.		0,80		0,80			0,80			
Wind dir. red.		0,65		0,72			0,73			
Total reduction		0,26		0,29			0,29			
Total, real		456		141			38			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:52		09:00 (26)	09:00		10:33 (3)
	22:49	22:01	20:40	19:13			16:49	24	09:24 (26)	15:51	76	13:20 (4)
2	04:33	05:26	06:35	07:42			07:54		09:01 (26)	09:02		10:34 (3)
	22:48	21:59	20:37	19:10			16:46	23	09:24 (26)	15:50	78	13:20 (4)
3	04:34	05:29	06:38	07:44			07:56		09:01 (26)	09:04		10:35 (3)
	22:47	21:56	20:34	19:07			16:44	23	09:24 (26)	15:49	78	13:20 (4)
4	04:35	05:31	06:40	07:46			07:59		09:02 (26)	09:05		10:37 (3)
	22:47	21:54	20:31	19:05			16:42	22	09:24 (26)	15:48	77	13:21 (4)
5	04:36	05:33	06:42	07:48		09:11 (28)	08:01		09:02 (26)	09:07		10:39 (3)
	22:46	21:52	20:28	19:02	3	09:14 (28)	16:39	26	10:37 (3)	15:47	76	13:21 (4)
6	04:37	05:35	06:44	07:51		09:06 (28)	08:04		09:03 (26)	09:09		10:46 (1)
	22:45	21:49	20:26	18:59	11	09:17 (28)	16:37	32	10:42 (3)	15:46	70	13:22 (4)
7	04:39	05:37	06:47	07:53		09:05 (28)	08:06		09:05 (26)	09:10		10:47 (1)
	22:44	21:47	20:23	18:56	15	09:20 (28)	16:35	34	10:44 (3)	15:46	69	13:22 (4)
8	04:40	05:40	06:49	07:55		09:03 (28)	08:08		09:05 (26)	09:12		10:48 (1)
	22:43	21:44	20:20	18:53	17	09:20 (28)	16:32	35	10:45 (3)	15:45	69	13:23 (4)
9	04:41	05:42	06:51	07:58		09:02 (28)	08:11		09:08 (26)	09:14		10:49 (1)
	22:42	21:42	20:17	18:50	18	09:20 (28)	16:30	33	10:47 (3)	15:44	68	13:23 (4)
10	04:43	05:44	06:53	08:00		09:02 (28)	08:13		09:13 (26)	09:15		10:49 (1)
	22:41	21:39	20:14	18:48	19	09:21 (28)	16:28	25	10:48 (3)	15:44	69	13:23 (4)
11	04:44	05:46	06:55	08:02		09:01 (28)	08:16		10:22 (3)	09:16		10:50 (1)
	22:39	21:37	20:11	18:45	20	09:21 (28)	16:26	26	10:48 (3)	15:43	69	13:24 (4)
12	04:46	05:49	06:58	08:04		09:01 (28)	08:18		10:22 (3)	09:18		10:50 (1)
	22:38	21:34	20:08	18:42	20	09:21 (28)	16:24	27	10:49 (3)	15:43	67	13:24 (4)
13	04:47	05:51	07:00	08:07		09:01 (28)	08:20		10:22 (3)	09:19		10:51 (1)
	22:37	21:32	20:05	18:39	19	09:20 (28)	16:21	28	10:50 (3)	15:43	68	13:25 (4)
14	04:49	05:53	07:02	08:09		09:01 (28)	08:23		10:23 (3)	09:20		10:52 (1)
	22:35	21:29	20:02	18:36	18	09:19 (28)	16:19	28	10:51 (3)	15:42	67	13:25 (4)
15	04:51	05:55	07:04	08:11		09:02 (28)	08:25		10:22 (3)	09:21		10:52 (1)
	22:34	21:26	20:00	18:34	16	09:18 (28)	16:17	29	10:51 (3)	15:42	66	13:25 (4)
16	04:53	05:57	07:06	08:14		09:03 (28)	08:27		10:22 (3)	09:22		10:53 (1)
	22:32	21:24	19:57	18:31	13	09:16 (28)	16:15	29	10:51 (3)	15:42	64	13:25 (4)
17	04:54	06:00	07:09	08:16		09:05 (28)	08:30		10:23 (3)	09:23		10:54 (1)
	22:31	21:21	19:54	18:28	10	09:15 (28)	16:13	29	10:52 (3)	15:42	67	13:27 (4)
18	04:56	06:02	07:11	08:18			08:32		10:22 (3)	09:24		10:54 (1)
	22:29	21:19	19:51	18:25			16:11	29	10:51 (3)	15:42	64	13:26 (4)
19	04:58	06:04	07:13	08:21			08:34		10:23 (3)	09:25		10:55 (1)
	22:27	21:16	19:48	18:23			16:10	43	13:07 (4)	15:42	65	13:27 (4)
20	05:00	06:06	07:15	08:23			08:37		10:24 (3)	09:26		10:55 (1)
	22:25	21:13	19:45	18:20			16:08	49	13:10 (4)	15:43	66	13:28 (4)
21	05:02	06:09	07:17	08:25			08:39		10:23 (3)	09:26		10:56 (1)
	22:24	21:10	19:42	18:17			16:06	53	13:11 (4)	15:43	66	13:29 (4)
22	05:04	06:11	07:20	08:28			08:41		10:24 (3)	09:27		10:56 (1)
	22:22	21:08	19:39	18:15			16:04	57	13:13 (4)	15:44	65	13:28 (4)
23	05:06	06:13	07:22	08:30			08:43		10:24 (3)	09:27		10:56 (1)
	22:20	21:05	19:36	18:12			16:03	58	13:13 (4)	15:44	66	13:29 (4)
24	05:08	06:15	07:24	08:32		10:07 (26)	08:45		10:26 (3)	09:28		10:58 (1)
	22:18	21:02	19:33	18:09	10	10:17 (26)	16:01	60	13:15 (4)	15:45	64	13:30 (4)
25	05:10	06:18	07:26	07:35		09:05 (26)	08:48		10:26 (3)	09:28		10:58 (1)
	22:16	20:59	19:30	17:07	15	09:20 (26)	15:59	61	13:15 (4)	15:45	65	13:30 (4)
26	05:12	06:20	07:28	07:37		09:04 (26)	08:50		10:27 (3)	09:28		10:58 (1)
	22:14	20:57	19:28	17:04	18	09:22 (26)	15:58	62	13:16 (4)	15:46	66	13:31 (4)
27	05:14	06:22	07:31	07:40		09:02 (26)	08:52		10:28 (3)	09:28		10:58 (1)
	22:12	20:54	19:25	17:02	20	09:22 (26)	15:56	67	13:17 (4)	15:47	66	13:31 (4)
28	05:16	06:24	07:33	07:42		09:02 (26)	08:54		10:29 (3)	09:29		10:59 (1)
	22:10	20:51	19:22	16:59	21	09:23 (26)	15:55	72	13:18 (4)	15:48	67	13:32 (4)
29	05:18	06:27	07:35	07:44		09:02 (26)	08:56		10:30 (3)	09:29		10:58 (1)
	22:08	20:48	19:19	16:56	22	09:24 (26)	15:54	74	13:18 (4)	15:49	67	13:32 (4)
30	05:20	06:29	07:37	07:47		09:01 (26)	08:58		10:31 (3)	09:28		10:59 (1)
	22:05	20:45	19:16	16:54	23	09:24 (26)	15:53	75	13:18 (4)	15:50	66	13:32 (4)
31	05:22	06:31		07:49		09:01 (26)				09:28		11:00 (1)
	22:03	20:43		16:51	23	09:24 (26)				15:51	66	13:33 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					351			1233			2117	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,68			0,63	
Total reduction					0,29			0,27			0,25	
Total, real					102			333			533	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April		May	June
1	09:28		11:05 (1)	08:46		09:41 (26)	07:35		08:31 (28)	07:07		05:44	04:40
	15:53	69	13:41 (4)	16:56	36	11:24 (3)	18:05	20	08:51 (28)	20:17		21:26	22:31
2	09:28		11:05 (1)	08:44		09:40 (26)	07:33		08:31 (28)	07:04		05:41	04:39
	15:54	68	13:41 (4)	16:59	35	11:22 (3)	18:07	20	08:51 (28)	20:19		21:28	22:32
3	09:27		11:05 (1)	08:41		09:39 (26)	07:30		08:31 (28)	07:01		05:39	04:37
	15:56	69	13:41 (4)	17:01	35	11:21 (3)	18:10	19	08:50 (28)	20:21		21:31	22:34
4	09:27		11:00 (3)	08:39		09:38 (26)	07:27		08:31 (28)	06:58		05:36	04:36
	15:57	74	13:42 (4)	17:04	32	11:19 (3)	18:12	19	08:50 (28)	20:24		21:33	22:35
5	09:26		10:59 (3)	08:37		09:38 (26)	07:24		08:32 (28)	06:55		05:34	04:35
	15:59	76	13:42 (4)	17:06	22	10:00 (26)	18:14	16	08:48 (28)	20:26		21:35	22:37
6	09:25		10:58 (3)	08:35		09:37 (26)	07:22		08:33 (28)	06:53		05:31	04:34
	16:00	77	13:43 (4)	17:08	23	10:00 (26)	18:17	14	08:47 (28)	20:28		21:38	22:38
7	09:25		10:58 (3)	08:32		09:36 (26)	07:19		08:35 (28)	06:50		05:29	04:33
	16:02	76	13:43 (4)	17:11	24	10:00 (26)	18:19	9	08:44 (28)	20:31		21:40	22:39
8	09:24		10:57 (3)	08:30		09:37 (26)	07:16			06:47		05:27	04:32
	16:04	78	13:44 (4)	17:13	24	10:01 (26)	18:21			20:33		21:42	22:41
9	09:23		10:57 (3)	08:28		09:36 (26)	07:13			06:44		05:24	04:31
	16:05	77	13:44 (4)	17:16	24	10:00 (26)	18:24			20:35		21:44	22:42
10	09:22		10:56 (3)	08:25		09:37 (26)	07:10			06:41		05:22	04:30
	16:07	77	13:44 (4)	17:18	24	10:01 (26)	18:26			20:38		21:47	22:43
11	09:21		10:56 (3)	08:23		09:37 (26)	07:07			06:38		05:20	04:30
	16:09	76	13:45 (4)	17:21	23	10:00 (26)	18:28			20:40		21:49	22:44
12	09:20		10:56 (3)	08:20		09:37 (26)	07:05			06:36		05:17	04:29
	16:11	74	13:44 (4)	17:23	23	10:00 (26)	18:31			20:42		21:51	22:45
13	09:19		10:56 (3)	08:18		09:38 (26)	07:02			06:33		05:15	04:28
	16:13	73	13:45 (4)	17:26	21	09:59 (26)	18:33			20:44		21:53	22:46
14	09:17		10:56 (3)	08:15		09:39 (26)	06:59			06:30		05:13	04:28
	16:15	69	13:45 (4)	17:28	20	09:59 (26)	18:35			20:47		21:55	22:47
15	09:16		10:55 (3)	08:13		09:40 (26)	06:56			06:27		05:11	04:28
	16:17	61	13:45 (4)	17:31	17	09:57 (26)	18:38			20:49		21:58	22:47
16	09:15		10:55 (3)	08:10		09:42 (26)	06:53			06:24		05:08	04:27
	16:19	59	13:44 (4)	17:33	13	09:55 (26)	18:40			20:51		22:00	22:48
17	09:13		10:56 (3)	08:08		09:45 (26)	06:50			06:21		05:06	04:27
	16:21	59	13:45 (4)	17:36	8	09:53 (26)	18:42			20:54		22:02	22:49
18	09:12		10:56 (3)	08:05			06:47			06:19		05:04	04:27
	16:23	58	13:45 (4)	17:38			18:45			20:56		22:04	22:49
19	09:10		10:56 (3)	08:02			06:44			06:16		05:02	04:27
	16:26	55	13:44 (4)	17:41			18:47			20:58		22:06	22:50
20	09:09		10:56 (3)	08:00			06:42			06:13		05:00	04:27
	16:28	54	13:44 (4)	17:43			18:49			21:01		22:08	22:50
21	09:07		10:56 (3)	07:57			06:39			06:10		04:58	04:27
	16:30	50	13:43 (4)	17:45			18:52			21:03		22:10	22:50
22	09:05		10:56 (3)	07:54			06:36			06:08		04:56	04:27
	16:32	45	13:42 (4)	17:48			18:54			21:05		22:12	22:51
23	09:04		10:57 (3)	07:52		08:40 (28)	06:33			06:05		04:54	04:27
	16:35	40	13:40 (4)	17:50	5	08:45 (28)	18:56			21:08		22:14	22:51
24	09:02		10:56 (3)	07:49		08:36 (28)	06:30			06:02		04:53	04:28
	16:37	32	13:36 (4)	17:53	12	08:48 (28)	18:59			21:10		22:16	22:51
25	09:00		10:57 (3)	07:46		08:34 (28)	06:27			06:00		04:51	04:28
	16:39	29	11:26 (3)	17:55	15	08:49 (28)	19:01			21:12		22:18	22:51
26	08:58		10:57 (3)	07:44		08:33 (28)	06:24			05:57		04:49	04:29
	16:42	29	11:26 (3)	17:58	17	08:50 (28)	19:03			21:14		22:20	22:51
27	08:56		10:58 (3)	07:41		08:32 (28)	06:21			05:54		04:47	04:29
	16:44	28	11:26 (3)	18:00	18	08:50 (28)	19:05			21:17		22:22	22:50
28	08:54		10:58 (3)	07:38		08:32 (28)	06:18			05:52		04:46	04:30
	16:46	28	11:26 (3)	18:02	19	08:51 (28)	19:08			21:19		22:24	22:50
29	08:52		10:59 (3)				07:16			05:49		04:44	04:30
	16:49	27	11:26 (3)				20:10			21:21		22:26	22:50
30	08:50		10:59 (3)				07:13			05:47		04:43	04:31
	16:51	26	11:25 (3)				20:12			21:24		22:27	22:49
31	08:48		09:43 (26)				07:10					04:41	
	16:54	32	11:24 (3)				20:15					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		1745			490			117					
Sun reduction		0,50			0,50			0,50					
Oper. time red.		0,80			0,80			0,80					
Wind dir. red.		0,65			0,72			0,73					
Total reduction		0,26			0,29			0,29					
Total, real		452			141			34					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:06 (26)	09:00		10:39 (3)
	22:49	22:01	20:40	19:13			16:49	24	09:30 (26)	15:51	75	13:27 (4)
2	04:33	05:26	06:35	07:42			07:54		09:06 (26)	09:02		10:39 (3)
	22:48	21:59	20:37	19:10			16:46	24	09:30 (26)	15:50	77	13:27 (4)
3	04:34	05:29	06:38	07:44			07:56		09:06 (26)	09:04		10:40 (3)
	22:47	21:56	20:34	19:07			16:44	24	09:30 (26)	15:49	78	13:27 (4)
4	04:35	05:31	06:40	07:46			07:59		09:07 (26)	09:05		10:41 (3)
	22:47	21:54	20:31	19:05			16:42	23	09:30 (26)	15:48	79	13:28 (4)
5	04:36	05:33	06:42	07:48			08:01		09:07 (26)	09:07		10:43 (3)
	22:46	21:52	20:28	19:02			16:39	22	09:29 (26)	15:47	76	13:28 (4)
6	04:37	05:35	06:44	07:51		09:12 (28)	08:04		09:08 (26)	09:09		10:44 (3)
	22:45	21:49	20:26	18:59	7	09:19 (28)	16:37	21	09:29 (26)	15:46	77	13:29 (4)
7	04:39	05:37	06:47	07:53		09:10 (28)	08:06		09:09 (26)	09:10		10:46 (3)
	22:44	21:47	20:23	18:56	12	09:22 (28)	16:35	32	10:50 (3)	15:46	76	13:29 (4)
8	04:40	05:40	06:49	07:55		09:08 (28)	08:08		09:09 (26)	09:12		10:48 (3)
	22:43	21:44	20:20	18:53	15	09:23 (28)	16:32	34	10:51 (3)	15:45	74	13:30 (4)
9	04:41	05:42	06:51	07:58		09:06 (28)	08:11		09:10 (26)	09:14		10:51 (3)
	22:42	21:42	20:17	18:50	18	09:24 (28)	16:30	36	10:53 (3)	15:44	72	13:30 (4)
10	04:43	05:44	06:53	08:00		09:06 (28)	08:13		09:12 (26)	09:15		10:54 (1)
	22:41	21:39	20:14	18:48	19	09:25 (28)	16:28	35	10:55 (3)	15:44	68	13:30 (4)
11	04:44	05:46	06:55	08:02		09:05 (28)	08:16		09:14 (26)	09:16		10:55 (1)
	22:39	21:37	20:11	18:45	19	09:24 (28)	16:26	33	10:55 (3)	15:43	68	13:31 (4)
12	04:46	05:49	06:58	08:04		09:05 (28)	08:18		10:31 (3)	09:18		10:55 (1)
	22:38	21:34	20:08	18:42	20	09:25 (28)	16:24	26	10:57 (3)	15:43	68	13:31 (4)
13	04:47	05:51	07:00	08:07		09:04 (28)	08:20		10:31 (3)	09:19		10:56 (1)
	22:37	21:32	20:05	18:39	20	09:24 (28)	16:21	27	10:58 (3)	15:43	68	13:32 (4)
14	04:49	05:53	07:02	08:09		09:04 (28)	08:23		10:31 (3)	09:20		10:57 (1)
	22:35	21:29	20:02	18:36	19	09:23 (28)	16:19	28	10:59 (3)	15:42	67	13:32 (4)
15	04:51	05:55	07:04	08:11		09:05 (28)	08:25		10:30 (3)	09:21		10:57 (1)
	22:34	21:26	20:00	18:34	18	09:23 (28)	16:17	28	10:58 (3)	15:42	68	13:32 (4)
16	04:53	05:57	07:06	08:14		09:05 (28)	08:27		10:30 (3)	09:22		10:57 (1)
	22:32	21:24	19:57	18:31	16	09:21 (28)	16:15	29	10:59 (3)	15:42	68	13:32 (4)
17	04:54	06:00	07:09	08:16		09:07 (28)	08:30		10:31 (3)	09:23		10:59 (1)
	22:31	21:21	19:54	18:28	14	09:21 (28)	16:13	29	11:00 (3)	15:42	66	13:34 (4)
18	04:56	06:02	07:11	08:18		09:08 (28)	08:32		10:30 (3)	09:24		10:59 (1)
	22:29	21:19	19:51	18:25	10	09:18 (28)	16:11	32	13:10 (4)	15:42	66	13:33 (4)
19	04:58	06:04	07:13	08:21			08:34		10:31 (3)	09:25		10:59 (1)
	22:27	21:16	19:48	18:23			16:10	40	13:14 (4)	15:42	67	13:34 (4)
20	05:00	06:06	07:15	08:23			08:37		10:31 (3)	09:26		11:00 (1)
	22:25	21:13	19:45	18:20			16:08	45	13:17 (4)	15:43	66	13:35 (4)
21	05:02	06:09	07:17	08:25			08:39		10:31 (3)	09:26		11:01 (1)
	22:24	21:10	19:42	18:17			16:06	50	13:18 (4)	15:43	66	13:35 (4)
22	05:04	06:11	07:20	08:28			08:41		10:32 (3)	09:27		11:01 (1)
	22:22	21:08	19:39	18:15			16:04	54	13:20 (4)	15:44	66	13:35 (4)
23	05:06	06:13	07:22	08:30			08:43		10:32 (3)	09:27		11:01 (1)
	22:20	21:05	19:36	18:12			16:03	55	13:20 (4)	15:44	66	13:36 (4)
24	05:08	06:15	07:24	08:32			08:45		10:33 (3)	09:28		11:02 (1)
	22:18	21:02	19:33	18:09			16:01	58	13:22 (4)	15:45	66	13:37 (4)
25	05:10	06:18	07:26	07:35		09:13 (26)	08:48		10:33 (3)	09:28		11:03 (1)
	22:16	20:59	19:30	17:07	10	09:23 (26)	15:59	59	13:22 (4)	15:45	66	13:37 (4)
26	05:12	06:20	07:28	07:37		09:11 (26)	08:50		10:34 (3)	09:28		11:03 (1)
	22:14	20:57	19:28	17:04	15	09:26 (26)	15:58	60	13:24 (4)	15:46	67	13:38 (4)
27	05:14	06:22	07:31	07:40		09:09 (26)	08:52		10:34 (3)	09:28		11:03 (1)
	22:12	20:54	19:25	17:01	18	09:27 (26)	15:56	62	13:24 (4)	15:47	68	13:38 (4)
28	05:16	06:24	07:33	07:42		09:08 (26)	08:54		10:36 (3)	09:29		11:04 (1)
	22:10	20:51	19:22	16:59	20	09:28 (26)	15:55	69	13:25 (4)	15:48	66	13:39 (4)
29	05:18	06:27	07:35	07:44		09:08 (26)	08:56		10:36 (3)	09:29		11:03 (1)
	22:08	20:48	19:19	16:56	21	09:29 (26)	15:54	72	13:25 (4)	15:49	68	13:39 (4)
30	05:20	06:29	07:37	07:47		09:07 (26)	08:58		10:37 (3)	09:28		11:04 (1)
	22:05	20:45	19:16	16:54	22	09:29 (26)	15:53	74	13:26 (4)	15:50	68	13:39 (4)
31	05:22	06:31		07:49		09:07 (26)				09:28		11:05 (1)
	22:03	20:43		16:51	23	09:30 (26)				15:51	68	13:40 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					336			1205			2159	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,67			0,63	
Total reduction					0,29			0,27			0,25	
Total, real					98			324			541	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	3	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08		16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46		07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05		16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02		16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59		16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56		16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53		16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51		16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48		16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45		16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05		08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:19	08:18	07:02		07:33 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07		08:20	09:19
	16:13	17:26	18:33	9	07:42 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39		16:22	15:43
14	09:17	08:15	06:59		07:31 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09		08:23	09:20
	16:15	17:28	18:36	13	07:44 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37		16:20	15:43
15	09:16	08:13	06:56		07:29 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11		08:25	09:21
	16:17	17:31	18:38	16	07:45 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34		16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14		08:27	09:22
	16:19	17:33	18:40	18	07:46 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31		16:15	15:42
17	09:13	08:08	06:50		07:26 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16		08:30	09:23
	16:21	17:36	18:43	20	07:46 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28		16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:19 (4)	08:18		08:32	09:24
	16:24	17:38	18:45	20	07:46 (4)	20:56	22:04	22:49	22:29	21:19	19:51	5 08:24 (4)	18:26		16:12	15:42
19	09:10	08:03	06:45		07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:15 (4)	08:21		08:34	09:25
	16:26	17:41	18:47	21	07:46 (4)	20:58	22:06	22:50	22:27	21:16	19:48	12 08:27 (4)	18:23		16:10	15:43
20	09:09	08:00	06:42		07:26 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:13 (4)	08:23		08:37	09:26
	16:28	17:43	18:49	20	07:46 (4)	21:01	22:08	22:50	22:26	21:13	19:45	15 08:28 (4)	18:20		16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:12 (4)	08:25		08:39	09:26
	16:30	17:46	18:52	20	07:46 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18 08:30 (4)	18:17		16:06	15:43
22	09:05	07:55	06:36		07:26 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:11 (4)	08:28		08:41	09:27
	16:33	17:48	18:54	19	07:45 (4)	21:05	22:12	22:51	22:22	21:08	19:39	19 08:30 (4)	18:15		16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:10 (4)	08:30		08:43	09:27
	16:35	17:51	18:56	16	07:43 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:30 (4)	18:12		16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:09 (4)	08:32		08:46	09:28
	16:37	17:53	18:59	13	07:41 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21 08:30 (4)	18:09		16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (4)	07:35		08:48	09:28
	16:39	17:55	19:01	8	07:38 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:29 (4)	17:07		16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28	08:09 (4)	07:37		08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	20 08:29 (4)	17:04		15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:09 (4)	07:40		08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	19 08:28 (4)	17:02		15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:09 (4)	07:42		08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18 08:27 (4)	16:59		15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:10 (4)	07:44		08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	15 08:25 (4)	16:57		15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:12 (4)	07:47		08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	12 08:24 (4)	16:54		15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49			09:28
	16:54		20:15				22:29		22:03	20:43			16:52			15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200
Total, worst case				213							214		3		
Sun reduction				0,50							0,50		0,50		
Oper. time red.				0,80							0,80		0,80		
Wind dir. red.				0,70							0,70		0,70		
Total reduction				0,28							0,28		0,28		
Total, real				59							59		1		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		11:26 (2)	08:46		10:08 (3)	07:35	07:07	05:44	04:40
	15:53	51	12:42 (4)	16:56	26	10:34 (3)	18:05	20:17	21:26	22:31
2	09:28		11:26 (2)	08:44		10:07 (3)	07:33	07:04	05:41	04:39
	15:54	51	12:42 (4)	16:59	27	10:34 (3)	18:07	20:19	21:28	22:32
3	09:27		11:26 (2)	08:41		10:08 (3)	07:30	07:01	05:39	04:37
	15:56	52	12:42 (4)	17:01	26	10:34 (3)	18:10	20:21	21:31	22:34
4	09:27		11:27 (2)	08:39		10:07 (3)	07:27	06:58	05:36	04:36
	15:57	52	12:43 (4)	17:04	27	10:34 (3)	18:12	20:24	21:33	22:35
5	09:26		11:27 (2)	08:37		10:08 (3)	07:24	06:55	05:34	04:35
	15:59	52	12:43 (4)	17:06	26	10:34 (3)	18:14	20:26	21:35	22:37
6	09:25		11:28 (2)	08:35		10:08 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:43 (4)	17:09	26	10:34 (3)	18:17	20:28	21:38	22:38
7	09:25		11:28 (2)	08:32		10:08 (3)	07:19	06:50	05:29	04:33
	16:02	52	12:44 (4)	17:11	25	10:33 (3)	18:19	20:31	21:40	22:39
8	09:24		10:35 (1)	08:30		10:10 (3)	07:16	06:47	05:27	04:32
	16:04	58	12:45 (4)	17:13	23	10:33 (3)	18:21	20:33	21:42	22:41
9	09:23		10:34 (1)	08:28		10:10 (3)	07:13	06:44	05:24	04:31
	16:05	60	12:45 (4)	17:16	22	10:32 (3)	18:24	20:35	21:44	22:42
10	09:22		10:33 (1)	08:25		09:11 (26)	07:10	06:41	05:22	04:30
	16:07	62	12:45 (4)	17:18	27	10:31 (3)	18:26	20:38	21:47	22:43
11	09:21		10:33 (1)	08:23		09:09 (26)	07:07	06:38	05:20	04:30
	16:09	63	12:46 (4)	17:21	28	10:29 (3)	18:28	20:40	21:49	22:44
12	09:20		10:32 (1)	08:20		09:07 (26)	07:05	06:36	05:17	04:29
	16:11	64	12:46 (4)	17:23	27	10:27 (3)	18:31	20:42	21:51	22:45
13	09:19		10:33 (1)	08:18		09:06 (26)	07:02	06:33	05:15	04:28
	16:13	64	12:46 (4)	17:26	18	09:24 (26)	18:33	20:44	21:53	22:46
14	09:17		10:32 (1)	08:15		09:05 (26)	06:59	06:30	05:13	04:28
	16:15	64	12:46 (4)	17:28	20	09:25 (26)	18:35	20:47	21:56	22:47
15	09:16		10:32 (1)	08:13		09:05 (26)	06:56	06:27	05:11	04:28
	16:17	63	12:46 (4)	17:31	20	09:25 (26)	18:38	20:49	21:58	22:47
16	09:15		10:31 (1)	08:10		09:04 (26)	06:53	06:24	05:08	04:27
	16:19	63	12:46 (4)	17:33	21	09:25 (26)	18:40	20:51	22:00	22:48
17	09:13		10:32 (1)	08:08		09:05 (26)	06:50	06:22	05:06	04:27
	16:21	60	12:46 (4)	17:36	21	09:26 (26)	18:42	20:54	22:02	22:49
18	09:12		10:32 (1)	08:05		09:05 (26)	06:47	06:19	05:04	04:27
	16:23	58	12:46 (4)	17:38	20	09:25 (26)	18:45	20:56	22:04	22:49
19	09:10		10:32 (1)	08:02		09:05 (26)	06:44	06:16	05:02	04:27
	16:26	53	12:46 (4)	17:41	20	09:25 (26)	18:47	20:58	22:06	22:50
20	09:09		10:33 (1)	08:00		09:05 (26)	06:42	06:13	05:00	04:27
	16:28	42	12:45 (4)	17:43	19	09:24 (26)	18:49	21:01	22:08	22:50
21	09:07		10:33 (1)	07:57		09:05 (26)	06:39	06:11	04:58	04:27
	16:30	42	12:45 (4)	17:46	18	09:23 (26)	18:52	21:03	22:10	22:50
22	09:05		10:16 (3)	07:54		09:07 (26)	06:36	06:08	04:56	04:27
	16:32	44	12:44 (4)	17:48	15	09:22 (26)	18:54	21:05	22:12	22:51
23	09:04		10:13 (3)	07:52		09:09 (26)	06:33	06:05	04:54	04:27
	16:35	48	12:43 (4)	17:50	11	09:20 (26)	18:56	21:08	22:14	22:51
24	09:02		10:11 (3)	07:49		09:13 (26)	06:30	06:02	04:53	04:28
	16:37	45	12:40 (4)	17:53	3	09:16 (26)	18:59	21:10	22:16	22:51
25	09:00		10:10 (3)	07:46			06:27	06:00	04:51	04:28
	16:39	40	12:37 (4)	17:55			19:01	21:12	22:18	22:51
26	08:58		10:09 (3)	07:44			06:24	05:57	04:49	04:29
	16:42	36	10:52 (1)	17:58			19:03	21:15	22:20	22:51
27	08:56		10:09 (3)	07:41			06:21	05:54	04:47	04:29
	16:44	37	10:52 (1)	18:00			19:05	21:17	22:22	22:50
28	08:54		10:08 (3)	07:38			06:18	05:52	04:46	04:30
	16:46	35	10:50 (1)	18:02			19:08	21:19	22:24	22:50
29	08:52		10:08 (3)				07:16	05:49	04:44	04:30
	16:49	33	10:49 (1)				20:10	21:21	22:26	22:50
30	08:50		10:08 (3)				07:13	05:47	04:43	04:31
	16:51	25	10:33 (3)				20:12	21:24	22:27	22:49
31	08:48		10:07 (3)				07:10		04:41	
	16:54	26	10:33 (3)				20:15		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1546			516					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,67			0,73					
Total reduction		0,27			0,29					
Total, real		411			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:40			07:52		08:41 (26)	09:00		10:15 (1)
	22:49		22:01		20:40		19:13			16:49	27	10:01 (3)	15:51	63	12:28 (4)
2	04:33		05:26		06:35		07:42			07:54		09:40 (3)	09:02		10:16 (1)
	22:48		21:59		20:37		19:10			16:46	22	10:02 (3)	15:50	62	12:28 (4)
3	04:34		05:29		06:38		07:44			07:56		09:39 (3)	09:04		10:17 (1)
	22:47		21:56		20:34		19:07			16:44	24	10:03 (3)	15:49	60	12:28 (4)
4	04:35		05:31		06:40		07:46			07:59		09:39 (3)	09:05		10:19 (1)
	22:47		21:54		20:31		19:05			16:42	25	10:04 (3)	15:48	57	12:29 (4)
5	04:36		05:33		06:42		07:48			08:01		09:38 (3)	09:07		11:13 (2)
	22:46		21:52		20:28		19:02			16:39	26	10:04 (3)	15:47	52	12:29 (4)
6	04:37		05:35		06:44		07:51			08:04		09:38 (3)	09:09		11:14 (2)
	22:45		21:49		20:26		18:59			16:37	26	10:04 (3)	15:46	52	12:30 (4)
7	04:39		05:37		06:47		07:53			08:06		09:38 (3)	09:10		11:14 (2)
	22:44		21:47		20:23		18:56			16:35	27	10:05 (3)	15:46	52	12:30 (4)
8	04:40		05:40		06:49		07:55			08:08		09:37 (3)	09:12		11:15 (2)
	22:43		21:44		20:20		18:53			16:32	27	10:04 (3)	15:45	52	12:31 (4)
9	04:41		05:42		06:51		07:58			08:11		09:38 (3)	09:14		11:16 (2)
	22:42		21:42		20:17		18:50			16:30	26	10:04 (3)	15:44	51	12:31 (4)
10	04:43		05:44		06:53		08:00			08:13		09:38 (3)	09:15		11:15 (2)
	22:41		21:39		20:14		18:48			16:28	27	10:05 (3)	15:44	52	12:31 (4)
11	04:44		05:46		06:55		08:02			08:16		09:38 (3)	09:16		11:16 (2)
	22:39		21:37		20:11		18:45			16:26	26	10:04 (3)	15:43	51	12:32 (4)
12	04:46		05:49		06:58		08:04			08:18		09:39 (3)	09:18		11:16 (2)
	22:38		21:34		20:08		18:42			16:24	25	10:04 (3)	15:43	51	12:32 (4)
13	04:48		05:51		07:00		08:07			08:20		09:40 (3)	09:19		11:17 (2)
	22:37		21:32		20:05		18:39			16:21	33	10:21 (1)	15:43	51	12:33 (4)
14	04:49		05:53		07:02		08:09			08:23		09:41 (3)	09:20		11:18 (2)
	22:35		21:29		20:02		18:36			16:19	35	10:23 (1)	15:42	50	12:33 (4)
15	04:51		05:55		07:04		08:11			08:25		09:41 (3)	09:21		11:18 (2)
	22:34		21:26		20:00		18:34			16:17	37	10:24 (1)	15:42	50	12:33 (4)
16	04:53		05:58		07:06		08:14			08:27		09:42 (3)	09:22		11:19 (2)
	22:32		21:24		19:57		18:31			16:15	36	10:25 (1)	15:42	50	12:34 (4)
17	04:54		06:00		07:09		08:16			08:30		09:44 (3)	09:23		11:20 (2)
	22:31		21:21		19:54		18:28			16:13	40	12:11 (4)	15:42	50	12:35 (4)
18	04:56		06:02		07:11		08:18		09:42 (26)	08:32		09:45 (3)	09:24		11:19 (2)
	22:29		21:19		19:51		18:25	7	09:49 (26)	16:11	45	12:14 (4)	15:42	49	12:34 (4)
19	04:58		06:04		07:13		08:21		09:39 (26)	08:34		09:47 (3)	09:25		11:20 (2)
	22:27		21:16		19:48		18:23	13	09:52 (26)	16:10	48	12:17 (4)	15:42	50	12:35 (4)
20	05:00		06:06		07:15		08:23		09:37 (26)	08:37		09:51 (3)	09:26		11:21 (2)
	22:26		21:13		19:45		18:20	16	09:53 (26)	16:08	44	12:19 (4)	15:43	50	12:36 (4)
21	05:02		06:09		07:17		08:25		09:36 (26)	08:39		10:08 (1)	09:26		11:22 (2)
	22:24		21:10		19:42		18:17	18	09:54 (26)	16:06	42	12:20 (4)	15:43	49	12:36 (4)
22	05:04		06:11		07:20		08:28		09:35 (26)	08:41		10:09 (1)	09:27		11:22 (2)
	22:22		21:08		19:39		18:15	19	09:54 (26)	16:04	42	12:21 (4)	15:44	49	12:36 (4)
23	05:06		06:13		07:22		08:30		09:35 (26)	08:43		10:08 (1)	09:27		11:22 (2)
	22:20		21:05		19:36		18:12	20	09:55 (26)	16:03	54	12:22 (4)	15:44	49	12:36 (4)
24	05:08		06:15		07:24		08:32		09:34 (26)	08:45		10:09 (1)	09:28		11:23 (2)
	22:18		21:02		19:33		18:09	21	09:55 (26)	16:01	58	12:23 (4)	15:45	50	12:38 (4)
25	05:10		06:18		07:26		07:35		08:34 (26)	08:48		10:09 (1)	09:28		11:23 (2)
	22:16		20:59		19:31		17:07	21	08:55 (26)	15:59	61	12:24 (4)	15:45	49	12:38 (4)
26	05:12		06:20		07:28		07:37		08:34 (26)	08:50		10:10 (1)	09:28		11:24 (2)
	22:14		20:57		19:28		17:04	21	08:55 (26)	15:58	62	12:25 (4)	15:46	49	12:38 (4)
27	05:14		06:22		07:31		07:40		08:34 (26)	08:52		10:11 (1)	09:29		11:24 (2)
	22:12		20:54		19:25		17:02	20	08:54 (26)	15:57	63	12:25 (4)	15:47	50	12:39 (4)
28	05:16		06:24		07:33		07:42		08:35 (26)	08:54		10:12 (1)	09:29		11:25 (2)
	22:10		20:51		19:22		16:59	19	08:54 (26)	15:55	63	12:26 (4)	15:48	50	12:40 (4)
29	05:18		06:27		07:35		07:44		08:36 (26)	08:56		10:13 (1)	09:29		11:24 (2)
	22:08		20:48		19:19		16:56	21	09:53 (3)	15:54	64	12:26 (4)	15:49	50	12:39 (4)
30	05:20		06:29		07:37		07:47		08:36 (26)	08:58		10:13 (1)	09:28		11:25 (2)
	22:05		20:45		19:16		16:54	29	09:57 (3)	15:53	65	12:27 (4)	15:50	50	12:40 (4)
31	05:22		06:31				07:49		08:38 (26)				09:28		11:26 (2)
	22:03		20:43				16:51	29	09:59 (3)				15:51	51	12:41 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								274			1200			1601	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,69			0,64	
Total reduction								0,29			0,27			0,26	
Total, real								80			329			411	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 - 15:53	08:46 - 16:56	07:36 - 08:20 (4), 18:05 - 08:33 (4) 13	07:07 - 20:17	05:44 - 21:26	04:40 - 22:31	04:32 - 22:49	05:24 - 22:01	06:33 - 20:40	07:40 - 19:13 25	08:51 (4) - 09:16 (4)	07:52 - 16:49	09:00 - 15:51
2	09:28 - 15:54	08:44 - 16:59	07:33 - 08:18 (4), 18:07 - 08:35 (4) 17	07:04 - 20:19	05:42 - 21:28	04:39 - 22:32	04:33 - 22:48	05:27 - 21:59	06:36 - 20:37	07:42 - 19:10 27	08:49 (4) - 09:16 (4)	07:54 - 16:47	09:02 - 15:50
3	09:27 - 15:56	08:41 - 17:01	07:30 - 08:16 (4), 18:10 - 08:36 (4) 20	07:01 - 20:22	05:39 - 21:31	04:37 - 22:34	04:34 - 22:47	05:29 - 21:56	06:38 - 20:34	07:44 - 19:08 28	08:48 (4) - 09:16 (4)	07:56 - 16:44	09:04 - 15:49
4	09:27 - 15:57	08:39 - 17:04	07:27 - 08:14 (4), 18:12 - 08:37 (4) 23	06:58 - 20:24	05:37 - 21:33	04:36 - 22:35	04:35 - 22:47	05:31 - 21:54	06:40 - 20:31	07:46 - 19:05 27	08:49 (4) - 09:16 (4)	07:59 - 16:42	09:05 - 15:48
5	09:26 - 15:59	08:37 - 17:06	07:24 - 08:13 (4), 18:14 - 08:38 (4) 25	06:56 - 20:26	05:34 - 21:35	04:35 - 22:37	04:36 - 22:46	05:33 - 21:52	06:42 - 20:28	07:49 - 19:02 28	08:48 (4) - 09:16 (4)	08:01 - 16:39	09:07 - 15:47
6	09:25 - 16:00	08:35 - 17:09	07:22 - 08:12 (4), 18:17 - 08:38 (4) 26	06:53 - 20:28	05:32 - 21:38	04:34 - 22:38	04:38 - 22:45	05:35 - 21:49	06:44 - 20:26	07:51 - 18:59 28	08:47 (4) - 09:15 (4)	08:04 - 16:37	09:09 - 15:47
7	09:25 - 16:02	08:32 - 17:11	07:19 - 08:11 (4), 18:19 - 08:38 (4) 27	06:50 - 20:31	05:29 - 21:40	04:33 - 22:39	04:39 - 22:44	05:38 - 21:47	06:47 - 20:23	07:53 - 18:56 27	08:48 (4) - 09:15 (4)	08:06 - 16:35	09:10 - 15:46
8	09:24 - 16:04	08:30 - 17:14	07:16 - 08:11 (4), 18:22 - 08:38 (4) 27	06:47 - 20:33	05:27 - 21:42	04:32 - 22:41	04:40 - 22:43	05:40 - 21:44	06:49 - 20:20	07:55 - 18:53 26	08:48 (4) - 09:14 (4)	08:08 - 16:32	09:12 - 15:45
9	09:23 - 16:06	08:28 - 17:16	07:13 - 08:11 (4), 18:24 - 08:39 (4) 28	06:44 - 20:35	05:24 - 21:44	04:31 - 22:42	04:42 - 22:42	05:42 - 21:42	06:51 - 20:17	07:58 - 18:50 24	08:48 (4) - 09:12 (4)	08:11 - 16:30	09:14 - 15:44
10	09:22 - 16:07	08:25 - 17:19	07:10 - 08:11 (4), 18:26 - 08:39 (4) 28	06:41 - 20:38	05:22 - 21:47	04:31 - 22:43	04:43 - 22:41	05:44 - 21:39	06:53 - 20:14	08:00 - 18:48 22	08:50 (4) - 09:12 (4)	08:13 - 16:28	09:15 - 15:44
11	09:21 - 16:09	08:23 - 17:21	07:07 - 08:11 (4), 18:29 - 08:38 (4) 27	06:38 - 20:40	05:20 - 21:49	04:30 - 22:44	04:45 - 22:39	05:46 - 21:37	06:55 - 20:11	08:02 - 18:45 20	08:50 (4) - 09:10 (4)	08:16 - 16:26	09:16 - 15:43
12	09:20 - 16:11	08:20 - 17:23	07:05 - 08:11 (4), 18:31 - 08:37 (4) 26	06:36 - 20:42	05:17 - 21:51	04:29 - 22:45	04:46 - 22:38	05:49 - 21:34	06:58 - 20:08	08:04 - 18:42 15	08:53 (4) - 09:08 (4)	08:18 - 16:24	09:18 - 15:43
13	09:19 - 16:13	08:18 - 17:26	07:02 - 08:12 (4), 18:33 - 08:36 (4) 24	06:33 - 20:45	05:15 - 21:53	04:29 - 22:46	04:48 - 22:37	05:51 - 21:32	07:00 - 20:05	08:07 - 18:39 10	08:55 (4) - 09:05 (4)	08:20 - 16:22	09:19 - 15:43
14	09:17 - 16:15	08:15 - 17:28	06:59 - 08:12 (4), 18:36 - 08:35 (4) 23	06:30 - 20:47	05:13 - 21:56	04:28 - 22:47	04:49 - 22:35	05:53 - 21:29	07:02 - 20:03	08:09 - 18:36		08:23 - 16:19	09:20 - 15:42
15	09:16 - 16:17	08:13 - 17:31	06:56 - 08:13 (4), 18:38 - 08:33 (4) 20	06:27 - 20:49	05:11 - 21:58	04:28 - 22:47	04:51 - 22:34	05:55 - 21:27	07:04 - 20:00	08:11 - 18:34		08:25 - 16:17	09:21 - 15:42
16	09:15 - 16:19	08:10 - 17:33	06:53 - 08:15 (4), 18:40 - 08:30 (4) 15	06:24 - 20:51	05:09 - 22:00	04:27 - 22:48	04:53 - 22:32	05:58 - 21:24	07:06 - 19:57	08:14 - 18:31		08:27 - 16:15	09:22 - 15:42
17	09:13 - 16:21	08:08 - 17:36	06:50 - 08:17 (4), 18:43 - 08:27 (4) 10	06:22 - 20:54	05:06 - 22:02	04:27 - 22:49	04:54 - 22:31	06:00 - 21:21	07:09 - 19:54	08:16 - 18:28		08:30 - 16:14	09:23 - 15:42
18	09:12 - 16:24	08:05 - 17:38	06:47 - 18:45	06:19 - 20:56	05:04 - 22:04	04:27 - 22:49	04:56 - 22:29	06:02 - 21:19	07:11 - 19:51	08:18 - 18:25		08:32 - 16:12	09:24 - 15:42
19	09:10 - 16:26	08:02 - 17:41	06:45 - 18:47	06:16 - 20:58	05:02 - 22:06	04:27 - 22:50	04:58 - 22:27	06:04 - 21:16	07:13 - 19:48	08:21 - 18:23		08:34 - 16:10	09:25 - 15:43
20	09:09 - 16:28	08:00 - 17:43	06:42 - 18:49	06:13 - 21:01	05:00 - 22:08	04:27 - 22:50	05:00 - 22:26	06:07 - 21:13	07:15 - 19:45	08:23 - 18:20		08:37 - 16:08	09:26 - 15:43
21	09:07 - 16:30	07:57 - 17:46	06:39 - 18:52	06:11 - 21:03	04:58 - 22:10	04:27 - 22:50	05:02 - 22:24	06:09 - 21:10	07:17 - 19:42	08:25 - 18:17		08:39 - 16:06	09:26 - 15:43
22	09:05 - 16:32	07:55 - 17:48	06:36 - 18:54	06:08 - 21:05	04:56 - 22:12	04:27 - 22:51	05:04 - 22:22	06:11 - 21:08	07:20 - 19:39	08:28 - 18:15		08:41 - 16:04	09:27 - 15:44
23	09:04 - 16:35	07:52 - 17:50	06:33 - 18:56	06:05 - 21:08	04:55 - 22:14	04:28 - 22:51	05:06 - 22:20	06:13 - 21:05	07:22 - 19:36	08:30 - 18:12		08:43 - 16:03	09:27 - 15:44
24	09:02 - 16:37	07:49 - 17:53	06:30 - 18:59	06:02 - 21:10	04:53 - 22:16	04:28 - 22:51	05:08 - 22:18	06:16 - 21:02	07:24 - 19:33	08:32 - 18:09		08:45 - 16:01	09:28 - 15:45
25	09:00 - 16:39	07:46 - 17:55	06:27 - 19:01	06:00 - 21:12	04:51 - 22:18	04:28 - 22:51	05:10 - 22:16	06:18 - 21:00	07:26 - 19:31	07:35 - 17:07		08:48 - 16:00	09:28 - 15:46
26	08:58 - 16:42	07:44 - 17:58	06:24 - 19:03	05:57 - 21:15	04:49 - 22:20	04:29 - 22:51	05:12 - 22:14	06:20 - 20:57	07:28 - 19:28 6	09:02 (4) - 09:08 (4) 17:04		08:50 - 15:58	09:28 - 15:46
27	08:56 - 16:44	07:41 - 18:00	06:21 - 19:05	05:55 - 21:17	04:48 - 22:22	04:29 - 22:50	05:14 - 22:12	06:22 - 20:54	07:31 - 19:25 14	08:57 (4) - 09:11 (4) 17:02		08:52 - 15:57	09:29 - 15:47
28	08:54 - 16:47	07:38 - 18:03 2	08:26 (4) - 08:28 (4) 19:08	06:19 - 21:19	05:52 - 22:24	04:46 - 22:50	04:30 - 22:10	05:16 - 20:51	06:24 - 19:22 18	07:33 - 09:13 (4) 16:59	08:55 (4) - 07:42	08:54 - 15:55	09:29 - 15:48
29	08:52 - 16:49		07:16 - 20:10	05:49 - 21:21	04:44 - 22:26	04:31 - 22:50	05:18 - 22:08	06:27 - 20:48	07:35 - 19:19 21	08:53 (4) - 09:14 (4) 16:57	07:44	08:56 - 15:54	09:29 - 15:49
30	08:50 - 16:51		07:13 - 20:12	05:47 - 21:24	04:43 - 22:27	04:31 - 22:49	05:20 - 22:05	06:29 - 20:46	07:37 - 19:16 24	08:52 (4) - 09:16 (4) 16:54	07:47	08:58 - 15:53	09:28 - 15:50
31	08:48 - 16:54		07:10 - 20:15	04:41 -	22:29		05:22 - 22:03	06:31 - 20:43		07:49 - 16:52			09:28 - 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236		200
Total, worst case		2	379						83	307			
Sun reduction		0,50	0,50						0,50	0,50			
Oper. time red.		0,80	0,80						0,80	0,80			
Wind dir. red.		0,72	0,72						0,72	0,72			
Total reduction		0,29	0,29						0,29	0,29			
Total, real		1	109						24	88			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (28)	08:46	10:00 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (32)	09:00	10:51 (27)	
	15:53	20 12:41 (28)	16:56	20 10:20 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (32)	15:51	28 12:23 (28)	
2	09:28	12:22 (28)	08:44	09:59 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (32)	09:02	10:51 (27)	
	15:54	19 12:41 (28)	16:58	21 10:20 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (32)	15:50	30 12:24 (28)	
3	09:27	12:22 (28)	08:41	10:00 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (32)	09:04	10:52 (27)	
	15:55	19 12:41 (28)	17:01	20 10:20 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (32)	15:49	29 12:25 (28)	
4	09:27	11:12 (27)	08:39	10:00 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (32)	09:05	10:53 (27)	
	15:57	22 12:41 (28)	17:03	20 10:20 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (32)	15:48	30 12:26 (28)	
5	09:26	11:11 (27)	08:37	10:01 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (32)	09:07	10:54 (27)	
	15:58	26 12:42 (28)	17:06	19 10:20 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (32)	15:47	29 12:27 (28)	
6	09:25	11:10 (27)	08:35	10:01 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (32)	09:09	10:56 (27)	
	16:00	28 12:42 (28)	17:08	18 10:19 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (32)	15:46	28 12:28 (28)	
7	09:25	11:09 (27)	08:32	10:01 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (32)	09:10	10:58 (27)	
	16:02	29 12:42 (28)	17:11	17 10:18 (32)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (32)	15:45	26 12:29 (28)	
8	09:24	11:09 (27)	08:30	10:03 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (32)	09:12	11:00 (27)	
	16:03	30 12:42 (28)	17:13	15 10:18 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (32)	15:45	23 12:30 (28)	
9	09:23	11:09 (27)	08:27	10:04 (32)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (32)	09:13	12:11 (28)	
	16:05	30 12:42 (28)	17:16	12 10:16 (32)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (32)	15:44	19 12:30 (28)	
10	09:22	11:08 (27)	08:25	10:07 (32)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (32)	09:15	12:11 (28)	
	16:07	30 12:41 (28)	17:18	5 10:12 (32)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (32)	15:44	19 12:30 (28)	
11	09:21	11:09 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (32)	09:16	12:11 (28)	
	16:09	28 12:41 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (32)	15:43	20 12:31 (28)	
12	09:20	11:08 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (32)	09:18	12:11 (28)	
	16:11	27 12:40 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (27)	15:43	20 12:31 (28)	
13	09:19	11:08 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (32)	09:19	12:12 (28)	
	16:13	25 12:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (27)	15:42	21 12:33 (28)	
14	09:17	11:08 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (32)	09:20	12:12 (28)	
	16:15	20 11:28 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (27)	15:42	21 12:33 (28)	
15	09:16	11:08 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (32)	09:21	12:12 (28)	
	16:17	21 11:29 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (27)	15:42	21 12:33 (28)	
16	09:15	11:08 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (32)	09:22	12:13 (28)	
	16:19	21 11:29 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (27)	15:42	20 12:33 (28)	
17	09:13	11:09 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (32)	09:23	12:14 (28)	
	16:21	22 11:31 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (27)	15:42	21 12:35 (28)	
18	09:12	11:09 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (27)	09:24	12:14 (28)	
	16:23	22 11:31 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (27)	15:42	21 12:35 (28)	
19	09:10	11:09 (27)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (27)	09:25	12:14 (28)	
	16:25	22 11:31 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (27)	15:42	21 12:35 (28)	
20	09:09	11:09 (27)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (27)	09:26	12:15 (28)	
	16:28	23 11:32 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (27)	15:43	21 12:36 (28)	
21	09:07	11:09 (27)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (27)	09:26	12:16 (28)	
	16:30	23 11:32 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (27)	15:43	21 12:37 (28)	
22	09:05	11:10 (27)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (27)	09:27	12:16 (28)	
	16:32	22 11:32 (27)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (27)	15:43	21 12:37 (28)	
23	09:03	11:10 (27)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (27)	09:27	12:16 (28)	
	16:34	22 11:32 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (27)	15:44	21 12:37 (28)	
24	09:02	11:10 (27)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (27)	09:28	12:17 (28)	
	16:37	22 11:32 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (27)	15:45	21 12:38 (28)	
25	09:00	10:04 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (27)	09:28	12:17 (28)	
	16:39	28 11:32 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (27)	15:45	21 12:38 (28)	
26	08:58	10:03 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (27)	09:28	12:18 (28)	
	16:42	31 11:32 (27)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (27)	15:46	21 12:39 (28)	
27	08:56	10:02 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (27)	09:28	12:18 (28)	
	16:44	31 11:31 (27)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (27)	15:47	21 12:39 (28)	
28	08:54	10:00 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (27)	09:29	12:19 (28)	
	16:46	32 11:30 (27)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (27)	15:48	21 12:40 (28)	
29	08:52	10:00 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (27)	09:29	12:19 (28)	
	16:49	31 11:29 (27)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (28)	15:49	21 12:40 (28)	
30	08:50	09:59 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (27)	09:28	12:20 (28)	
	16:51	27 11:26 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (28)	15:50	20 12:40 (28)	
31	08:48	09:59 (32)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (28)	
	16:54	20 10:19 (32)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (28)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
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24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
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31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
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	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
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12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
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22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
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	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
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	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 2.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

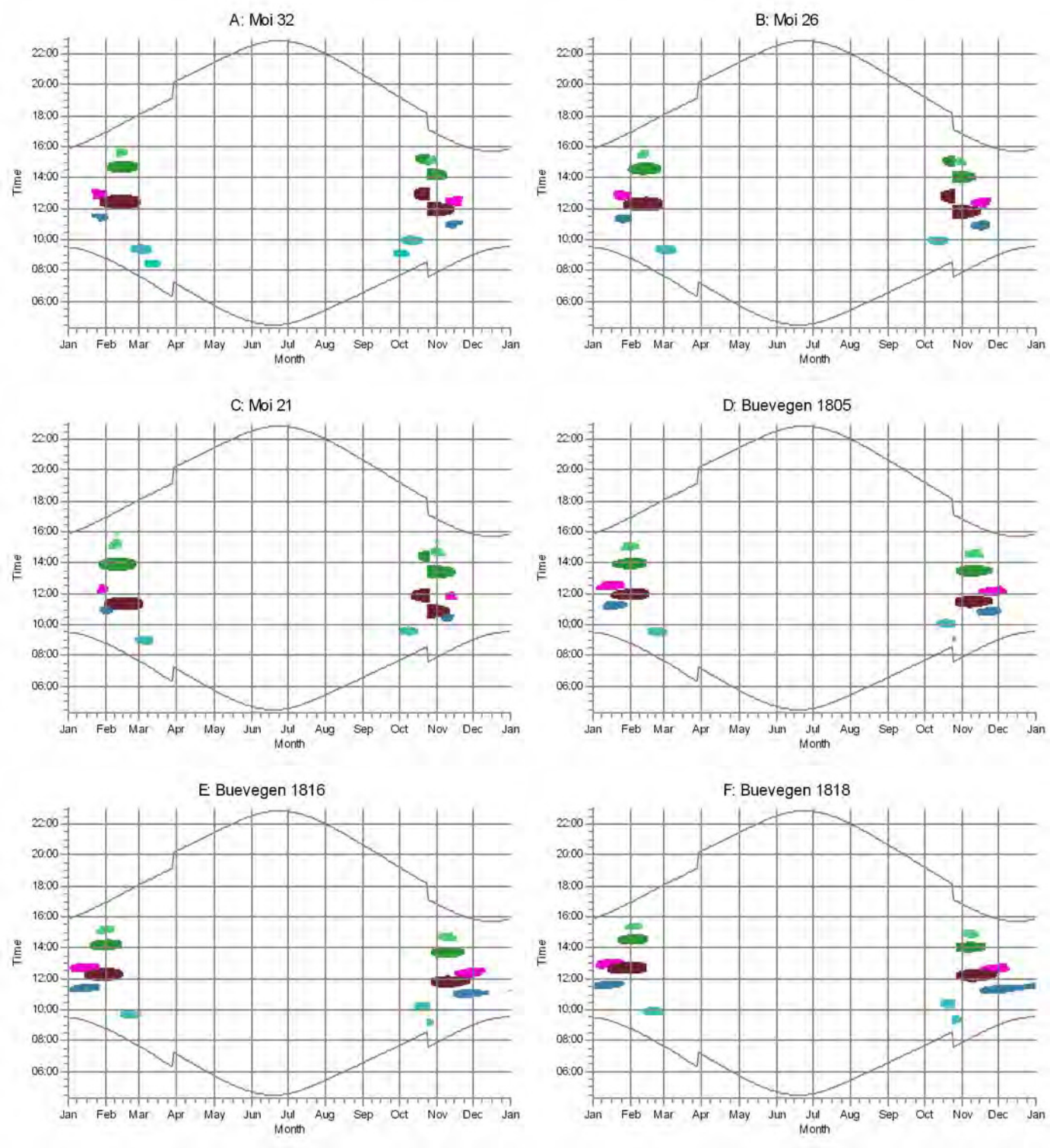
realistic case

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

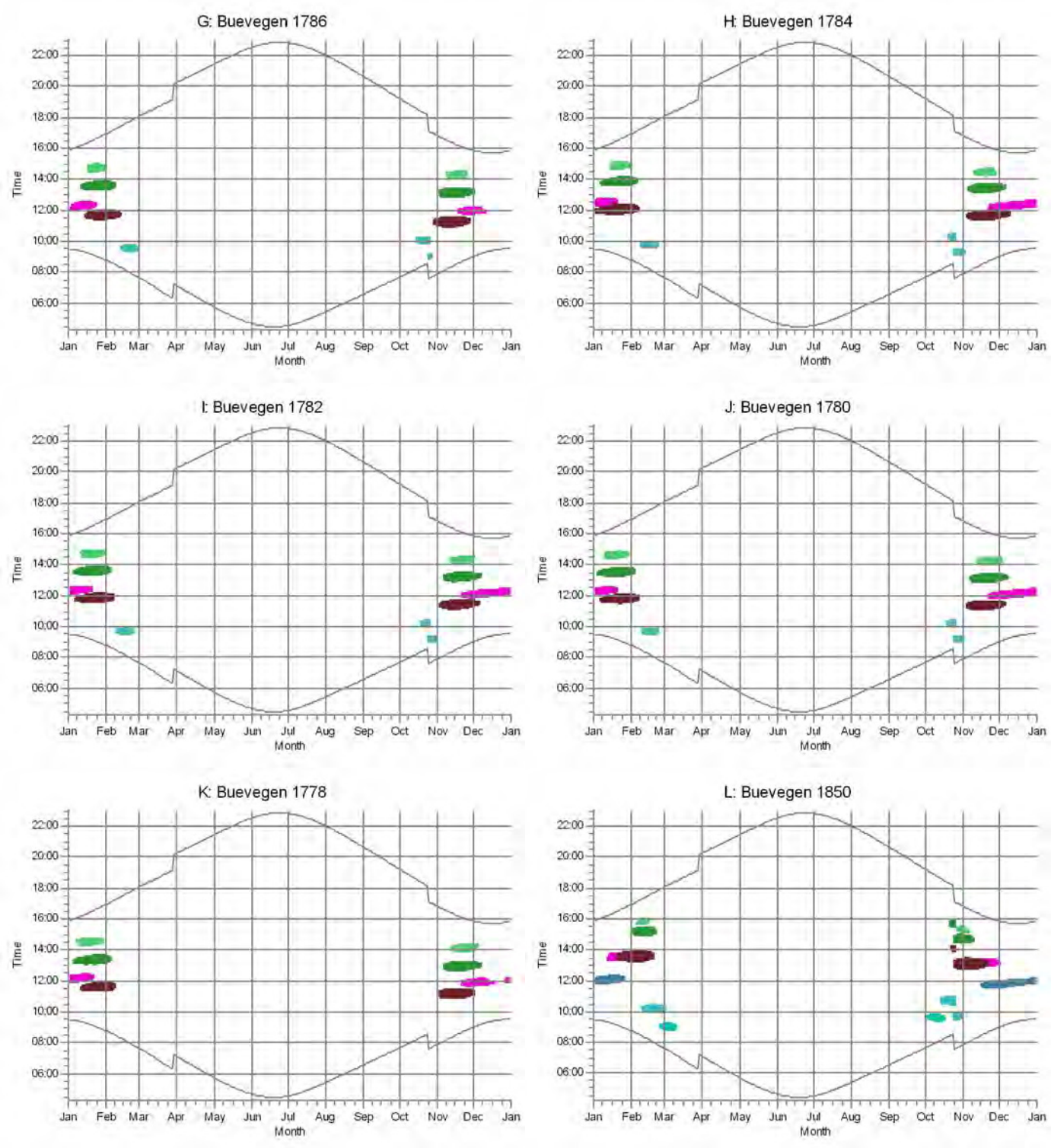


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

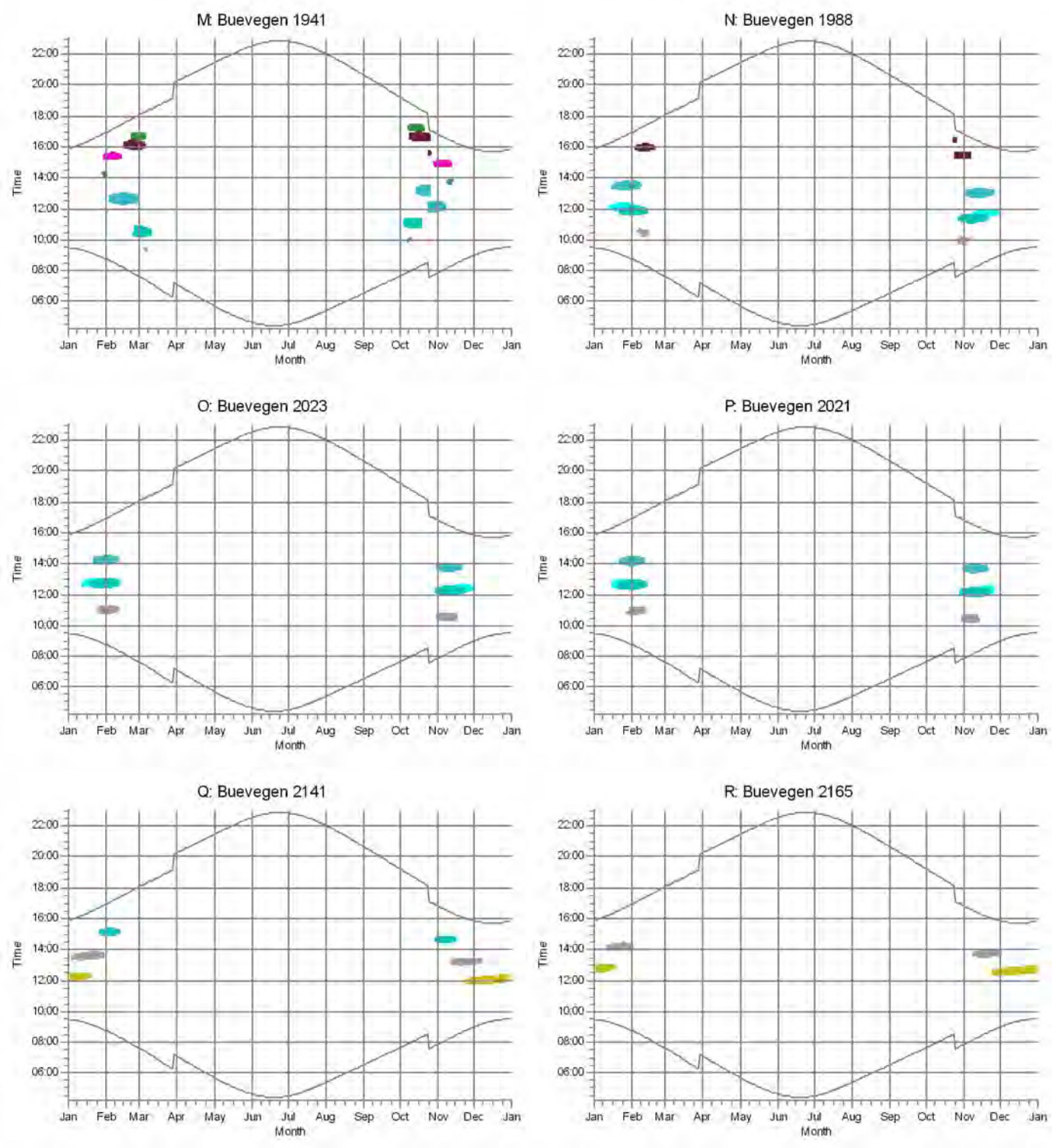


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

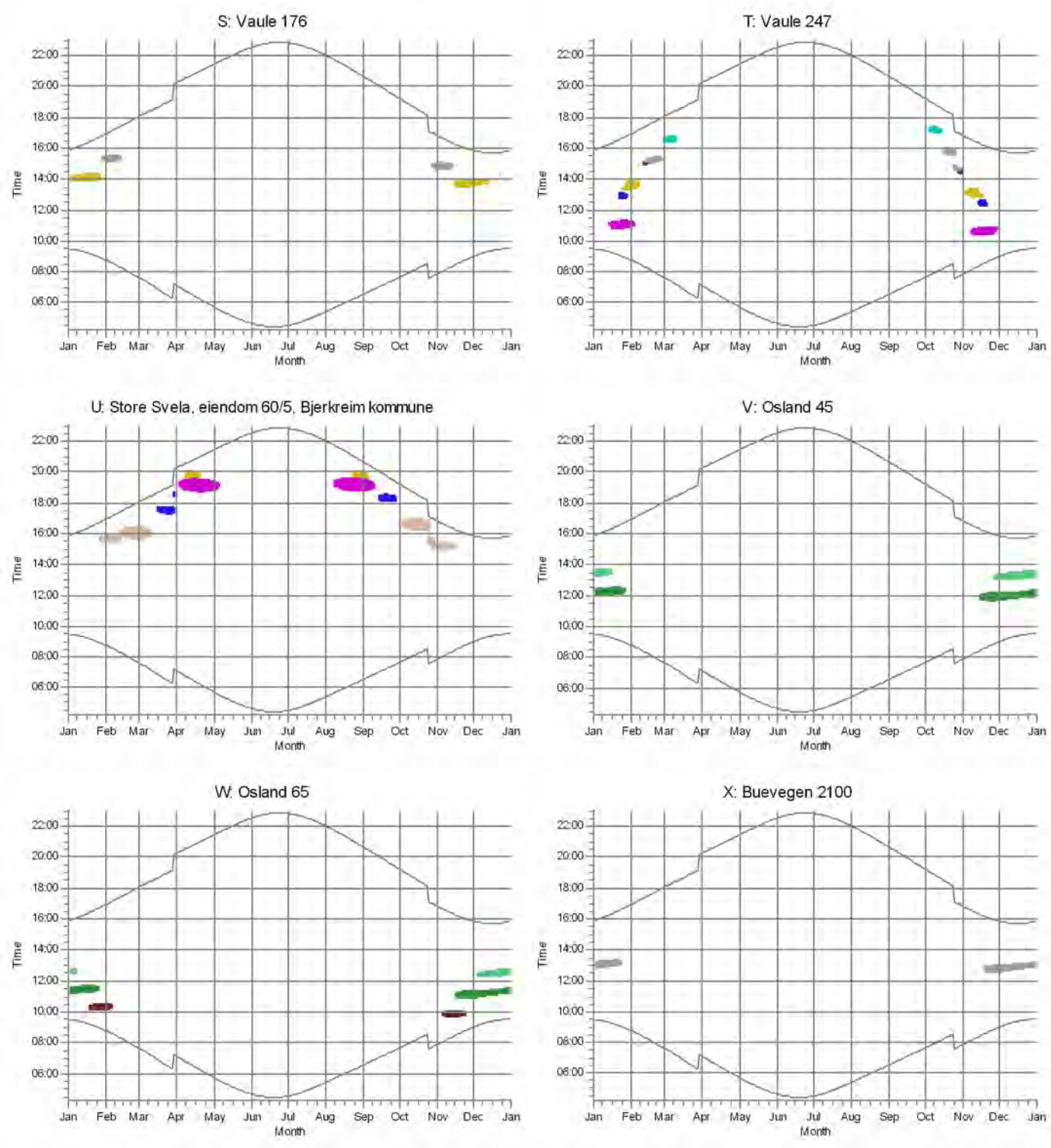


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere



WTGs

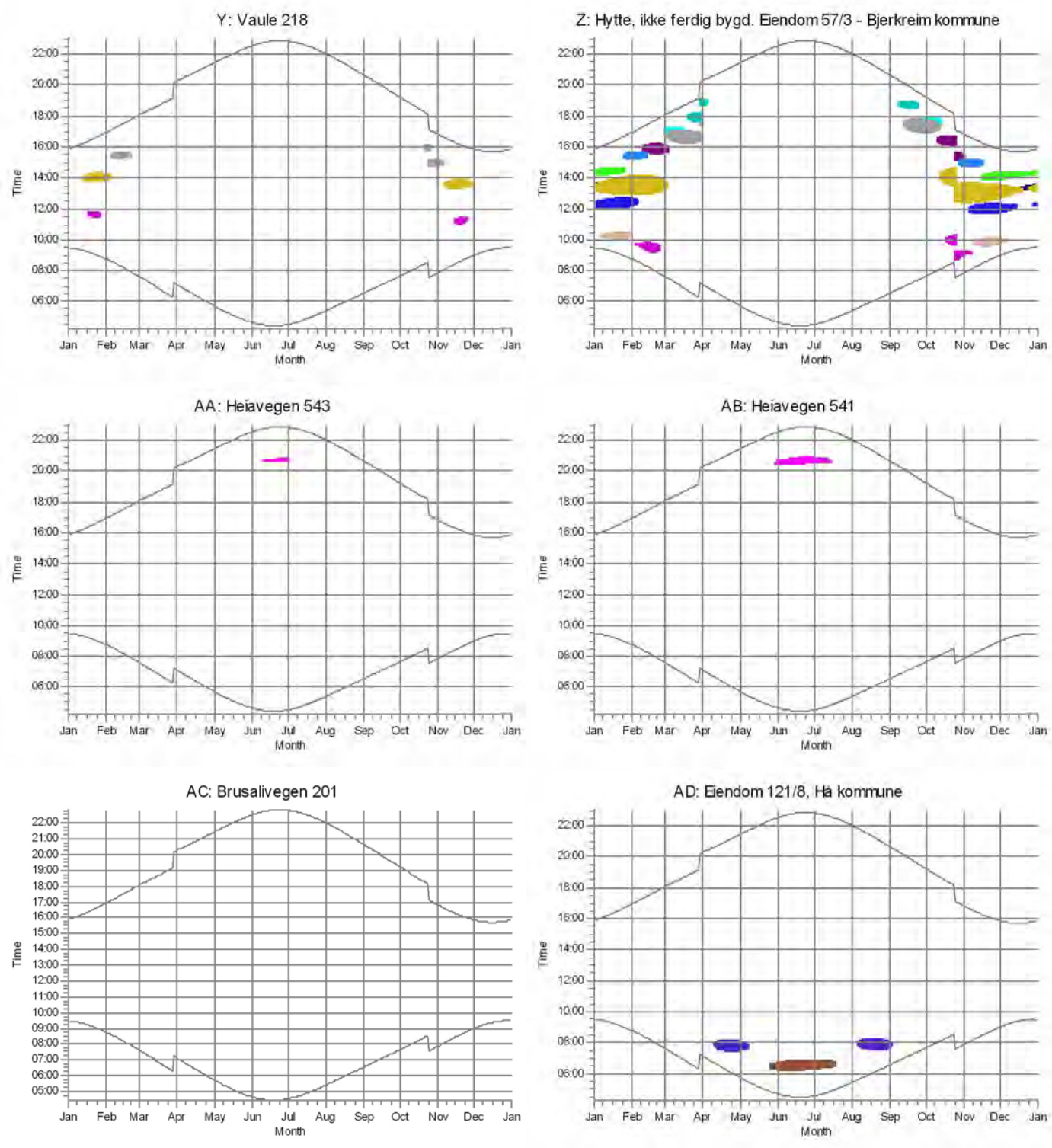
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
27: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere



WTGs

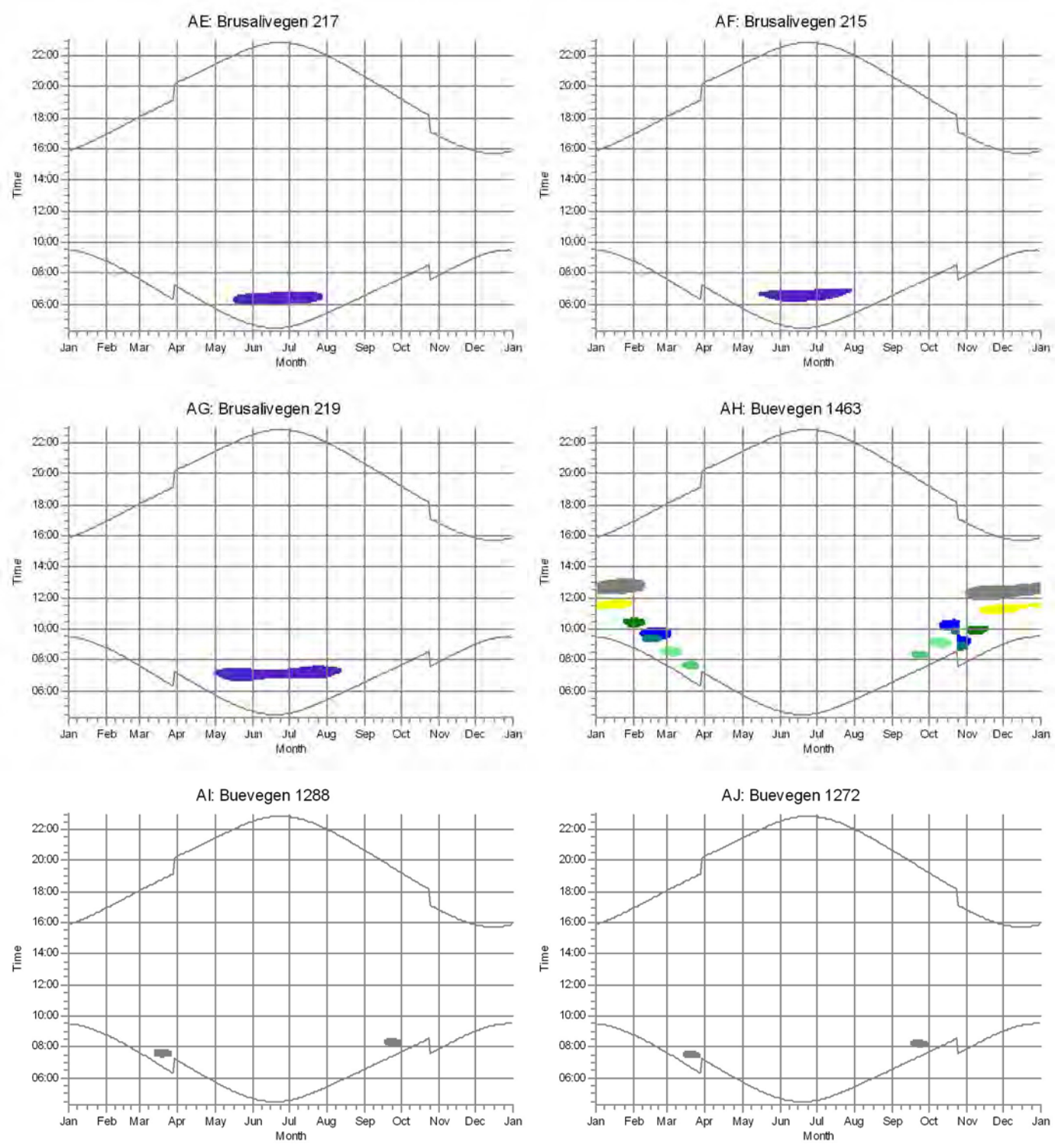
5: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544	17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556	39: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546	18: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557	40: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550	21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560	41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552	30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569	42: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555	36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575	

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

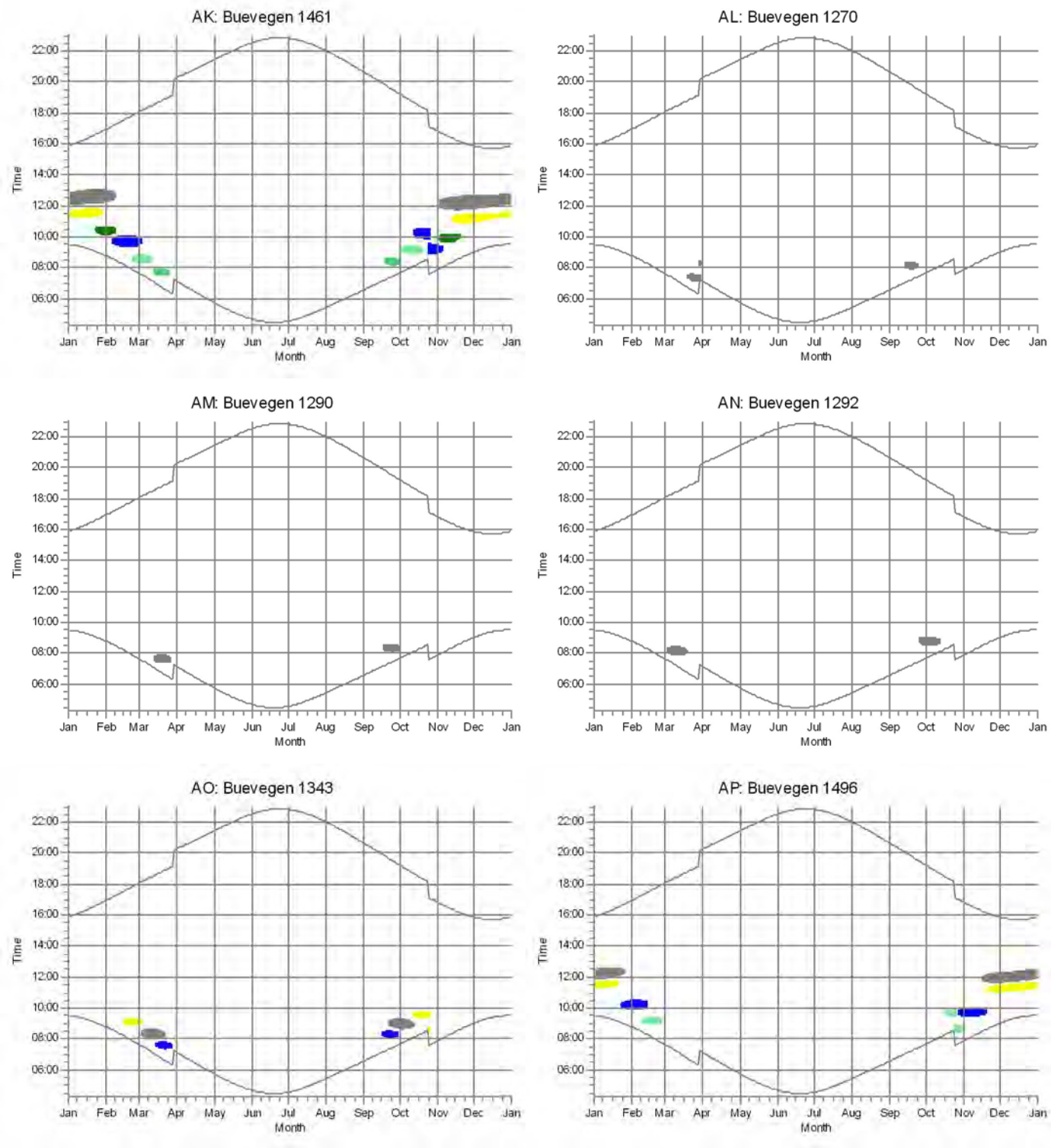


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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

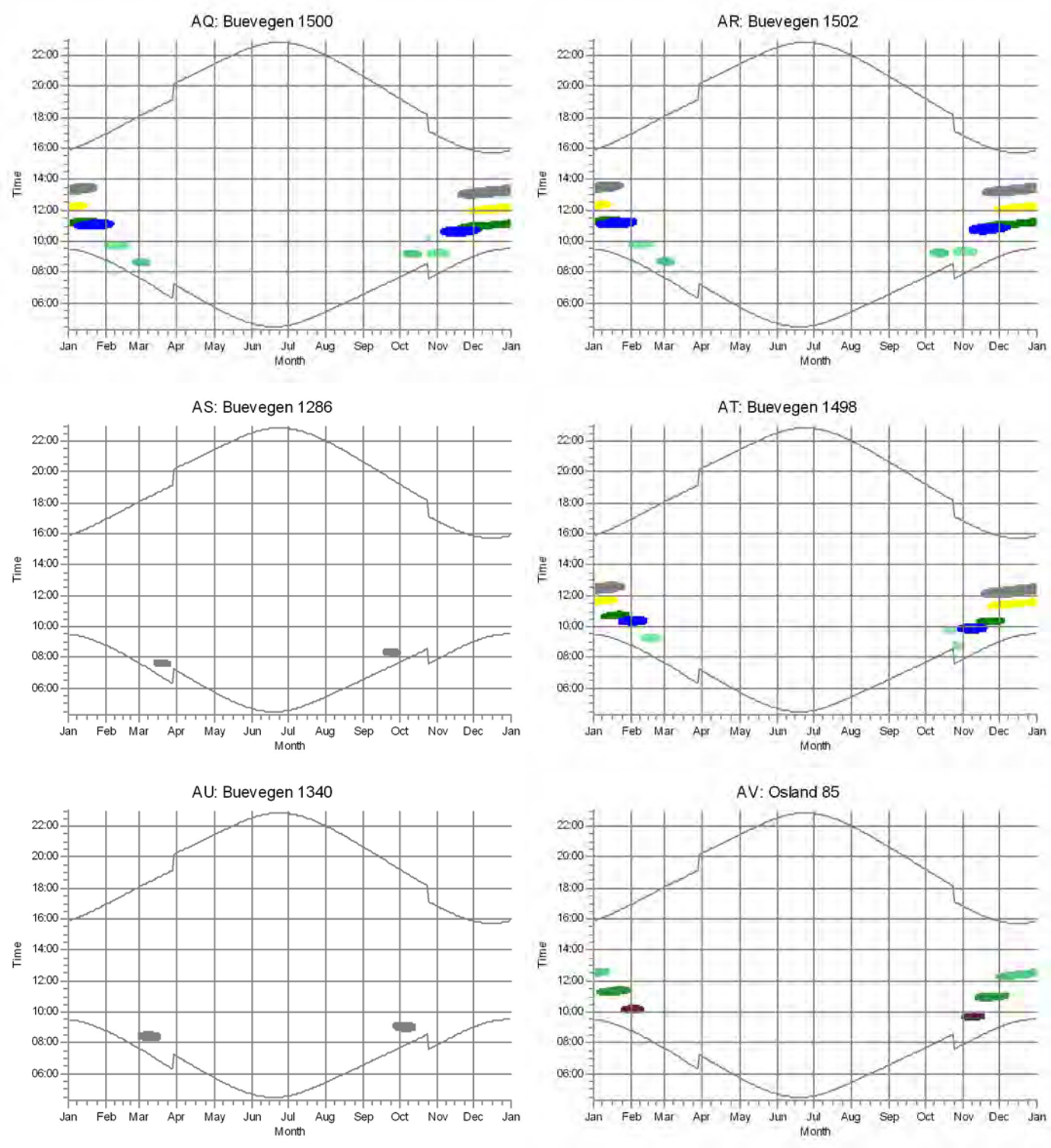


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19.11.2025 14:30/4.2.271

SHADOW - Calendar, graphical

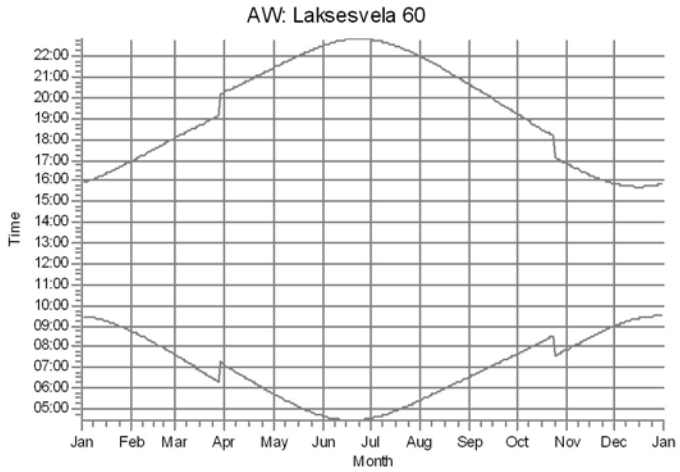
Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

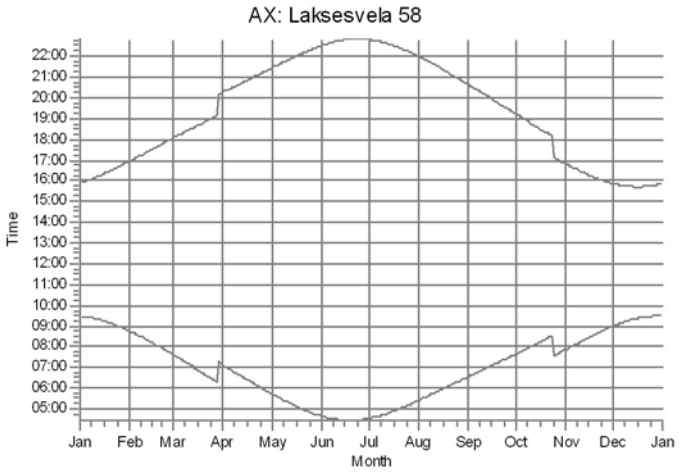


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere





WTGs

Vedlegg 3.1

Tabell Moifjellet og Mellomstrand vindkraftverk

Med nærliggende – worst case

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:19 (37)	07:35		09:10 (19)	07:07		05:44	04:40
	15:53			16:56	51	13:02 (24)	18:05	24	09:34 (19)	20:17		21:26	22:30
2	09:27			08:43		11:24 (37)	07:33		09:10 (19)	07:04		05:41	04:38
	15:54			16:58	34	12:41 (32)	18:07	25	09:35 (19)	20:19		21:28	22:32
3	09:27			08:41		12:08 (32)	07:30		09:10 (19)	07:01		05:39	04:37
	15:55			17:01	43	14:41 (27)	18:09	24	09:34 (19)	20:21		21:30	22:34
4	09:26			08:39		12:07 (32)	07:27		09:10 (19)	06:58		05:36	04:36
	15:57			17:03	56	14:50 (27)	18:12	24	09:34 (19)	20:24		21:33	22:35
5	09:26			08:37		12:06 (32)	07:24		09:10 (19)	06:55		05:34	04:35
	15:58			17:06	61	14:52 (27)	18:14	23	09:33 (19)	20:26		21:35	22:37
6	09:25			08:34		12:06 (32)	07:21		08:24 (21)	06:52		05:31	04:34
	16:00			17:08	66	14:54 (27)	18:17	28	09:32 (19)	20:28		21:37	22:38
7	09:24			08:32		12:05 (32)	07:19		08:21 (21)	06:50		05:29	04:33
	16:02			17:11	69	14:54 (27)	18:19	32	09:30 (19)	20:30		21:40	22:39
8	09:24			08:30		12:05 (32)	07:16		08:19 (21)	06:47		05:26	04:32
	16:03			17:13	72	14:56 (27)	18:21	32	09:28 (19)	20:33		21:42	22:40
9	09:23			08:27		12:04 (32)	07:13		08:18 (21)	06:44		05:24	04:31
	16:05			17:16	75	14:57 (27)	18:24	29	09:26 (19)	20:35		21:44	22:42
10	09:22			08:25		12:04 (32)	07:10		08:17 (21)	06:41		05:22	04:30
	16:07			17:18	80	15:35 (28)	18:26	18	08:35 (21)	20:37		21:46	22:43
11	09:21			08:23		12:04 (32)	07:07		08:17 (21)	06:38		05:19	04:29
	16:09			17:21	91	15:40 (28)	18:28	18	08:35 (21)	20:40		21:49	22:44
12	09:20			08:20		12:04 (32)	07:04		08:17 (21)	06:35		05:17	04:29
	16:11			17:23	99	15:47 (28)	18:31	19	08:36 (21)	20:42		21:51	22:45
13	09:18			08:18		12:03 (32)	07:01		08:17 (21)	06:32		05:15	04:28
	16:13			17:26	101	15:48 (28)	18:33	18	08:35 (21)	20:44		21:53	22:46
14	09:17			08:15		12:04 (32)	06:59		08:17 (21)	06:30		05:13	04:28
	16:15			17:28	99	15:48 (28)	18:35	17	08:34 (21)	20:47		21:55	22:47
15	09:16			08:13		12:04 (32)	06:56		08:18 (21)	06:27		05:10	04:27
	16:17			17:31	96	15:46 (28)	18:38	15	08:33 (21)	20:49		21:58	22:47
16	09:15			08:10		12:03 (32)	06:53		08:19 (21)	06:24		05:08	04:27
	16:19			17:33	92	15:44 (28)	18:40	12	08:31 (21)	20:51		22:00	22:48
17	09:13			08:07		12:03 (32)	06:50		08:22 (21)	06:21		05:06	04:27
	16:21			17:36	86	15:41 (28)	18:42	5	08:27 (21)	20:53		22:02	22:49
18	09:12			08:05		12:04 (32)	06:47			06:19		05:04	04:27
	16:23			17:38	78	14:58 (27)	18:45			20:56		22:04	22:49
19	09:10			08:02		12:05 (32)	06:44			06:16		05:02	04:27
	16:25			17:40	76	14:58 (27)	18:47			20:58		22:06	22:50
20	09:08			08:00		12:05 (32)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:57 (27)	18:49			21:00		22:08	22:50
21	09:07		11:29 (37)	07:57		12:05 (32)	06:38			06:10		04:58	04:27
	16:30	8	13:08 (24)	17:45	71	14:56 (27)	18:51			21:03		22:10	22:50
22	09:05		11:28 (37)	07:54		12:06 (32)	06:36			06:08		04:56	04:27
	16:32	22	13:07 (24)	17:48	66	14:55 (27)	18:54			21:05		22:12	22:50
23	09:03		11:29 (37)	07:52		09:20 (19)	06:33			06:05		04:54	04:27
	16:34	21	13:08 (24)	17:50	69	14:54 (27)	18:56			21:07		22:14	22:50
24	09:02		11:28 (37)	07:49		09:16 (19)	06:30			06:02		04:52	04:27
	16:37	33	13:08 (24)	17:53	69	14:52 (27)	18:58			21:10		22:16	22:51
25	09:00		11:27 (37)	07:46		09:14 (19)	06:27			05:59		04:51	04:28
	16:39	33	13:08 (24)	17:55	64	14:49 (27)	19:01			21:12		22:18	22:50
26	08:58		11:22 (37)	07:44		09:13 (19)	06:24			05:57		04:49	04:28
	16:41	37	13:08 (24)	17:57	54	14:45 (27)	19:03			21:14		22:20	22:50
27	08:56		11:14 (37)	07:41		09:12 (19)	06:21			05:54		04:47	04:29
	16:44	43	13:07 (24)	18:00	41	12:35 (32)	19:05			21:17		22:22	22:50
28	08:54		11:14 (37)	07:38		09:11 (19)	06:18			05:52		04:46	04:30
	16:46	52	13:07 (24)	18:02	33	12:29 (32)	19:07			21:19		22:24	22:50
29	08:52		11:15 (37)				07:15			05:49		04:44	04:30
	16:49	56	13:07 (24)				20:10			21:21		22:25	22:50
30	08:50		11:15 (37)				07:12			05:46		04:43	04:31
	16:51	59	13:06 (24)				20:12			21:24		22:27	22:49
31	08:48		11:17 (37)				07:10					04:41	
	16:54	57	13:05 (24)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		421			1966			363					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October		November		December
1	04:32	05:24	06:33			07:39		08:56 (21)	07:51	11:33 (32)	09:00
	22:49	22:01	20:40			19:13	19	09:15 (21)	16:49	78	14:57 (28)	15:51
2	04:33	05:26	06:35			07:42		08:56 (21)	07:54	11:34 (32)	09:02
	22:48	21:58	20:37			19:10	18	09:14 (21)	16:46	74	14:26 (27)	15:50
3	04:34	05:28	06:37			07:44		08:55 (21)	07:56	11:35 (32)	09:03
	22:47	21:56	20:34			19:07	19	09:14 (21)	16:44	71	14:25 (27)	15:49
4	04:35	05:31	06:40			07:46		08:55 (21)	07:59	11:35 (32)	09:05
	22:47	21:54	20:31			19:04	26	10:01 (19)	16:41	69	14:24 (27)	15:48
5	04:36	05:33	06:42			07:48		08:56 (21)	08:01	11:36 (32)	09:07
	22:46	21:51	20:28			19:02	31	10:05 (19)	16:39	64	14:23 (27)	15:47
6	04:37	05:35	06:44			07:51		08:57 (21)	08:03	11:37 (32)	09:09
	22:45	21:49	20:25			18:59	32	10:06 (19)	16:37	61	14:22 (27)	15:46
7	04:39	05:37	06:46			07:53		08:58 (21)	08:06	11:37 (32)	09:10
	22:44	21:47	20:22			18:56	31	10:07 (19)	16:34	53	14:17 (27)	15:45
8	04:40	05:39	06:49			07:55		09:03 (21)	08:08	11:39 (32)	09:12
	22:43	21:44	20:20			18:53	23	10:08 (19)	16:32	42	14:11 (27)	15:45
9	04:41	05:42	06:51			07:57		09:45 (19)	08:11	10:53 (37)	09:13
	22:42	21:42	20:17			18:50	23	10:08 (19)	16:30	37	12:12 (32)	15:44
10	04:43	05:44	06:53			08:00		09:45 (19)	08:13	10:50 (37)	09:15
	22:40	21:39	20:14			18:47	24	10:09 (19)	16:28	52	12:34 (24)	15:44
11	04:44	05:46	06:55			08:02		09:44 (19)	08:15	10:48 (37)	09:16
	22:39	21:37	20:11			18:45	24	10:08 (19)	16:25	57	12:36 (24)	15:43
12	04:46	05:48	06:57			08:04		09:43 (19)	08:18	10:47 (37)	09:18
	22:38	21:34	20:08			18:42	24	10:07 (19)	16:23	58	12:37 (24)	15:43
13	04:47	05:51	07:00			08:07		09:44 (19)	08:20	10:47 (37)	09:19
	22:37	21:31	20:05			18:39	23	10:07 (19)	16:21	57	12:39 (24)	15:42
14	04:49	05:53	07:02			08:09		09:44 (19)	08:22	10:46 (37)	09:20
	22:35	21:29	20:02			18:36	37	13:05 (32)	16:19	52	12:39 (24)	15:42
15	04:51	05:55	07:04			08:11		09:45 (19)	08:25	10:47 (37)	09:21
	22:34	21:26	19:59			18:33	44	13:09 (32)	16:17	43	12:40 (24)	15:42
16	04:52	05:57	07:06			08:13		09:45 (19)	08:27	10:55 (37)	09:22
	22:32	21:24	19:56			18:31	59	15:19 (27)	16:15	37	12:41 (24)	15:42
17	04:54	06:00	07:08			08:16		09:47 (19)	08:29	11:00 (37)	09:23
	22:30	21:21	19:54			18:28	66	15:22 (27)	16:13	33	12:41 (24)	15:42
18	04:56	06:02	07:11			08:18		09:48 (19)	08:32	11:02 (37)	09:24
	22:29	21:18	19:51			18:25	71	15:24 (27)	16:11	33	12:42 (24)	15:42
19	04:58	06:04	07:13			08:20		09:52 (19)	08:34	11:04 (37)	09:25
	22:27	21:16	19:48			18:22	70	15:26 (27)	16:09	21	12:43 (24)	15:42
20	05:00	06:06	07:15			08:23		12:37 (32)	08:36	11:03 (37)	09:26
	22:25	21:13	19:45			18:20	68	15:26 (27)	16:08	22	12:42 (24)	15:43
21	05:01	06:08	07:17			08:25		12:36 (32)	08:39	11:04 (37)	09:26
	22:24	21:10	19:42			18:17	71	15:27 (27)	16:06	8	12:43 (24)	15:43
22	05:03	06:11	07:19			08:27		12:35 (32)	08:41			09:27
	22:22	21:08	19:39			18:14	74	15:27 (27)	16:04			15:43
23	05:05	06:13	07:22			08:30		12:35 (32)	08:43			09:27
	22:20	21:05	19:36			18:12	76	15:28 (27)	16:02			15:44
24	05:07	06:15	07:24			08:32		12:34 (32)	08:45			09:28
	22:18	21:02	19:33			18:09	78	15:28 (27)	16:01			15:44
25	05:09	06:17	07:26			07:35		11:34 (32)	08:47			09:28
	22:16	20:59	19:30			17:06	86	15:12 (28)	15:59			15:45
26	05:11	06:20	07:28			07:37		11:33 (32)	08:50			09:28
	22:14	20:56	19:27			17:04	94	15:14 (28)	15:58			15:46
27	05:13	06:22	07:30		09:02 (21)	07:39		11:33 (32)	08:52			09:28
	22:12	20:54	19:25	10	09:12 (21)	17:01	97	15:16 (28)	15:56			15:47
28	05:16	06:24	07:33		09:00 (21)	07:42		11:33 (32)	08:54			09:28
	22:10	20:51	19:22	13	09:13 (21)	16:59	101	15:18 (28)	15:55			15:48
29	05:18	06:26	07:35		08:58 (21)	07:44		11:33 (32)	08:56			09:28
	22:07	20:48	19:19	16	09:14 (21)	16:56	102	15:18 (28)	15:54			15:49
30	05:20	06:29	07:37		08:56 (21)	07:47		11:33 (32)	08:58			09:28
	22:05	20:45	19:16	18	09:14 (21)	16:54	99	15:15 (28)	15:52			15:50
31	05:22	06:31				07:49		11:34 (32)				09:28
	22:03	20:42				16:51	90	15:09 (28)				15:51
Potential sun hours	546	478	386			319			236			199
Total, worst case				57			1700			1022		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
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SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		11:16 (37)	07:35		09:09 (19)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (27)	18:05	23	09:32 (19)	20:17	21:26	22:30
2	09:27			08:43		12:00 (32)	07:33		09:09 (19)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (27)	18:07	24	09:33 (19)	20:19	21:28	22:32
3	09:27			08:41		11:58 (32)	07:30		09:09 (19)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (27)	18:09	24	09:33 (19)	20:21	21:30	22:34
4	09:26			08:39		11:58 (32)	07:27		09:09 (19)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (27)	18:12	23	09:32 (19)	20:24	21:33	22:35
5	09:26			08:37		11:57 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (27)	18:14	21	09:31 (19)	20:26	21:35	22:37
6	09:25			08:34		11:57 (32)	07:21		09:10 (19)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (27)	18:17	20	09:30 (19)	20:28	21:37	22:38
7	09:24			08:32		11:56 (32)	07:19		09:11 (19)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (27)	18:19	17	09:28 (19)	20:30	21:40	22:39
8	09:24			08:30		11:56 (32)	07:16		09:13 (19)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (28)	18:21	12	09:25 (19)	20:33	21:42	22:40
9	09:23			08:27		11:56 (32)	07:13		09:16 (19)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (28)	18:24	5	09:21 (19)	20:35	21:44	22:42
10	09:22			08:25		11:55 (32)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (28)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (32)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (28)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (32)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (28)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (28)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (27)	18:45			20:56	22:04	22:49
19	09:10		12:54 (24)	08:02		11:57 (32)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (24)	17:40	70	14:48 (27)	18:47			20:58	22:06	22:50
20	09:08		11:12 (37)	08:00		11:57 (32)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (24)	17:43	68	14:47 (27)	18:49			21:00	22:08	22:50
21	09:07		11:11 (37)	07:57		11:58 (32)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (24)	17:45	64	14:46 (27)	18:51			21:03	22:10	22:50
22	09:05		11:11 (37)	07:54		11:59 (32)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (24)	17:48	58	14:44 (27)	18:54			21:05	22:12	22:50
23	09:03		11:11 (37)	07:52		09:17 (19)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (24)	17:50	62	14:43 (27)	18:56			21:07	22:14	22:50
24	09:02		11:10 (37)	07:49		09:14 (19)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (24)	17:53	57	14:39 (27)	18:58			21:10	22:16	22:51
25	09:00		11:08 (37)	07:46		09:13 (19)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (24)	17:55	42	12:28 (32)	19:01			21:12	22:18	22:50
26	08:58		11:09 (37)	07:44		09:11 (19)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (24)	17:57	38	12:24 (32)	19:03			21:14	22:20	22:50
27	08:56		11:09 (37)	07:41		09:10 (19)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (24)	18:00	22	09:32 (19)	19:05			21:17	22:22	22:50
28	08:54		11:10 (37)	07:38		09:09 (19)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (24)	18:02	23	09:32 (19)	19:07			21:19	22:24	22:50
29	08:52		11:12 (37)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (24)				20:10			21:21	22:25	22:50
30	08:50		11:12 (37)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (24)				20:12			21:24	22:27	22:49
31	08:48		11:14 (37)				07:10				04:41	
	16:54	56	14:29 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		09:00
	22:49	22:01	20:40	19:13		16:49	96	15:51
2	04:33	05:26	06:35	07:42		07:54		09:02
	22:48	21:58	20:37	19:10		16:46	90	15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44	82	14:58 (28)	15:49
4	04:35	05:31	06:40	07:46		07:59		09:05
	22:47	21:54	20:31	19:04		16:41	72	14:17 (27)	15:48
5	04:36	05:33	06:42	07:48		09:51 (19)	08:01		09:07
	22:46	21:51	20:28	19:02	10	10:01 (19)	16:39	70	14:17 (27)	15:47
6	04:37	05:35	06:44	07:51		09:48 (19)	08:03		09:09
	22:45	21:49	20:25	18:59	15	10:03 (19)	16:37	65	14:16 (27)	15:46
7	04:39	05:37	06:46	07:53		09:46 (19)	08:06		09:10
	22:44	21:47	20:22	18:56	18	10:04 (19)	16:34	62	14:14 (27)	15:45
8	04:40	05:39	06:49	07:55		09:45 (19)	08:08		09:12
	22:43	21:44	20:20	18:53	21	10:06 (19)	16:32	57	14:13 (27)	15:45
9	04:41	05:42	06:51	07:57		09:44 (19)	08:11		09:13
	22:42	21:42	20:17	18:50	22	10:06 (19)	16:30	53	14:12 (27)	15:44
10	04:43	05:44	06:53	08:00		09:44 (19)	08:13		10:47 (37)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (19)	16:28	58	14:10 (27)	15:44
11	04:44	05:46	06:55	08:02		09:43 (19)	08:15		10:45 (37)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (19)	16:25	55	13:59 (27)	15:43
12	04:46	05:48	06:57	08:04		09:42 (19)	08:18		10:44 (37)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (19)	16:23	57	12:31 (24)	15:43
13	04:47	05:51	07:00	08:07		09:43 (19)	08:20		10:43 (37)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (19)	16:21	59	12:32 (24)	15:42
14	04:49	05:53	07:02	08:09		09:42 (19)	08:22		10:42 (37)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (19)	16:19	58	12:33 (24)	15:42
15	04:51	05:55	07:04	08:11		09:43 (19)	08:25		10:42 (37)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (32)	16:17	53	12:34 (24)	15:42
16	04:52	05:57	07:06	08:13		09:44 (19)	08:27		10:42 (37)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (32)	16:15	45	12:35 (24)	15:42
17	04:54	06:00	07:08	08:16		09:45 (19)	08:29		10:41 (37)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (27)	16:13	47	12:35 (24)	15:42
18	04:56	06:02	07:11	08:18		09:46 (19)	08:32		10:44 (37)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (27)	16:11	46	12:36 (24)	15:42
19	04:58	06:04	07:13	08:20		09:49 (19)	08:34		10:46 (37)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (27)	16:09	45	12:37 (24)	15:42
20	05:00	06:06	07:15	08:23		12:30 (32)	08:36		10:46 (37)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (27)	16:08	45	12:37 (24)	15:43
21	05:01	06:08	07:17	08:25		12:29 (32)	08:39		10:46 (37)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (27)	16:06	36	12:37 (24)	15:43
22	05:03	06:11	07:19	08:27		12:27 (32)	08:41		10:48 (37)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (27)	16:04	30	12:38 (24)	15:43
23	05:05	06:13	07:22	08:30		12:27 (32)	08:43		12:30 (24)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (27)	16:02	5	12:35 (24)	15:44
24	05:07	06:15	07:24	08:32		12:26 (32)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (27)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (32)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (27)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (32)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (32)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (28)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (32)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (28)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (32)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (28)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (32)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (28)	15:52			15:50
31	05:22	06:31		07:49		11:25 (32)				09:28
	22:03	20:42		16:51	101	15:13 (28)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		10:42 (37)	07:35		08:50 (19)	07:07		05:44	04:40
	15:53			16:56	72	14:06 (27)	18:05	39	11:29 (32)	20:17		21:26	22:30
2	09:27			08:43		10:44 (37)	07:33		08:50 (19)	07:04		05:41	04:38
	15:54			16:58	72	14:08 (27)	18:07	31	11:25 (32)	20:19		21:28	22:32
3	09:27			08:41		10:46 (37)	07:30		08:49 (19)	07:01		05:39	04:37
	15:55			17:01	71	14:10 (27)	18:09	21	09:10 (19)	20:21		21:31	22:34
4	09:26			08:39		10:47 (37)	07:27		08:48 (19)	06:58		05:36	04:36
	15:57			17:03	77	15:02 (28)	18:12	22	09:10 (19)	20:24		21:33	22:35
5	09:26			08:37		10:50 (37)	07:24		08:48 (19)	06:55		05:34	04:35
	15:58			17:06	77	15:05 (28)	18:14	21	09:09 (19)	20:26		21:35	22:37
6	09:25			08:34		11:05 (32)	07:21		08:48 (19)	06:52		05:31	04:34
	16:00			17:08	82	15:12 (28)	18:17	21	09:09 (19)	20:28		21:37	22:38
7	09:24			08:32		11:03 (32)	07:19		08:48 (19)	06:50		05:29	04:33
	16:02			17:11	92	15:18 (28)	18:19	20	09:08 (19)	20:30		21:40	22:39
8	09:24			08:30		11:03 (32)	07:16		08:48 (19)	06:47		05:26	04:32
	16:03			17:13	101	15:25 (28)	18:21	19	09:07 (19)	20:33		21:42	22:40
9	09:23			08:27		11:02 (32)	07:13		08:48 (19)	06:44		05:24	04:31
	16:05			17:16	112	15:55 (26)	18:24	18	09:06 (19)	20:35		21:44	22:42
10	09:22			08:25		11:01 (32)	07:10		08:49 (19)	06:41		05:22	04:30
	16:07			17:18	104	15:51 (26)	18:26	15	09:04 (19)	20:37		21:46	22:43
11	09:21			08:23		11:01 (32)	07:07		08:51 (19)	06:38		05:19	04:29
	16:09			17:21	101	15:23 (28)	18:28	10	09:01 (19)	20:40		21:49	22:44
12	09:20			08:20		11:00 (32)	07:04			06:35		05:17	04:29
	16:11			17:23	98	15:21 (28)	18:31			20:42		21:51	22:45
13	09:18			08:18		10:59 (32)	07:02			06:33		05:15	04:28
	16:13			17:26	94	15:18 (28)	18:33			20:44		21:53	22:46
14	09:17			08:15		11:00 (32)	06:59			06:30		05:13	04:28
	16:15			17:28	83	14:14 (27)	18:35			20:47		21:55	22:47
15	09:16			08:13		10:59 (32)	06:56			06:27		05:10	04:27
	16:17			17:31	83	14:13 (27)	18:38			20:49		21:58	22:47
16	09:15			08:10		10:59 (32)	06:53			06:24		05:08	04:27
	16:19			17:33	81	14:12 (27)	18:40			20:51		22:00	22:48
17	09:13			08:07		10:59 (32)	06:50			06:21		05:06	04:27
	16:21			17:36	81	14:12 (27)	18:42			20:53		22:02	22:49
18	09:12			08:05		10:59 (32)	06:47			06:19		05:04	04:27
	16:23			17:38	80	14:12 (27)	18:45			20:56		22:04	22:49
19	09:10			08:02		10:59 (32)	06:44			06:16		05:02	04:27
	16:25			17:40	78	14:11 (27)	18:47			20:58		22:06	22:50
20	09:08			08:00		10:59 (32)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:09 (27)	18:49			21:00		22:08	22:50
21	09:07			07:57		10:59 (32)	06:39			06:10		04:58	04:27
	16:30			17:45	71	14:08 (27)	18:51			21:03		22:10	22:50
22	09:05			07:54		11:00 (32)	06:36			06:08		04:56	04:27
	16:32			17:48	66	14:06 (27)	18:54			21:05		22:12	22:50
23	09:03			07:52		11:01 (32)	06:33			06:05		04:54	04:27
	16:34			17:50	60	14:04 (27)	18:56			21:07		22:14	22:50
24	09:02			07:49		11:01 (32)	06:30			06:02		04:52	04:27
	16:37			17:53	50	14:00 (27)	18:58			21:10		22:16	22:51
25	09:00			07:46		11:02 (32)	06:27			06:00		04:51	04:28
	16:39			17:55	36	11:38 (32)	19:01			21:12		22:18	22:50
26	08:58		12:05 (24)	07:44		08:58 (19)	06:24			05:57		04:49	04:28
	16:41	5	12:10 (24)	17:57	36	11:36 (32)	19:03			21:14		22:20	22:50
27	08:56		12:05 (24)	07:41		08:54 (19)	06:21			05:54		04:47	04:29
	16:44	19	13:53 (27)	18:00	41	11:34 (32)	19:05			21:17		22:22	22:50
28	08:54		11:00 (37)	07:38		08:52 (19)	06:18			05:52		04:46	04:30
	16:46	40	13:59 (27)	18:02	41	11:32 (32)	19:08			21:19		22:24	22:50
29	08:52		10:56 (37)				07:15			05:49		04:44	04:30
	16:49	47	14:02 (27)				20:10			21:21		22:25	22:50
30	08:50		10:50 (37)				07:13			05:46		04:43	04:31
	16:51	55	14:03 (27)				20:12			21:24		22:27	22:49
31	08:48		10:44 (37)				07:10					04:41	
	16:54	62	14:05 (27)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		228			2114			237					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (32)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (26)	15:51
2	04:33		05:26		06:35		07:42		09:32 (19)	07:54		10:32 (32)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (19)	16:46	110	15:25 (26)	15:50
3	04:34		05:28		06:37		07:44		09:28 (19)	07:56		10:33 (32)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (19)	16:44	97	14:53 (28)	15:49
4	04:35		05:31		06:40		07:46		09:26 (19)	07:59		10:33 (32)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (19)	16:41	89	14:46 (28)	15:48
5	04:36		05:33		06:42		07:48		09:25 (19)	08:01		10:35 (32)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (19)	16:39	81	14:41 (28)	15:47
6	04:37		05:35		06:44		07:51		09:24 (19)	08:03		10:20 (37)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (19)	16:37	77	14:35 (28)	15:46
7	04:39		05:37		06:46		07:53		09:23 (19)	08:06		10:16 (37)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (19)	16:34	77	14:32 (28)	15:45
8	04:40		05:39		06:49		07:55		09:23 (19)	08:08		10:15 (37)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (19)	16:32	71	13:39 (27)	15:45
9	04:41		05:42		06:51		07:57		09:22 (19)	08:11		10:15 (37)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (19)	16:30	72	13:39 (27)	15:44
10	04:43		05:44		06:53		08:00		09:23 (19)	08:13		10:14 (37)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (19)	16:28	71	13:38 (27)	15:44
11	04:44		05:46		06:55		08:02		09:23 (19)	08:15		10:15 (37)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (19)	16:25	61	13:36 (27)	15:43
12	04:46		05:48		06:57		08:04		09:23 (19)	08:18		10:24 (37)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (32)	16:23	52	13:35 (27)	15:43
13	04:47		05:51		07:00		08:07		09:24 (19)	08:20		10:28 (37)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (32)	16:21	47	13:33 (27)	15:42
14	04:49		05:53		07:02		08:09		09:25 (19)	08:22		10:32 (37)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (32)	16:19	39	13:30 (27)	15:42
15	04:51		05:55		07:04		08:11		09:28 (19)	08:25		11:38 (24)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (32)	16:17	19	13:26 (27)	15:42
16	04:52		05:57		07:06		08:13		11:35 (32)	08:27		11:38 (24)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (32)	16:15	4	11:42 (24)	15:42
17	04:54		06:00		07:08		08:16		11:34 (32)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (32)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (32)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (27)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (32)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (27)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (32)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (27)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (32)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (27)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (32)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (27)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (32)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (27)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (32)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (27)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (32)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (27)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (32)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (27)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (32)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (27)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (32)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (28)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (32)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (28)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (32)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (28)	15:52			15:50
31	05:22		06:31				07:49		10:31 (32)				09:28
	22:03		20:42				16:51	99	14:52 (28)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:39 (32)	07:35		09:25 (19)	07:07		05:44	04:40
	15:53			16:56	88	15:12 (28)	18:05	9	09:34 (19)	20:17		21:26	22:31
2	09:27			08:43		11:39 (32)	07:33			07:04		05:41	04:38
	15:54			16:58	88	15:13 (28)	18:07			20:19		21:28	22:32
3	09:27			08:41		11:40 (32)	07:30			07:01		05:39	04:37
	15:55			17:01	85	15:12 (28)	18:09			20:21		21:31	22:34
4	09:27			08:39		11:39 (32)	07:27			06:58		05:36	04:36
	15:57			17:03	83	15:11 (28)	18:12			20:24		21:33	22:35
5	09:26		12:20 (24)	08:37		11:39 (32)	07:24			06:55		05:34	04:35
	15:58	1	12:21 (24)	17:06	80	15:09 (28)	18:14			20:26		21:35	22:37
6	09:25		12:19 (24)	08:34		11:40 (32)	07:21			06:52		05:31	04:34
	16:00	5	12:24 (24)	17:08	74	15:08 (28)	18:17			20:28		21:37	22:38
7	09:24		12:17 (24)	08:32		11:40 (32)	07:19			06:50		05:29	04:33
	16:02	11	12:28 (24)	17:11	62	14:11 (27)	18:19			20:30		21:40	22:39
8	09:24		12:17 (24)	08:30		11:41 (32)	07:16			06:47		05:26	04:32
	16:03	13	12:30 (24)	17:13	61	14:11 (27)	18:21			20:33		21:42	22:40
9	09:23		12:18 (24)	08:27		11:42 (32)	07:13			06:44		05:24	04:31
	16:05	16	12:34 (24)	17:16	57	14:10 (27)	18:24			20:35		21:44	22:42
10	09:22		11:06 (37)	08:25		11:42 (32)	07:10			06:41		05:22	04:30
	16:07	25	12:39 (24)	17:18	54	14:09 (27)	18:26			20:37		21:46	22:43
11	09:21		11:02 (37)	08:23		11:44 (32)	07:07			06:38		05:19	04:29
	16:09	31	12:41 (24)	17:21	48	14:08 (27)	18:28			20:40		21:49	22:44
12	09:20		11:01 (37)	08:20		11:45 (32)	07:04			06:35		05:17	04:29
	16:11	40	12:41 (24)	17:23	42	14:06 (27)	18:31			20:42		21:51	22:45
13	09:18		11:02 (37)	08:18		11:46 (32)	07:02			06:32		05:15	04:28
	16:13	42	12:42 (24)	17:26	32	14:02 (27)	18:33			20:44		21:53	22:46
14	09:17		11:02 (37)	08:15		11:49 (32)	06:59			06:30		05:13	04:28
	16:15	42	12:42 (24)	17:28	18	12:07 (32)	18:35			20:47		21:55	22:47
15	09:16		11:02 (37)	08:13		11:52 (32)	06:56			06:27		05:10	04:27
	16:17	43	12:42 (24)	17:31	12	12:04 (32)	18:38			20:49		21:58	22:47
16	09:15		11:02 (37)	08:10		09:29 (19)	06:53			06:24		05:08	04:27
	16:19	43	12:42 (24)	17:33	5	09:34 (19)	18:40			20:51		22:00	22:48
17	09:13		11:02 (37)	08:07		09:25 (19)	06:50			06:21		05:06	04:27
	16:21	45	12:42 (24)	17:36	12	09:37 (19)	18:42			20:53		22:02	22:49
18	09:12		11:03 (37)	08:05		09:24 (19)	06:47			06:19		05:04	04:27
	16:23	57	13:55 (27)	17:38	16	09:40 (19)	18:45			20:56		22:04	22:49
19	09:10		11:03 (37)	08:02		09:23 (19)	06:44			06:16		05:02	04:27
	16:25	70	13:59 (27)	17:40	17	09:40 (19)	18:47			20:58		22:06	22:50
20	09:08		11:04 (37)	08:00		09:22 (19)	06:41			06:13		05:00	04:27
	16:28	75	14:01 (27)	17:43	19	09:41 (19)	18:49			21:00		22:08	22:50
21	09:07		11:04 (37)	07:57		09:21 (19)	06:39			06:10		04:58	04:27
	16:30	80	14:03 (27)	17:45	20	09:41 (19)	18:51			21:03		22:10	22:50
22	09:05		11:05 (37)	07:54		09:20 (19)	06:36			06:08		04:56	04:27
	16:32	82	14:05 (27)	17:48	21	09:41 (19)	18:54			21:05		22:12	22:50
23	09:03		11:05 (37)	07:52		09:21 (19)	06:33			06:05		04:54	04:27
	16:34	83	14:05 (27)	17:50	21	09:42 (19)	18:56			21:07		22:14	22:51
24	09:02		11:06 (37)	07:49		09:21 (19)	06:30			06:02		04:52	04:27
	16:37	84	14:07 (27)	17:53	20	09:41 (19)	18:58			21:10		22:16	22:51
25	09:00		11:07 (37)	07:46		09:21 (19)	06:27			05:59		04:51	04:28
	16:39	84	14:52 (28)	17:55	20	09:41 (19)	19:01			21:12		22:18	22:51
26	08:58		11:09 (37)	07:44		09:21 (19)	06:24			05:57		04:49	04:28
	16:41	79	14:57 (28)	17:57	19	09:40 (19)	19:03			21:14		22:20	22:50
27	08:56		11:10 (37)	07:41		09:22 (19)	06:21			05:54		04:47	04:29
	16:44	86	15:12 (28)	18:00	16	09:38 (19)	19:05			21:17		22:22	22:50
28	08:54		11:13 (37)	07:38		09:23 (19)	06:18			05:52		04:46	04:30
	16:46	90	15:13 (28)	18:02	14	09:37 (19)	19:08			21:19		22:24	22:50
29	08:52		11:40 (32)				07:15			05:49		04:44	04:30
	16:49	88	15:14 (28)				20:10			21:21		22:25	22:50
30	08:50		11:39 (32)				07:12			05:46		04:42	04:31
	16:51	88	15:13 (28)				20:12			21:24		22:27	22:49
31	08:48		11:39 (32)				07:10					04:41	
	16:54	88	15:13 (28)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		1491			1104			9					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (32)	09:00		10:44 (37)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (27)	15:51	31	12:23 (24)
2	04:33	05:26	06:35	07:42			07:54		11:11 (32)	09:02		10:48 (37)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (27)	15:50	27	12:23 (24)
3	04:34	05:28	06:37	07:44			07:56		11:11 (32)	09:03		12:01 (24)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (27)	15:49	17	12:18 (24)
4	04:35	05:31	06:40	07:46			07:59		11:10 (32)	09:05		12:01 (24)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (27)	15:48	13	12:14 (24)
5	04:36	05:33	06:42	07:48			08:01		11:10 (32)	09:07		12:02 (24)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (28)	15:47	11	12:13 (24)
6	04:37	05:35	06:44	07:51			08:03		11:10 (32)	09:09		12:05 (24)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (28)	15:46	5	12:10 (24)
7	04:39	05:37	06:46	07:53			08:06		11:09 (32)	09:10		12:07 (24)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (28)	15:45	2	12:09 (24)
8	04:40	05:39	06:49	07:55			08:08		11:09 (32)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (28)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (28)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (28)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (28)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (19)	08:18		11:11 (32)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (19)	16:23	88	14:45 (28)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (19)	08:20		11:12 (32)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (19)	16:21	86	14:45 (28)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (19)	08:22		10:45 (37)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (19)	16:19	89	14:45 (28)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (19)	08:25		10:42 (37)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (19)	16:17	87	14:45 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (19)	08:27		10:41 (37)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (19)	16:15	81	14:30 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (19)	08:30		10:41 (37)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (19)	16:13	83	14:25 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (19)	08:32		10:40 (37)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (19)	16:11	84	13:41 (27)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (19)	08:34		10:40 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (19)	16:09	83	13:40 (27)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (19)	08:36		10:39 (37)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (19)	16:08	82	13:39 (27)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (19)	08:39		10:39 (37)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (19)	16:06	80	13:38 (27)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		10:40 (37)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (19)	16:04	75	13:37 (27)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		10:39 (37)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (19)	16:02	69	13:35 (27)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (19)	08:45		10:40 (37)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (19)	16:01	58	13:32 (27)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (19)	08:47		10:40 (37)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (19)	15:59	45	12:20 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		10:41 (37)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (19)	15:58	43	12:21 (24)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (32)	08:52		10:41 (37)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (32)	15:56	43	12:21 (24)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (32)	08:54		10:42 (37)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (32)	15:55	42	12:22 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (32)	08:56		10:42 (37)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (27)	15:54	42	12:22 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (32)	08:58		10:42 (37)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (27)	15:52	40	12:22 (24)	15:50		
31	05:22	06:31		07:49		11:13 (32)				09:28		
	22:03	20:42		16:51	50	13:38 (27)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:12 (37)	08:46		11:58 (32)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (37)	16:56	88	15:21 (28)	18:05	20:17	21:26	22:30
2	09:27		11:11 (37)	08:43		11:59 (32)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (37)	16:58	85	15:21 (28)	18:07	20:19	21:28	22:32
3	09:27		11:11 (37)	08:41		12:00 (32)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (24)	17:01	84	15:21 (28)	18:09	20:21	21:31	22:34
4	09:27		11:11 (37)	08:39		11:59 (32)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (24)	17:03	82	15:20 (28)	18:12	20:24	21:33	22:35
5	09:26		11:11 (37)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (24)	17:06	81	15:19 (28)	18:14	20:26	21:35	22:37
6	09:25		11:11 (37)	08:34		12:00 (32)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (24)	17:08	75	15:18 (28)	18:17	20:28	21:37	22:38
7	09:24		11:11 (37)	08:32		12:01 (32)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (24)	17:11	64	15:14 (28)	18:19	20:30	21:40	22:39
8	09:24		11:11 (37)	08:30		12:02 (32)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (24)	17:13	57	14:25 (27)	18:21	20:33	21:42	22:40
9	09:23		11:12 (37)	08:27		12:03 (32)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (24)	17:16	53	14:24 (27)	18:24	20:35	21:44	22:42
10	09:22		11:11 (37)	08:25		12:04 (32)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (24)	17:18	48	14:23 (27)	18:26	20:37	21:46	22:43
11	09:21		11:12 (37)	08:23		12:06 (32)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (24)	17:21	43	14:22 (27)	18:28	20:40	21:49	22:44
12	09:20		11:12 (37)	08:20		12:07 (32)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (24)	17:23	35	14:20 (27)	18:31	20:42	21:51	22:45
13	09:18		11:12 (37)	08:18		12:10 (32)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (24)	17:26	22	14:16 (27)	18:33	20:44	21:53	22:46
14	09:17		11:12 (37)	08:15		09:38 (19)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (24)	17:28	10	12:19 (32)	18:35	20:47	21:55	22:47
15	09:16		11:12 (37)	08:13		09:35 (19)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (24)	17:31	12	09:47 (19)	18:38	20:49	21:58	22:47
16	09:15		11:12 (37)	08:10		09:33 (19)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (24)	17:33	16	09:49 (19)	18:40	20:51	22:00	22:48
17	09:13		11:13 (37)	08:07		09:32 (19)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (24)	17:36	18	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:14 (37)	08:05		09:31 (19)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (24)	17:38	20	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:15 (37)	08:02		09:31 (19)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (24)	17:40	20	09:51 (19)	18:47	20:58	22:06	22:50
20	09:08		11:15 (37)	08:00		09:30 (19)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (27)	17:43	21	09:51 (19)	18:49	21:00	22:08	22:50
21	09:07		11:16 (37)	07:57		09:30 (19)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (27)	17:45	21	09:51 (19)	18:51	21:03	22:10	22:50
22	09:05		11:16 (37)	07:54		09:29 (19)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (27)	17:48	22	09:51 (19)	18:54	21:05	22:12	22:50
23	09:03		11:17 (37)	07:52		09:30 (19)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (27)	17:50	21	09:51 (19)	18:56	21:07	22:14	22:51
24	09:02		11:19 (37)	07:49		09:31 (19)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (27)	17:53	19	09:50 (19)	18:58	21:10	22:16	22:51
25	09:00		11:20 (37)	07:46		09:31 (19)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (27)	17:55	18	09:49 (19)	19:01	21:12	22:18	22:51
26	08:58		11:23 (37)	07:44		09:32 (19)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (28)	17:57	15	09:47 (19)	19:03	21:14	22:20	22:50
27	08:56		11:58 (32)	07:41		09:34 (19)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (28)	18:00	11	09:45 (19)	19:05	21:17	22:22	22:50
28	08:54		11:58 (32)	07:38		09:38 (19)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (28)	18:02	2	09:40 (19)	19:07	21:19	22:24	22:50
29	08:52		11:59 (32)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (28)				20:10	21:21	22:25	22:50
30	08:50		11:58 (32)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (28)				20:12	21:24	22:27	22:49
31	08:48		11:58 (32)				07:10		04:41	
	16:54	88	15:22 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:33 (32)	09:00		10:54 (37)
	22:49	22:01	20:40	19:13			16:49	50	13:53 (27)	15:51	43	12:35 (24)
2	04:33	05:26	06:35	07:42			07:54		11:32 (32)	09:02		10:54 (37)
	22:48	21:58	20:37	19:10			16:46	54	13:54 (27)	15:50	42	12:35 (24)
3	04:34	05:28	06:37	07:44			07:56		11:32 (32)	09:03		10:55 (37)
	22:47	21:56	20:34	19:07			16:44	57	13:55 (27)	15:49	40	12:35 (24)
4	04:35	05:31	06:40	07:46			07:59		11:30 (32)	09:05		10:56 (37)
	22:47	21:54	20:31	19:04			16:41	68	14:45 (28)	15:48	39	12:35 (24)
5	04:36	05:33	06:42	07:48			08:01		11:30 (32)	09:07		10:56 (37)
	22:46	21:51	20:28	19:02			16:39	76	14:48 (28)	15:47	39	12:36 (24)
6	04:37	05:35	06:44	07:51			08:03		11:30 (32)	09:09		10:57 (37)
	22:45	21:49	20:25	18:59			16:37	78	14:49 (28)	15:46	30	12:36 (24)
7	04:39	05:37	06:46	07:53			08:06		11:29 (32)	09:10		10:58 (37)
	22:44	21:47	20:22	18:56			16:34	83	14:50 (28)	15:45	29	12:36 (24)
8	04:40	05:39	06:49	07:55			08:08		11:29 (32)	09:12		10:59 (37)
	22:43	21:44	20:20	18:53			16:32	86	14:51 (28)	15:45	15	12:33 (24)
9	04:41	05:42	06:51	07:57			08:11		11:29 (32)	09:13		11:00 (37)
	22:42	21:42	20:17	18:50			16:30	87	14:52 (28)	15:44	12	12:34 (24)
10	04:43	05:44	06:53	08:00			08:13		11:30 (32)	09:15		11:00 (37)
	22:41	21:39	20:14	18:47			16:28	88	14:53 (28)	15:43	4	12:31 (24)
11	04:44	05:46	06:55	08:02			08:15		11:29 (32)	09:16		11:02 (37)
	22:39	21:37	20:11	18:45			16:25	87	14:52 (28)	15:43	2	11:04 (37)
12	04:46	05:48	06:57	08:04			08:18		11:30 (32)	09:18		11:02 (37)
	22:38	21:34	20:08	18:42			16:23	87	14:53 (28)	15:43	2	11:04 (37)
13	04:47	05:51	07:00	08:07			08:20		11:30 (32)	09:19		
	22:37	21:31	20:05	18:39			16:21	83	14:50 (28)	15:42		
14	04:49	05:53	07:02	08:09		10:08 (19)	08:22		11:30 (32)	09:20		
	22:35	21:29	20:02	18:36	8	10:16 (19)	16:19	74	14:42 (28)	15:42		
15	04:51	05:55	07:04	08:11		10:06 (19)	08:25		11:31 (32)	09:21		
	22:34	21:26	19:59	18:33	13	10:19 (19)	16:17	68	14:38 (28)	15:42		
16	04:52	05:57	07:06	08:13		10:04 (19)	08:27		10:56 (37)	09:22		
	22:32	21:24	19:56	18:31	16	10:20 (19)	16:15	69	14:36 (28)	15:42		
17	04:54	06:00	07:08	08:16		10:03 (19)	08:30		10:54 (37)	09:23		
	22:30	21:21	19:54	18:28	18	10:21 (19)	16:13	73	13:55 (27)	15:42		
18	04:56	06:02	07:11	08:18		10:02 (19)	08:32		10:52 (37)	09:24		
	22:29	21:18	19:51	18:25	20	10:22 (19)	16:11	78	13:54 (27)	15:42		
19	04:58	06:04	07:13	08:20		10:01 (19)	08:34		10:52 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:22 (19)	16:09	81	13:54 (27)	15:42		
20	05:00	06:06	07:15	08:23		10:01 (19)	08:36		10:51 (37)	09:26		
	22:25	21:13	19:45	18:20	21	10:22 (19)	16:08	80	13:52 (27)	15:43		
21	05:01	06:08	07:17	08:25		10:01 (19)	08:39		10:51 (37)	09:26		
	22:24	21:10	19:42	18:17	21	10:22 (19)	16:06	78	13:51 (27)	15:43		
22	05:03	06:11	07:19	08:27		10:00 (19)	08:41		10:51 (37)	09:27		
	22:22	21:08	19:39	18:14	21	10:21 (19)	16:04	75	13:50 (27)	15:43		
23	05:05	06:13	07:22	08:30		10:01 (19)	08:43		10:51 (37)	09:27		
	22:20	21:05	19:36	18:12	20	10:21 (19)	16:02	64	12:31 (24)	15:44		
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		10:51 (37)	09:28		
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	63	12:32 (24)	15:44		
25	05:09	06:17	07:26	07:35		09:02 (19)	08:47		10:51 (37)	09:28		
	22:16	20:59	19:30	17:06	18	09:20 (19)	15:59	60	12:32 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:03 (19)	08:50		10:52 (37)	09:28		
	22:14	20:57	19:27	17:04	15	09:18 (19)	15:58	56	12:33 (24)	15:46		
27	05:13	06:22	07:30	07:39		09:05 (19)	08:52		10:51 (37)	09:28		
	22:12	20:54	19:25	17:01	11	09:16 (19)	15:56	53	12:33 (24)	15:47		
28	05:16	06:24	07:33	07:42		09:08 (19)	08:54		10:52 (37)	09:28		
	22:10	20:51	19:22	16:59	13	11:51 (32)	15:55	44	12:34 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:38 (32)	08:56		10:53 (37)	09:28		
	22:07	20:48	19:19	16:56	26	13:46 (27)	15:54	43	12:34 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:36 (32)	08:58		10:53 (37)	09:28		
	22:05	20:45	19:16	16:54	37	13:50 (27)	15:52	43	12:34 (24)	15:50		
31	05:22	06:31		07:49		11:35 (32)				09:28		11:11 (37)
	22:03	20:42		16:51	44	13:52 (27)				15:51	1	11:12 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					362			2086			298	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:23 (37)	08:46	12:23 (32)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (37)	16:56	82	15:30 (28)	18:05	20:17	21:26	22:30
2	09:27		11:23 (37)	08:43	12:24 (32)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (37)	16:58	86	15:34 (28)	18:07	20:19	21:28	22:32
3	09:27		11:23 (37)	08:41	12:25 (32)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (37)	17:01	84	15:34 (28)	18:09	20:21	21:31	22:34
4	09:26		11:23 (37)	08:39	12:25 (32)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (24)	17:03	85	15:34 (28)	18:12	20:24	21:33	22:35
5	09:26		11:23 (37)	08:37	12:25 (32)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (24)	17:06	82	15:33 (28)	18:14	20:26	21:35	22:37
6	09:25		11:24 (37)	08:34	12:26 (32)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (24)	17:08	79	15:33 (28)	18:17	20:28	21:37	22:38
7	09:24		11:24 (37)	08:32	12:26 (32)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (24)	17:11	74	15:31 (28)	18:19	20:30	21:40	22:39
8	09:24		11:24 (37)	08:30	12:28 (32)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (24)	17:13	68	15:30 (28)	18:21	20:33	21:42	22:40
9	09:23		11:24 (37)	08:27	12:28 (32)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (24)	17:16	60	15:26 (28)	18:24	20:35	21:44	22:42
10	09:22		11:25 (37)	08:25	12:29 (32)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (24)	17:18	51	14:44 (27)	18:26	20:37	21:46	22:43
11	09:21		11:25 (37)	08:23	12:32 (32)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (24)	17:21	45	14:43 (27)	18:28	20:40	21:49	22:44
12	09:20		11:25 (37)	08:20	09:49 (19)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (24)	17:23	45	14:42 (27)	18:31	20:42	21:51	22:45
13	09:18		11:26 (37)	08:18	09:45 (19)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (24)	17:26	43	14:40 (27)	18:33	20:44	21:53	22:46
14	09:17		11:26 (37)	08:15	09:44 (19)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (24)	17:28	27	14:38 (27)	18:35	20:47	21:55	22:47
15	09:16		11:26 (37)	08:13	09:43 (19)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (24)	17:31	18	10:01 (19)	18:38	20:49	21:58	22:47
16	09:15		11:27 (37)	08:10	09:42 (19)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (24)	17:33	20	10:02 (19)	18:40	20:51	22:00	22:48
17	09:13		11:27 (37)	08:07	09:41 (19)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (24)	17:35	21	10:02 (19)	18:42	20:53	22:02	22:49
18	09:12		11:28 (37)	08:05	09:41 (19)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (24)	17:38	22	10:03 (19)	18:45	20:56	22:04	22:49
19	09:10		11:29 (37)	08:02	09:40 (19)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (24)	17:40	23	10:03 (19)	18:47	20:58	22:06	22:50
20	09:08		11:30 (37)	08:00	09:40 (19)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (24)	17:43	23	10:03 (19)	18:49	21:00	22:08	22:50
21	09:07		11:31 (37)	07:57	09:40 (19)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (24)	17:45	22	10:02 (19)	18:51	21:03	22:10	22:50
22	09:05		11:31 (37)	07:54	09:40 (19)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (24)	17:48	22	10:02 (19)	18:54	21:05	22:12	22:50
23	09:03		11:33 (37)	07:52	09:42 (19)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (27)	17:50	20	10:02 (19)	18:56	21:07	22:14	22:50
24	09:02		11:35 (37)	07:49	09:42 (19)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (27)	17:53	18	10:00 (19)	18:58	21:10	22:16	22:51
25	09:00		11:39 (37)	07:46	09:43 (19)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (27)	17:55	16	09:59 (19)	19:01	21:12	22:18	22:50
26	08:58		12:24 (32)	07:44	09:45 (19)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (27)	17:57	11	09:56 (19)	19:03	21:14	22:20	22:50
27	08:56		12:23 (32)	07:41	09:49 (19)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (27)	18:00	2	09:51 (19)	19:05	21:17	22:22	22:50
28	08:54		12:23 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (28)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (32)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (28)				20:10	21:21	22:25	22:50
30	08:50		12:23 (32)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (28)				20:12	21:24	22:27	22:49
31	08:48		12:24 (32)				07:10		04:41	
	16:53	77	15:26 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:59 (32)	09:00		11:07 (37)
	22:49	22:01	20:40	19:13			16:49	51	14:13 (27)	15:51	43	12:51 (24)
2	04:33	05:26	06:35	07:42			07:54		11:58 (32)	09:02		11:08 (37)
	22:48	21:58	20:37	19:10			16:46	61	14:57 (28)	15:50	42	12:51 (24)
3	04:34	05:28	06:37	07:44			07:56		11:57 (32)	09:03		11:08 (37)
	22:47	21:56	20:34	19:07			16:44	71	15:00 (28)	15:49	42	12:51 (24)
4	04:35	05:31	06:40	07:46			07:59		11:56 (32)	09:05		11:09 (37)
	22:47	21:54	20:31	19:04			16:41	76	15:01 (28)	15:48	41	12:52 (24)
5	04:36	05:33	06:42	07:48			08:01		11:55 (32)	09:07		11:09 (37)
	22:46	21:51	20:28	19:02			16:39	80	15:02 (28)	15:47	35	12:52 (24)
6	04:37	05:35	06:44	07:51			08:03		11:55 (32)	09:09		11:10 (37)
	22:45	21:49	20:25	18:59			16:37	82	15:03 (28)	15:46	31	12:52 (24)
7	04:38	05:37	06:46	07:53			08:06		11:54 (32)	09:10		11:11 (37)
	22:44	21:47	20:22	18:56			16:34	84	15:03 (28)	15:45	24	12:40 (24)
8	04:40	05:39	06:49	07:55			08:08		11:54 (32)	09:12		11:11 (37)
	22:43	21:44	20:20	18:53			16:32	87	15:04 (28)	15:45	24	12:41 (24)
9	04:41	05:42	06:51	07:57			08:11		11:55 (32)	09:13		11:12 (37)
	22:42	21:42	20:17	18:50			16:30	87	15:05 (28)	15:44	20	12:37 (24)
10	04:43	05:44	06:53	08:00			08:13		11:55 (32)	09:15		11:12 (37)
	22:40	21:39	20:14	18:47			16:28	81	15:01 (28)	15:43	17	11:29 (37)
11	04:44	05:46	06:55	08:02			08:15		11:54 (32)	09:16		11:14 (37)
	22:39	21:37	20:11	18:45			16:25	78	14:57 (28)	15:43	16	11:30 (37)
12	04:46	05:48	06:57	08:04			08:18		11:55 (32)	09:18		11:14 (37)
	22:38	21:34	20:08	18:42			16:23	74	14:55 (28)	15:43	15	11:29 (37)
13	04:47	05:51	07:00	08:07			08:20		11:56 (32)	09:19		11:15 (37)
	22:37	21:31	20:05	18:39			16:21	67	14:51 (28)	15:42	15	11:30 (37)
14	04:49	05:53	07:02	08:09			08:22		11:55 (32)	09:20		11:16 (37)
	22:35	21:29	20:02	18:36			16:19	62	14:47 (28)	15:42	14	11:30 (37)
15	04:51	05:55	07:04	08:11		10:19 (19)	08:25		11:56 (32)	09:21		11:16 (37)
	22:34	21:26	19:59	18:33	8	10:27 (19)	16:17	57	14:13 (27)	15:42	14	11:30 (37)
16	04:52	05:57	07:06	08:13		10:16 (19)	08:27		11:57 (32)	09:22		11:17 (37)
	22:32	21:24	19:56	18:31	13	10:29 (19)	16:15	54	14:12 (27)	15:42	12	11:29 (37)
17	04:54	06:00	07:08	08:16		10:15 (19)	08:29		11:12 (37)	09:23		11:17 (37)
	22:30	21:21	19:54	18:28	16	10:31 (19)	16:13	58	14:11 (27)	15:42	12	11:29 (37)
18	04:56	06:02	07:11	08:18		10:13 (19)	08:32		11:09 (37)	09:24		11:18 (37)
	22:29	21:18	19:51	18:25	19	10:32 (19)	16:11	67	14:10 (27)	15:42	11	11:29 (37)
19	04:58	06:04	07:13	08:20		10:12 (19)	08:34		11:08 (37)	09:25		11:19 (37)
	22:27	21:16	19:48	18:22	21	10:33 (19)	16:09	66	14:08 (27)	15:42	11	11:30 (37)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:06 (37)	09:26		11:20 (37)
	22:25	21:13	19:45	18:20	22	10:33 (19)	16:08	60	12:44 (24)	15:43	10	11:30 (37)
21	05:01	06:08	07:17	08:25		10:11 (19)	08:39		11:06 (37)	09:26		11:20 (37)
	22:24	21:10	19:42	18:17	23	10:34 (19)	16:06	62	12:46 (24)	15:43	10	11:30 (37)
22	05:03	06:11	07:19	08:27		10:10 (19)	08:41		11:06 (37)	09:27		11:21 (37)
	22:22	21:08	19:39	18:14	23	10:33 (19)	16:04	63	12:47 (24)	15:43	10	11:31 (37)
23	05:05	06:13	07:22	08:30		10:11 (19)	08:43		11:05 (37)	09:27		11:21 (37)
	22:20	21:05	19:36	18:12	22	10:33 (19)	16:02	63	12:47 (24)	15:44	10	11:31 (37)
24	05:07	06:15	07:24	08:32		10:10 (19)	08:45		11:05 (37)	09:28		11:22 (37)
	22:18	21:02	19:33	18:09	22	10:32 (19)	16:01	64	12:48 (24)	15:44	10	11:32 (37)
25	05:09	06:17	07:26	07:35		09:11 (19)	08:47		11:05 (37)	09:28		11:22 (37)
	22:16	20:59	19:30	17:06	21	09:32 (19)	15:59	63	12:48 (24)	15:45	11	11:33 (37)
26	05:11	06:20	07:28	07:37		09:11 (19)	08:50		11:06 (37)	09:28		11:22 (37)
	22:14	20:56	19:27	17:04	20	09:31 (19)	15:58	59	12:49 (24)	15:46	12	11:34 (37)
27	05:13	06:22	07:30	07:39		09:12 (19)	08:52		11:05 (37)	09:28		11:23 (37)
	22:12	20:54	19:25	17:01	18	09:30 (19)	15:56	57	12:49 (24)	15:47	11	11:34 (37)
28	05:16	06:24	07:33	07:42		09:14 (19)	08:54		11:06 (37)	09:28		11:23 (37)
	22:10	20:51	19:22	16:59	28	14:08 (27)	15:55	53	12:50 (24)	15:48	13	11:36 (37)
29	05:18	06:26	07:35	07:44		09:15 (19)	08:56		11:06 (37)	09:28		11:22 (37)
	22:07	20:48	19:19	16:56	44	14:10 (27)	15:54	44	12:50 (24)	15:49	14	11:36 (37)
30	05:20	06:29	07:37	07:47		09:19 (19)	08:58		11:06 (37)	09:28		11:23 (37)
	22:05	20:45	19:16	16:54	44	14:11 (27)	15:52	43	12:50 (24)	15:50	15	11:38 (37)
31	05:22	06:31		07:49		12:01 (32)				09:28		11:23 (37)
	22:03	20:42		16:51	46	14:13 (27)				15:51	15	11:38 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					410			1974			580	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		08:46		11:27 (32)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (28)	18:05	20:17	21:26	22:31
2	09:27	12:04 (24)	08:43		11:27 (32)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (24)	16:58	60	13:50 (27)	18:07	20:19	21:28	22:32
3	09:27	12:04 (24)	08:41		11:28 (32)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (24)	17:01	58	13:50 (27)	18:09	20:21	21:31	22:34
4	09:27	12:04 (24)	08:39		11:28 (32)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (24)	17:03	54	13:48 (27)	18:12	20:24	21:33	22:35
5	09:26	12:04 (24)	08:37		11:28 (32)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (24)	17:06	52	13:47 (27)	18:14	20:26	21:35	22:37
6	09:25	12:05 (24)	08:34		11:29 (32)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (24)	17:08	49	13:47 (27)	18:17	20:28	21:37	22:38
7	09:24	12:05 (24)	08:32		11:29 (32)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (24)	17:11	43	13:44 (27)	18:19	20:30	21:40	22:39
8	09:24	12:05 (24)	08:30		11:31 (32)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (24)	17:13	35	13:42 (27)	18:21	20:33	21:42	22:40
9	09:23	12:06 (24)	08:27		11:32 (32)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (24)	17:16	22	11:54 (32)	18:24	20:35	21:44	22:42
10	09:22	12:06 (24)	08:25		11:34 (32)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (24)	17:18	18	11:52 (32)	18:26	20:37	21:46	22:43
11	09:21	12:07 (24)	08:23		11:37 (32)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (24)	17:21	14	11:51 (32)	18:28	20:40	21:49	22:44
12	09:20	12:07 (24)	08:20		11:41 (32)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (27)	17:23	4	11:45 (32)	18:31	20:42	21:51	22:45
13	09:18	12:08 (24)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (27)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (24)	08:15		09:30 (19)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (27)	17:28	5	09:35 (19)	18:35	20:47	21:55	22:47
15	09:16	11:34 (32)	08:13		09:27 (19)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (27)	17:31	11	09:38 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10		09:25 (19)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (27)	17:33	14	09:39 (19)	18:40	20:51	22:00	22:48
17	09:13	11:31 (32)	08:07		09:23 (19)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (27)	17:36	17	09:40 (19)	18:42	20:53	22:02	22:49
18	09:12	11:30 (32)	08:05		09:23 (19)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (28)	17:38	18	09:41 (19)	18:45	20:56	22:04	22:49
19	09:10	11:29 (32)	08:02		09:22 (19)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (28)	17:40	19	09:41 (19)	18:47	20:58	22:06	22:50
20	09:09	11:28 (32)	08:00		09:22 (19)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (28)	17:43	19	09:41 (19)	18:49	21:00	22:08	22:50
21	09:07	11:28 (32)	07:57		09:22 (19)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (28)	17:45	19	09:41 (19)	18:51	21:03	22:10	22:50
22	09:05	11:28 (32)	07:54		09:22 (19)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (28)	17:48	19	09:41 (19)	18:54	21:05	22:12	22:50
23	09:03	11:26 (32)	07:52		09:23 (19)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (28)	17:50	18	09:41 (19)	18:56	21:07	22:14	22:51
24	09:02	11:26 (32)	07:49		09:23 (19)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (28)	17:53	17	09:40 (19)	18:58	21:10	22:16	22:51
25	09:00	11:26 (32)	07:46		09:24 (19)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (28)	17:55	14	09:38 (19)	19:01	21:12	22:18	22:51
26	08:58	11:26 (32)	07:44		09:25 (19)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (28)	17:57	11	09:36 (19)	19:03	21:14	22:20	22:50
27	08:56	11:25 (32)	07:41		09:30 (19)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (28)	18:00	1	09:31 (19)	19:05	21:17	22:22	22:50
28	08:54	11:26 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (32)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (28)				20:10	21:21	22:25	22:50
30	08:50	11:26 (32)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (28)				20:12	21:24	22:27	22:49
31	08:48	11:26 (32)				07:10		04:41	
	16:54	76 14:52 (28)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		11:03 (32)	09:00		11:49 (24)
	22:49	22:01	20:40	19:13		16:49	19	11:22 (32)	15:51	22	12:11 (24)
2	04:33	05:26	06:35	07:42		07:54		11:01 (32)	09:02		11:49 (24)
	22:48	21:59	20:37	19:10		16:46	23	11:24 (32)	15:50	22	12:11 (24)
3	04:34	05:28	06:37	07:44		07:56		11:01 (32)	09:03		11:49 (24)
	22:47	21:56	20:34	19:07		16:44	36	13:12 (27)	15:49	22	12:11 (24)
4	04:35	05:31	06:40	07:46		07:59		10:59 (32)	09:05		11:50 (24)
	22:47	21:54	20:31	19:04		16:41	43	13:14 (27)	15:48	21	12:11 (24)
5	04:36	05:33	06:42	07:48		08:01		10:59 (32)	09:07		11:50 (24)
	22:46	21:51	20:28	19:02		16:39	48	13:16 (27)	15:47	21	12:11 (24)
6	04:37	05:35	06:44	07:51		08:03		10:58 (32)	09:09		11:51 (24)
	22:45	21:49	20:25	18:59		16:37	53	13:18 (27)	15:46	16	12:07 (24)
7	04:39	05:37	06:46	07:53		08:06		10:57 (32)	09:10		11:51 (24)
	22:44	21:47	20:23	18:56		16:34	55	13:18 (27)	15:45	17	12:08 (24)
8	04:40	05:39	06:49	07:55		08:08		10:57 (32)	09:12		11:52 (24)
	22:43	21:44	20:20	18:53		16:32	58	13:19 (27)	15:45	8	12:00 (24)
9	04:41	05:42	06:51	07:57		08:11		10:57 (32)	09:13		11:53 (24)
	22:42	21:42	20:17	18:50		16:30	63	14:18 (28)	15:44	4	11:57 (24)
10	04:43	05:44	06:53	08:00		08:13		10:58 (32)	09:15		11:53 (24)
	22:41	21:39	20:14	18:47		16:28	71	14:22 (28)	15:43	1	11:54 (24)
11	04:44	05:46	06:55	08:02		08:15		10:57 (32)	09:16		
	22:39	21:37	20:11	18:45		16:25	76	14:23 (28)	15:43		
12	04:46	05:48	06:57	08:04		08:18		10:57 (32)	09:18		
	22:38	21:34	20:08	18:42		16:23	80	14:25 (28)	15:43		
13	04:47	05:51	07:00	08:07		08:20		10:58 (32)	09:19		
	22:37	21:32	20:05	18:39		16:21	81	14:26 (28)	15:42		
14	04:49	05:53	07:02	08:09		08:22		10:58 (32)	09:20		
	22:35	21:29	20:02	18:36		16:19	82	14:26 (28)	15:42		
15	04:51	05:55	07:04	08:11	10:00 (19)	08:25		10:58 (32)	09:21		
	22:34	21:26	19:59	18:33	7 10:07 (19)	16:17	83	14:27 (28)	15:42		
16	04:52	05:57	07:06	08:13	09:57 (19)	08:27		10:59 (32)	09:22		
	22:32	21:24	19:56	18:31	12 10:09 (19)	16:15	83	14:28 (28)	15:42		
17	04:54	06:00	07:08	08:16	09:56 (19)	08:30		11:00 (32)	09:23		
	22:31	21:21	19:54	18:28	15 10:11 (19)	16:13	83	14:29 (28)	15:42		
18	04:56	06:02	07:11	08:18	09:54 (19)	08:32		11:00 (32)	09:24		
	22:29	21:18	19:51	18:25	17 10:11 (19)	16:11	81	14:29 (28)	15:42		
19	04:58	06:04	07:13	08:20	09:54 (19)	08:34		11:01 (32)	09:25		
	22:27	21:16	19:48	18:22	18 10:12 (19)	16:09	87	14:29 (28)	15:42		
20	05:00	06:06	07:15	08:23	09:53 (19)	08:36		11:02 (32)	09:26		
	22:25	21:13	19:45	18:20	19 10:12 (19)	16:08	88	14:29 (28)	15:43		
21	05:01	06:08	07:17	08:25	09:53 (19)	08:39		11:03 (32)	09:26		
	22:24	21:10	19:42	18:17	19 10:12 (19)	16:06	88	14:29 (28)	15:43		
22	05:03	06:11	07:19	08:27	09:52 (19)	08:41		11:04 (32)	09:27		
	22:22	21:08	19:39	18:14	20 10:12 (19)	16:04	88	14:30 (28)	15:43		
23	05:05	06:13	07:22	08:30	09:53 (19)	08:43		11:05 (32)	09:27		
	22:20	21:05	19:36	18:12	19 10:12 (19)	16:02	84	14:29 (28)	15:44		
24	05:07	06:15	07:24	08:32	09:53 (19)	08:45		11:07 (32)	09:28		
	22:18	21:02	19:33	18:09	17 10:10 (19)	16:01	72	14:30 (28)	15:44		
25	05:09	06:17	07:26	07:35	08:54 (19)	08:47		11:08 (32)	09:28		
	22:16	20:59	19:30	17:06	16 09:10 (19)	15:59	58	13:20 (27)	15:45		
26	05:11	06:20	07:28	07:37	08:55 (19)	08:50		11:11 (32)	09:28		
	22:14	20:57	19:27	17:04	14 09:09 (19)	15:58	53	13:20 (27)	15:46		
27	05:13	06:22	07:30	07:39	08:56 (19)	08:52		11:13 (32)	09:28		
	22:12	20:54	19:25	17:01	10 09:06 (19)	15:56	47	13:19 (27)	15:47		
28	05:16	06:24	07:33	07:42		08:54		11:48 (24)	09:28		
	22:10	20:51	19:22	16:59		15:55	35	13:18 (27)	15:48		
29	05:18	06:26	07:35	07:44		08:56		11:48 (24)	09:28		
	22:07	20:48	19:19	16:56		15:54	33	13:17 (27)	15:49		
30	05:20	06:29	07:37	07:47	11:09 (32)	08:58		11:48 (24)	09:28		
	22:05	20:45	19:16	16:54	7 11:16 (32)	15:52	30	13:15 (27)	15:50		
31	05:22	06:31		07:49	11:06 (32)				09:28		
	22:03	20:42		16:51	15 11:21 (32)				15:51		
Potential sun hours	546	478	386	319		236			199		
Total, worst case					225		1881			154	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		12:18 (24)	08:46		11:53 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (24)	16:56	49	14:04 (27)	18:05	20:17	21:26	22:31
2	09:27		12:18 (24)	08:43		11:54 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (24)	16:58	44	14:02 (27)	18:07	20:19	21:28	22:32
3	09:27		11:54 (32)	08:41		11:56 (32)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (24)	17:01	39	14:01 (27)	18:09	20:21	21:31	22:34
4	09:27		11:52 (32)	08:39		11:57 (32)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (24)	17:03	32	13:59 (27)	18:12	20:24	21:33	22:35
5	09:26		11:51 (32)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (24)	17:06	19	13:55 (27)	18:14	20:26	21:35	22:37
6	09:25		11:50 (32)	08:34		12:04 (32)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (24)	17:08	5	12:09 (32)	18:17	20:28	21:37	22:38
7	09:24		11:50 (32)	08:32			07:19	06:50	05:29	04:33
	16:02	42	13:46 (27)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (32)	08:30			07:16	06:47	05:26	04:32
	16:03	48	13:49 (27)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (32)	08:27		09:42 (19)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (27)	17:16	7	09:49 (19)	18:24	20:35	21:44	22:42
10	09:22		11:49 (32)	08:25		09:40 (19)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (27)	17:18	12	09:52 (19)	18:26	20:37	21:46	22:43
11	09:21		11:49 (32)	08:23		09:39 (19)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (27)	17:21	15	09:54 (19)	18:28	20:40	21:49	22:44
12	09:20		11:48 (32)	08:20		09:37 (19)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (27)	17:23	17	09:54 (19)	18:31	20:42	21:51	22:45
13	09:18		11:49 (32)	08:18		09:36 (19)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (27)	17:26	19	09:55 (19)	18:33	20:44	21:53	22:46
14	09:17		11:48 (32)	08:15		09:37 (19)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (27)	17:28	19	09:56 (19)	18:35	20:47	21:55	22:47
15	09:16		11:48 (32)	08:13		09:36 (19)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (28)	17:31	20	09:56 (19)	18:38	20:49	21:58	22:47
16	09:15		11:47 (32)	08:10		09:36 (19)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (28)	17:33	20	09:56 (19)	18:40	20:51	22:00	22:48
17	09:13		11:48 (32)	08:07		09:36 (19)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (28)	17:36	19	09:55 (19)	18:42	20:53	22:02	22:49
18	09:12		11:48 (32)	08:05		09:37 (19)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (28)	17:38	19	09:56 (19)	18:45	20:56	22:04	22:49
19	09:10		11:48 (32)	08:02		09:37 (19)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (28)	17:40	18	09:55 (19)	18:47	20:58	22:06	22:50
20	09:08		11:48 (32)	08:00		09:38 (19)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (28)	17:43	15	09:53 (19)	18:49	21:00	22:08	22:50
21	09:07		11:48 (32)	07:57		09:39 (19)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (28)	17:45	13	09:52 (19)	18:51	21:03	22:10	22:50
22	09:05		11:48 (32)	07:54		09:41 (19)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (28)	17:48	8	09:49 (19)	18:54	21:05	22:12	22:50
23	09:03		11:48 (32)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (28)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (32)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (28)				20:10	21:21	22:25	22:50
30	08:50		11:51 (32)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (28)				20:12	21:24	22:27	22:49
31	08:48		11:52 (32)				07:10		04:41	
	16:54	55	14:55 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1930			409					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (19)	09:00		11:31 (32)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (19)	15:51	60	13:37 (27)
2	04:33	05:26	06:35	07:42			07:54		09:12 (19)	09:02		11:32 (32)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (19)	15:50	56	13:36 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (27)
5	04:36	05:33	06:42	07:48			08:01		11:32 (32)	09:07		11:35 (32)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (32)	15:47	43	13:32 (27)
6	04:37	05:35	06:44	07:51			08:03		11:29 (32)	09:09		11:37 (32)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (27)	15:46	36	12:27 (24)
7	04:38	05:37	06:46	07:53			08:06		11:27 (32)	09:10		11:38 (32)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (27)	15:45	34	12:27 (24)
8	04:40	05:39	06:49	07:55			08:08		11:25 (32)	09:12		11:40 (32)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (27)	15:45	32	12:28 (24)
9	04:41	05:42	06:51	07:57			08:11		11:25 (32)	09:13		11:42 (32)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (27)	15:44	28	12:28 (24)
10	04:43	05:44	06:53	08:00			08:13		11:24 (32)	09:15		12:07 (24)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (27)	15:43	21	12:28 (24)
11	04:44	05:46	06:55	08:02			08:15		11:23 (32)	09:16		12:08 (24)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (28)	15:43	21	12:29 (24)
12	04:46	05:48	06:57	08:04			08:18		11:23 (32)	09:18		12:08 (24)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (28)	15:43	21	12:29 (24)
13	04:47	05:51	07:00	08:07			08:20		11:23 (32)	09:19		12:09 (24)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (28)	15:42	21	12:30 (24)
14	04:49	05:53	07:02	08:09			08:22		11:22 (32)	09:20		12:09 (24)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (28)	15:42	21	12:30 (24)
15	04:51	05:55	07:04	08:11			08:25		11:22 (32)	09:21		12:09 (24)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (28)	15:42	21	12:30 (24)
16	04:52	05:57	07:06	08:13			08:27		11:22 (32)	09:22		12:10 (24)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (28)	15:42	20	12:30 (24)
17	04:54	06:00	07:08	08:16			08:30		11:23 (32)	09:23		12:10 (24)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (28)	15:42	21	12:31 (24)
18	04:56	06:02	07:11	08:18			08:32		11:22 (32)	09:24		12:11 (24)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (28)	15:42	20	12:31 (24)
19	04:58	06:04	07:13	08:20			08:34		11:23 (32)	09:25		12:12 (24)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (28)	15:42	20	12:32 (24)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:22 (32)	09:26		12:12 (24)
	22:25	21:13	19:45	18:20	10	10:21 (19)	16:08	82	14:37 (28)	15:43	20	12:32 (24)
21	05:01	06:08	07:17	08:25		10:10 (19)	08:39		11:23 (32)	09:26		12:12 (24)
	22:24	21:10	19:42	18:17	13	10:23 (19)	16:06	80	14:37 (28)	15:43	20	12:32 (24)
22	05:03	06:11	07:19	08:27		10:08 (19)	08:41		11:24 (32)	09:27		12:13 (24)
	22:22	21:08	19:39	18:14	16	10:24 (19)	16:04	79	14:38 (28)	15:43	20	12:33 (24)
23	05:05	06:13	07:22	08:30		10:07 (19)	08:43		11:24 (32)	09:27		12:13 (24)
	22:20	21:05	19:36	18:12	18	10:25 (19)	16:02	84	14:38 (28)	15:44	20	12:33 (24)
24	05:07	06:15	07:24	08:32		10:06 (19)	08:45		11:25 (32)	09:28		12:14 (24)
	22:18	21:02	19:33	18:09	19	10:25 (19)	16:01	88	14:38 (28)	15:44	21	12:35 (24)
25	05:09	06:17	07:26	07:35		09:06 (19)	08:47		11:25 (32)	09:28		12:15 (24)
	22:16	20:59	19:30	17:06	20	09:26 (19)	15:59	88	14:38 (28)	15:45	20	12:35 (24)
26	05:11	06:20	07:28	07:37		09:06 (19)	08:50		11:26 (32)	09:28		12:15 (24)
	22:14	20:57	19:27	17:04	20	09:26 (19)	15:58	81	14:37 (28)	15:46	20	12:35 (24)
27	05:13	06:22	07:30	07:39		09:06 (19)	08:52		11:27 (32)	09:28		12:16 (24)
	22:12	20:54	19:25	17:01	19	09:25 (19)	15:56	73	14:26 (28)	15:47	20	12:36 (24)
28	05:16	06:24	07:33	07:42		09:06 (19)	08:54		11:28 (32)	09:28		12:16 (24)
	22:10	20:51	19:22	16:59	19	09:25 (19)	15:55	65	13:38 (27)	15:48	21	12:37 (24)
29	05:18	06:26	07:35	07:44		09:06 (19)	08:56		11:29 (32)	09:28		12:16 (24)
	22:07	20:48	19:19	16:56	18	09:24 (19)	15:54	64	13:37 (27)	15:49	20	12:36 (24)
30	05:20	06:29	07:37	07:47		09:07 (19)	08:58		11:29 (32)	09:28		12:17 (24)
	22:05	20:45	19:16	16:54	17	09:24 (19)	15:52	62	13:37 (27)	15:50	20	12:37 (24)
31	05:22	06:31		07:49		09:08 (19)				09:28		12:16 (24)
	22:03	20:42		16:51	15	09:23 (19)				15:51	21	12:37 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:08 (24)	08:46		11:39 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (24)	16:56	49	13:50 (27)	18:05	20:17	21:26	22:31
2	09:27		12:08 (24)	08:43		11:40 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (24)	16:58	44	13:48 (27)	18:07	20:19	21:28	22:32
3	09:27		12:09 (24)	08:41		11:41 (32)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (24)	17:01	39	13:47 (27)	18:09	20:21	21:31	22:34
4	09:27		12:09 (24)	08:39		11:42 (32)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (24)	17:03	32	13:45 (27)	18:12	20:24	21:33	22:35
5	09:26		12:09 (24)	08:37		11:43 (32)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (24)	17:06	19	12:02 (32)	18:14	20:26	21:35	22:37
6	09:25		12:10 (24)	08:34		11:46 (32)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (27)	17:08	14	12:00 (32)	18:17	20:28	21:37	22:38
7	09:24		11:43 (32)	08:32		11:50 (32)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (27)	17:11	6	11:56 (32)	18:19	20:30	21:40	22:39
8	09:24		11:41 (32)	08:30			07:16	06:47	05:26	04:32
	16:03	41	13:37 (27)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:40 (32)	08:27			07:13	06:44	05:24	04:31
	16:05	47	13:39 (27)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:38 (32)	08:25		09:39 (19)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (27)	17:18	3	09:42 (19)	18:26	20:37	21:46	22:43
11	09:21		11:38 (32)	08:23		09:36 (19)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (27)	17:21	10	09:46 (19)	18:28	20:40	21:49	22:44
12	09:20		11:37 (32)	08:20		09:34 (19)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (28)	17:23	14	09:48 (19)	18:31	20:42	21:51	22:45
13	09:18		11:37 (32)	08:18		09:33 (19)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (28)	17:26	16	09:49 (19)	18:33	20:44	21:53	22:46
14	09:17		11:36 (32)	08:15		09:33 (19)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (28)	17:28	17	09:50 (19)	18:35	20:47	21:55	22:47
15	09:16		11:36 (32)	08:13		09:32 (19)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (28)	17:31	18	09:50 (19)	18:38	20:49	21:58	22:47
16	09:15		11:35 (32)	08:10		09:31 (19)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (28)	17:33	19	09:50 (19)	18:40	20:51	22:00	22:48
17	09:13		11:36 (32)	08:07		09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (28)	17:36	19	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:36 (32)	08:05		09:32 (19)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (28)	17:38	19	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:36 (32)	08:02		09:32 (19)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (28)	17:40	18	09:50 (19)	18:47	20:58	22:06	22:50
20	09:09		11:35 (32)	08:00		09:32 (19)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (28)	17:43	17	09:49 (19)	18:49	21:00	22:08	22:50
21	09:07		11:35 (32)	07:57		09:33 (19)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (28)	17:45	15	09:48 (19)	18:51	21:03	22:10	22:50
22	09:05		11:36 (32)	07:54		09:34 (19)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (28)	17:48	12	09:46 (19)	18:54	21:05	22:12	22:50
23	09:03		11:35 (32)	07:52		09:38 (19)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (28)	17:50	6	09:44 (19)	18:56	21:07	22:14	22:51
24	09:02		11:35 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (32)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (28)				20:10	21:21	22:25	22:50
30	08:50		11:37 (32)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (28)				20:12	21:24	22:27	22:49
31	08:48		11:38 (32)				07:10		04:41	
	16:54	51	13:50 (27)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (32)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (27)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (27)
4	04:35	05:31	06:40	07:46			07:59		11:18 (32)	09:05		11:25 (32)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (32)	15:48	42	13:22 (27)
5	04:36	05:33	06:42	07:48			08:01		11:15 (32)	09:07		11:28 (32)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (32)	15:47	34	13:21 (27)
6	04:37	05:35	06:44	07:51			08:03		11:14 (32)	09:09		11:56 (24)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (32)	15:46	26	13:19 (27)
7	04:38	05:37	06:46	07:53			08:06		11:12 (32)	09:10		11:56 (24)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (27)	15:45	21	12:17 (24)
8	04:40	05:39	06:49	07:55			08:08		11:11 (32)	09:12		11:57 (24)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (27)	15:45	21	12:18 (24)
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		11:58 (24)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (27)	15:44	20	12:18 (24)
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		11:58 (24)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (27)	15:43	20	12:18 (24)
11	04:44	05:46	06:55	08:02			08:15		11:09 (32)	09:16		11:58 (24)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (27)	15:43	21	12:19 (24)
12	04:46	05:48	06:57	08:04			08:18		11:09 (32)	09:18		11:58 (24)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (28)	15:43	21	12:19 (24)
13	04:47	05:51	07:00	08:07			08:20		11:09 (32)	09:19		12:00 (24)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (28)	15:42	20	12:20 (24)
14	04:49	05:53	07:02	08:09			08:23		11:08 (32)	09:20		12:00 (24)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (28)	15:42	20	12:20 (24)
15	04:51	05:55	07:04	08:11			08:25		11:08 (32)	09:21		12:00 (24)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (28)	15:42	20	12:20 (24)
16	04:52	05:57	07:06	08:13			08:27		11:09 (32)	09:22		12:01 (24)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (28)	15:42	19	12:20 (24)
17	04:54	06:00	07:08	08:16			08:30		11:09 (32)	09:23		12:01 (24)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (28)	15:42	20	12:21 (24)
18	04:56	06:02	07:11	08:18			08:32		11:09 (32)	09:24		12:02 (24)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (28)	15:42	19	12:21 (24)
19	04:58	06:04	07:13	08:20		10:07 (19)	08:34		11:10 (32)	09:25		12:02 (24)
	22:27	21:16	19:48	18:22	9	10:16 (19)	16:09	79	14:27 (28)	15:42	20	12:22 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:10 (32)	09:26		12:03 (24)
	22:25	21:13	19:45	18:20	13	10:18 (19)	16:08	79	14:27 (28)	15:43	19	12:22 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:10 (32)	09:26		12:03 (24)
	22:24	21:10	19:42	18:17	15	10:19 (19)	16:06	79	14:28 (28)	15:43	19	12:22 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:11 (32)	09:27		12:04 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	84	14:29 (28)	15:43	19	12:23 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:12 (32)	09:27		12:04 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:28 (28)	15:44	19	12:23 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:13 (32)	09:28		12:05 (24)
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	88	14:29 (28)	15:44	19	12:24 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:13 (32)	09:28		12:06 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	88	14:29 (28)	15:45	19	12:25 (24)
26	05:11	06:20	07:28	07:37		09:02 (19)	08:50		11:14 (32)	09:28		12:06 (24)
	22:14	20:57	19:27	17:04	19	09:21 (19)	15:58	87	14:29 (28)	15:46	19	12:25 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:15 (32)	09:28		12:06 (24)
	22:12	20:54	19:25	17:01	19	09:20 (19)	15:56	86	14:29 (28)	15:47	20	12:26 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:16 (32)	09:28		12:07 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	82	14:29 (28)	15:48	20	12:27 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:17 (32)	09:28		12:07 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	72	14:29 (28)	15:49	19	12:26 (24)
30	05:20	06:29	07:37	07:47		09:04 (19)	08:58		11:18 (32)	09:28		12:07 (24)
	22:05	20:45	19:16	16:54	13	09:17 (19)	15:52	60	14:28 (28)	15:50	20	12:27 (24)
31	05:22	06:31		07:49		09:06 (19)				09:28		12:07 (24)
	22:03	20:42		16:51	9	09:15 (19)				15:51	20	12:27 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28	12:05 (24)	08:46	11:36 (32)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (24)	16:56	45 13:44 (27)	18:05	20:17	21:26	22:31
2	09:27	12:06 (24)	08:43	11:37 (32)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (24)	16:58	40 13:42 (27)	18:07	20:19	21:28	22:32
3	09:27	12:06 (24)	08:41	11:38 (32)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (24)	17:01	34 13:40 (27)	18:09	20:21	21:31	22:34
4	09:27	12:06 (24)	08:39	11:39 (32)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (24)	17:03	20 11:59 (32)	18:12	20:24	21:33	22:35
5	09:26	12:06 (24)	08:37	11:41 (32)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (27)	17:06	16 11:57 (32)	18:14	20:26	21:35	22:37
6	09:25	12:07 (24)	08:34	11:44 (32)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (27)	17:08	11 11:55 (32)	18:17	20:28	21:37	22:38
7	09:24	11:39 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (32)	08:25	09:37 (19)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (28)	17:18	6 09:43 (19)	18:26	20:37	21:46	22:43
11	09:21	11:34 (32)	08:23	09:35 (19)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (28)	17:21	11 09:46 (19)	18:28	20:40	21:49	22:44
12	09:20	11:33 (32)	08:20	09:33 (19)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (28)	17:23	15 09:48 (19)	18:31	20:42	21:51	22:45
13	09:18	11:34 (32)	08:18	09:32 (19)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (28)	17:26	16 09:48 (19)	18:33	20:44	21:53	22:46
14	09:17	11:33 (32)	08:15	09:32 (19)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (28)	17:28	18 09:50 (19)	18:35	20:47	21:55	22:47
15	09:16	11:32 (32)	08:13	09:31 (19)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (28)	17:31	19 09:50 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (28)	17:33	19 09:50 (19)	18:40	20:51	22:00	22:48
17	09:13	11:32 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (28)	17:36	19 09:50 (19)	18:42	20:53	22:02	22:49
18	09:12	11:32 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (28)	17:38	18 09:50 (19)	18:45	20:56	22:04	22:49
19	09:10	11:32 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (28)	17:40	17 09:49 (19)	18:47	20:58	22:06	22:50
20	09:09	11:32 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (28)	17:43	16 09:48 (19)	18:49	21:00	22:08	22:50
21	09:07	11:32 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (28)	17:45	14 09:47 (19)	18:51	21:03	22:10	22:50
22	09:05	11:32 (32)	07:54	09:35 (19)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (28)	17:48	10 09:45 (19)	18:54	21:05	22:12	22:50
23	09:03	11:31 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (32)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (28)			20:10	21:21	22:25	22:50
30	08:50	11:34 (32)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (27)			20:12	21:24	22:27	22:49
31	08:48	11:35 (32)			07:10		04:41	
	16:54	48 13:44 (27)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (19)	09:00		11:16 (32)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (19)	15:51	74	14:26 (28)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (28)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (27)
5	04:36	05:33	06:42	07:48			08:01		11:13 (32)	09:07		11:23 (32)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (32)	15:47	39	13:18 (27)
6	04:37	05:35	06:44	07:51			08:03		11:11 (32)	09:09		11:53 (24)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (32)	15:46	32	13:17 (27)
7	04:38	05:37	06:46	07:53			08:06		11:10 (32)	09:10		11:54 (24)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (27)	15:45	28	13:16 (27)
8	04:40	05:39	06:49	07:55			08:08		11:08 (32)	09:12		11:54 (24)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (27)	15:45	22	13:13 (27)
9	04:41	05:42	06:51	07:57			08:11		11:07 (32)	09:13		11:55 (24)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (27)	15:44	20	12:15 (24)
10	04:43	05:44	06:53	08:00			08:13		11:07 (32)	09:15		11:55 (24)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (27)	15:43	20	12:15 (24)
11	04:44	05:46	06:55	08:02			08:15		11:06 (32)	09:16		11:56 (24)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (27)	15:43	20	12:16 (24)
12	04:46	05:48	06:57	08:04			08:18		11:06 (32)	09:18		11:56 (24)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (27)	15:43	20	12:16 (24)
13	04:47	05:51	07:00	08:07			08:20		11:06 (32)	09:19		11:57 (24)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (28)	15:42	20	12:17 (24)
14	04:49	05:53	07:02	08:09			08:23		11:05 (32)	09:20		11:57 (24)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (28)	15:42	20	12:17 (24)
15	04:51	05:55	07:04	08:11			08:25		11:05 (32)	09:21		11:57 (24)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (28)	15:42	20	12:17 (24)
16	04:52	05:57	07:06	08:13			08:27		11:06 (32)	09:22		11:58 (24)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (28)	15:42	19	12:17 (24)
17	04:54	06:00	07:08	08:16			08:30		11:06 (32)	09:23		11:58 (24)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (28)	15:42	19	12:17 (24)
18	04:56	06:02	07:11	08:18			08:32		11:06 (32)	09:24		11:59 (24)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (28)	15:42	19	12:18 (24)
19	04:58	06:04	07:13	08:20		10:09 (19)	08:34		11:06 (32)	09:25		11:59 (24)
	22:27	21:16	19:48	18:22	5	10:14 (19)	16:09	78	14:23 (28)	15:42	20	12:19 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:06 (32)	09:26		12:00 (24)
	22:25	21:13	19:45	18:20	11	10:16 (19)	16:08	79	14:23 (28)	15:43	19	12:19 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:07 (32)	09:26		12:00 (24)
	22:24	21:10	19:42	18:17	14	10:18 (19)	16:06	77	14:23 (28)	15:43	19	12:19 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:08 (32)	09:27		12:01 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	77	14:24 (28)	15:43	19	12:20 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:08 (32)	09:27		12:01 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:24 (28)	15:44	19	12:20 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:09 (32)	09:28		12:02 (24)
	22:18	21:02	19:33	18:09	18	10:19 (19)	16:01	87	14:25 (28)	15:44	19	12:21 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:10 (32)	09:28		12:03 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	87	14:25 (28)	15:45	19	12:22 (24)
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		11:11 (32)	09:28		12:03 (24)
	22:14	20:57	19:27	17:04	19	09:20 (19)	15:58	87	14:25 (28)	15:46	19	12:22 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:11 (32)	09:28		12:03 (24)
	22:12	20:54	19:25	17:01	18	09:19 (19)	15:56	86	14:25 (28)	15:47	20	12:23 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:13 (32)	09:28		12:04 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	85	14:26 (28)	15:48	20	12:24 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:14 (32)	09:28		12:04 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	82	14:25 (28)	15:49	19	12:23 (24)
30	05:20	06:29	07:37	07:47		09:03 (19)	08:58		11:14 (32)	09:28		12:04 (24)
	22:05	20:45	19:16	16:54	14	09:17 (19)	15:52	80	14:25 (28)	15:50	20	12:24 (24)
31	05:22	06:31		07:49		09:05 (19)				09:28		12:04 (24)
	22:03	20:42		16:51	11	09:16 (19)				15:51	20	12:24 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November			December		
1	09:28		11:58 (24)	08:46		11:24 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (24)
	15:53	16	12:14 (24)	16:56	49	13:35 (27)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (28)
2	09:28		11:58 (24)	08:43		11:24 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (24)
	15:54	18	12:16 (24)	16:58	47	13:34 (27)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (28)
3	09:27		11:58 (24)	08:41		11:25 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (32)	09:03		11:44 (24)
	15:55	20	12:18 (24)	17:01	42	13:33 (27)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (32)	15:49	40	14:19 (28)
4	09:27		11:58 (24)	08:39		11:26 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (32)	09:05		11:44 (24)
	15:57	21	12:19 (24)	17:03	35	13:30 (27)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (32)	15:48	34	14:19 (28)
5	09:26		11:59 (24)	08:37		11:26 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (32)	09:07		11:45 (24)
	15:58	20	12:19 (24)	17:06	23	11:49 (32)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (32)	15:47	31	13:06 (27)
6	09:25		11:59 (24)	08:34		11:28 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (32)	09:09		11:45 (24)
	16:00	26	13:18 (27)	17:08	20	11:48 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (32)	15:46	27	13:05 (27)
7	09:25		12:00 (24)	08:32		11:30 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (32)	09:10		11:46 (24)
	16:02	30	13:21 (27)	17:11	16	11:46 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (27)	15:45	20	12:06 (24)
8	09:24		12:00 (24)	08:30		11:33 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (32)	09:12		11:47 (24)
	16:03	34	14:35 (28)	17:13	11	11:44 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (27)	15:45	20	12:07 (24)
9	09:23		12:01 (24)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (32)	09:13		11:47 (24)
	16:05	41	14:36 (28)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (27)	15:44	20	12:07 (24)
10	09:22		12:01 (24)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (32)	09:15		11:47 (24)
	16:07	50	14:36 (28)	17:18			18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (27)	15:43	19	12:07 (24)
11	09:21		12:02 (24)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (32)	09:16		11:48 (24)
	16:09	57	14:37 (28)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (27)	15:43	16	12:04 (24)
12	09:20		11:28 (32)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (32)	09:18		11:48 (24)
	16:11	68	14:38 (28)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (27)	15:43	11	11:59 (24)
13	09:18		11:26 (32)	08:18			07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (32)	09:19		11:49 (24)
	16:13	75	14:39 (28)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (28)	15:42	11	12:00 (24)
14	09:17		11:25 (32)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (32)	09:20		11:50 (24)
	16:15	78	14:39 (28)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (28)	15:42	7	12:00 (24)
15	09:16		11:24 (32)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (32)	09:21		11:50 (24)
	16:17	82	14:40 (28)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (28)	15:42	3	11:53 (24)
16	09:15		11:23 (32)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (32)	09:22		11:50 (24)
	16:19	85	14:40 (28)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (28)	15:42	3	11:53 (24)
17	09:13		11:23 (32)	08:07			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (32)	09:23		11:51 (24)
	16:21	86	14:41 (28)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (28)	15:42	1	11:52 (24)
18	09:12		11:23 (32)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (32)	09:24		
	16:23	87	14:42 (28)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (28)	15:42		
19	09:10		11:22 (32)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (32)	09:25		
	16:25	88	14:42 (28)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (28)	15:42		
20	09:09		11:22 (32)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (32)	09:26		
	16:28	86	14:42 (28)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (28)	15:43		
21	09:07		11:22 (32)	07:57			06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (32)	09:26		
	16:30	83	14:42 (28)	17:45			18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (28)	15:43		
22	09:05		11:22 (32)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (32)	09:27		
	16:32	77	14:42 (28)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (28)	15:43		
23	09:03		11:21 (32)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (32)	09:27		
	16:34	77	14:41 (28)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (28)	15:44		
24	09:02		11:21 (32)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (32)	09:28		
	16:37	76	14:41 (28)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (28)	15:44		
25	09:00		11:21 (32)	07:46			06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (32)	09:28		
	16:39	77	14:41 (28)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (28)	15:45		
26	08:58		11:22 (32)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (32)	09:28		
	16:41	74	14:41 (28)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (28)	15:46		
27	08:56		11:21 (32)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (32)	09:28		11:56 (24)
	16:44	71	14:39 (28)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (28)	15:47	3	11:59 (24)
28	08:54		11:21 (32)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (32)	09:28		11:57 (24)
	16:46	69	14:38 (28)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (28)	15:48	3	12:00 (24)
29	08:52		11:22 (32)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (32)	09:28		11:56 (24)
	16:49	61	14:36 (28)				20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (28)	15:49	5	12:07 (24)
30	08:50		11:22 (32)				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (32)	09:28		11:57 (24)
	16:51	55	13:36 (27)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (28)	15:50	11	12:08 (24)
31	08:48		11:23 (32)				07:10		04:41		05:22	06:31		07:49				09:28		11:57 (24)
	16:54	53	13:36 (27)				20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		1841			243											1761			403	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:52 (37)	08:46		13:17 (32)	07:35	08:53 (21)	07:07	05:44	04:40
	15:53	17	12:09 (37)	16:56	36	13:53 (32)	18:05	19	09:12 (21)	20:17	21:26	22:30
2	09:27		11:51 (37)	08:43		13:18 (32)	07:32		08:53 (21)	07:04	05:41	04:38
	15:54	19	12:10 (37)	16:58	43	15:13 (27)	18:07	20	09:13 (21)	20:19	21:28	22:32
3	09:27		11:51 (37)	08:41		13:17 (32)	07:30		08:52 (21)	07:01	05:39	04:37
	15:55	19	12:10 (37)	17:01	52	15:18 (27)	18:09	21	09:13 (21)	20:21	21:30	22:34
4	09:26		11:51 (37)	08:39		13:18 (32)	07:27		08:52 (21)	06:58	05:36	04:36
	15:57	20	12:11 (37)	17:03	54	15:20 (27)	18:12	20	09:12 (21)	20:24	21:33	22:35
5	09:26		11:52 (37)	08:37		13:17 (32)	07:24		08:52 (21)	06:55	05:34	04:35
	15:58	20	12:12 (37)	17:06	58	15:21 (27)	18:14	20	09:12 (21)	20:26	21:35	22:37
6	09:25		11:52 (37)	08:34		13:18 (32)	07:21		08:52 (21)	06:52	05:31	04:34
	16:00	20	12:12 (37)	17:08	62	15:43 (28)	18:16	19	09:11 (21)	20:28	21:37	22:38
7	09:24		11:52 (37)	08:32		13:17 (32)	07:19		08:53 (21)	06:49	05:29	04:33
	16:02	21	12:13 (37)	17:11	68	15:46 (28)	18:19	17	09:10 (21)	20:30	21:40	22:39
8	09:24		11:53 (37)	08:30		13:18 (32)	07:16		08:54 (21)	06:47	05:26	04:32
	16:03	21	12:14 (37)	17:13	72	15:51 (28)	18:21	14	09:08 (21)	20:33	21:42	22:40
9	09:23		11:52 (37)	08:27		13:18 (32)	07:13		08:55 (21)	06:44	05:24	04:31
	16:05	22	12:14 (37)	17:16	78	15:59 (28)	18:24	10	09:05 (21)	20:35	21:44	22:42
10	09:22		11:53 (37)	08:25		13:18 (32)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (37)	17:18	82	16:00 (28)	18:26			20:37	21:46	22:43
11	09:21		11:54 (37)	08:23		10:11 (19)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (37)	17:21	84	16:00 (28)	18:28			20:40	21:49	22:44
12	09:20		11:53 (37)	08:20		10:06 (19)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (37)	17:23	89	15:59 (28)	18:31			20:42	21:51	22:45
13	09:18		11:53 (37)	08:18		10:04 (19)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (24)	17:26	90	15:58 (28)	18:33			20:44	21:53	22:46
14	09:17		11:54 (37)	08:15		10:03 (19)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (24)	17:28	87	15:57 (28)	18:35			20:47	21:55	22:46
15	09:16		11:55 (37)	08:13		10:02 (19)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (24)	17:31	81	15:54 (28)	18:38			20:49	21:57	22:47
16	09:15		11:55 (37)	08:10		10:01 (19)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (24)	17:33	72	15:24 (27)	18:40			20:51	22:00	22:48
17	09:13		11:55 (37)	08:07		10:00 (19)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (24)	17:35	67	15:23 (27)	18:42			20:53	22:02	22:49
18	09:12		11:57 (37)	08:05		10:00 (19)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (24)	17:38	61	15:23 (27)	18:45			20:56	22:04	22:49
19	09:10		11:57 (37)	08:02		10:00 (19)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (24)	17:40	43	15:21 (27)	18:47			20:58	22:06	22:50
20	09:08		11:58 (37)	08:00		09:59 (19)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (24)	17:43	41	15:19 (27)	18:49			21:00	22:08	22:50
21	09:07		11:59 (37)	07:57		09:59 (19)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (24)	17:45	32	15:15 (27)	18:51			21:03	22:10	22:50
22	09:05		11:59 (37)	07:54		09:59 (19)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (24)	17:48	25	10:24 (19)	18:54			21:05	22:12	22:50
23	09:03		12:01 (37)	07:52		10:00 (19)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (24)	17:50	24	10:24 (19)	18:56			21:07	22:14	22:50
24	09:02		12:03 (37)	07:49		10:01 (19)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (24)	17:53	22	10:23 (19)	18:58			21:10	22:16	22:51
25	09:00		12:05 (37)	07:46		09:00 (21)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (32)	17:55	27	10:22 (19)	19:01			21:12	22:18	22:50
26	08:58		13:21 (32)	07:43		08:57 (21)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (32)	17:57	30	10:20 (19)	19:03			21:14	22:20	22:50
27	08:56		13:20 (32)	07:41		08:55 (21)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (32)	18:00	28	10:17 (19)	19:05			21:17	22:22	22:50
28	08:54		13:19 (32)	07:38		08:54 (21)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (32)	18:02	22	10:13 (19)	19:07			21:19	22:24	22:50
29	08:52		13:19 (32)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (32)				20:10			21:21	22:25	22:50
30	08:50		13:18 (32)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (32)				20:12			21:24	22:27	22:49
31	08:48		13:18 (32)				07:10				04:41	
	16:53	34	13:52 (32)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		12:48 (32)	09:00		11:36 (37)
	22:49	22:01	20:40	19:13		16:49	83	15:30 (28)	15:51	22	11:58 (37)
2	04:33	05:26	06:35	07:42		07:54		12:48 (32)	09:02		11:36 (37)
	22:48	21:58	20:37	19:10		16:46	76	15:28 (28)	15:50	22	11:58 (37)
3	04:34	05:28	06:37	07:44		07:56		12:48 (32)	09:03		11:36 (37)
	22:47	21:56	20:34	19:07		16:44	71	15:20 (28)	15:49	22	11:58 (37)
4	04:35	05:31	06:40	07:46	09:34 (21)	07:59		12:47 (32)	09:05		11:37 (37)
	22:47	21:54	20:31	19:04	7 09:41 (21)	16:41	66	15:15 (28)	15:48	21	11:58 (37)
5	04:36	05:33	06:42	07:48	09:32 (21)	08:01		12:47 (32)	09:07		11:37 (37)
	22:46	21:51	20:28	19:01	12 09:44 (21)	16:39	62	15:13 (28)	15:47	21	11:58 (37)
6	04:37	05:35	06:44	07:51	09:30 (21)	08:03		12:48 (32)	09:09		11:38 (37)
	22:45	21:49	20:25	18:59	15 09:45 (21)	16:37	57	14:51 (27)	15:46	21	11:59 (37)
7	04:38	05:37	06:46	07:53	09:28 (21)	08:06		12:47 (32)	09:10		11:39 (37)
	22:44	21:47	20:22	18:56	18 09:46 (21)	16:34	55	14:50 (27)	15:45	20	11:59 (37)
8	04:40	05:39	06:48	07:55	09:28 (21)	08:08		12:48 (32)	09:12		11:40 (37)
	22:43	21:44	20:20	18:53	19 09:47 (21)	16:32	50	14:48 (27)	15:45	19	11:59 (37)
9	04:41	05:42	06:51	07:57	09:27 (21)	08:11		12:48 (32)	09:13		11:41 (37)
	22:42	21:42	20:17	18:50	20 09:47 (21)	16:30	42	14:43 (27)	15:44	19	12:00 (37)
10	04:43	05:44	06:53	08:00	09:27 (21)	08:13		12:49 (32)	09:15		11:41 (37)
	22:40	21:39	20:14	18:47	20 09:47 (21)	16:28	35	13:24 (32)	15:43	18	11:59 (37)
11	04:44	05:46	06:55	08:02	09:26 (21)	08:15		12:49 (32)	09:16		11:42 (37)
	22:39	21:37	20:11	18:45	20 09:46 (21)	16:25	34	13:23 (32)	15:43	18	12:00 (37)
12	04:46	05:48	06:57	08:04	09:26 (21)	08:18		12:50 (32)	09:18		11:42 (37)
	22:38	21:34	20:08	18:42	19 09:45 (21)	16:23	33	13:23 (32)	15:43	17	11:59 (37)
13	04:47	05:51	07:00	08:06	09:27 (21)	08:20		12:51 (32)	09:19		11:43 (37)
	22:37	21:31	20:05	18:39	18 09:45 (21)	16:21	32	13:23 (32)	15:42	17	12:00 (37)
14	04:49	05:53	07:02	08:09	09:27 (21)	08:22		12:51 (32)	09:20		11:44 (37)
	22:35	21:29	20:02	18:36	26 10:48 (19)	16:19	31	13:22 (32)	15:42	16	12:00 (37)
15	04:51	05:55	07:04	08:11	09:29 (21)	08:25		12:53 (32)	09:21		11:44 (37)
	22:34	21:26	19:59	18:33	29 10:51 (19)	16:17	28	13:21 (32)	15:42	16	12:00 (37)
16	04:52	05:57	07:06	08:13	09:30 (21)	08:27		12:54 (32)	09:22		11:45 (37)
	22:32	21:24	19:56	18:31	28 10:52 (19)	16:15	27	13:21 (32)	15:42	15	12:00 (37)
17	04:54	05:59	07:08	08:16	10:33 (19)	08:29		11:38 (37)	09:23		11:45 (37)
	22:30	21:21	19:54	18:28	21 10:54 (19)	16:13	32	13:19 (32)	15:42	15	12:00 (37)
18	04:56	06:02	07:10	08:18	10:31 (19)	08:32		11:36 (37)	09:24		11:46 (37)
	22:29	21:18	19:51	18:25	23 10:54 (19)	16:11	35	13:20 (24)	15:42	15	12:01 (37)
19	04:58	06:04	07:13	08:20	10:31 (19)	08:34		11:36 (37)	09:25		11:47 (37)
	22:27	21:16	19:48	18:22	24 10:55 (19)	16:09	36	13:21 (24)	15:42	14	12:01 (37)
20	05:00	06:06	07:15	08:23	10:30 (19)	08:36		11:34 (37)	09:26		11:48 (37)
	22:25	21:13	19:45	18:20	25 10:55 (19)	16:08	40	13:21 (24)	15:42	14	12:02 (37)
21	05:01	06:08	07:17	08:25	10:30 (19)	08:39		11:34 (37)	09:26		11:48 (37)
	22:24	21:10	19:42	18:17	37 15:48 (27)	16:06	40	13:21 (24)	15:43	14	12:02 (37)
22	05:03	06:11	07:19	08:27	10:29 (19)	08:41		11:34 (37)	09:27		11:49 (37)
	22:22	21:08	19:39	18:14	42 15:50 (27)	16:04	43	13:22 (24)	15:43	14	12:03 (37)
23	05:05	06:13	07:22	08:30	10:30 (19)	08:43		11:33 (37)	09:27		11:49 (37)
	22:20	21:05	19:36	18:12	50 15:52 (27)	16:02	44	13:22 (24)	15:44	14	12:03 (37)
24	05:07	06:15	07:24	08:32	10:29 (19)	08:45		11:34 (37)	09:28		11:50 (37)
	22:18	21:02	19:33	18:09	63 15:52 (27)	16:01	44	13:23 (24)	15:44	14	12:04 (37)
25	05:09	06:17	07:26	07:35	09:30 (19)	08:47		11:33 (37)	09:28		11:50 (37)
	22:16	20:59	19:30	17:06	69 14:54 (27)	15:59	44	13:22 (24)	15:45	14	12:04 (37)
26	05:11	06:20	07:28	07:37	09:30 (19)	08:50		11:34 (37)	09:28		11:50 (37)
	22:14	20:56	19:27	17:04	74 14:54 (27)	15:58	44	13:23 (24)	15:46	15	12:05 (37)
27	05:13	06:22	07:30	07:39	09:31 (19)	08:52		11:34 (37)	09:28		11:50 (37)
	22:12	20:54	19:24	17:01	82 15:24 (28)	15:56	44	13:23 (24)	15:47	16	12:06 (37)
28	05:16	06:24	07:33	07:42	09:33 (19)	08:54		11:35 (37)	09:28		11:50 (37)
	22:10	20:51	19:22	16:59	89 15:27 (28)	15:55	37	13:17 (24)	15:48	16	12:06 (37)
29	05:18	06:26	07:35	07:44	09:34 (19)	08:56		11:35 (37)	09:28		11:50 (37)
	22:07	20:48	19:19	16:56	90 15:28 (28)	15:54	29	13:09 (24)	15:49	16	12:06 (37)
30	05:20	06:29	07:37	07:47	09:36 (19)	08:58		11:35 (37)	09:28		11:51 (37)
	22:05	20:45	19:16	16:54	90 15:29 (28)	15:52	23	13:03 (24)	15:50	17	12:08 (37)
31	05:22	06:31		07:49	12:49 (32)				09:28		11:51 (37)
	22:03	20:42		16:51	81 15:30 (28)				15:51	17	12:08 (37)
Potential sun hours	546	478	386	319		236			199		
Total, worst case					1111		1317			529	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		14:11 (37)	07:35		10:14 (21)	07:07		05:44	04:40
	15:53			16:56	18	15:31 (24)	18:05	73	16:49 (27)	20:17		21:26	22:30
2	09:27			08:43		15:15 (24)	07:32		10:15 (21)	07:04		05:41	04:38
	15:54			16:58	17	15:32 (24)	18:07	70	16:50 (27)	20:19		21:28	22:32
3	09:27			08:41		15:14 (24)	07:30		10:16 (21)	07:01		05:39	04:37
	15:55			17:01	19	15:33 (24)	18:09	63	16:48 (27)	20:21		21:30	22:34
4	09:26			08:39		12:33 (19)	07:27		10:16 (21)	06:58		05:36	04:36
	15:57			17:03	32	15:33 (24)	18:12	54	16:47 (27)	20:23		21:33	22:35
5	09:26			08:37		12:30 (19)	07:24		09:25 (16)	06:55		05:34	04:35
	15:58			17:06	37	15:33 (24)	18:14	37	16:44 (27)	20:26		21:35	22:36
6	09:25			08:34		12:29 (19)	07:21		09:21 (16)	06:52		05:31	04:34
	16:00			17:08	40	15:34 (24)	18:16	27	10:42 (21)	20:28		21:37	22:38
7	09:24			08:32		12:27 (19)	07:18		10:19 (21)	06:49		05:29	04:33
	16:02			17:11	43	15:33 (24)	18:19	20	10:39 (21)	20:30		21:40	22:39
8	09:24			08:30		12:26 (19)	07:16		10:21 (21)	06:47		05:26	04:32
	16:03			17:13	46	15:34 (24)	18:21	15	10:36 (21)	20:33		21:42	22:40
9	09:23			08:27		12:25 (19)	07:13		10:24 (21)	06:44		05:24	04:31
	16:05			17:16	46	15:33 (24)	18:24	8	10:32 (21)	20:35		21:44	22:42
10	09:22			08:25		12:24 (19)	07:10			06:41		05:22	04:30
	16:07			17:18	45	15:31 (24)	18:26			20:37		21:46	22:43
11	09:21			08:22		12:24 (19)	07:07			06:38		05:19	04:29
	16:09			17:21	43	15:30 (24)	18:28			20:40		21:49	22:44
12	09:20			08:20		12:23 (19)	07:04			06:35		05:17	04:29
	16:11			17:23	38	15:27 (24)	18:31			20:42		21:51	22:45
13	09:18			08:18		12:22 (19)	07:01			06:32		05:15	04:28
	16:13			17:26	35	12:57 (19)	18:33			20:44		21:53	22:46
14	09:17			08:15		12:23 (19)	06:59			06:30		05:12	04:28
	16:15			17:28	35	12:58 (19)	18:35			20:46		21:55	22:46
15	09:16			08:12		12:22 (19)	06:56			06:27		05:10	04:27
	16:17			17:30	35	12:57 (19)	18:38			20:49		21:57	22:47
16	09:14			08:10		12:22 (19)	06:53			06:24		05:08	04:27
	16:19			17:33	43	16:12 (32)	18:40			20:51		22:00	22:48
17	09:13			08:07		12:22 (19)	06:50			06:21		05:06	04:27
	16:21			17:35	49	16:15 (32)	18:42			20:53		22:02	22:48
18	09:12			08:05		12:23 (19)	06:47			06:18		05:04	04:27
	16:23			17:38	51	16:17 (32)	18:44			20:56		22:04	22:49
19	09:10			08:02		12:23 (19)	06:44			06:16		05:02	04:27
	16:25			17:40	54	16:18 (32)	18:47			20:58		22:06	22:49
20	09:08			08:00		12:23 (19)	06:41			06:13		05:00	04:27
	16:28			17:43	55	16:19 (32)	18:49			21:00		22:08	22:50
21	09:07			07:57		12:23 (19)	06:38			06:10		04:58	04:27
	16:30			17:45	56	16:20 (32)	18:51			21:03		22:10	22:50
22	09:05			07:54		12:24 (19)	06:36			06:07		04:56	04:27
	16:32			17:48	61	16:42 (27)	18:54			21:05		22:12	22:50
23	09:03			07:52		12:26 (19)	06:33			06:05		04:54	04:27
	16:34			17:50	66	16:48 (27)	18:56			21:07		22:14	22:50
24	09:01			07:49		10:20 (21)	06:30			06:02		04:52	04:27
	16:37			17:52	68	16:49 (27)	18:58			21:10		22:16	22:50
25	09:00			07:46		10:16 (21)	06:27			05:59		04:51	04:28
	16:39			17:55	89	16:50 (27)	19:01			21:12		22:18	22:50
26	08:58			07:43		10:15 (21)	06:24			05:57		04:49	04:28
	16:41			17:57	92	16:50 (27)	19:03			21:14		22:20	22:50
27	08:56			07:41		10:15 (21)	06:21			05:54		04:47	04:29
	16:44			18:00	77	16:50 (27)	19:05			21:17		22:22	22:50
28	08:54			07:38		10:15 (21)	06:18			05:51		04:45	04:29
	16:46			18:02	75	16:50 (27)	19:07			21:19		22:24	22:50
29	08:52						07:15			05:49		04:44	04:30
	16:49						20:10			21:21		22:25	22:49
30	08:50		14:16 (37)				07:12			05:46		04:42	04:31
	16:51	3	14:19 (37)				20:12			21:23		22:27	22:49
31	08:48		14:08 (37)				07:10					04:41	
	16:53	21	15:27 (24)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		24			1365			367					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51	11:53 (19)	09:00
	22:48	22:01	20:40	19:13		16:49	46 15:01 (24)	15:51
2	04:33	05:26	06:35	07:41		07:54	11:55 (19)	09:01
	22:48	21:58	20:37	19:10		16:46	45 15:02 (24)	15:50
3	04:34	05:28	06:37	07:44		07:56	11:56 (19)	09:03
	22:47	21:56	20:34	19:07		16:44	45 15:03 (24)	15:49
4	04:35	05:31	06:40	07:46		07:58	11:57 (19)	09:05
	22:46	21:54	20:31	19:04		16:41	43 15:03 (24)	15:48
5	04:36	05:33	06:42	07:48	10:59 (21)	08:01	11:58 (19)	09:07
	22:46	21:51	20:28	19:01	13 11:12 (21)	16:39	41 15:03 (24)	15:47
6	04:37	05:35	06:44	07:50	10:56 (21)	08:03	12:01 (19)	09:09
	22:45	21:49	20:25	18:59	19 11:15 (21)	16:37	36 15:04 (24)	15:46
7	04:38	05:37	06:46	07:53	09:54 (16)	08:06	12:03 (19)	09:10
	22:44	21:47	20:22	18:56	24 11:16 (21)	16:34	31 15:03 (24)	15:45
8	04:40	05:39	06:48	07:55	09:58 (16)	08:08	14:45 (24)	09:12
	22:43	21:44	20:20	18:53	33 17:18 (27)	16:32	18 15:03 (24)	15:45
9	04:41	05:42	06:51	07:57	10:01 (16)	08:10	14:46 (24)	09:13
	22:42	21:42	20:17	18:50	49 17:20 (27)	16:30	17 15:03 (24)	15:44
10	04:43	05:44	06:53	08:00	10:49 (21)	08:13	13:42 (37)	09:15
	22:40	21:39	20:14	18:47	59 17:21 (27)	16:28	20 15:03 (24)	15:43
11	04:44	05:46	06:55	08:02	10:49 (21)	08:15	13:39 (37)	09:16
	22:39	21:37	20:11	18:44	67 17:23 (27)	16:25	20 14:58 (24)	15:43
12	04:46	05:48	06:57	08:04	10:48 (21)	08:18	13:48 (37)	09:17
	22:38	21:34	20:08	18:42	72 17:23 (27)	16:23	3 13:51 (37)	15:43
13	04:47	05:50	06:59	08:06	10:48 (21)	08:20		09:19
	22:36	21:31	20:05	18:39	73 17:23 (27)	16:21		15:42
14	04:49	05:53	07:02	08:09	10:47 (21)	08:22		09:20
	22:35	21:29	20:02	18:36	77 17:23 (27)	16:19		15:42
15	04:50	05:55	07:04	08:11	10:48 (21)	08:25		09:21
	22:34	21:26	19:59	18:33	86 17:23 (27)	16:17		15:42
16	04:52	05:57	07:06	08:13	10:47 (21)	08:27		09:22
	22:32	21:24	19:56	18:31	93 17:22 (27)	16:15		15:42
17	04:54	05:59	07:08	08:16	10:48 (21)	08:29		09:23
	22:30	21:21	19:53	18:28	85 17:22 (27)	16:13		15:42
18	04:56	06:02	07:10	08:18	12:58 (19)	08:32		09:24
	22:29	21:18	19:51	18:25	66 17:20 (27)	16:11		15:42
19	04:58	06:04	07:13	08:20	12:57 (19)	08:34		09:25
	22:27	21:16	19:48	18:22	64 17:17 (27)	16:09		15:42
20	04:59	06:06	07:15	08:23	12:55 (19)	08:36		09:25
	22:25	21:13	19:45	18:20	58 17:12 (27)	16:07		15:42
21	05:01	06:08	07:17	08:25	12:54 (19)	08:39		09:26
	22:23	21:10	19:42	18:17	56 16:51 (32)	16:06		15:43
22	05:03	06:11	07:19	08:27	12:53 (19)	08:41		09:27
	22:22	21:07	19:39	18:14	55 16:49 (32)	16:04		15:43
23	05:05	06:13	07:21	08:30	12:53 (19)	08:43		09:27
	22:20	21:05	19:36	18:12	53 16:48 (32)	16:02		15:44
24	05:07	06:15	07:24	08:32	12:52 (19)	08:45		09:28
	22:18	21:02	19:33	18:09	52 16:46 (32)	16:01		15:44
25	05:09	06:17	07:26	07:34	11:52 (19)	08:47		09:28
	22:16	20:59	19:30	17:06	47 15:44 (32)	15:59		15:45
26	05:11	06:20	07:28	07:37	11:51 (19)	08:49		09:28
	22:14	20:56	19:27	17:04	39 15:39 (32)	15:58		15:46
27	05:13	06:22	07:30	07:39	11:52 (19)	08:52		09:28
	22:12	20:54	19:24	17:01	35 12:27 (19)	15:56		15:47
28	05:15	06:24	07:33	07:42	11:52 (19)	08:54		09:28
	22:10	20:51	19:22	16:59	35 12:27 (19)	15:55		15:48
29	05:18	06:26	07:35	07:44	11:52 (19)	08:56		09:28
	22:07	20:48	19:19	16:56	34 12:26 (19)	15:53		15:49
30	05:20	06:29	07:37	07:46	11:53 (19)	08:58		09:28
	22:05	20:45	19:16	16:54	40 14:58 (24)	15:52		15:50
31	05:22	06:31		07:49	11:53 (19)			09:28
	22:03	20:42		16:51	44 15:00 (24)			15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					1428		365	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (21) | 07:35	07:07	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (16) | 09:00
	15:53		16:56	63	13:43 (19) | 18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	56	15:37 (32) | 15:51
2	09:27		08:43		11:39 (21) | 07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:56 (16) | 09:01
	15:54		16:58	59	13:43 (19) | 18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46	51	15:37 (32) | 15:50
3	09:27		08:41		11:38 (21) | 07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		09:57 (16) | 09:03
	15:55		17:01	51	13:42 (19) | 18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07	16:44	55	15:36 (32) | 15:49
4	09:26		08:39		11:39 (21) | 07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46	07:58		10:02 (16) | 09:05
	15:57		17:03	51	15:59 (32) | 18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41	56	15:35 (32) | 15:48
5	09:26		08:37		11:39 (21) | 07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:04 (16) | 09:07
	15:58		17:06	56	16:02 (32) | 18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39	58	15:34 (32) | 15:47
6	09:25		08:34		10:34 (16) | 07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03		11:10 (21) | 09:09
	16:00		17:08	57	16:05 (32) | 18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	55	15:33 (32) | 15:46
7	09:24		08:32		10:32 (16) | 07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53	08:06		11:09 (21) | 09:10
	16:02		17:11	55	16:05 (32) | 18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56	16:34	49	13:12 (19) | 15:45
8	09:24		08:30		10:27 (16) | 07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55	08:08		11:09 (21) | 09:12
	16:03		17:13	53	16:07 (32) | 18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	50	13:13 (19) | 15:45
9	09:23		08:27		10:26 (16) | 07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:10		11:09 (21) | 09:13
	16:05		17:16	49	16:07 (32) | 18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	60	13:14 (19) | 15:44
10	09:22		08:25		10:15 (16) | 07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		11:10 (21) | 09:15
	16:07		17:18	58	16:07 (32) | 18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:28	61	13:14 (19) | 15:43
11	09:21		08:22		10:16 (16) | 07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		11:10 (21) | 09:16
	16:09		17:21	55	16:08 (32) | 18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44	16:25	63	13:14 (19) | 15:43
12	09:20		08:20		10:17 (16) | 07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		11:10 (21) | 09:17
	16:11		17:23	48	16:08 (32) | 18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	66	13:15 (19) | 15:43
13	09:18		08:17		10:18 (16) | 07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20		11:11 (21) | 09:19
	16:13		17:26	33	16:07 (32) | 18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	65	13:15 (19) | 15:42
14	09:17		12:02 (13) | 08:15		10:21 (16) | 06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09	08:22		11:11 (21) | 09:20
	16:15	8	12:10 (13) | 17:28	28	16:08 (32) | 18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	66	13:15 (19) | 15:42
15	09:16		12:02 (13) | 08:12		15:50 (32) | 06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25		11:13 (21) | 09:21
	16:17	9	12:11 (13) | 17:30	17	16:07 (32) | 18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17	64	13:15 (19) | 15:42
16	09:14		12:02 (13) | 08:10		15:51 (32) | 06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:14 (21) | 09:22
	16:19	11	12:13 (13) | 17:33	14	16:05 (32) | 18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	62	13:15 (19) | 15:42
17	09:13		12:02 (13) | 08:07		15:52 (32) | 06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29		11:15 (21) | 09:23
	16:21	20	13:30 (19) | 17:35	12	16:04 (32) | 18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	61	13:14 (19) | 15:42
18	09:12		11:58 (13) | 08:05		15:56 (32) | 06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:32		11:16 (21) | 09:24
	16:23	30	13:34 (19) | 17:38	6	16:02 (32) | 18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	60	13:14 (19) | 15:42
19	09:10		11:58 (13) | 08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20	08:34		11:19 (21) | 09:25
	16:25	33	13:35 (19) | 17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22	16:09	55	13:14 (19) | 15:42
20	09:08		11:58 (13) | 08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		11:21 (21) | 09:25
	16:27	36	13:37 (19) | 17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	47	13:13 (19) | 15:42
21	09:07		11:58 (13) | 07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		11:33 (13) | 09:26
	16:30	39	13:38 (19) | 17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	39	13:13 (19) | 15:43
22	09:05		11:46 (21) | 07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		11:34 (13) | 09:27
	16:32	47	13:38 (19) | 17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	36	13:13 (19) | 15:43
23	09:03		11:44 (21) | 07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		11:34 (13) | 09:27
	16:34	55	13:39 (19) | 17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	33	13:12 (19) | 15:44
24	09:01		11:42 (21) | 07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (32) | 08:45		11:35 (13) | 09:28
	16:37	60	13:40 (19) | 17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 | 16:32 (32) | 16:01	30	13:11 (19) | 15:44
25	09:00		11:42 (21) | 07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (32) | 08:47		11:41 (13) | 09:28
	16:39	61	13:41 (19) | 17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 | 15:34 (32) | 15:59	20	13:09 (19) | 15:45
26	08:58		11:41 (21) | 07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (32) | 08:49		11:41 (13) | 09:28
	16:41	62	13:42 (19) | 17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 | 15:35 (32) | 15:58	11	11:52 (13) | 15:46
27	08:56		11:40 (21) | 07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (32) | 08:52		11:41 (13) | 09:28
	16:44	64	13:42 (19) | 18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 | 15:36 (32) | 15:56	10	11:51 (13) | 15:47
28	08:54		11:40 (21) | 07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (16) | 08:54		11:42 (13) | 09:28
	16:46	65	13:43 (19) | 18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 | 15:37 (32) | 15:55	8	11:50 (13) | 15:48
29	08:52		11:39 (21) |		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (16) | 08:56		09:28
	16:49	65	13:43 (19) |		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 | 15:37 (32) | 15:53		15:49
30	08:50		11:39 (21) |		07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (16) | 08:58		09:28
	16:51	65	13:43 (19) |		20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 | 15:37 (32) | 15:52		15:50
31	08:48		11:39 (21) |		07:09		04:41		05:22	06:31		07:49	09:46 (16) |		09:28
	16:53	63	13:43 (19) |		20:14		22:29		22:03	20:42		16:51	55 | 15:38 (32) |		15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		793		765									221		1347	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October			November			December
1	09:28			08:46		10:50 (16)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39			07:51		10:27 (16)	09:00
	15:53			16:56	74	14:26 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13			16:49	30	13:49 (19)	15:51
2	09:27			08:43		10:51 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:54		10:25 (16)	09:01
	15:54			16:58	73	14:27 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	45	13:52 (19)	15:50
3	09:27			08:41		10:50 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44			07:56		10:24 (16)	09:03
	15:55			17:01	74	14:27 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07			16:44	54	13:54 (19)	15:49
4	09:26			08:39		10:51 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46			07:58		10:22 (16)	09:05
	15:57			17:03	71	14:27 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	61	13:55 (19)	15:48
5	09:26			08:37		10:51 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48			08:01		10:22 (16)	09:07
	15:58			17:06	68	14:26 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01			16:39	65	13:56 (19)	15:47
6	09:25			08:34		10:53 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50			08:03		10:22 (16)	09:09
	16:00			17:08	64	14:26 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59			16:37	69	13:57 (19)	15:46
7	09:24			08:32		10:53 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53			08:06		10:21 (16)	09:10
	16:02			17:11	59	14:25 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56			16:34	72	13:57 (19)	15:45
8	09:24			08:30		10:55 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55			08:08		10:21 (16)	09:12
	16:03			17:13	52	14:24 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53			16:32	73	13:57 (19)	15:45
9	09:23			08:27		10:56 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57			08:10		10:21 (16)	09:13
	16:05			17:16	43	14:22 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50			16:30	75	13:58 (19)	15:44
10	09:22			08:25		10:58 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00			08:13		10:22 (16)	09:15
	16:07			17:18	26	14:18 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:28	72	13:58 (19)	15:43
11	09:21			08:22		12:44 (21)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		10:21 (16)	09:16
	16:09			17:21	5	12:49 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44			16:25	75	13:58 (19)	15:43
12	09:20			08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04			08:18		10:22 (16)	09:17
	16:11			17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42			16:23	72	13:58 (19)	15:42
13	09:18		12:39 (13)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		10:23 (16)	09:19
	16:13	5	12:44 (13)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39			16:21	72	13:58 (19)	15:42
14	09:17		12:39 (13)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09			08:22		10:23 (16)	09:20
	16:15	7	12:46 (13)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	68	13:57 (19)	15:42
15	09:16		12:39 (13)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		10:24 (16)	09:21
	16:17	15	12:54 (13)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33			16:17	63	13:57 (19)	15:42
16	09:14		12:38 (13)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		10:30 (16)	09:22
	16:19	17	12:55 (13)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31			16:15	50	13:57 (19)	15:42
17	09:13		12:38 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		12:05 (21)	09:23
	16:21	18	12:56 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	45	13:55 (19)	15:42
18	09:12		12:37 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18			08:32		12:07 (21)	09:24
	16:23	19	12:56 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25			16:11	42	13:55 (19)	15:42
19	09:10		12:38 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20			08:34		12:08 (21)	09:25
	16:25	20	12:58 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22			16:09	39	13:54 (19)	15:42
20	09:08		12:37 (21)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		12:09 (21)	09:25
	16:27	22	12:59 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20			16:07	33	13:51 (19)	15:42
21	09:07		12:35 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25			08:39		12:11 (21)	09:26
	16:30	23	12:58 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17			16:06	23	12:34 (13)	15:43
22	09:05		12:34 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27			08:41		12:13 (21)	09:27
	16:32	33	14:16 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14			16:04	22	12:35 (13)	15:43
23	09:03		12:33 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30			08:43		12:14 (13)	09:27
	16:34	39	14:19 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12			16:02	20	12:34 (13)	15:44
24	09:01		12:33 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32			08:45		12:15 (13)	09:28
	16:37	42	14:21 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09			16:01	20	12:35 (13)	15:44
25	09:00		12:32 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34			08:47		12:16 (13)	09:28
	16:39	45	14:22 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06			15:59	18	12:34 (13)	15:45
26	08:58		10:57 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37			08:49		12:17 (13)	09:28
	16:41	50	14:24 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04			15:58	17	12:34 (13)	15:46
27	08:56		10:51 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39			08:52		12:18 (13)	09:28
	16:44	64	14:24 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01			15:56	15	12:33 (13)	15:47
28	08:54		10:51 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42			08:54		12:19 (13)	09:28
	16:46	69	14:25 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59			15:55	7	12:26 (13)	15:48
29	08:52		10:51 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44			08:56		12:20 (13)	09:28
	16:49	70	14:26 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56			15:53	5	12:25 (13)	15:49
30	08:50		10:50 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46			08:58			09:28
	16:51	72	14:26 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54			15:52			15:50
31	08:48		10:51 (16)				07:09		04:41		05:22	06:31		07:49	12:13 (21)					09:28
	16:53	74	14:27 (19)				20:14		22:29		22:03	20:42		16:51	7 12:20 (21)					15:51
Potential sun hours	221			260			365	432	521	547	546	478	386	319			236			199
Total, worst case		704			609										7			1322		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October			November			December
1	09:28			08:46		10:45 (16)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39			07:51		10:19 (16)	09:00
	15:53			16:56	73	14:22 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13			16:49	43	13:46 (19)	15:51
2	09:27			08:43		10:46 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:54		10:18 (16)	09:01
	15:54			16:58	74	14:23 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	53	13:48 (19)	15:50
3	09:27			08:41		10:45 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44			07:56		10:18 (16)	09:03
	15:55			17:01	74	14:22 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07			16:44	59	13:50 (19)	15:49
4	09:26			08:39		10:46 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46			07:58		10:16 (16)	09:05
	15:57			17:03	73	14:23 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	65	13:51 (19)	15:48
5	09:26			08:37		10:46 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48			08:01		10:16 (16)	09:07
	15:58			17:06	71	14:22 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01			16:39	70	13:52 (19)	15:47
6	09:25			08:34		10:47 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50			08:03		10:16 (16)	09:09
	16:00			17:08	68	14:22 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59			16:37	73	13:53 (19)	15:46
7	09:24			08:32		10:47 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53			08:06		10:16 (16)	09:10
	16:02			17:11	65	14:21 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56			16:34	73	13:52 (19)	15:45
8	09:24			08:30		10:48 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55			08:08		10:16 (16)	09:12
	16:03			17:13	58	14:20 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53			16:32	73	13:53 (19)	15:45
9	09:23			08:27		10:49 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57			08:10		10:16 (16)	09:13
	16:05			17:16	50	14:18 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50			16:30	75	13:53 (19)	15:44
10	09:22			08:25		10:50 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00			08:13		10:17 (16)	09:15
	16:07			17:18	40	14:16 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:28	74	13:54 (19)	15:43
11	09:21			08:22		10:53 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		10:17 (16)	09:16
	16:09			17:21	22	12:47 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44			16:25	69	13:53 (19)	15:43
12	09:20			08:20		12:38 (21)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04			08:18		10:18 (16)	09:17
	16:11			17:23	4	12:42 (21)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42			16:23	54	13:53 (19)	15:42
13	09:18			08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		10:20 (16)	09:19
	16:13			17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39			16:21	53	13:53 (19)	15:42
14	09:17			08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09			08:22		11:57 (21)	09:20
	16:15			17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	51	13:52 (19)	15:42
15	09:16			08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:58 (21)	09:21
	16:17			17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33			16:17	50	13:52 (19)	15:42
16	09:14			08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:59 (21)	09:22
	16:19			17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31			16:15	49	13:52 (19)	15:42
17	09:13		12:33 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		12:00 (21)	09:23
	16:21	5	12:50 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	45	13:50 (19)	15:42
18	09:12		12:33 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18			08:32		12:01 (21)	09:24
	16:23	18	12:51 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25			16:11	43	13:50 (19)	15:42
19	09:10		12:34 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20			08:34		12:03 (21)	09:25
	16:25	19	12:53 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22			16:09	38	13:49 (19)	15:42
20	09:08		12:34 (13)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		12:04 (21)	09:25
	16:27	20	12:54 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20			16:07	27	13:41 (19)	15:42
21	09:07		12:31 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25			08:39		12:07 (21)	09:26
	16:30	22	12:53 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17			16:06	22	12:29 (13)	15:43
22	09:05		12:29 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27			08:41		12:10 (13)	09:27
	16:32	27	14:06 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14			16:04	20	12:30 (13)	15:43
23	09:03		12:28 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30			08:43		12:10 (13)	09:27
	16:34	38	14:14 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12			16:02	19	12:29 (13)	15:44
24	09:01		12:27 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32			08:45		12:11 (13)	09:28
	16:37	43	14:16 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09			16:01	18	12:29 (13)	15:44
25	09:00		12:27 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34			08:47		12:11 (13)	09:28
	16:39	45	14:17 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06			15:59	5	12:28 (13)	15:45
26	08:58		12:26 (21)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37			08:49			09:28
	16:41	49	14:19 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04			15:58			15:46
27	08:56		12:25 (21)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39			08:52			09:28
	16:44	50	14:19 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01			15:56			15:47
28	08:54		12:25 (21)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42			08:54			09:28
	16:46	51	14:20 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59			15:55			15:48
29	08:52		10:48 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44			08:56			09:28
	16:49	53	14:21 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56			15:53			15:49
30	08:50		10:46 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		12:06 (21)	08:58			09:28
	16:51	55	14:21 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7	12:13 (21)	15:52			15:50
31	08:48		10:46 (16)				07:09		04:41		05:22	06:31		07:49		10:22 (16)				09:28
	16:53	69	14:22 (19)				20:14		22:29		22:03	20:42		16:51	25	12:17 (21)				15:51
Potential sun hours	221			260			365	432	521	547	546	478	386	319			236			199
Total, worst case		564			672										32			1221		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:03 (30)	08:45		14:59 (21)	07:35	07:07	05:44	04:39
	15:52	20	12:23 (30)	16:56	18	15:17 (21)	18:04	20:16	21:26	22:30
2	09:27		12:03 (30)	08:43		14:59 (21)	07:32	07:04	05:41	04:38
	15:54	20	12:23 (30)	16:58	19	15:18 (21)	18:07	20:19	21:28	22:32
3	09:27		12:03 (30)	08:41		14:58 (21)	07:30	07:01	05:38	04:37
	15:55	20	12:23 (30)	17:01	19	15:17 (21)	18:09	20:21	21:30	22:33
4	09:26		12:03 (30)	08:39		14:59 (21)	07:27	06:58	05:36	04:36
	15:57	21	12:24 (30)	17:03	19	15:18 (21)	18:12	20:23	21:33	22:35
5	09:26		12:04 (30)	08:37		14:59 (21)	07:24	06:55	05:33	04:34
	15:58	26	13:33 (16)	17:06	19	15:18 (21)	18:14	20:26	21:35	22:36
6	09:25		12:04 (30)	08:34		15:00 (21)	07:21	06:52	05:31	04:33
	16:00	29	13:35 (16)	17:08	18	15:18 (21)	18:16	20:28	21:37	22:38
7	09:24		12:05 (30)	08:32		15:00 (21)	07:18	06:49	05:29	04:32
	16:01	31	13:37 (16)	17:11	17	15:17 (21)	18:19	20:30	21:39	22:39
8	09:23		12:06 (30)	08:30		15:00 (21)	07:16	06:46	05:26	04:31
	16:03	33	13:39 (16)	17:13	16	15:16 (21)	18:21	20:33	21:42	22:40
9	09:23		12:06 (30)	08:27		15:02 (21)	07:13	06:44	05:24	04:31
	16:05	33	13:39 (16)	17:15	14	15:16 (21)	18:23	20:35	21:44	22:42
10	09:22		12:07 (30)	08:25		15:03 (21)	07:10	06:41	05:21	04:30
	16:07	35	13:41 (16)	17:18	11	15:14 (21)	18:26	20:37	21:46	22:43
11	09:21		12:07 (30)	08:22		15:07 (21)	07:07	06:38	05:19	04:29
	16:09	35	13:41 (16)	17:20	5	15:12 (21)	18:28	20:39	21:49	22:44
12	09:19		12:08 (30)	08:20			07:04	06:35	05:17	04:29
	16:11	35	13:42 (16)	17:23			18:30	20:42	21:51	22:45
13	09:18		12:09 (30)	08:17			07:01	06:32	05:15	04:28
	16:12	35	13:43 (16)	17:25			18:33	20:44	21:53	22:46
14	09:17		12:10 (30)	08:15			06:58	06:29	05:12	04:28
	16:14	35	13:44 (16)	17:28			18:35	20:46	21:55	22:46
15	09:16		12:11 (30)	08:12			06:56	06:27	05:10	04:27
	16:17	34	13:45 (16)	17:30			18:37	20:49	21:57	22:47
16	09:14		12:12 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	32	13:45 (16)	17:33			18:40	20:51	22:00	22:48
17	09:13		12:14 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	29	13:45 (16)	17:35			18:42	20:53	22:02	22:48
18	09:11		12:16 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	26	13:46 (16)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:25 (16)	08:02			06:44	06:16	05:02	04:26
	16:25	21	13:46 (16)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:25 (16)	07:59			06:41	06:13	05:00	04:26
	16:27	22	13:47 (16)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:26 (16)	07:57			06:38	06:10	04:58	04:26
	16:30	21	13:47 (16)	17:45			18:51	21:03	22:10	22:50
22	09:05		13:26 (16)	07:54			06:35	06:07	04:56	04:27
	16:32	21	13:47 (16)	17:48			18:54	21:05	22:12	22:50
23	09:03		13:27 (16)	07:51			06:33	06:05	04:54	04:27
	16:34	20	13:47 (16)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:28 (16)	07:49			06:30	06:02	04:52	04:27
	16:37	19	13:47 (16)	17:52			18:58	21:09	22:16	22:50
25	09:00		13:29 (16)	07:46			06:27	05:59	04:50	04:28
	16:39	18	13:47 (16)	17:55			19:00	21:12	22:18	22:50
26	08:58		13:30 (16)	07:43			06:24	05:57	04:49	04:28
	16:41	17	13:47 (16)	17:57			19:03	21:14	22:20	22:50
27	08:56		13:30 (16)	07:41			06:21	05:54	04:47	04:29
	16:44	20	15:09 (21)	18:00			19:05	21:16	22:22	22:50
28	08:54		13:32 (16)	07:38			06:18	05:51	04:45	04:29
	16:46	23	15:12 (21)	18:02			19:07	21:19	22:23	22:50
29	08:52		13:35 (16)				07:15	05:49	04:44	04:30
	16:48	21	15:14 (21)				20:10	21:21	22:25	22:49
30	08:50		15:00 (21)				07:12	05:46	04:42	04:31
	16:51	15	15:15 (21)				20:12	21:23	22:27	22:49
31	08:48		15:00 (21)				07:09		04:41	
	16:53	16	15:16 (21)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		783			175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (21)	08:59		11:49 (30)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (21)	15:51	35	13:23 (16)
2	04:33	05:26	06:35	07:41			07:54		14:31 (21)	09:01		11:50 (30)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (21)	15:50	35	13:24 (16)
3	04:34	05:28	06:37	07:44			07:56		14:31 (21)	09:03		11:50 (30)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (21)	15:49	33	13:23 (16)
4	04:35	05:30	06:39	07:46			07:58		14:29 (21)	09:05		11:50 (30)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (21)	15:48	33	13:23 (16)
5	04:36	05:33	06:42	07:48			08:01		14:29 (21)	09:07		11:50 (30)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (21)	15:47	31	13:22 (16)
6	04:37	05:35	06:44	07:50			08:03		14:29 (21)	09:08		11:50 (30)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (21)	15:46	30	13:22 (16)
7	04:38	05:37	06:46	07:53			08:06		14:29 (21)	09:10		11:51 (30)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (21)	15:45	27	13:21 (16)
8	04:40	05:39	06:48	07:55			08:08		14:29 (21)	09:12		11:51 (30)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (21)	15:44	21	12:12 (30)
9	04:41	05:41	06:51	07:57			08:10		14:30 (21)	09:13		11:51 (30)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (21)	15:44	21	12:12 (30)
10	04:42	05:44	06:53	07:59			08:13		14:29 (21)	09:15		11:52 (30)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (21)	15:43	20	12:12 (30)
11	04:44	05:46	06:55	08:02			08:15		14:30 (21)	09:16		11:53 (30)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (21)	15:43	20	12:13 (30)
12	04:45	05:48	06:57	08:04			08:18		14:32 (21)	09:17		11:53 (30)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (21)	15:42	20	12:13 (30)
13	04:47	05:50	06:59	08:06			08:20		13:07 (16)	09:19		11:54 (30)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (21)	15:42	20	12:14 (30)
14	04:49	05:53	07:02	08:09			08:22		13:04 (16)	09:20		11:54 (30)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (21)	15:42	20	12:14 (30)
15	04:50	05:55	07:04	08:11			08:25		13:03 (16)	09:21		11:54 (30)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (21)	15:42	20	12:14 (30)
16	04:52	05:57	07:06	08:13			08:27		13:03 (16)	09:22		11:55 (30)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (16)	15:42	20	12:15 (30)
17	04:54	05:59	07:08	08:16			08:29		13:02 (16)	09:23		11:55 (30)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (16)	15:42	20	12:15 (30)
18	04:56	06:02	07:10	08:18			08:32		13:02 (16)	09:24		11:56 (30)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (16)	15:42	19	12:15 (30)
19	04:57	06:04	07:13	08:20			08:34		13:02 (16)	09:25		11:56 (30)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (16)	15:42	20	12:16 (30)
20	04:59	06:06	07:15	08:23			08:36		13:01 (16)	09:25		11:57 (30)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (16)	15:42	20	12:17 (30)
21	05:01	06:08	07:17	08:25			08:38		13:02 (16)	09:26		11:57 (30)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (16)	15:43	20	12:17 (30)
22	05:03	06:10	07:19	08:27			08:41		13:02 (16)	09:27		11:58 (30)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (16)	15:43	20	12:18 (30)
23	05:05	06:13	07:21	08:30			08:43		13:02 (16)	09:27		11:58 (30)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (16)	15:44	20	12:18 (30)
24	05:07	06:15	07:24	08:32			08:45		11:55 (30)	09:27		11:58 (30)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (16)	15:44	20	12:18 (30)
25	05:09	06:17	07:26	07:34			08:47		11:52 (30)	09:28		11:59 (30)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (16)	15:45	20	12:19 (30)
26	05:11	06:19	07:28	07:37			08:49		11:51 (30)	09:28		12:00 (30)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (16)	15:46	20	12:20 (30)
27	05:13	06:22	07:30	07:39			08:51		11:50 (30)	09:28		12:00 (30)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (16)	15:47	20	12:20 (30)
28	05:15	06:24	07:32	07:42			08:54		11:49 (30)	09:28		12:00 (30)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (16)	15:48	20	12:20 (30)
29	05:17	06:26	07:35	07:44			08:56		11:50 (30)	09:28		12:01 (30)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (16)	15:49	20	12:21 (30)
30	05:20	06:28	07:37	07:46			08:58		11:49 (30)	09:28		12:01 (30)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (16)	15:50	21	12:22 (30)
31	05:22	06:31		07:49		14:35 (21)				09:28		12:01 (30)
	22:03	20:42		16:51	6	14:41 (21)				15:51	21	12:22 (30)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November			December		
1	09:28		12:35 (30)	08:45		14:09 (16)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51			08:59		12:23 (30)
	15:52	20	12:55 (30)	16:56	5	14:14 (16)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	18	12:41 (30)
2	09:27		12:36 (30)	08:43			07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:23 (30)
	15:54	21	12:57 (30)	16:58			18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	19	12:42 (30)
3	09:27		12:36 (30)	08:41			07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:23 (30)
	15:55	21	12:57 (30)	17:01			18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	12:43 (30)
4	09:26		12:37 (30)	08:39			07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:23 (30)
	15:57	20	12:57 (30)	17:03			18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	12:43 (30)
5	09:26		12:37 (30)	08:37			07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:24 (30)
	15:58	20	12:57 (30)	17:06			18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	20	12:44 (30)
6	09:25		12:38 (30)	08:34			07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:08		12:24 (30)
	16:00	20	12:58 (30)	17:08			18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	20	12:44 (30)
7	09:24		12:38 (30)	08:32			07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:24 (30)
	16:01	20	12:58 (30)	17:11			18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34			15:45	21	12:45 (30)
8	09:23		12:39 (30)	08:30			07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:25 (30)
	16:03	20	12:59 (30)	17:13			18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	20	12:45 (30)
9	09:23		12:39 (30)	08:27			07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10			09:13		12:24 (30)
	16:05	19	12:58 (30)	17:15			18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30			15:44	21	12:45 (30)
10	09:22		12:40 (30)	08:25			07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13		13:40 (16)	09:15		12:25 (30)
	16:07	19	12:59 (30)	17:18			18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27	5	13:45 (16)	15:43	21	12:46 (30)
11	09:21		12:40 (30)	08:22			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		13:37 (16)	09:16		12:26 (30)
	16:09	19	12:59 (30)	17:20			18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25	11	13:48 (16)	15:43	21	12:47 (30)
12	09:19		12:42 (30)	08:20			07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18		13:36 (16)	09:17		12:26 (30)
	16:10	24	14:10 (16)	17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	14	13:50 (16)	15:42	20	12:46 (30)
13	09:18		12:42 (30)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20		13:35 (16)	09:19		12:27 (30)
	16:12	27	14:11 (16)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	17	13:52 (16)	15:42	20	12:47 (30)
14	09:17		12:44 (30)	08:15			06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22		13:34 (16)	09:20		12:27 (30)
	16:14	27	14:13 (16)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	18	13:52 (16)	15:42	21	12:48 (30)
15	09:16		12:45 (30)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25		13:34 (16)	09:21		12:27 (30)
	16:17	27	14:14 (16)	17:30			18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17	19	13:53 (16)	15:42	21	12:48 (30)
16	09:14		12:46 (30)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		13:34 (16)	09:22		12:28 (30)
	16:19	27	14:15 (16)	17:33			18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15	20	13:54 (16)	15:42	20	12:48 (30)
17	09:13		12:48 (30)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29		13:33 (16)	09:23		12:28 (30)
	16:21	25	14:16 (16)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	20	13:53 (16)	15:42	20	12:48 (30)
18	09:11		13:59 (16)	08:05			06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32		13:34 (16)	09:24		12:29 (30)
	16:23	18	14:17 (16)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11	20	13:54 (16)	15:42	20	12:49 (30)
19	09:10		13:59 (16)	08:02			06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34		13:34 (16)	09:25		12:30 (30)
	16:25	19	14:18 (16)	17:40			18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	21	13:55 (16)	15:42	20	12:50 (30)
20	09:08		13:59 (16)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		13:34 (16)	09:25		12:30 (30)
	16:27	19	14:18 (16)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	20	13:54 (16)	15:42	20	12:50 (30)
21	09:07		13:59 (16)	07:57			06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		13:35 (16)	09:26		12:30 (30)
	16:30	20	14:19 (16)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	20	13:55 (16)	15:43	20	12:50 (30)
22	09:05		13:59 (16)	07:54			06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41		13:35 (16)	09:27		12:31 (30)
	16:32	20	14:19 (16)	17:47			18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	19	13:54 (16)	15:43	20	12:51 (30)
23	09:03		13:59 (16)	07:51			06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		13:36 (16)	09:27		12:31 (30)
	16:34	21	14:20 (16)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02	19	13:55 (16)	15:44	20	12:51 (30)
24	09:01		14:00 (16)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		13:37 (16)	09:27		12:31 (30)
	16:36	20	14:20 (16)	17:52			18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	13:55 (16)	15:44	21	12:52 (30)
25	09:00		14:00 (16)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:26 (30)	09:28		12:33 (30)
	16:39	21	14:21 (16)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	25	13:54 (16)	15:45	20	12:53 (30)
26	08:58		14:01 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:25 (30)	09:28		12:33 (30)
	16:41	20	14:21 (16)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	26	13:54 (16)	15:46	20	12:53 (30)
27	08:56		14:01 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51		12:24 (30)	09:28		12:34 (30)
	16:44	19	14:20 (16)	18:00			19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	28	13:54 (16)	15:47	20	12:54 (30)
28	08:54		14:02 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:23 (30)	09:28		12:33 (30)
	16:46	18	14:20 (16)	18:02			19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55	28	13:53 (16)	15:47	21	12:54 (30)
29	08:52		14:04 (16)				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:23 (30)	09:28		12:34 (30)
	16:48	16	14:20 (16)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	27	13:52 (16)	15:49	20	12:54 (30)
30	08:50		14:04 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:23 (30)	09:28		12:35 (30)
	16:51	14	14:18 (16)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	24	13:51 (16)	15:50	20	12:55 (30)
31	08:48		14:07 (16)				07:09		04:41		05:22	06:31		07:49				09:28		12:35 (30)
	16:53	10	14:17 (16)				20:14		22:29		22:03	20:42		16:51				15:51	20	12:55 (30)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		631			5											419			625	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		13:54 (30)	08:45		15:12 (16)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (30)	16:56	14	15:26 (16)	18:04	20:16	21:26	22:30
2	09:27		13:54 (30)	08:43		15:12 (16)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (30)	16:58	16	15:28 (16)	18:07	20:19	21:28	22:32
3	09:27		13:54 (30)	08:41		15:11 (16)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (30)	17:01	17	15:28 (16)	18:09	20:21	21:30	22:33
4	09:26		13:54 (30)	08:39		15:11 (16)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (30)	17:03	18	15:29 (16)	18:12	20:23	21:33	22:35
5	09:26		13:53 (30)	08:37		15:11 (16)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (30)	17:06	18	15:29 (16)	18:14	20:26	21:35	22:36
6	09:25		13:53 (30)	08:34		15:11 (16)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (30)	17:08	19	15:30 (16)	18:16	20:28	21:37	22:38
7	09:24		13:54 (30)	08:32		15:11 (16)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (30)	17:10	19	15:30 (16)	18:19	20:30	21:39	22:39
8	09:23		13:54 (30)	08:30		15:11 (16)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (30)	17:13	18	15:29 (16)	18:21	20:32	21:42	22:40
9	09:23		13:53 (30)	08:27		15:12 (16)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (30)	17:15	18	15:30 (16)	18:23	20:35	21:44	22:41
10	09:22		13:53 (30)	08:25		15:12 (16)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (30)	17:18	17	15:29 (16)	18:26	20:37	21:46	22:43
11	09:20		13:53 (30)	08:22		15:13 (16)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (30)	17:20	14	15:27 (16)	18:28	20:39	21:48	22:44
12	09:19		13:54 (30)	08:20		15:16 (16)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (30)	17:23	11	15:27 (16)	18:30	20:42	21:51	22:45
13	09:18		13:53 (30)	08:17		15:18 (16)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (30)	17:25	5	15:23 (16)	18:33	20:44	21:53	22:45
14	09:17		13:54 (30)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (30)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (30)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (30)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (30)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (30)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (30)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (30)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (30)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (30)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (30)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (30)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (30)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (30)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (30)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (30)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (30)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (30)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (30)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (30)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (30)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (30)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (30)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (30)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (30)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (16)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (16)				20:12	21:23	22:27	22:49
31	08:48		15:14 (16)				07:09		04:41	
	16:53	11	15:25 (16)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		14:42 (16)	08:59		13:35 (30)
	22:48		22:01		20:39		19:13			16:48	16	14:58 (16)	15:51	19	13:54 (30)
2	04:33		05:26		06:35		07:41			07:53		14:41 (16)	09:01		13:37 (30)
	22:48		21:58		20:37		19:10			16:46	18	14:59 (16)	15:50	18	13:55 (30)
3	04:34		05:28		06:37		07:44			07:56		14:40 (16)	09:03		13:37 (30)
	22:47		21:56		20:34		19:07			16:44	19	14:59 (16)	15:49	18	13:55 (30)
4	04:35		05:30		06:39		07:46			07:58		14:40 (16)	09:05		13:38 (30)
	22:46		21:54		20:31		19:04			16:41	20	15:00 (16)	15:48	17	13:55 (30)
5	04:36		05:32		06:42		07:48			08:01		14:41 (16)	09:07		13:39 (30)
	22:45		21:51		20:28		19:01			16:39	19	15:00 (16)	15:47	16	13:55 (30)
6	04:37		05:35		06:44		07:50			08:03		14:41 (16)	09:08		13:40 (30)
	22:45		21:49		20:25		18:58			16:36	19	15:00 (16)	15:46	15	13:55 (30)
7	04:38		05:37		06:46		07:53			08:06		14:41 (16)	09:10		13:41 (30)
	22:44		21:46		20:22		18:56			16:34	18	14:59 (16)	15:45	14	13:55 (30)
8	04:40		05:39		06:48		07:55			08:08		14:42 (16)	09:12		13:42 (30)
	22:43		21:44		20:19		18:53			16:32	17	14:59 (16)	15:44	13	13:55 (30)
9	04:41		05:41		06:50		07:57			08:10		14:43 (16)	09:13		13:42 (30)
	22:41		21:41		20:16		18:50			16:30	16	14:59 (16)	15:44	12	13:54 (30)
10	04:42		05:44		06:53		07:59			08:13		14:43 (16)	09:15		13:43 (30)
	22:40		21:39		20:14		18:47			16:27	14	14:57 (16)	15:43	11	13:54 (30)
11	04:44		05:46		06:55		08:02			08:15		14:45 (16)	09:16		13:45 (30)
	22:39		21:36		20:11		18:44			16:25	11	14:56 (16)	15:43	9	13:54 (30)
12	04:45		05:48		06:57		08:04			08:18		14:47 (16)	09:17		13:46 (30)
	22:38		21:34		20:08		18:41			16:23	7	14:54 (16)	15:42	7	13:53 (30)
13	04:47		05:50		06:59		08:06			08:20			09:19		13:48 (30)
	22:36		21:31		20:05		18:39			16:21			15:42	5	13:53 (30)
14	04:49		05:53		07:01		08:09			08:22			09:20		13:49 (30)
	22:35		21:29		20:02		18:36			16:19			15:42	3	13:52 (30)
15	04:50		05:55		07:04		08:11			08:25		13:37 (30)	09:21		
	22:33		21:26		19:59		18:33			16:17	7	13:44 (30)	15:42		
16	04:52		05:57		07:06		08:13			08:27		13:36 (30)	09:22		
	22:32		21:23		19:56		18:30			16:15	11	13:47 (30)	15:42		
17	04:54		05:59		07:08		08:16			08:29		13:34 (30)	09:23		
	22:30		21:21		19:53		18:28			16:13	14	13:48 (30)	15:42		
18	04:56		06:01		07:10		08:18			08:32		13:33 (30)	09:24		
	22:29		21:18		19:50		18:25			16:11	17	13:50 (30)	15:42		
19	04:57		06:04		07:12		08:20			08:34		13:33 (30)	09:25		
	22:27		21:15		19:47		18:22			16:09	18	13:51 (30)	15:42		
20	04:59		06:06		07:15		08:23			08:36		13:32 (30)	09:25		
	22:25		21:13		19:45		18:19			16:07	19	13:51 (30)	15:42		
21	05:01		06:08		07:17		08:25			08:38		13:32 (30)	09:26		
	22:23		21:10		19:42		18:17			16:06	20	13:52 (30)	15:43		
22	05:03		06:10		07:19		08:27			08:41		13:32 (30)	09:27		
	22:21		21:07		19:39		18:14			16:04	20	13:52 (30)	15:43		
23	05:05		06:13		07:21		08:30			08:43		13:32 (30)	09:27		
	22:20		21:05		19:36		18:11			16:02	21	13:53 (30)	15:44		
24	05:07		06:15		07:23		08:32			08:45		13:33 (30)	09:27		
	22:18		21:02		19:33		18:09			16:00	21	13:54 (30)	15:44		
25	05:09		06:17		07:26		07:34			08:47		13:33 (30)	09:28		
	22:16		20:59		19:30		17:06			15:59	21	13:54 (30)	15:45		
26	05:11		06:19		07:28		07:37			08:49		13:33 (30)	09:28		
	22:14		20:56		19:27		17:04			15:57	21	13:54 (30)	15:46		
27	05:13		06:22		07:30		07:39			08:51		13:33 (30)	09:28		
	22:11		20:53		19:24		17:01			15:56	21	13:54 (30)	15:47		
28	05:15		06:24		07:32		07:41			08:53		13:33 (30)	09:28		
	22:09		20:51		19:21		16:58			15:55	21	13:54 (30)	15:47		
29	05:17		06:26		07:35		07:44		14:47 (16)	08:55		13:35 (30)	09:28		
	22:07		20:48		19:18		16:56	7	14:54 (16)	15:53	20	13:55 (30)	15:48		
30	05:19		06:28		07:37		07:46		14:45 (16)	08:57		13:35 (30)	09:28		13:56 (30)
	22:05		20:45		19:16		16:53	11	14:56 (16)	15:52	20	13:55 (30)	15:50	4	14:00 (30)
31	05:22		06:31				07:49		14:42 (16)				09:28		13:55 (30)
	22:03		20:42				16:51	15	14:57 (16)				15:51	6	14:01 (30)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								33			486			187	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:45		10:57 (41)	07:35		16:28 (21)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (30)	18:04	11	16:39 (21)	20:16	21:26	22:30
2	09:27			08:43		10:59 (41)	07:32		16:27 (21)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (30)	18:07	13	16:40 (21)	20:19	21:28	22:32
3	09:27			08:41		11:02 (41)	07:30		16:27 (21)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (30)	18:09	14	16:41 (21)	20:21	21:30	22:33
4	09:26			08:39		13:29 (30)	07:27		16:27 (21)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (30)	18:12	17	16:44 (21)	20:23	21:33	22:35
5	09:26			08:37		13:30 (30)	07:24		16:27 (21)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (30)	18:14	19	16:46 (21)	20:26	21:35	22:36
6	09:25			08:34		13:33 (30)	07:21		16:28 (21)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (30)	18:16	17	16:45 (21)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (21)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (21)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (21)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (21)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (21)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (21)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (11)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (11)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (11)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (11)	18:33			20:44	21:53	22:45
14	09:17		11:05 (41)	08:15		15:02 (11)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (41)	17:28	12	15:14 (16)	18:35			20:46	21:55	22:46
15	09:16		10:59 (41)	08:12		15:06 (16)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (41)	17:30	12	15:18 (16)	18:37			20:49	21:57	22:47
16	09:14		10:52 (41)	08:10		15:06 (16)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (41)	17:33	15	15:21 (16)	18:40			20:51	21:59	22:48
17	09:13		10:51 (41)	08:07		15:05 (16)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (41)	17:35	16	15:21 (16)	18:42			20:53	22:02	22:48
18	09:11		10:51 (41)	08:05		15:05 (16)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (41)	17:38	15	15:20 (16)	18:44			20:56	22:04	22:49
19	09:10		10:51 (41)	08:02		15:06 (16)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (41)	17:40	16	15:22 (16)	18:47			20:58	22:06	22:49
20	09:08		10:51 (41)	07:59		15:07 (16)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (41)	17:43	17	15:24 (16)	18:49			21:00	22:08	22:50
21	09:07		10:51 (41)	07:57		15:07 (16)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (41)	17:45	20	15:27 (16)	18:51			21:02	22:10	22:50
22	09:05		10:51 (41)	07:54		15:08 (16)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (36)	17:47	20	15:28 (16)	18:53			21:05	22:12	22:50
23	09:03		10:51 (41)	07:51		15:09 (16)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (36)	17:50	18	15:27 (16)	18:56			21:07	22:14	22:50
24	09:01		10:52 (41)	07:49		15:12 (16)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (36)	17:52	13	15:25 (16)	18:58			21:09	22:16	22:50
25	08:59		10:52 (41)	07:46		15:16 (16)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (36)	17:55	5	15:21 (16)	19:00			21:12	22:18	22:50
26	08:58		10:52 (41)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (30)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (41)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (30)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (41)	07:38		16:32 (21)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (30)	18:02	4	16:36 (21)	19:07			21:19	22:23	22:50
29	08:52		10:54 (41)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (30)				20:10			21:21	22:25	22:49
30	08:50		10:55 (41)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (30)				20:12			21:23	22:27	22:49
31	08:48		10:56 (41)				07:09				04:41	
	16:53	42	13:49 (30)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		08:59
	22:48	22:01	20:39	19:13		16:48		15:51
2	04:33	05:26	06:35	07:41		07:54		09:01
	22:48	21:58	20:37	19:10		16:46		15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44		15:49
4	04:35	05:30	06:39	07:46		07:58	13:07 (30)	09:05
	22:46	21:54	20:31	19:04		16:41	4 13:11 (30)	15:48
5	04:36	05:33	06:42	07:48	17:09 (21)	08:01	13:02 (30)	09:07
	22:45	21:51	20:28	19:01	9 17:18 (21)	16:39	13 13:15 (30)	15:47
6	04:37	05:35	06:44	07:50	17:06 (21)	08:03	13:01 (30)	09:08
	22:45	21:49	20:25	18:58	14 17:20 (21)	16:36	17 13:18 (30)	15:46
7	04:38	05:37	06:46	07:53	17:04 (21)	08:06	12:58 (30)	09:10
	22:44	21:46	20:22	18:56	16 17:20 (21)	16:34	21 13:19 (30)	15:45
8	04:40	05:39	06:48	07:55	17:03 (21)	08:08	10:32 (41)	09:12
	22:43	21:44	20:19	18:53	18 17:21 (21)	16:32	29 13:20 (30)	15:44
9	04:41	05:41	06:50	07:57	17:02 (21)	08:10	10:30 (41)	09:13
	22:41	21:41	20:16	18:50	18 17:20 (21)	16:30	37 13:22 (30)	15:44
10	04:42	05:44	06:53	07:59	17:01 (21)	08:13	10:28 (41)	09:15
	22:40	21:39	20:14	18:47	16 17:17 (21)	16:27	40 13:21 (30)	15:43
11	04:44	05:46	06:55	08:02	17:01 (21)	08:15	10:27 (41)	09:16
	22:39	21:36	20:11	18:44	14 17:15 (21)	16:25	41 13:19 (30)	15:43
12	04:45	05:48	06:57	08:04	17:01 (21)	08:18	10:27 (41)	09:17
	22:38	21:34	20:08	18:41	12 17:13 (21)	16:23	42 13:19 (30)	15:42
13	04:47	05:50	06:59	08:06	17:02 (21)	08:20	10:25 (41)	09:19
	22:36	21:31	20:05	18:39	10 17:12 (21)	16:21	41 13:15 (30)	15:42
14	04:49	05:53	07:01	08:09	17:06 (21)	08:22	10:25 (41)	09:20
	22:35	21:29	20:02	18:36	2 17:08 (21)	16:19	41 13:07 (30)	15:42
15	04:50	05:55	07:04	08:11		08:25	10:25 (41)	09:21
	22:33	21:26	19:59	18:33		16:17	40 13:01 (30)	15:42
16	04:52	05:57	07:06	08:13		08:27	10:26 (41)	09:22
	22:32	21:23	19:56	18:30		16:15	39 12:58 (30)	15:42
17	04:54	05:59	07:08	08:16	15:45 (16)	08:29	10:25 (41)	09:23
	22:30	21:21	19:53	18:28	9 15:54 (16)	16:13	39 12:37 (36)	15:42
18	04:56	06:02	07:10	08:18	15:42 (16)	08:32	10:26 (41)	09:24
	22:29	21:18	19:50	18:25	15 15:57 (16)	16:11	40 12:38 (36)	15:42
19	04:57	06:04	07:12	08:20	15:40 (16)	08:34	10:26 (41)	09:25
	22:27	21:15	19:47	18:22	18 15:58 (16)	16:09	39 12:37 (36)	15:42
20	04:59	06:06	07:15	08:23	15:39 (16)	08:36	10:26 (41)	09:25
	22:25	21:13	19:45	18:20	21 16:00 (16)	16:07	28 12:25 (36)	15:42
21	05:01	06:08	07:17	08:25	15:37 (16)	08:38	10:27 (41)	09:26
	22:23	21:10	19:42	18:17	18 15:55 (16)	16:06	22 10:49 (41)	15:43
22	05:03	06:10	07:19	08:27	15:37 (16)	08:41	10:27 (41)	09:27
	22:21	21:07	19:39	18:14	16 15:53 (16)	16:04	22 10:49 (41)	15:43
23	05:05	06:13	07:21	08:30	15:36 (16)	08:43	10:28 (41)	09:27
	22:20	21:05	19:36	18:12	16 15:52 (16)	16:02	21 10:49 (41)	15:44
24	05:07	06:15	07:24	08:32	15:35 (16)	08:45	10:29 (41)	09:27
	22:18	21:02	19:33	18:09	16 15:51 (16)	16:01	20 10:49 (41)	15:44
25	05:09	06:17	07:26	07:34	14:36 (16)	08:47	10:29 (41)	09:28
	22:16	20:59	19:30	17:06	15 14:51 (16)	15:59	19 10:48 (41)	15:45
26	05:11	06:19	07:28	07:37	14:35 (16)	08:49	10:31 (41)	09:28
	22:14	20:56	19:27	17:04	14 14:49 (16)	15:57	18 10:49 (41)	15:46
27	05:13	06:22	07:30	07:39	14:35 (16)	08:51	10:38 (41)	09:28
	22:11	20:53	19:24	17:01	12 14:47 (16)	15:56	10 10:48 (41)	15:47
28	05:15	06:24	07:32	07:41	14:30 (11)	08:53	10:44 (41)	09:28
	22:09	20:51	19:21	16:58	12 14:42 (16)	15:55	3 10:47 (41)	15:48
29	05:17	06:26	07:35	07:44	14:27 (11)	08:55		09:28
	22:07	20:48	19:19	16:56	11 14:38 (11)	15:53		15:49
30	05:20	06:28	07:37	07:46	14:26 (11)	08:57		09:28
	22:05	20:45	19:16	16:53	8 14:34 (11)	15:52		15:50
31	05:22	06:31		07:49				09:28
	22:03	20:42		16:51				15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					330		686	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (12)	07:35		15:43 (17)	07:06			05:43		18:54 (41)	04:39		
	15:52			16:56	22	15:51 (12)	18:04	38	16:21 (17)	20:16			21:25	25	19:19 (41)	22:30		
2	09:27			08:43		15:29 (12)	07:32		15:44 (17)	07:04			05:41		18:56 (41)	04:38		
	15:54			16:58	23	15:52 (12)	18:07	36	16:20 (17)	20:19			21:28	20	19:16 (41)	22:32		
3	09:27			08:41		15:29 (12)	07:29		15:44 (17)	07:01		19:08 (41)	05:38		18:59 (41)	04:37		
	15:55			17:01	23	15:52 (12)	18:09	35	16:19 (17)	20:21	9	19:17 (41)	21:30	15	19:14 (41)	22:33		
4	09:26			08:39		15:29 (12)	07:27		15:45 (17)	06:58		19:03 (41)	05:36		19:04 (41)	04:36		
	15:57			17:03	24	15:53 (12)	18:11	33	16:18 (17)	20:23	18	19:21 (41)	21:32	5	19:09 (41)	22:35		
5	09:25			08:36		15:29 (12)	07:24		15:46 (17)	06:55		18:59 (41)	05:33			04:35		
	15:58			17:06	23	15:52 (12)	18:14	32	16:18 (17)	20:25	24	19:23 (41)	21:35			22:36		
6	09:25			08:34		15:28 (12)	07:21		15:48 (17)	06:52		18:57 (41)	05:31			04:33		
	16:00			17:08	24	15:52 (12)	18:16	28	16:16 (17)	20:28	28	19:25 (41)	21:37			22:37		
7	09:24			08:32		15:29 (12)	07:18		15:49 (17)	06:49		18:55 (41)	05:29			04:32		
	16:01			17:10	24	15:53 (12)	18:19	25	16:14 (17)	20:30	31	19:26 (41)	21:39			22:39		
8	09:23			08:29		15:29 (12)	07:15		15:51 (17)	06:46		18:53 (41)	05:26			04:32		
	16:03			17:13	23	15:52 (12)	18:21	21	16:12 (17)	20:32	35	19:42 (30)	21:42			22:40		
9	09:22			08:27		15:31 (12)	07:13		15:54 (17)	06:43		18:52 (41)	05:24			04:31		
	16:05			17:15	21	15:52 (12)	18:23	15	16:09 (17)	20:35	54	19:59 (30)	21:44			22:41		
10	09:21			08:25		15:31 (12)	07:10			06:41		18:51 (41)	05:21			04:30		
	16:07			17:18	20	15:51 (12)	18:26			20:37	57	19:59 (30)	21:46			22:42		
11	09:20			08:22		15:32 (12)	07:07			06:38		18:49 (41)	05:19			04:29		
	16:09			17:20	18	15:50 (12)	18:28			20:39	60	19:59 (30)	21:48			22:43		
12	09:19			08:20		15:34 (12)	07:04			06:35		18:48 (41)	05:17			04:29		
	16:11			17:23	15	15:49 (12)	18:30			20:42	62	19:58 (30)	21:50			22:44		
13	09:18			08:17		15:36 (12)	07:01			06:32		18:48 (41)	05:15			04:28		
	16:12			17:25	22	16:09 (17)	18:33			20:44	64	19:59 (30)	21:53			22:45		
14	09:17			08:15		15:54 (17)	06:58			06:29		18:47 (41)	05:12			04:28		
	16:14			17:28	18	16:12 (17)	18:35			20:46	63	19:58 (30)	21:55			22:46		
15	09:15			08:12		15:52 (17)	06:55			06:27		18:46 (41)	05:10			04:27		
	16:17			17:30	22	16:14 (17)	18:37			20:48	63	19:57 (30)	21:57			22:47		
16	09:14			08:10		15:51 (17)	06:53		17:30 (36)	06:24		18:47 (41)	05:08			04:27		
	16:19			17:33	26	16:17 (17)	18:40	8	17:38 (36)	20:51	62	19:57 (30)	21:59			22:47		
17	09:13			08:07		15:49 (17)	06:50		17:27 (36)	06:21		18:46 (41)	05:06			04:27		
	16:21			17:35	29	16:18 (17)	18:42	13	17:40 (36)	20:53	60	19:55 (30)	22:01			22:48		
18	09:11			08:04		15:47 (17)	06:47		17:25 (36)	06:18		18:45 (41)	05:04			04:26		
	16:23			17:38	32	16:19 (17)	18:44	17	17:42 (36)	20:55	58	19:53 (30)	22:04			22:49		
19	09:10			08:02		15:46 (17)	06:44		17:23 (36)	06:15		18:46 (41)	05:02			04:26		
	16:25			17:40	33	16:19 (17)	18:46	19	17:42 (36)	20:58	53	19:52 (30)	22:06			22:49		
20	09:08			07:59		15:46 (17)	06:41		17:22 (36)	06:13		18:45 (41)	05:00			04:26		
	16:27			17:43	35	16:21 (17)	18:49	21	17:43 (36)	21:00	44	19:29 (41)	22:08			22:49		
21	09:06			07:57		15:45 (17)	06:38		17:21 (36)	06:10		18:45 (41)	04:58			04:26		
	16:30			17:45	36	16:21 (17)	18:51	22	17:43 (36)	21:02	43	19:28 (41)	22:10			22:50		
22	09:05			07:54		15:44 (17)	06:35		17:21 (36)	06:07		18:46 (41)	04:56			04:27		
	16:32			17:47	37	16:21 (17)	18:53	22	17:43 (36)	21:05	43	19:29 (41)	22:12			22:50		
23	09:03			07:51		15:44 (17)	06:32		17:20 (36)	06:05		18:46 (41)	04:54			04:27		
	16:34			17:50	38	16:22 (17)	18:56	22	17:42 (36)	21:07	41	19:27 (41)	22:14			22:50		
24	09:01			07:49		15:43 (17)	06:29		17:20 (36)	06:02		18:47 (41)	04:52			04:27		
	16:36			17:52	39	16:22 (17)	18:58	22	17:42 (36)	21:09	40	19:27 (41)	22:16			22:50		
25	08:59			07:46		15:44 (17)	06:27		17:20 (36)	05:59		18:47 (41)	04:50			04:28		
	16:39			17:55	38	16:22 (17)	19:00	21	17:41 (36)	21:12	39	19:26 (41)	22:18			22:50		
26	08:57			07:43		15:43 (17)	06:24		17:20 (36)	05:57		18:48 (41)	04:49			04:28		
	16:41			17:57	39	16:22 (17)	19:03	20	17:40 (36)	21:14	37	19:25 (41)	22:20			22:50		
27	08:55		15:34 (12)	07:40		15:43 (17)	06:21		17:22 (36)	05:54		18:48 (41)	04:47			04:29		
	16:44	10	15:44 (12)	18:00	39	16:22 (17)	19:05	17	17:39 (36)	21:16	36	19:24 (41)	22:21			22:50		
28	08:54		15:33 (12)	07:38		15:43 (17)	06:18		17:24 (36)	05:51		18:50 (41)	04:45			04:29		
	16:46	13	15:46 (12)	18:02	38	16:21 (17)	19:07	13	17:37 (36)	21:19	33	19:23 (41)	22:23			22:49		
29	08:51		15:31 (12)				07:15		18:26 (36)	05:49		18:50 (41)	04:44			04:30		
	16:48	16	15:47 (12)				20:09	8	18:34 (36)	21:21	31	19:21 (41)	22:25			22:49		
30	08:49		15:31 (12)				07:12			05:46		18:52 (41)	04:42			04:31		
	16:51	18	15:49 (12)				20:12			21:23	28	19:20 (41)	22:27			22:49		
31	08:47		15:29 (12)				07:09						04:41					
	16:53	20	15:49 (12)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (41)	07:39			07:51		15:00 (12)	08:59
	22:48	22:00			20:39	60	19:58 (30)	19:13			16:48	21	15:21 (12)	15:51
2	04:33	05:26			06:35		18:49 (41)	07:41			07:53		15:00 (12)	09:01
	22:47	21:58			20:36	57	19:57 (30)	19:10			16:46	22	15:22 (12)	15:50
3	04:34	05:28			06:37		18:49 (41)	07:43			07:56		14:59 (12)	09:03
	22:47	21:56			20:34	54	19:56 (30)	19:07			16:44	23	15:22 (12)	15:49
4	04:35	05:30			06:39		18:51 (41)	07:46		16:33 (17)	07:58		14:59 (12)	09:05
	22:46	21:53			20:31	35	19:40 (30)	19:04	11	16:44 (17)	16:41	23	15:22 (12)	15:48
5	04:36	05:33			06:42		18:52 (41)	07:48		16:29 (17)	08:01		14:59 (12)	09:07
	22:45	21:51			20:28	31	19:23 (41)	19:01	18	16:47 (17)	16:39	24	15:23 (12)	15:47
6	04:37	05:35			06:44		18:53 (41)	07:50		16:26 (17)	08:03		14:58 (12)	09:08
	22:44	21:49			20:25	28	19:21 (41)	18:58	24	16:50 (17)	16:36	24	15:22 (12)	15:46
7	04:38	05:37			06:46		18:54 (41)	07:52		16:24 (17)	08:05		14:59 (12)	09:10
	22:43	21:46			20:22	25	19:19 (41)	18:55	27	16:51 (17)	16:34	23	15:22 (12)	15:45
8	04:40	05:39			06:48		18:57 (41)	07:55		16:21 (17)	08:08		14:59 (12)	09:11
	22:42	21:44			20:19	18	19:15 (41)	18:53	30	16:51 (17)	16:32	23	15:22 (12)	15:44
9	04:41	05:41		19:10 (41)	06:50		19:00 (41)	07:57		16:21 (17)	08:10		14:59 (12)	09:13
	22:41	21:41	10	19:20 (41)	20:16	11	19:11 (41)	18:50	32	16:53 (17)	16:30	23	15:22 (12)	15:44
10	04:42	05:44		19:07 (41)	06:53			07:59		16:19 (17)	08:13		15:00 (12)	09:14
	22:40	21:39	17	19:24 (41)	20:13			18:47	34	16:53 (17)	16:27	21	15:21 (12)	15:43
11	04:44	05:46		19:04 (41)	06:55			08:02		16:18 (17)	08:15		15:01 (12)	09:16
	22:39	21:36	22	19:26 (41)	20:11			18:44	36	16:54 (17)	16:25	20	15:21 (12)	15:43
12	04:45	05:48		19:02 (41)	06:57			08:04		16:17 (17)	08:17		15:02 (12)	09:17
	22:37	21:34	26	19:28 (41)	20:08			18:41	37	16:54 (17)	16:23	19	15:21 (12)	15:42
13	04:47	05:50		19:00 (41)	06:59			08:06		16:16 (17)	08:20		15:03 (12)	09:18
	22:36	21:31	29	19:29 (41)	20:05			18:39	38	16:54 (17)	16:21	16	15:19 (12)	15:42
14	04:49	05:53		18:58 (41)	07:01		18:17 (36)	08:08		16:16 (17)	08:22		15:05 (12)	09:20
	22:35	21:28	32	19:30 (41)	20:02	7	18:24 (36)	18:36	38	16:54 (17)	16:19	13	15:18 (12)	15:42
15	04:50	05:55		18:57 (41)	07:04		18:13 (36)	08:11		16:15 (17)	08:24		15:07 (12)	09:21
	22:33	21:26	34	19:31 (41)	19:59	13	18:26 (36)	18:33	39	16:54 (17)	16:17	10	15:17 (12)	15:42
16	04:52	05:57		18:56 (41)	07:06		18:11 (36)	08:13		16:15 (17)	08:27			09:22
	22:32	21:23	36	19:32 (41)	19:56	16	18:27 (36)	18:30	39	16:54 (17)	16:15			15:42
17	04:54	05:59		18:54 (41)	07:08		18:09 (36)	08:15		16:15 (17)	08:29			09:23
	22:30	21:21	38	19:32 (41)	19:53	19	18:28 (36)	18:28	38	16:53 (17)	16:13			15:42
18	04:56	06:01		18:53 (41)	07:10		18:08 (36)	08:18		16:15 (17)	08:31			09:24
	22:28	21:18	40	19:33 (41)	19:50	20	18:28 (36)	18:25	39	16:54 (17)	16:11			15:42
19	04:57	06:04		18:52 (41)	07:12		18:08 (36)	08:20		16:15 (17)	08:34			09:24
	22:27	21:15	41	19:33 (41)	19:47	21	18:29 (36)	18:22	38	16:53 (17)	16:09			15:42
20	04:59	06:06		18:51 (41)	07:15		18:07 (36)	08:22		16:16 (17)	08:36			09:25
	22:25	21:13	42	19:33 (41)	19:44	22	18:29 (36)	18:19	36	16:52 (17)	16:07			15:42
21	05:01	06:08		18:50 (41)	07:17		18:06 (36)	08:25		16:16 (17)	08:38			09:26
	22:23	21:10	43	19:33 (41)	19:42	22	18:28 (36)	18:17	35	16:51 (17)	16:06			15:43
22	05:03	06:10		18:50 (41)	07:19		18:06 (36)	08:27		16:17 (17)	08:40			09:26
	22:21	21:07	43	19:33 (41)	19:39	22	18:28 (36)	18:14	34	16:51 (17)	16:04			15:43
23	05:05	06:13		18:49 (41)	07:21		18:06 (36)	08:29		16:17 (17)	08:43			09:27
	22:19	21:04	44	19:33 (41)	19:36	21	18:27 (36)	18:11	32	16:49 (17)	16:02			15:44
24	05:07	06:15		18:49 (41)	07:23		18:07 (36)	08:32		16:18 (17)	08:45			09:27
	22:17	21:02	54	19:55 (30)	19:33	19	18:26 (36)	18:09	31	16:49 (17)	16:01			15:44
25	05:09	06:17		18:49 (41)	07:26		18:07 (36)	07:34		15:18 (17)	08:47			09:28
	22:15	20:59	58	19:57 (30)	19:30	18	18:25 (36)	17:06	29	15:47 (17)	15:59			15:45
26	05:11	06:19		18:49 (41)	07:28		18:08 (36)	07:37		15:20 (17)	08:49			09:28
	22:13	20:56	60	19:58 (30)	19:27	15	18:23 (36)	17:04	25	15:45 (17)	15:57			15:46
27	05:13	06:22		18:48 (41)	07:30		18:09 (36)	07:39		15:22 (17)	08:51			09:28
	22:11	20:53	63	19:59 (30)	19:24	11	18:20 (36)	17:01	22	15:44 (17)	15:56			15:47
28	05:15	06:24		18:48 (41)	07:32			07:41		15:08 (12)	08:53			09:28
	22:09	20:51	63	19:59 (30)	19:21			16:58	22	15:41 (17)	15:55			15:48
29	05:17	06:26		18:48 (41)	07:34			07:44		15:05 (12)	08:55			09:28
	22:07	20:48	63	19:59 (30)	19:18			16:56	21	15:37 (17)	15:53			15:49
30	05:20	06:28		18:48 (41)	07:37			07:46		15:03 (12)	08:57			09:28
	22:05	20:45	63	19:59 (30)	19:16			16:53	16	15:19 (12)	15:52			15:50
31	05:22	06:30		18:48 (41)				07:49		15:01 (12)				09:28
	22:03	20:42	62	19:58 (30)				16:51	18	15:19 (12)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (27)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (27)
	15:53	39	13:36 (28)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (28)
2	09:28		12:01 (27)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (27)
	15:54	41	13:36 (28)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (28)
3	09:27		12:01 (27)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (27)
	15:55	41	13:36 (28)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (28)
4	09:27		12:01 (27)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (27)
	15:57	41	13:36 (28)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (28)
5	09:26		12:01 (27)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (27)
	15:58	43	13:37 (28)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (28)
6	09:25		12:02 (27)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (27)
	16:00	41	13:37 (28)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (28)
7	09:25		12:02 (27)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (27)
	16:02	41	13:37 (28)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (28)
8	09:24		12:02 (27)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (27)
	16:03	42	13:38 (28)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (28)
9	09:23		12:03 (27)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (27)
	16:05	41	13:38 (28)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (28)
10	09:22		12:03 (27)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (27)
	16:07	40	13:37 (28)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (28)
11	09:21		12:03 (27)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (27)
	16:09	41	13:38 (28)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (28)
12	09:20		12:03 (27)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (27)
	16:11	39	13:37 (28)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (28)
13	09:19		12:04 (27)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (27)
	16:13	37	13:37 (28)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (28)
14	09:17		12:04 (27)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (27)
	16:15	35	13:36 (28)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (28)
15	09:16		12:04 (27)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (27)	09:21		11:54 (27)
	16:17	32	13:35 (28)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (27)	15:42	38	13:27 (28)
16	09:15		12:04 (27)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (27)	09:22		11:55 (27)
	16:19	24	12:28 (27)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (27)	15:42	37	13:28 (28)
17	09:13		12:06 (27)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (27)	09:23		11:55 (27)
	16:21	24	12:30 (27)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (27)	15:42	37	13:28 (28)
18	09:12		12:06 (27)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (27)	09:24		11:56 (27)
	16:23	24	12:30 (27)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (27)	15:42	36	13:29 (28)
19	09:10		12:06 (27)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (27)	09:25		11:57 (27)
	16:25	24	12:30 (27)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (27)	15:42	36	13:29 (28)
20	09:09		12:07 (27)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (27)	09:26		11:58 (27)
	16:28	23	12:30 (27)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (27)	15:43	36	13:30 (28)
21	09:07		12:08 (27)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (27)	09:26		11:59 (27)
	16:30	21	12:29 (27)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (27)	15:43	35	13:31 (28)
22	09:05		12:09 (27)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (27)	09:27		11:58 (27)
	16:32	20	12:29 (27)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (27)	15:43	36	13:31 (28)
23	09:03		12:09 (27)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (27)	09:27		11:59 (27)
	16:34	19	12:28 (27)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (27)	15:44	36	13:31 (28)
24	09:02		12:10 (27)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (27)	09:28		12:00 (27)
	16:37	17	12:27 (27)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (27)	15:44	36	13:32 (28)
25	09:00		12:12 (27)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (27)	09:28		12:00 (27)
	16:39	15	12:27 (27)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (27)	15:45	37	13:33 (28)
26	08:58		12:14 (27)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (27)	09:28		12:00 (27)
	16:41	11	12:25 (27)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (27)	15:46	37	13:33 (28)
27	08:56		12:17 (27)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (27)	09:28		12:00 (27)
	16:44	4	12:21 (27)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (28)	15:47	38	13:33 (28)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (27)	09:29		12:01 (27)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (28)	15:48	37	13:34 (28)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (27)	09:28		12:00 (27)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (28)	15:49	38	13:34 (28)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (27)	09:28		12:01 (27)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (28)	15:50	39	13:35 (28)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (27)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (28)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		11:14 (27)	08:46		10:11 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (27)
	15:53	31	12:43 (28)	16:56	18	10:29 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (27)
2	09:28		11:14 (27)	08:44		10:11 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (27)
	15:54	30	12:43 (28)	16:58	17	10:28 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (27)
3	09:27		11:13 (27)	08:41		10:13 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (27)
	15:55	31	12:43 (28)	17:01	14	10:27 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (27)
4	09:27		11:13 (27)	08:39		10:14 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (27)
	15:57	30	12:43 (28)	17:03	11	10:25 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (27)
5	09:26		11:14 (27)	08:37		10:17 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (27)
	15:58	28	12:42 (28)	17:06	7	10:24 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (28)
6	09:25		11:14 (27)	08:35			07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (32)	09:09		11:00 (27)
	16:00	28	12:42 (28)	17:08			18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	7 09:54 (32)	15:46	28	12:28 (28)
7	09:25		11:14 (27)	08:32			07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (32)	09:10		11:01 (27)
	16:02	26	12:41 (28)	17:11			18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	11 09:56 (32)	15:45	29	12:30 (28)
8	09:24		11:14 (27)	08:30			07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (32)	09:12		11:02 (27)
	16:03	21	11:35 (27)	17:13			18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	14 09:57 (32)	15:45	30	12:31 (28)
9	09:23		11:15 (27)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (32)	09:14		11:03 (27)
	16:05	21	11:36 (27)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	17 09:59 (32)	15:44	30	12:32 (28)
10	09:22		11:15 (27)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (32)	09:15		11:03 (27)
	16:07	21	11:36 (27)	17:18			18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	18 10:00 (32)	15:44	30	12:32 (28)
11	09:21		11:15 (27)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (32)	09:16		11:04 (27)
	16:09	22	11:37 (27)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	19 10:00 (32)	15:43	30	12:33 (28)
12	09:20		11:15 (27)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (32)	09:18		11:04 (27)
	16:11	22	11:37 (27)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	19 10:00 (32)	15:43	31	12:34 (28)
13	09:19		11:16 (27)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (32)	09:19		11:05 (27)
	16:13	22	11:38 (27)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	20 10:01 (32)	15:42	31	12:35 (28)
14	09:17		11:16 (27)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (32)	09:20		11:06 (27)
	16:15	22	11:38 (27)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	19 10:01 (32)	15:42	30	12:35 (28)
15	09:16		11:16 (27)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (32)	09:21		11:06 (27)
	16:17	22	11:38 (27)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	20 10:01 (32)	15:42	31	12:36 (28)
16	09:15		11:16 (27)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (32)	09:22		11:08 (27)
	16:19	22	11:38 (27)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	19 10:01 (32)	15:42	30	12:37 (28)
17	09:13		11:18 (27)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (32)	09:23		11:09 (27)
	16:21	21	11:39 (27)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	26 11:08 (27)	15:42	30	12:38 (28)
18	09:12		11:18 (27)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (32)	09:24		11:08 (27)
	16:23	21	11:39 (27)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	29 11:10 (27)	15:42	30	12:37 (28)
19	09:10		10:13 (32)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (32)	09:25		11:09 (27)
	16:25	27	11:39 (27)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	31 11:12 (27)	15:42	29	12:38 (28)
20	09:09		10:12 (32)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (32)	09:26		11:10 (27)
	16:28	30	11:39 (27)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	32 11:13 (27)	15:43	30	12:39 (28)
21	09:07		10:11 (32)	07:57			06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (32)	09:26		11:11 (27)
	16:30	32	11:39 (27)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	32 11:14 (27)	15:43	29	12:40 (28)
22	09:05		10:10 (32)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (32)	09:27		11:11 (27)
	16:32	32	11:38 (27)	17:48			18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04	29 11:15 (27)	15:43	29	12:40 (28)
23	09:03		10:09 (32)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (32)	09:27		11:11 (27)
	16:34	31	11:37 (27)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	27 11:15 (27)	15:44	30	12:40 (28)
24	09:02		10:09 (32)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (27)	09:28		11:12 (27)
	16:37	29	11:36 (27)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	21 11:16 (27)	15:45	30	12:41 (28)
25	09:00		10:09 (32)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (27)	09:28		11:12 (27)
	16:39	26	11:34 (27)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	21 11:16 (27)	15:45	29	12:41 (28)
26	08:58		10:09 (32)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (27)	09:28		11:13 (27)
	16:41	19	10:28 (32)	17:57			19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58	22 11:17 (27)	15:46	30	12:42 (28)
27	08:56		10:09 (32)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (27)	09:28		11:13 (27)
	16:44	20	10:29 (32)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	22 11:17 (27)	15:47	30	12:42 (28)
28	08:54		10:09 (32)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (27)	09:29		11:13 (27)
	16:46	19	10:28 (32)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	22 11:18 (27)	15:48	31	12:43 (28)
29	08:52		10:09 (32)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (27)	09:29		11:13 (27)
	16:49	20	10:29 (32)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 11:18 (27)	15:49	30	12:42 (28)
30	08:50		10:09 (32)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (27)	09:28		11:13 (27)
	16:51	19	10:28 (32)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	22 11:18 (27)	15:50	31	12:43 (28)
31	08:48		10:10 (32)				07:10		04:41		05:22	06:31		07:49			09:28		11:14 (27)
	16:54	19	10:29 (32)				20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (28)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236		199		
Total, worst case		764			67											541		888	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May	June	July	August	September	October	November	December
1	09:28	12:55 (16)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51	09:00 12:38 (16)
	15:52 16	13:11 (16)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48	15:51 20 12:58 (16)
2	09:27	12:55 (16)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:01 12:39 (16)
	15:54 16	13:11 (16)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46	15:50 20 12:59 (16)
3	09:27	12:55 (16)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56	09:03 12:40 (16)
	15:55 17	13:12 (16)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49 20 13:00 (16)
4	09:26	12:55 (16)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58	09:05 12:40 (16)
	15:57 17	13:12 (16)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41	15:48 20 13:00 (16)
5	09:26	12:55 (16)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01	09:07 12:41 (16)
	15:58 18	13:13 (16)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39	15:47 19 13:00 (16)
6	09:25	12:55 (16)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03	09:09 12:41 (16)
	16:00 19	13:14 (16)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36	15:46 19 13:00 (16)
7	09:24	12:55 (16)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06	09:10 12:42 (16)
	16:01 20	13:15 (16)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34	15:45 18 13:00 (16)
8	09:24	12:56 (16)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08	09:12 12:43 (16)
	16:03 19	13:15 (16)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32	15:44 18 13:01 (16)
9	09:23	12:55 (16)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10	09:13 12:43 (16)
	16:05 20	13:15 (16)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44 17 13:00 (16)
10	09:22	12:56 (16)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	09:15 12:44 (16)
	16:07 20	13:16 (16)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27	15:43 17 13:01 (16)
11	09:21	12:57 (16)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:16 12:45 (16)
	16:09 20	13:17 (16)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25	15:43 16 13:01 (16)
12	09:19	12:57 (16)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	09:17 12:45 (16)
	16:11 20	13:17 (16)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	15:42 16 13:01 (16)
13	09:18	12:57 (16)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:19 12:46 (16)
	16:12 20	13:17 (16)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	15:42 16 13:02 (16)
14	09:17	12:58 (16)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22	09:20 12:47 (16)
	16:14 20	13:18 (16)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:42 14 13:01 (16)
15	09:16	12:58 (16)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	09:21 12:47 (16)
	16:17 20	13:18 (16)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17	15:42 14 13:01 (16)
16	09:14	12:58 (16)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:22 12:48 (16)
	16:19 20	13:18 (16)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15	15:42 13 13:01 (16)
17	09:13	12:59 (16)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	09:23 12:48 (16)
	16:21 19	13:18 (16)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	15:42 14 13:02 (16)
18	09:11	12:59 (16)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	09:24 12:49 (16)
	16:23 19	13:18 (16)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11	15:42 13 13:02 (16)
19	09:10	13:01 (16)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34 12:41 (16)	09:25 12:50 (16)
	16:25 18	13:19 (16)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 9 12:50 (16)	15:42 13 13:03 (16)
20	09:08	13:02 (16)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36 12:39 (16)	09:25 12:51 (16)
	16:27 16	13:18 (16)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 12 12:51 (16)	15:42 12 13:03 (16)
21	09:07	13:02 (16)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38 12:38 (16)	09:26 12:51 (16)
	16:30 15	13:17 (16)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 15 12:53 (16)	15:43 12 13:03 (16)
22	09:05	13:04 (16)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41 12:38 (16)	09:27 12:52 (16)
	16:32 12	13:16 (16)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 16 12:54 (16)	15:43 12 13:04 (16)
23	09:03	13:06 (16)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43 12:37 (16)	09:27 12:52 (16)
	16:34 9	13:15 (16)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 18 12:55 (16)	15:44 12 13:04 (16)
24	09:01		07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45 12:38 (16)	09:28 12:52 (16)
	16:37		17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18 12:56 (16)	15:44 12 13:04 (16)
25	09:00		07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47 12:37 (16)	09:28 12:53 (16)
	16:39		17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 19 12:56 (16)	15:45 13 13:06 (16)
26	08:58		07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49 12:37 (16)	09:28 12:53 (16)
	16:41		17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 20 12:57 (16)	15:46 13 13:06 (16)
27	08:56		07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52 12:37 (16)	09:28 12:54 (16)
	16:44		18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 20 12:57 (16)	15:47 13 13:07 (16)
28	08:54		07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54 12:37 (16)	09:28 12:53 (16)
	16:46		18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55 20 12:57 (16)	15:48 14 13:07 (16)
29	08:52			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56 12:38 (16)	09:28 12:53 (16)
	16:48			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 20 12:58 (16)	15:49 15 13:08 (16)
30	08:50			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58 12:38 (16)	09:28 12:54 (16)
	16:51			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 20 12:58 (16)	15:50 15 13:09 (16)
31	08:48			07:09		04:41		05:22	06:31		07:49		09:28 12:54 (16)
	16:53			20:14		22:29		22:03	20:42		16:51		15:51 15 13:09 (16)
Potential sun hours	221		260	365	432	521	547	546	478	386	319	236	199
Total, worst case		410										207	475

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (30)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (16)	08:59
	15:52		16:56 19	14:13 (30)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (16)	15:51
2	09:27		08:43	13:56 (30)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (16)	09:01
	15:54		16:58 16	14:12 (30)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (16)	15:50
3	09:27		08:41	13:58 (30)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (16)	09:03
	15:55		17:01 12	14:10 (30)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (16)	15:49
4	09:26		08:39	14:02 (30)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (16)	09:05
	15:57		17:03 5	14:07 (30)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (16)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (16)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (16)	15:47
6	09:25		08:34	15:25 (16)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (16)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (16)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (30)	09:10
	16:01		17:11 11	15:33 (16)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (30)	15:45
8	09:23		08:30	15:20 (16)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (30)	09:12
	16:03		17:13 15	15:35 (16)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (30)	15:44
9	09:23		08:27	15:19 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (30)	09:13
	16:05		17:15 18	15:37 (16)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (30)	15:44
10	09:22		08:25	15:18 (16)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (30)	09:15
	16:07		17:18 19	15:37 (16)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (30)	15:43
11	09:20		08:22	15:17 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (30)	09:16
	16:09		17:20 21	15:38 (16)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (30)	15:43
12	09:19		08:20	15:17 (16)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (30)	09:17
	16:10		17:23 22	15:39 (16)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (30)	15:42
13	09:18	13:53 (30)	08:17	15:17 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (30)	09:19
	16:12 5	13:58 (30)	17:25 22	15:39 (16)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (30)	15:42
14	09:17	13:51 (30)	08:15	15:16 (16)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (30)	09:20
	16:14 9	14:00 (30)	17:28 23	15:39 (16)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (30)	15:42
15	09:16	13:50 (30)	08:12	15:17 (16)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (41)	09:21
	16:17 11	14:01 (30)	17:30 22	15:39 (16)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (30)	15:42
16	09:14	13:50 (30)	08:10	15:17 (16)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (41)	09:22
	16:19 17	14:07 (30)	17:33 22	15:39 (16)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (30)	15:42
17	09:13	13:49 (30)	08:07	15:17 (16)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (41)	09:23
	16:21 21	14:10 (30)	17:35 21	15:38 (16)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (30)	15:42
18	09:11	11:38 (41)	08:05	15:18 (16)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (41)	09:24
	16:23 27	14:11 (30)	17:38 19	15:37 (16)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (30)	15:42
19	09:10	11:35 (41)	08:02	15:20 (16)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (41)	09:25
	16:25 32	14:12 (30)	17:40 17	15:37 (16)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (30)	15:42
20	09:08	11:32 (41)	07:59	15:21 (16)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (41)	09:25
	16:27 36	14:12 (30)	17:43 14	15:35 (16)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (30)	15:42
21	09:07	11:29 (41)	07:57	15:24 (16)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (16)	08:38	11:05 (41)	09:26
	16:30 42	14:13 (30)	17:45 8	15:32 (16)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (16)	16:06 42	13:49 (30)	15:43
22	09:05	11:27 (41)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (16)	08:41	11:08 (41)	09:27
	16:32 45	14:14 (30)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (16)	16:04 36	13:48 (30)	15:43
23	09:03	11:28 (41)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (16)	08:43	11:12 (41)	09:27
	16:34 44	14:14 (30)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (16)	16:02 32	13:49 (30)	15:44
24	09:01	11:29 (41)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (16)	08:45	11:16 (41)	09:27
	16:36 42	14:15 (30)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (16)	16:01 28	13:49 (30)	15:44
25	08:59	11:31 (41)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (16)	08:47	13:27 (30)	09:28
	16:39 40	14:15 (30)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (16)	15:59 21	13:48 (30)	15:45
26	08:58	11:32 (41)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (16)	08:49	13:29 (30)	09:28
	16:41 37	14:15 (30)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (16)	15:57 17	13:46 (30)	15:46
27	08:56	11:34 (41)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (16)	08:51	13:29 (30)	09:28
	16:44 33	14:15 (30)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (16)	15:56 12	13:41 (30)	15:47
28	08:54	13:51 (30)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (16)	08:53	13:30 (30)	09:28
	16:46 24	14:15 (30)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (16)	15:55 9	13:39 (30)	15:47
29	08:52	13:51 (30)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (16)	08:55	13:35 (30)	09:28
	16:48 23	14:14 (30)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (16)	15:53 5	13:40 (30)	15:49
30	08:50	13:52 (30)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (16)	08:57		09:28
	16:51 22	14:14 (30)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (16)	15:52		15:50
31	08:48	13:54 (30)			07:09		04:41		05:22	06:31		07:49	14:47 (16)			09:28
	16:53 20	14:14 (30)			20:14		22:29		22:03	20:42		16:51 20	15:07 (16)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June	
1	09:28		12:11 (36)		08:45		10:15 (17)		07:35		13:26 (30)	
	15:52	47	14:26 (18)		16:56	119	15:37 (39)		18:04	35	17:05 (13)	
2	09:27		12:11 (36)		08:43		12:16 (36)		07:32		15:45 (11)	
	15:54	53	14:28 (18)		16:58	114	15:38 (39)		18:07	27	17:09 (13)	
3	09:27		12:10 (36)		08:41		12:17 (36)		07:30		16:34 (16)	
	15:55	58	14:29 (18)		17:01	113	15:38 (39)		18:09	33	17:12 (13)	
4	09:26		12:10 (36)		08:39		09:39 (41)		07:27		16:31 (16)	
	15:57	61	14:29 (18)		17:03	109	15:39 (39)		18:12	43	17:15 (13)	
5	09:26		12:10 (36)		08:36		09:39 (41)		07:24		16:29 (16)	
	15:58	64	14:30 (18)		17:06	105	15:39 (39)		18:14	46	17:15 (13)	
6	09:25		12:09 (36)		08:34		09:40 (41)		07:21		16:26 (16)	
	16:00	70	14:31 (18)		17:08	95	15:39 (39)		18:16	49	17:15 (13)	
7	09:24		10:10 (17)		08:32		09:40 (41)		07:18		16:25 (16)	
	16:01	78	14:32 (18)		17:11	96	15:39 (39)		18:19	50	17:15 (13)	
8	09:23		10:10 (17)		08:30		09:38 (41)		07:15		16:23 (16)	
	16:03	84	14:33 (18)		17:13	96	15:38 (39)		18:21	52	17:15 (13)	
9	09:22		10:10 (17)		08:27		09:36 (41)		07:13		16:22 (16)	
	16:05	86	14:33 (18)		17:16	98	15:38 (39)		18:23	53	17:15 (13)	
10	09:21		10:11 (17)		08:25		09:33 (41)		07:10		16:20 (16)	
	16:07	91	14:34 (18)		17:18	107	15:57 (11)		18:26	54	17:14 (13)	
11	09:20		10:10 (17)		08:22		09:29 (41)		07:07		16:19 (16)	
	16:09	97	14:34 (18)		17:20	114	16:00 (11)		18:28	54	17:13 (13)	
12	09:19		10:09 (17)		08:20		09:27 (41)		07:04		16:18 (16)	
	16:11	102	14:35 (18)		17:23	118	16:03 (11)		18:30	54	17:12 (13)	
13	09:18		10:09 (17)		08:17		09:24 (41)		07:01		16:18 (16)	
	16:13	105	14:35 (18)		17:25	118	16:04 (11)		18:33	52	17:10 (13)	
14	09:17		10:10 (17)		08:15		09:21 (41)		06:58		16:17 (16)	
	16:15	107	14:36 (18)		17:28	114	16:05 (11)		18:35	51	17:08 (13)	
15	09:16		10:10 (17)		08:12		09:18 (41)		06:56		16:17 (16)	
	16:17	112	14:37 (18)		17:30	120	16:07 (11)		18:37	47	17:04 (13)	
16	09:14		10:02 (17)		08:10		09:13 (41)		06:53		16:17 (16)	
	16:19	119	14:37 (18)		17:33	125	16:08 (11)		18:40	46	17:03 (16)	
17	09:13		10:02 (17)		08:07		09:13 (41)		06:50		16:17 (16)	
	16:21	126	14:37 (18)		17:35	123	16:08 (11)		18:42	46	17:03 (16)	
18	09:11		10:02 (17)		08:05		09:13 (41)		06:47		16:16 (16)	
	16:23	127	14:37 (18)		17:38	121	16:08 (11)		18:44	46	17:02 (16)	
19	09:10		10:02 (17)		08:02		09:15 (41)		06:44		16:16 (16)	
	16:25	129	14:37 (18)		17:40	118	16:09 (11)		18:47	56	18:01 (21)	
20	09:08		10:02 (17)		07:59		09:16 (41)		06:41		16:16 (16)	
	16:27	130	14:37 (18)		17:43	114	16:09 (11)		18:49	60	18:03 (21)	
21	09:07		10:03 (17)		07:57		09:17 (41)		06:38		16:16 (16)	
	16:30	131	14:37 (18)		17:45	110	16:09 (11)		18:51	64	18:05 (21)	
22	09:05		10:03 (17)		07:54		09:18 (41)		06:35		16:17 (16)	
	16:32	129	14:36 (18)		17:48	104	16:08 (11)		18:54	63	18:05 (21)	
23	09:03		10:04 (17)		07:51		09:20 (41)		06:32		16:17 (16)	
	16:34	131	14:36 (18)		17:50	95	16:08 (11)		18:56	64	18:06 (21)	
24	09:01		10:04 (17)		07:49		13:09 (30)		06:30		16:18 (16)	
	16:37	128	14:35 (18)		17:52	77	16:08 (11)		18:58	64	18:06 (21)	
25	08:59		10:05 (17)		07:46		13:11 (30)		06:27		16:18 (16)	
	16:39	125	14:34 (18)		17:55	71	16:07 (11)		19:00	62	18:06 (21)	
26	08:58		10:05 (17)		07:43		13:13 (30)		06:24		16:20 (16)	
	16:41	124	15:28 (39)		17:57	66	16:06 (11)		19:03	61	18:07 (21)	
27	08:56		10:06 (17)		07:41		13:16 (30)		06:21		16:22 (16)	
	16:44	127	15:30 (39)		18:00	58	16:05 (11)		19:05	57	18:07 (21)	
28	08:54		10:07 (17)		07:38		13:19 (30)		06:18		16:23 (16)	
	16:46	130	15:33 (39)		18:02	49	16:04 (11)		19:07	54	18:06 (21)	
29	08:52		10:08 (17)						07:15		17:26 (16)	
	16:48	131	15:35 (39)						20:10	47	19:05 (21)	
30	08:50		10:09 (17)						07:12		17:29 (16)	
	16:51	129	15:36 (39)						20:12	38	19:04 (21)	
31	08:47		10:12 (17)						07:09		18:41 (21)	
	16:53	126	15:37 (39)						20:14	22	19:03 (21)	
Potential sun hours	221		260		365		432		521		547	
Total, worst case	3257		2867		1550		46					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September		October		November		December		
1	04:32	05:24	06:33		07:39		16:57 (16)	07:51	09:03 (41)	08:59	09:52 (17)
	22:48	22:01	20:39		19:13	53	17:50 (13)	16:49 107	15:26 (11)	15:51 96	14:16 (18)
2	04:33	05:26	06:35		07:41		16:58 (16)	07:53	09:06 (41)	09:01	09:53 (17)
	22:48	21:58	20:37		19:10	54	17:52 (13)	16:46 98	15:08 (39)	15:50 91	14:16 (18)
3	04:34	05:28	06:37		07:44		16:58 (16)	07:56	09:08 (41)	09:03	09:54 (17)
	22:47	21:56	20:34		19:07	54	17:52 (13)	16:44 96	15:08 (39)	15:49 88	14:17 (18)
4	04:35	05:30	06:39		07:46		16:58 (16)	07:58	09:10 (41)	09:05	09:54 (17)
	22:46	21:54	20:31		19:04	54	17:52 (13)	16:41 94	15:08 (39)	15:48 83	14:17 (18)
5	04:36	05:33	06:42		07:48		17:00 (16)	08:01	09:10 (41)	09:07	09:55 (17)
	22:45	21:51	20:28		19:01	52	17:52 (13)	16:39 95	15:09 (39)	15:47 77	14:17 (18)
6	04:37	05:35	06:44		07:50		17:00 (16)	08:03	09:10 (41)	09:08	09:57 (17)
	22:45	21:49	20:25		18:58	52	17:52 (13)	16:37 105	15:09 (39)	15:46 71	14:17 (18)
7	04:38	05:37	06:46		07:53		17:01 (16)	08:06	09:08 (41)	09:10	09:57 (17)
	22:44	21:46	20:22		18:56	50	17:51 (13)	16:34 111	15:09 (39)	15:45 64	14:17 (18)
8	04:40	05:39	06:48		07:55		17:03 (16)	08:08	11:48 (36)	09:12	11:57 (36)
	22:43	21:44	20:19		18:53	48	17:51 (13)	16:32 112	15:09 (39)	15:44 62	14:17 (18)
9	04:41	05:41	06:51	18:40 (21)	07:57		17:04 (16)	08:10	11:47 (36)	09:13	11:59 (36)
	22:41	21:41	20:16 10	18:50 (21)	18:50	46	17:50 (13)	16:30 113	15:09 (39)	15:44 57	14:17 (18)
10	04:42	05:44	06:53	18:37 (21)	07:59		17:06 (16)	08:13	09:45 (17)	09:15	12:00 (36)
	22:40	21:39	20:14 15	18:52 (21)	18:47	40	17:48 (13)	16:27 121	15:08 (39)	15:43 53	14:17 (18)
11	04:44	05:46	06:55	18:35 (21)	08:02		16:22 (11)	08:15	09:42 (17)	09:16	12:01 (36)
	22:39	21:36	20:11 19	18:54 (21)	18:44	36	17:45 (13)	16:25 127	15:08 (39)	15:43 47	14:16 (18)
12	04:45	05:48	06:57	18:34 (21)	08:04		16:18 (11)	08:17	09:41 (17)	09:17	12:03 (36)
	22:38	21:34	20:08 21	18:55 (21)	18:42	25	17:41 (13)	16:23 130	15:08 (39)	15:42 44	14:17 (18)
13	04:47	05:50	06:59	17:21 (16)	08:06		13:56 (30)	08:20	09:39 (17)	09:19	12:04 (36)
	22:36	21:31	20:05 37	18:55 (21)	18:39	42	17:38 (13)	16:21 131	15:06 (39)	15:42 39	14:17 (18)
14	04:49	05:53	07:02	17:17 (16)	08:09		13:50 (30)	08:22	09:39 (17)	09:20	12:07 (36)
	22:35	21:29	20:02 45	18:55 (21)	18:36	53	16:37 (11)	16:19 131	15:05 (39)	15:42 34	14:17 (18)
15	04:50	05:55	07:04	17:13 (16)	08:11		13:46 (30)	08:25	09:39 (17)	09:21	13:06 (30)
	22:33	21:26	19:59 52	18:55 (21)	18:33	62	16:37 (11)	16:17 128	15:03 (39)	15:42 26	14:16 (18)
16	04:52	05:57	07:06	17:11 (16)	08:13		13:44 (30)	08:27	09:39 (17)	09:22	13:08 (30)
	22:32	21:23	19:56 56	18:55 (21)	18:30	69	16:39 (11)	16:15 124	15:02 (39)	15:42 22	14:15 (18)
17	04:54	05:59	07:08	17:08 (16)	08:16		13:41 (30)	08:29	09:38 (17)	09:23	13:10 (30)
	22:30	21:21	19:53 59	18:54 (21)	18:28	75	16:39 (11)	16:13 125	14:07 (18)	15:42 18	14:15 (18)
18	04:56	06:02	07:10	17:07 (16)	08:18		09:55 (41)	08:32	09:38 (17)	09:24	13:12 (30)
	22:29	21:18	19:50 63	18:55 (21)	18:25	86	16:39 (11)	16:11 129	14:09 (18)	15:42 16	14:15 (18)
19	04:58	06:04	07:12	17:06 (16)	08:20		09:51 (41)	08:34	09:39 (17)	09:25	13:16 (7)
	22:27	21:15	19:47 63	18:54 (21)	18:22	98	16:39 (11)	16:09 131	14:11 (18)	15:42 11	14:15 (18)
20	04:59	06:06	07:15	17:04 (16)	08:23		09:49 (41)	08:36	09:38 (17)	09:25	13:16 (7)
	22:25	21:13	19:45 65	18:53 (21)	18:20	106	16:40 (11)	16:07 129	14:11 (18)	15:42 9	14:14 (18)
21	05:01	06:08	07:17	17:03 (16)	08:25		09:46 (41)	08:38	09:39 (17)	09:26	13:17 (7)
	22:23	21:10	19:42 64	18:51 (21)	18:17	113	16:39 (11)	16:06 131	14:13 (18)	15:43 9	14:15 (18)
22	05:03	06:11	07:19	17:01 (16)	08:27		09:45 (41)	08:41	09:38 (17)	09:26	13:18 (7)
	22:21	21:07	19:39 64	18:50 (21)	18:14	116	16:39 (11)	16:04 131	14:13 (18)	15:43 9	14:16 (18)
23	05:05	06:13	07:21	17:00 (16)	08:30		09:44 (41)	08:43	09:39 (17)	09:27	13:18 (7)
	22:19	21:05	19:36 62	18:48 (21)	18:12	119	16:38 (11)	16:02 128	14:14 (18)	15:44 9	14:16 (18)
24	05:07	06:15	07:24	17:00 (16)	08:32		09:43 (41)	08:45	09:39 (17)	09:27	13:18 (7)
	22:18	21:02	19:33 58	18:46 (21)	18:09	122	16:38 (11)	16:01 127	14:14 (18)	15:44 11	14:17 (18)
25	05:09	06:17	07:26	16:59 (16)	07:34		08:43 (41)	08:47	09:40 (17)	09:28	13:15 (30)
	22:16	20:59	19:30 46	17:45 (16)	17:06	123	15:38 (11)	15:59 124	14:15 (18)	15:45 14	14:17 (18)
26	05:11	06:19	07:28	16:58 (16)	07:37		08:44 (41)	08:49	09:40 (17)	09:28	13:14 (30)
	22:14	20:56	19:27 47	17:45 (16)	17:04	122	15:37 (11)	15:58 119	14:15 (18)	15:46 17	14:18 (18)
27	05:13	06:22	07:30	16:58 (16)	07:39		08:48 (41)	08:51	09:49 (17)	09:28	13:13 (30)
	22:11	20:53	19:24 46	17:44 (16)	17:01	118	15:36 (11)	15:56 112	14:16 (18)	15:47 20	14:19 (18)
28	05:15	06:24	07:32	16:58 (16)	07:41		08:51 (41)	08:53	09:49 (17)	09:28	13:12 (30)
	22:09	20:51	19:21 46	17:44 (16)	16:59	115	15:35 (11)	15:55 109	14:16 (18)	15:48 24	14:21 (18)
29	05:17	06:26	07:35	16:58 (16)	07:44		08:54 (41)	08:55	09:50 (17)	09:28	12:14 (36)
	22:07	20:48	19:19 50	17:48 (13)	16:56	119	15:34 (11)	15:53 106	14:16 (18)	15:49 31	14:23 (18)
30	05:20	06:28	07:37	16:57 (16)	07:46		08:57 (41)	08:57	09:50 (17)	09:28	12:13 (36)
	22:05	20:45	19:16 52	17:49 (13)	16:53	117	15:32 (11)	15:52 103	14:16 (18)	15:50 37	14:25 (18)
31	05:22	06:31			07:49		08:59 (41)			09:28	12:12 (36)
	22:03	20:42			16:51	115	15:29 (11)			15:51 41	14:25 (18)
Potential sun hours	546	478	386		319		236		199		
Total, worst case			1040		2454		3527		1230		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (5)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (5)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (5)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (5)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (5)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (5)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (5)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (5)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (5)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (5)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (5)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (5)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case							34		1					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44		04:40		20:27 (5)	04:32	20:33 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25		22:30	8	20:35 (5)	22:48	15 20:48 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41		04:38		20:27 (5)	04:33	20:33 (5)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28		22:31	11	20:38 (5)	22:47	15 20:48 (5)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39		04:37		20:27 (5)	04:34	20:33 (5)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30		22:33	12	20:39 (5)	22:47	15 20:48 (5)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36		04:36		20:27 (5)	04:35	20:33 (5)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32		22:34	12	20:39 (5)	22:46	14 20:47 (5)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34		04:35		20:27 (5)	04:36	20:33 (5)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35		22:36	13	20:40 (5)	22:45	14 20:47 (5)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31		04:34		20:27 (5)	04:37	20:34 (5)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37		22:37	13	20:40 (5)	22:44	13 20:47 (5)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29		04:33		20:28 (5)	04:39	20:34 (5)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39		22:38	14	20:42 (5)	22:43	12 20:46 (5)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26		04:32		20:28 (5)	04:40	20:34 (5)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41		22:40	14	20:42 (5)	22:42	12 20:46 (5)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24		04:31		20:28 (5)	04:41	20:35 (5)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44		22:41	14	20:42 (5)	22:41	11 20:46 (5)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22		04:30		20:29 (5)	04:43	20:35 (5)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46		22:42	14	20:43 (5)	22:40	11 20:46 (5)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19		04:29		20:28 (5)	04:44	20:35 (5)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48		22:43	16	20:44 (5)	22:39	9 20:44 (5)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17		04:29		20:29 (5)	04:46	20:35 (5)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50		22:44	16	20:45 (5)	22:37	4 20:39 (5)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15		04:28		20:29 (5)	04:47	20:35 (5)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53		22:45	16	20:45 (5)	22:36	3 20:38 (5)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12		04:28		20:29 (5)	04:49	20:35 (5)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55		22:46	17	20:46 (5)	22:34	2 20:37 (5)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10		04:27		20:30 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57		22:47	17	20:47 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08		04:27		20:30 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59		22:47	17	20:47 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06		04:27		20:30 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01		22:48	18	20:48 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04		04:27		20:31 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03		22:48	17	20:48 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02		04:27		20:31 (5)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05		22:49	18	20:49 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00		04:27		20:31 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07		22:49	18	20:49 (5)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58		04:27		20:31 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10		22:49	18	20:49 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56		04:27		20:31 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12		22:50	18	20:49 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54		04:27		20:31 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14		22:50	18	20:49 (5)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52		04:27		20:32 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15		22:50	17	20:49 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51		04:28		20:32 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17		22:50	17	20:49 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49		04:28		20:32 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19		22:50	18	20:50 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47		04:29		20:32 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21		22:49	17	20:49 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46		04:30		20:32 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23		22:49	17	20:49 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44		04:30		20:33 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25		22:49	17	20:50 (5)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42		20:27 (5)	04:31	20:32 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2	20:29 (5)	22:48	17 20:49 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41		20:27 (5)			05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3	20:30 (5)			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521			547		545		478	386	319	236	200
Total, worst case						5			469		150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (86)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13	09:01 (89)	16:49	15:52
2	09:27	08:43		07:33	08:13 (89)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (86)	07:54	09:01
	15:54	16:59		18:07	6 08:19 (89)	20:19	21:28	22:32	22:48	21:58	20:37		19:10	25 09:01 (89)	16:47	15:50
3	09:27	08:41		07:30	08:10 (89)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (86)	07:56	09:03
	15:56	17:01		18:10	12 08:22 (89)	20:21	21:30	22:33	22:47	21:56	20:34		19:07	26 09:01 (89)	16:44	15:49
4	09:26	08:39		07:27	08:07 (89)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (86)	07:59	09:05
	15:57	17:04		18:12	16 08:23 (89)	20:24	21:33	22:35	22:46	21:54	20:31		19:05	28 09:02 (89)	16:42	15:48
5	09:26	08:37		07:24	08:00 (86)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (86)	08:01	09:07
	15:59	17:06		18:14	24 08:24 (89)	20:26	21:35	22:36	22:45	21:51	20:28		19:02	28 09:02 (89)	16:39	15:47
6	09:25	08:34		07:21	07:58 (86)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (86)	08:03	09:08
	16:00	17:09		18:17	26 08:24 (89)	20:28	21:37	22:38	22:45	21:49	20:25		18:59	28 09:01 (89)	16:37	15:47
7	09:24	08:32		07:19	07:57 (86)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (86)	08:06	09:10
	16:02	17:11		18:19	28 08:25 (89)	20:30	21:40	22:39	22:44	21:47	20:23		18:56	27 09:01 (89)	16:35	15:46
8	09:23	08:30		07:16	07:56 (86)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (86)	08:08	09:12
	16:04	17:14		18:21	28 08:24 (89)	20:33	21:42	22:40	22:43	21:44	20:20		18:53	25 09:00 (89)	16:32	15:45
9	09:23	08:27		07:13	07:56 (86)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (86)	08:11	09:13
	16:06	17:16		18:24	28 08:24 (89)	20:35	21:44	22:41	22:41	21:42	20:17		18:50	22 08:58 (89)	16:30	15:44
10	09:22	08:25		07:10	07:56 (86)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (89)	08:13	09:15
	16:07	17:18		18:26	27 08:23 (89)	20:37	21:46	22:43	22:40	21:39	20:14		18:48	14 08:57 (89)	16:28	15:44
11	09:21	08:23		07:07	07:58 (86)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (89)	08:15	09:16
	16:09	17:21		18:28	26 08:24 (89)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	10 08:54 (89)	16:26	15:43
12	09:19	08:20		07:04	07:59 (86)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31	23 08:22 (89)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (85)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (88)	08:07		08:20	09:19
	16:13	17:26		18:33	20 08:21 (89)	20:44	21:53	22:45	22:36	21:31	20:05	8 08:21 (88)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (85)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (88)	08:09		08:22	09:20
	16:15	17:28		18:35	20 08:18 (89)	20:47	21:55	22:46	22:35	21:29	20:02	13 08:23 (88)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (85)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (88)	08:11		08:25	09:21
	16:17	17:31		18:38	14 08:14 (89)	20:49	21:57	22:47	22:33	21:26	19:59	16 08:24 (88)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (85)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (88)	08:13	09:01 (87)	08:27	09:22
	16:19	17:33		18:40	12 07:44 (85)	20:51	22:00	22:48	22:32	21:24	19:57	17 08:25 (88)	18:31	9 09:10 (87)	16:15	15:42
17	09:13	08:07		06:50	07:32 (85)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (88)	08:16	09:00 (87)	08:29	09:23
	16:21	17:36		18:42	12 07:44 (85)	20:53	22:02	22:48	22:30	21:21	19:54	18 08:25 (88)	18:28	12 09:12 (87)	16:13	15:42
18	09:12	08:05	08:36 (87)	06:47	07:32 (85)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (88)	08:18	08:59 (87)	08:32	09:24
	16:24	17:38	3 08:39 (87)	18:45	11 07:43 (85)	20:56	22:04	22:49	22:29	21:18	19:51	19 08:25 (88)	18:25	13 09:12 (87)	16:12	15:42
19	09:10	08:02	08:33 (87)	06:44	07:26 (88)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (88)	08:20	08:59 (87)	08:34	09:25
	16:26	17:41	7 08:40 (87)	18:47	16 07:42 (85)	20:58	22:06	22:49	22:27	21:16	19:48	19 08:24 (88)	18:23	14 09:13 (87)	16:10	15:43
20	09:08	08:00	08:30 (87)	06:42	07:23 (88)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (88)	08:23	08:58 (87)	08:36	09:25
	16:28	17:43	11 08:41 (87)	18:49	17 07:40 (85)	21:00	22:08	22:50	22:25	21:13	19:45	19 08:24 (88)	18:20	14 09:12 (87)	16:08	15:43
21	09:07	07:57	08:27 (87)	06:39	07:21 (88)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (88)	08:25	08:58 (87)	08:39	09:26
	16:30	17:46	14 08:41 (87)	18:52	15 07:36 (88)	21:03	22:10	22:50	22:23	21:10	19:42	17 08:22 (88)	18:17	14 09:12 (87)	16:06	15:43
22	09:05	07:54	08:27 (87)	06:36	07:20 (88)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (88)	08:27	09:01 (87)	08:41	09:27
	16:32	17:48	14 08:41 (87)	18:54	18 07:38 (88)	21:05	22:12	22:50	22:22	21:08	19:39	16 08:22 (88)	18:15	10 09:11 (87)	16:04	15:44
23	09:03	07:52	08:28 (87)	06:33	07:19 (88)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (88)	08:30	09:04 (87)	08:43	09:27
	16:35	17:50	13 08:41 (87)	18:56	19 07:38 (88)	21:07	22:14	22:50	22:20	21:05	19:36	17 08:24 (85)	18:12	6 09:10 (87)	16:03	15:44
24	09:01	07:49	08:28 (87)	06:30	07:19 (88)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (88)	08:32	09:06 (87)	08:45	09:27
	16:37	17:53	13 08:41 (87)	18:58	19 07:38 (88)	21:10	22:16	22:50	22:18	21:02	19:33	16 08:25 (85)	18:09	2 09:08 (87)	16:01	15:45
25	09:00	07:46	08:29 (87)	06:27	07:18 (88)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (85)	07:35		08:47	09:28
	16:39	17:55	10 08:39 (87)	19:01	19 07:37 (88)	21:12	22:18	22:50	22:16	20:59	19:30	11 08:26 (85)	17:07		16:00	15:46
26	08:58	07:44	08:30 (87)	06:24	07:18 (88)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (85)	07:37		08:49	09:28
	16:42	17:58	7 08:37 (87)	19:03	19 07:37 (88)	21:14	22:20	22:50	22:14	20:57	19:28	12 08:26 (85)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (88)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (85)	07:39		08:52	09:28
	16:44	18:00		19:05	18 07:36 (88)	21:17	22:22	22:50	22:12	20:54	19:25	12 08:26 (85)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (88)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (85)	07:42		08:54	09:28
	16:47	18:02		19:08	16 07:34 (88)	21:19	22:23	22:50	22:09	20:51	19:22	12 08:26 (85)	16:59		15:55	15:48
29	08:52			07:16	08:19 (88)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (85)	07:44		08:56	09:28
	16:49			20:10	14 08:33 (88)	21:21	22:25	22:49	22:07	20:48	19:19	19 08:57 (89)	16:56		15:54	15:49
30	08:50			07:13	08:21 (88)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (85)	07:47		08:58	09:28
	16:51			20:12	9 08:30 (88)	21:24	22:27	22:49	22:05	20:45	19:16	21 08:59 (89)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April		May		June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (42)	04:40	06:17 (40)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (42)	22:30	23 06:40 (40)
2	09:27	08:43		07:33	07:04		05:42		07:32 (42)	04:39	06:16 (40)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (42)	22:32	24 06:40 (40)
3	09:27	08:41		07:30	07:01		05:39		07:32 (42)	04:37	06:16 (40)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (42)	22:34	25 06:41 (40)
4	09:26	08:39		07:27	06:58		05:36		07:34 (42)	04:36	06:16 (40)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (42)	22:35	26 06:42 (40)
5	09:26	08:37		07:24	06:55		05:34		07:36 (42)	04:35	06:16 (40)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (42)	22:36	27 06:43 (40)
6	09:25	08:34		07:21	06:53		05:32		07:38 (42)	04:34	06:16 (40)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (42)	22:38	27 06:43 (40)
7	09:24	08:32		07:19	06:50		05:29		07:40 (42)	04:33	06:16 (40)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (42)	22:39	27 06:43 (40)
8	09:24	08:30	09:03 (89)	07:16	06:47		05:27			04:32	06:15 (40)
	16:04	17:14	2 09:05 (89)	18:21	20:33		21:42			22:40	29 06:44 (40)
9	09:23	08:27	09:00 (89)	07:13	06:44		05:24			04:31	06:16 (40)
	16:06	17:16	7 09:07 (89)	18:24	20:35		21:44			22:42	29 06:45 (40)
10	09:22	08:25	08:58 (89)	07:10	06:41	07:48 (42)	05:22			04:31	06:15 (40)
	16:07	17:18	10 09:08 (89)	18:26	20:37	10 07:58 (42)	21:46			22:43	30 06:45 (40)
11	09:21	08:23	08:56 (89)	07:07	06:38	07:45 (42)	05:20			04:30	06:16 (40)
	16:09	17:21	13 09:09 (89)	18:28	20:40	17 08:02 (42)	21:49			22:44	29 06:45 (40)
12	09:20	08:20	08:55 (89)	07:04	06:36	07:41 (42)	05:17			04:29	06:15 (40)
	16:11	17:23	14 09:09 (89)	18:31	20:42	22 08:03 (42)	21:51			22:45	30 06:45 (40)
13	09:18	08:18	08:55 (89)	07:02	06:33	07:37 (42)	05:15			04:29	06:16 (40)
	16:13	17:26	14 09:09 (89)	18:33	20:44	27 08:04 (42)	21:53			22:46	30 06:46 (40)
14	09:17	08:15	08:56 (89)	06:59	06:30	07:35 (42)	05:13			04:28	06:16 (40)
	16:15	17:28	13 09:09 (89)	18:35	20:47	30 08:05 (42)	21:55			22:46	30 06:46 (40)
15	09:16	08:13	08:56 (89)	06:56	06:27	07:34 (42)	05:11			04:28	06:15 (40)
	16:17	17:31	13 09:09 (89)	18:38	20:49	33 08:07 (42)	21:57			22:47	31 06:46 (40)
16	09:14	08:10	08:56 (89)	06:53	06:24	07:33 (42)	05:09			04:28	06:16 (40)
	16:19	17:33	11 09:07 (89)	18:40	20:51	34 08:07 (42)	22:00			22:48	30 06:46 (40)
17	09:13	08:07	08:58 (89)	06:50	06:22	07:32 (42)	05:06			04:27	06:16 (40)
	16:21	17:36	7 09:05 (89)	18:42	20:54	35 08:07 (42)	22:02			22:48	31 06:47 (40)
18	09:12	08:05		06:47	06:19	07:31 (42)	05:04			04:27	06:16 (40)
	16:24	17:38		18:45	20:56	37 08:08 (42)	22:04			22:49	31 06:47 (40)
19	09:10	08:02		06:44	06:16	07:30 (42)	05:02			04:27	06:16 (40)
	16:26	17:41		18:47	20:58	38 08:08 (42)	22:06			22:49	31 06:47 (40)
20	09:08	08:00		06:42	06:13	07:30 (42)	05:00			04:27	06:16 (40)
	16:28	17:43		18:49	21:00	39 08:09 (42)	22:08			22:50	31 06:47 (40)
21	09:07	07:57		06:39	06:11	07:30 (42)	04:58			04:27	06:16 (40)
	16:30	17:46		18:52	21:03	38 08:08 (42)	22:10			22:50	31 06:47 (40)
22	09:05	07:54		06:36	06:08	07:29 (42)	04:56			04:27	06:17 (40)
	16:32	17:48		18:54	21:05	39 08:08 (42)	22:12			22:50	31 06:48 (40)
23	09:03	07:52		06:33	06:05	07:29 (42)	04:55			04:28	06:17 (40)
	16:35	17:50		18:56	21:07	39 08:08 (42)	22:14			22:50	31 06:48 (40)
24	09:02	07:49		06:30	06:02	07:29 (42)	04:53			04:28	06:17 (40)
	16:37	17:53		18:58	21:10	38 08:07 (42)	22:16			22:50	31 06:48 (40)
25	09:00	07:46		06:27	06:00	07:29 (42)	04:51			04:28	06:18 (40)
	16:39	17:55		19:01	21:12	38 08:07 (42)	22:18			22:50	31 06:49 (40)
26	08:58	07:44		06:24	05:57	07:29 (42)	04:49		06:24 (40)	04:29	06:18 (40)
	16:42	17:58		19:03	21:14	37 08:06 (42)	22:20	8	06:32 (40)	22:50	31 06:49 (40)
27	08:56	07:41		06:21	05:54	07:29 (42)	04:48		06:21 (40)	04:29	06:19 (40)
	16:44	18:00		19:05	21:17	37 08:06 (42)	22:22	13	06:34 (40)	22:50	30 06:49 (40)
28	08:54	07:38		06:18	05:52	07:29 (42)	04:46		06:20 (40)	04:30	06:18 (40)
	16:47	18:02		19:08	21:19	36 08:05 (42)	22:24	16	06:36 (40)	22:50	31 06:49 (40)
29	08:52			07:16	05:49	07:30 (42)	04:44		06:19 (40)	04:31	06:19 (40)
	16:49			20:10	21:21	34 08:04 (42)	22:25	18	06:37 (40)	22:49	30 06:49 (40)
30	08:50			07:13	05:47	07:30 (42)	04:43		06:19 (40)	04:31	06:19 (40)
	16:51			20:12	21:24	33 08:03 (42)	22:27	20	06:39 (40)	22:49	30 06:49 (40)
31	08:48			07:10			04:41		06:17 (40)		
	16:54			20:14			22:29	22	06:39 (40)		
Potential sun hours	221	260		365	432		521			547	
Total, worst case			104			691		254			878

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December
1	04:32		06:20 (40)	05:24			06:33		07:44 (42)	07:39			07:51		08:28 (89)	09:00
	22:48	30	06:50 (40)	22:01			20:40	17	08:01 (42)	19:13			16:49	9	08:37 (89)	15:51
2	04:33		06:20 (40)	05:27			06:35		07:47 (42)	07:42			07:54		08:30 (89)	09:01
	22:48	30	06:50 (40)	21:58			20:37	10	07:57 (42)	19:10			16:47	6	08:36 (89)	15:50
3	04:34		06:20 (40)	05:29			06:38			07:44			07:56		08:33 (89)	09:03
	22:47	29	06:49 (40)	21:56			20:34			19:07			16:44	1	08:34 (89)	15:49
4	04:35		06:20 (40)	05:31			06:40			07:46			07:59			09:05
	22:46	29	06:49 (40)	21:54			20:31			19:05			16:42			15:48
5	04:36		06:21 (40)	05:33			06:42			07:48			08:01			09:07
	22:46	28	06:49 (40)	21:51			20:28			19:02			16:39			15:47
6	04:38		06:21 (40)	05:35		07:49 (42)	06:44			07:51			08:03			09:09
	22:45	28	06:49 (40)	21:49	13	08:02 (42)	20:25			18:59			16:37			15:47
7	04:39		06:23 (40)	05:38		07:46 (42)	06:47			07:53			08:06			09:10
	22:44	27	06:50 (40)	21:47	18	08:04 (42)	20:23			18:56			16:35			15:46
8	04:40		06:23 (40)	05:40		07:44 (42)	06:49			07:55			08:08			09:12
	22:43	26	06:49 (40)	21:44	22	08:06 (42)	20:20			18:53			16:32			15:45
9	04:42		06:23 (40)	05:42		07:43 (42)	06:51			07:57			08:11			09:13
	22:42	26	06:49 (40)	21:42	25	08:08 (42)	20:17			18:50			16:30			15:44
10	04:43		06:24 (40)	05:44		07:41 (42)	06:53			08:00			08:13			09:15
	22:40	24	06:48 (40)	21:39	28	08:09 (42)	20:14			18:48			16:28			15:44
11	04:45		06:25 (40)	05:46		07:40 (42)	06:55			08:02			08:15			09:16
	22:39	23	06:48 (40)	21:37	30	08:10 (42)	20:11			18:45			16:26			15:43
12	04:46		06:25 (40)	05:49		07:39 (42)	06:58			08:04			08:18			09:17
	22:38	23	06:48 (40)	21:34	32	08:11 (42)	20:08			18:42			16:24			15:43
13	04:48		06:26 (40)	05:51		07:38 (42)	07:00			08:07			08:20			09:19
	22:36	21	06:47 (40)	21:32	33	08:11 (42)	20:05			18:39			16:22			15:43
14	04:49		06:28 (40)	05:53		07:37 (42)	07:02			08:09			08:22			09:20
	22:35	18	06:46 (40)	21:29	35	08:12 (42)	20:02			18:36			16:19			15:43
15	04:51		06:28 (40)	05:55		07:36 (42)	07:04			08:11			08:25			09:21
	22:34	17	06:45 (40)	21:26	36	08:12 (42)	19:59			18:34			16:17			15:42
16	04:53		06:30 (40)	05:58		07:36 (42)	07:06			08:14			08:27			09:22
	22:32	14	06:44 (40)	21:24	37	08:13 (42)	19:57			18:31			16:15			15:42
17	04:54		06:31 (40)	06:00		07:35 (42)	07:09			08:16			08:29			09:23
	22:30	11	06:42 (40)	21:21	38	08:13 (42)	19:54			18:28			16:13			15:42
18	04:56		06:35 (40)	06:02		07:36 (42)	07:11			08:18			08:32			09:24
	22:29	5	06:40 (40)	21:18	38	08:14 (42)	19:51			18:25			16:12			15:42
19	04:58			06:04		07:35 (42)	07:13			08:21			08:34			09:25
	22:27			21:16	39	08:14 (42)	19:48			18:23			16:10			15:43
20	05:00			06:07		07:35 (42)	07:15			08:23			08:36			09:25
	22:25			21:13	38	08:13 (42)	19:45			18:20			16:08			15:43
21	05:02			06:09		07:34 (42)	07:17			08:25			08:39			09:26
	22:23			21:10	39	08:13 (42)	19:42			18:17			16:06			15:43
22	05:04			06:11		07:34 (42)	07:20			08:28			08:41			09:27
	22:22			21:08	39	08:13 (42)	19:39			18:15			16:04			15:44
23	05:06			06:13		07:34 (42)	07:22			08:30			08:43			09:27
	22:20			21:05	38	08:12 (42)	19:36			18:12			16:03			15:44
24	05:08			06:15		07:34 (42)	07:24			08:32		09:30 (89)	08:45			09:28
	22:18			21:02	37	08:11 (42)	19:33			18:09	3	09:33 (89)	16:01			15:45
25	05:10			06:18		07:34 (42)	07:26			07:35		08:28 (89)	08:47			09:28
	22:16			20:59	37	08:11 (42)	19:30			17:07	8	08:36 (89)	16:00			15:46
26	05:12			06:20		07:34 (42)	07:28			07:37		08:27 (89)	08:50			09:28
	22:14			20:57	36	08:10 (42)	19:28			17:04	11	08:38 (89)	15:58			15:46
27	05:14			06:22		07:35 (42)	07:31			07:39		08:25 (89)	08:52			09:28
	22:12			20:54	34	08:09 (42)	19:25			17:02	13	08:38 (89)	15:57			15:47
28	05:16			06:24		07:35 (42)	07:33			07:42		08:25 (89)	08:54			09:28
	22:10			20:51	32	08:07 (42)	19:22			16:59	14	08:39 (89)	15:55			15:48
29	05:18			06:27		07:36 (42)	07:35			07:44		08:24 (89)	08:56			09:28
	22:07			20:48	30	08:06 (42)	19:19			16:56	14	08:38 (89)	15:54			15:49
30	05:20			06:29		07:38 (42)	07:37			07:47		08:25 (89)	08:58			09:28
	22:05			20:45	27	08:05 (42)	19:16			16:54	13	08:38 (89)	15:53			15:50
31	05:22			06:31		07:41 (42)				07:49		08:26 (89)				09:28
	22:03			20:43	22	08:03 (42)				16:51	12	08:38 (89)				15:51
Potential sun hours	545			478			386			319			236			200
Total, worst case		409			833			27			88			16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:16 (89)	07:07	05:44			04:40		06:01 (42)
	15:53	16:56		18:05	15	08:31 (89)	20:17	21:26			22:30	34	06:35 (42)
2	09:27	08:43		07:33		08:17 (89)	07:04	05:42			04:39		06:01 (42)
	15:54	16:59		18:07	13	08:30 (89)	20:19	21:28			22:32	35	06:36 (42)
3	09:27	08:41		07:30		08:18 (89)	07:01	05:39			04:38		06:01 (42)
	15:56	17:01		18:10	10	08:28 (89)	20:21	21:30			22:33	35	06:36 (42)
4	09:26	08:39		07:27		08:20 (89)	06:58	05:37			04:36		06:00 (42)
	15:57	17:04		18:12	5	08:25 (89)	20:24	21:33			22:35	36	06:36 (42)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:01 (42)
	15:59	17:06		18:14			20:26	21:35			22:36	36	06:37 (42)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:01 (42)
	16:00	17:09		18:17			20:28	21:37			22:38	36	06:37 (42)
7	09:24	08:32		07:19			06:50	05:29			04:33		06:01 (42)
	16:02	17:11		18:19			20:31	21:40			22:39	36	06:37 (42)
8	09:24	08:30		07:16		07:46 (88)	06:47	05:27			04:32		06:01 (42)
	16:04	17:14		18:21	7	07:53 (88)	20:33	21:42			22:40	36	06:37 (42)
9	09:23	08:27		07:13		07:44 (88)	06:44	05:24			04:31		06:02 (42)
	16:06	17:16		18:24	10	07:54 (88)	20:35	21:44			22:41	36	06:38 (42)
10	09:22	08:25		07:10		07:43 (88)	06:41	05:22			04:31		06:01 (42)
	16:07	17:19		18:26	13	07:56 (88)	20:37	21:46			22:43	37	06:38 (42)
11	09:21	08:23		07:07		07:42 (88)	06:38	05:20			04:30		06:02 (42)
	16:09	17:21		18:28	14	07:56 (88)	20:40	21:49			22:44	37	06:39 (42)
12	09:20	08:20		07:04		07:42 (88)	06:36	05:17			04:29		06:02 (42)
	16:11	17:23		18:31	14	07:56 (88)	20:42	21:51			22:45	36	06:38 (42)
13	09:18	08:18		07:02		07:41 (88)	06:33	05:15			04:29		06:02 (42)
	16:13	17:26		18:33	15	07:56 (88)	20:44	21:53			22:46	37	06:39 (42)
14	09:17	08:15		06:59		07:42 (88)	06:30	05:13			04:28		06:03 (42)
	16:15	17:28		18:35	13	07:55 (88)	20:47	21:55			22:46	36	06:39 (42)
15	09:16	08:13		06:56		07:42 (88)	06:27	05:11			04:28		06:02 (42)
	16:17	17:31		18:38	11	07:53 (88)	20:49	21:57			22:47	37	06:39 (42)
16	09:14	08:10		06:53		07:44 (88)	06:24	05:09			04:28		06:02 (42)
	16:19	17:33		18:40	7	07:51 (88)	20:51	22:00			22:48	37	06:39 (42)
17	09:13	08:07		06:50			06:22	05:06		06:12 (42)	04:27		06:03 (42)
	16:21	17:36		18:42			20:54	22:02	10	06:22 (42)	22:48	37	06:40 (42)
18	09:12	08:05		06:47			06:19	05:04		06:11 (42)	04:27		06:03 (42)
	16:24	17:38		18:45			20:56	22:04	14	06:25 (42)	22:49	37	06:40 (42)
19	09:10	08:02		06:44			06:16	05:02		06:09 (42)	04:27		06:03 (42)
	16:26	17:41		18:47			20:58	22:06	18	06:27 (42)	22:49	37	06:40 (42)
20	09:08	08:00		06:42			06:13	05:00		06:08 (42)	04:27		06:03 (42)
	16:28	17:43		18:49			21:00	22:08	20	06:28 (42)	22:50	37	06:40 (42)
21	09:07	07:57		06:39			06:11	04:58		06:06 (42)	04:27		06:03 (42)
	16:30	17:46		18:52			21:03	22:10	23	06:29 (42)	22:50	37	06:40 (42)
22	09:05	07:54		06:36			06:08	04:56		06:05 (42)	04:27		06:04 (42)
	16:32	17:48		18:54			21:05	22:12	25	06:30 (42)	22:50	37	06:41 (42)
23	09:03	07:52		06:33			06:05	04:55		06:03 (42)	04:28		06:04 (42)
	16:35	17:50	8	08:29 (89)	18:56			21:07	22:14	28	06:31 (42)	22:50	37	06:41 (42)
24	09:02	07:49		08:18 (89)	06:30			06:02	04:53		06:03 (42)	04:28		06:04 (42)
	16:37	17:53	12	08:30 (89)	18:58			21:10	22:16	29	06:32 (42)	22:50	37	06:41 (42)
25	09:00	07:46		08:17 (89)	06:27			06:00	04:51		06:02 (42)	04:28		06:05 (42)
	16:39	17:55	14	08:31 (89)	19:01			21:12	22:18	30	06:32 (42)	22:50	37	06:42 (42)
26	08:58	07:44		08:16 (89)	06:24			05:57	04:49		06:02 (42)	04:29		06:05 (42)
	16:42	17:58	15	08:31 (89)	19:03			21:14	22:20	31	06:33 (42)	22:50	36	06:41 (42)
27	08:56	07:41		08:15 (89)	06:21			05:54	04:48		06:01 (42)	04:29		06:05 (42)
	16:44	18:00	16	08:31 (89)	19:05			21:17	22:22	32	06:33 (42)	22:50	37	06:42 (42)
28	08:54	07:38		08:15 (89)	06:18			05:52	04:46		06:01 (42)	04:30		06:05 (42)
	16:47	18:02	15	08:30 (89)	19:08			21:19	22:24	33	06:34 (42)	22:50	37	06:42 (42)
29	08:52				07:16			05:49	04:44		06:01 (42)	04:31		06:05 (42)
	16:49				20:10			21:21	22:25	34	06:35 (42)	22:49	37	06:42 (42)
30	08:50				07:13			05:47	04:43		06:01 (42)	04:32		06:06 (42)
	16:51				20:12			21:24	22:27	34	06:35 (42)	22:49	37	06:43 (42)
31	08:48				07:10				04:41		06:01 (42)			
	16:54				20:14				22:29	34	06:35 (42)			
Potential sun hours	221	260			365			432	521			547		
Total, worst case			80			147				395			1094	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August		September			October			November	December
1	04:32		06:06 (42)	05:24		06:33			07:39		08:21 (88)	07:51	09:00
	22:48	37	06:43 (42)	22:01		20:40			19:13	14	08:35 (88)	16:49	15:52
2	04:33		06:07 (42)	05:27		06:35			07:42		08:20 (88)	07:54	09:01
	22:48	36	06:43 (42)	21:58		20:37			19:10	15	08:35 (88)	16:47	15:50
3	04:34		06:06 (42)	05:29		06:38			07:44		08:20 (88)	07:56	09:03
	22:47	37	06:43 (42)	21:56		20:34			19:07	13	08:33 (88)	16:44	15:49
4	04:35		06:06 (42)	05:31		06:40			07:46		08:21 (88)	07:59	09:05
	22:46	37	06:43 (42)	21:54		20:31			19:05	12	08:33 (88)	16:42	15:48
5	04:37		06:06 (42)	05:33		06:42			07:48		08:22 (88)	08:01	09:07
	22:46	37	06:43 (42)	21:51		20:28			19:02	9	08:31 (88)	16:39	15:47
6	04:38		06:08 (42)	05:35		06:44			07:51			08:03	09:09
	22:45	36	06:44 (42)	21:49		20:25			18:59			16:37	15:47
7	04:39		06:08 (42)	05:38		06:47			07:53			08:06	09:10
	22:44	36	06:44 (42)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:08 (42)	05:40		06:49			07:55			08:08	09:12
	22:43	36	06:44 (42)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:08 (42)	05:42		06:51			07:57			08:11	09:13
	22:42	36	06:44 (42)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:08 (42)	05:44		06:53			08:00		08:54 (89)	08:13	09:15
	22:40	35	06:43 (42)	21:39		20:14			18:48	7	09:01 (89)	16:28	15:44
11	04:45		06:09 (42)	05:46		06:55			08:02		08:51 (89)	08:15	09:16
	22:39	35	06:44 (42)	21:37		20:11			18:45	11	09:02 (89)	16:26	15:43
12	04:46		06:09 (42)	05:49		06:58			08:04		08:49 (89)	08:18	09:17
	22:38	35	06:44 (42)	21:34		20:08			18:42	14	09:03 (89)	16:24	15:43
13	04:48		06:09 (42)	05:51		07:00			08:07		08:49 (89)	08:20	09:19
	22:36	34	06:43 (42)	21:31		20:05			18:39	15	09:04 (89)	16:22	15:43
14	04:49		06:10 (42)	05:53		07:02			08:09		08:48 (89)	08:22	09:20
	22:35	33	06:43 (42)	21:29		20:02			18:36	15	09:03 (89)	16:19	15:43
15	04:51		06:10 (42)	05:55		07:04			08:11		08:48 (89)	08:25	09:21
	22:34	33	06:43 (42)	21:26		19:59			18:34	16	09:04 (89)	16:17	15:42
16	04:53		06:11 (42)	05:58		07:06			08:14		08:48 (89)	08:27	09:22
	22:32	32	06:43 (42)	21:24		19:57			18:31	15	09:03 (89)	16:15	15:42
17	04:54		06:11 (42)	06:00		07:09			08:16		08:49 (89)	08:29	09:23
	22:30	31	06:42 (42)	21:21		19:54			18:28	13	09:02 (89)	16:14	15:42
18	04:56		06:12 (42)	06:02		07:11			08:18		08:50 (89)	08:32	09:24
	22:29	30	06:42 (42)	21:18		19:51			18:25	11	09:01 (89)	16:12	15:42
19	04:58		06:13 (42)	06:04		07:13			08:20		08:53 (89)	08:34	09:25
	22:27	29	06:42 (42)	21:16		19:48			18:23	6	08:59 (89)	16:10	15:43
20	05:00		06:13 (42)	06:07		07:15			08:23			08:36	09:25
	22:25	28	06:41 (42)	21:13		19:45			18:20			16:08	15:43
21	05:02		06:14 (42)	06:09		07:17			08:25			08:39	09:26
	22:23	27	06:41 (42)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:16 (42)	06:11		07:20			08:28			08:41	09:27
	22:22	24	06:40 (42)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:17 (42)	06:13		07:22			08:30			08:43	09:27
	22:20	21	06:38 (42)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:18 (42)	06:15		07:24			08:32			08:45	09:28
	22:18	19	06:37 (42)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:20 (42)	06:18		07:26			07:35			08:47	09:28
	22:16	16	06:36 (42)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:22 (42)	06:20		07:28			07:37			08:49	09:28
	22:14	12	06:34 (42)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:25 (42)	06:22		07:31		08:27 (88)	07:39			08:52	09:28
	22:12	6	06:31 (42)	20:54		19:25	5	08:32 (88)	17:02			15:57	15:47
28	05:16			06:24		07:33		08:24 (88)	07:42			08:54	09:28
	22:10			20:51		19:22	10	08:34 (88)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:22 (88)	07:44			08:56	09:28
	22:07			20:48		19:19	12	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:21 (88)	07:47			08:58	09:28
	22:05			20:45		19:16	14	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		808					41			186			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:18 (89)	07:07	05:44			04:40		06:18 (42)
	15:53	16:56		18:05	13	08:31 (89)	20:17	21:26			22:30	28	06:46 (42)
2	09:27	08:43		07:33		08:19 (89)	07:04	05:42			04:39		06:18 (42)
	15:54	16:59		18:07	10	08:29 (89)	20:19	21:28			22:32	28	06:46 (42)
3	09:27	08:41		07:30		08:21 (89)	07:01	05:39			04:38		06:17 (42)
	15:56	17:01		18:10	5	08:26 (89)	20:21	21:31			22:33	29	06:46 (42)
4	09:26	08:39		07:27			06:58	05:37			04:36		06:16 (42)
	15:57	17:04		18:12			20:24	21:33			22:35	30	06:46 (42)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:16 (42)
	15:59	17:06		18:14			20:26	21:35			22:36	31	06:47 (42)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:15 (42)
	16:00	17:09		18:17			20:28	21:37			22:38	32	06:47 (42)
7	09:24	08:32		07:19		07:48 (88)	06:50	05:29			04:33		06:14 (42)
	16:02	17:11		18:19	6	07:54 (88)	20:31	21:40			22:39	32	06:46 (42)
8	09:24	08:30		07:16		07:46 (88)	06:47	05:27			04:32		06:13 (42)
	16:04	17:14		18:21	10	07:56 (88)	20:33	21:42			22:40	33	06:46 (42)
9	09:23	08:27		07:13		07:44 (88)	06:44	05:24			04:31		06:14 (42)
	16:06	17:16		18:24	13	07:57 (88)	20:35	21:44			22:41	33	06:47 (42)
10	09:22	08:25		07:10		07:44 (88)	06:41	05:22			04:31		06:13 (42)
	16:07	17:19		18:26	14	07:58 (88)	20:37	21:46			22:43	33	06:46 (42)
11	09:21	08:23		07:07		07:44 (88)	06:38	05:20			04:30		06:14 (42)
	16:09	17:21		18:28	14	07:58 (88)	20:40	21:49			22:44	33	06:47 (42)
12	09:20	08:20		07:04		07:44 (88)	06:36	05:17			04:29		06:14 (42)
	16:11	17:23		18:31	13	07:57 (88)	20:42	21:51			22:45	32	06:46 (42)
13	09:18	08:18		07:02		07:44 (88)	06:33	05:15			04:29		06:14 (42)
	16:13	17:26		18:33	12	07:56 (88)	20:44	21:53			22:46	33	06:47 (42)
14	09:17	08:15		06:59		07:45 (88)	06:30	05:13			04:28		06:15 (42)
	16:15	17:28		18:35	10	07:55 (88)	20:47	21:55			22:46	32	06:47 (42)
15	09:16	08:13		06:56		07:46 (88)	06:27	05:11			04:28		06:15 (42)
	16:17	17:31		18:38	6	07:52 (88)	20:49	21:57			22:47	32	06:47 (42)
16	09:14	08:10		06:53			06:24	05:09		06:39 (42)	04:28		06:15 (42)
	16:19	17:33		18:40			20:51	22:00	2	06:41 (42)	22:48	32	06:47 (42)
17	09:13	08:07		06:50			06:22	05:06		06:37 (42)	04:27		06:15 (42)
	16:21	17:36		18:42			20:54	22:02	4	06:41 (42)	22:48	32	06:47 (42)
18	09:12	08:05		06:47			06:19	05:04		06:36 (42)	04:27		06:16 (42)
	16:24	17:38		18:45			20:56	22:04	7	06:43 (42)	22:49	31	06:47 (42)
19	09:10	08:02		06:44			06:16	05:02		06:35 (42)	04:27		06:16 (42)
	16:26	17:41		18:47			20:58	22:06	8	06:43 (42)	22:49	31	06:47 (42)
20	09:08	08:00		06:42			06:13	05:00		06:33 (42)	04:27		06:16 (42)
	16:28	17:43		18:49			21:00	22:08	10	06:43 (42)	22:50	31	06:47 (42)
21	09:07	07:57		06:39			06:11	04:58		06:31 (42)	04:27		06:16 (42)
	16:30	17:46		18:52			21:03	22:10	12	06:43 (42)	22:50	31	06:47 (42)
22	09:05	07:54		06:36			06:08	04:56		06:30 (42)	04:27		06:17 (42)
	16:32	17:48	5	08:28 (89)	18:54			21:05	22:12	14	06:44 (42)	22:50	31	06:48 (42)
23	09:03	07:52		08:21 (89)	06:33			06:05	04:55		06:29 (42)	04:28		06:17 (42)
	16:35	17:50	10	08:31 (89)	18:56			21:07	22:14	15	06:44 (42)	22:50	31	06:48 (42)
24	09:02	07:49		08:18 (89)	06:30			06:02	04:53		06:28 (42)	04:28		06:17 (42)
	16:37	17:53	13	08:31 (89)	18:58			21:10	22:16	17	06:45 (42)	22:50	31	06:48 (42)
25	09:00	07:46		08:17 (89)	06:27			06:00	04:51		06:26 (42)	04:28		06:18 (42)
	16:39	17:55	15	08:32 (89)	19:01			21:12	22:18	19	06:45 (42)	22:50	31	06:49 (42)
26	08:58	07:44		08:17 (89)	06:24			05:57	04:49		06:25 (42)	04:29		06:17 (42)
	16:42	17:58	15	08:32 (89)	19:03			21:14	22:20	20	06:45 (42)	22:50	32	06:49 (42)
27	08:56	07:41		08:17 (89)	06:21			05:54	04:48		06:23 (42)	04:29		06:18 (42)
	16:44	18:00	14	08:31 (89)	19:05			21:17	22:22	22	06:45 (42)	22:50	32	06:50 (42)
28	08:54	07:38		08:17 (89)	06:18			05:52	04:46		06:23 (42)	04:30		06:17 (42)
	16:47	18:02	14	08:31 (89)	19:08			21:19	22:24	22	06:45 (42)	22:50	32	06:49 (42)
29	08:52				07:16			05:49	04:44		06:22 (42)	04:31		06:18 (42)
	16:49				20:10			21:21	22:25	24	06:46 (42)	22:49	32	06:50 (42)
30	08:50				07:13			05:47	04:43		06:21 (42)	04:32		06:18 (42)
	16:51				20:12			21:24	22:27	25	06:46 (42)	22:49	33	06:51 (42)
31	08:48				07:10				04:41		06:19 (42)			
	16:54				20:14				22:29	26	06:45 (42)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			86			126			247			944	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August		September			October			November	December
1	04:32		06:18 (42)	05:24		06:33			07:39		08:23 (88)	07:51	09:00
	22:48	33	06:51 (42)	22:01		20:40			19:13	13	08:36 (88)	16:49	15:52
2	04:33		06:19 (42)	05:27		06:35			07:42		08:22 (88)	07:54	09:01
	22:48	33	06:52 (42)	21:58		20:37			19:10	14	08:36 (88)	16:47	15:50
3	04:34		06:18 (42)	05:29		06:38			07:44		08:21 (88)	07:56	09:03
	22:47	33	06:51 (42)	21:56		20:34			19:07	14	08:35 (88)	16:44	15:49
4	04:35		06:18 (42)	05:31		06:40			07:46		08:22 (88)	07:59	09:05
	22:46	33	06:51 (42)	21:54		20:31			19:05	13	08:35 (88)	16:42	15:48
5	04:37		06:19 (42)	05:33		06:42			07:48		08:22 (88)	08:01	09:07
	22:46	33	06:52 (42)	21:51		20:28			19:02	12	08:34 (88)	16:39	15:47
6	04:38		06:21 (42)	05:35		06:44			07:51		08:23 (88)	08:03	09:09
	22:45	32	06:53 (42)	21:49		20:25			18:59	9	08:32 (88)	16:37	15:47
7	04:39		06:22 (42)	05:38		06:47			07:53			08:06	09:10
	22:44	31	06:53 (42)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:23 (42)	05:40		06:49			07:55			08:08	09:12
	22:43	30	06:53 (42)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:24 (42)	05:42		06:51			07:57			08:11	09:13
	22:42	29	06:53 (42)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:25 (42)	05:44		06:53			08:00			08:13	09:15
	22:40	28	06:53 (42)	21:39		20:14			18:48			16:28	15:44
11	04:45		06:26 (42)	05:46		06:55			08:02		08:54 (89)	08:15	09:16
	22:39	28	06:54 (42)	21:37		20:11			18:45	7	09:01 (89)	16:26	15:43
12	04:46		06:27 (42)	05:49		06:58			08:04		08:51 (89)	08:18	09:17
	22:38	27	06:54 (42)	21:34		20:08			18:42	12	09:03 (89)	16:24	15:43
13	04:48		06:28 (42)	05:51		07:00			08:07		08:51 (89)	08:20	09:19
	22:36	26	06:54 (42)	21:32		20:05			18:39	13	09:04 (89)	16:22	15:43
14	04:49		06:30 (42)	05:53		07:02			08:09		08:49 (89)	08:22	09:20
	22:35	24	06:54 (42)	21:29		20:02			18:36	15	09:04 (89)	16:19	15:43
15	04:51		06:31 (42)	05:55		07:04			08:11		08:49 (89)	08:25	09:21
	22:34	23	06:54 (42)	21:26		19:59			18:34	15	09:04 (89)	16:17	15:42
16	04:53		06:33 (42)	05:58		07:06			08:14		08:49 (89)	08:27	09:22
	22:32	22	06:55 (42)	21:24		19:57			18:31	15	09:04 (89)	16:15	15:42
17	04:54		06:33 (42)	06:00		07:09			08:16		08:50 (89)	08:29	09:23
	22:30	21	06:54 (42)	21:21		19:54			18:28	14	09:04 (89)	16:14	15:42
18	04:56		06:35 (42)	06:02		07:11			08:18		08:50 (89)	08:32	09:24
	22:29	20	06:55 (42)	21:18		19:51			18:25	12	09:02 (89)	16:12	15:42
19	04:58		06:37 (42)	06:04		07:13			08:21		08:53 (89)	08:34	09:25
	22:27	18	06:55 (42)	21:16		19:48			18:23	8	09:01 (89)	16:10	15:43
20	05:00		06:38 (42)	06:07		07:15			08:23		08:55 (89)	08:36	09:25
	22:25	16	06:54 (42)	21:13		19:45			18:20	3	08:58 (89)	16:08	15:43
21	05:02		06:39 (42)	06:09		07:17			08:25			08:39	09:26
	22:23	15	06:54 (42)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:41 (42)	06:11		07:20			08:28			08:41	09:27
	22:22	13	06:54 (42)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:42 (42)	06:13		07:22			08:30			08:43	09:27
	22:20	11	06:53 (42)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:44 (42)	06:15		07:24			08:32			08:45	09:28
	22:18	9	06:53 (42)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:45 (42)	06:18		07:26			07:35			08:47	09:28
	22:16	8	06:53 (42)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:47 (42)	06:20		07:28			07:37			08:49	09:28
	22:14	6	06:53 (42)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:49 (42)	06:22		07:31			07:39			08:52	09:28
	22:12	3	06:52 (42)	20:54		19:25			17:02			15:57	15:47
28	05:16		06:51 (42)	06:24		07:33		08:29 (88)	07:42			08:54	09:28
	22:10	1	06:52 (42)	20:51		19:22	3	08:32 (88)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:25 (88)	07:44			08:56	09:28
	22:07			20:48		19:19	9	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:23 (88)	07:47			08:58	09:28
	22:05			20:45		19:16	12	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		606					24			189			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:11 (88)	07:07	05:44		07:08 (42)	04:40		06:45 (42)
	15:53	16:56		18:05	6	08:17 (88)	20:17	21:26	1	07:09 (42)	22:30	32	07:17 (42)
2	09:27	08:43		07:33		08:08 (88)	07:04	05:42		07:06 (42)	04:39		06:46 (42)
	15:54	16:59		18:07	11	08:19 (88)	20:19	21:28	6	07:12 (42)	22:32	31	07:17 (42)
3	09:27	08:41		07:30		08:06 (88)	07:01	05:39		07:04 (42)	04:38		06:46 (42)
	15:56	17:01		18:10	13	08:19 (88)	20:21	21:31	9	07:13 (42)	22:33	31	07:17 (42)
4	09:26	08:39		07:27		08:05 (88)	06:58	05:37		07:02 (42)	04:36		06:47 (42)
	15:57	17:04		18:12	14	08:19 (88)	20:24	21:33	13	07:15 (42)	22:35	29	07:16 (42)
5	09:26	08:37		07:24		08:05 (88)	06:55	05:34		07:00 (42)	04:35		06:48 (42)
	15:59	17:06		18:14	14	08:19 (88)	20:26	21:35	16	07:16 (42)	22:36	29	07:17 (42)
6	09:25	08:34		07:21		08:05 (88)	06:53	05:32		06:58 (42)	04:34		06:49 (42)
	16:00	17:09		18:17	13	08:18 (88)	20:28	21:37	19	07:17 (42)	22:38	27	07:16 (42)
7	09:24	08:32		07:19		08:05 (88)	06:50	05:29		06:55 (42)	04:33		06:49 (42)
	16:02	17:11		18:19	12	08:17 (88)	20:31	21:40	22	07:17 (42)	22:39	27	07:16 (42)
8	09:24	08:30		07:16		08:06 (88)	06:47	05:27		06:54 (42)	04:32		06:49 (42)
	16:04	17:14		18:21	10	08:16 (88)	20:33	21:42	24	07:18 (42)	22:40	26	07:15 (42)
9	09:23	08:27		07:13		08:08 (88)	06:44	05:24		06:52 (42)	04:31		06:50 (42)
	16:06	17:16		18:24	5	08:13 (88)	20:35	21:44	27	07:19 (42)	22:42	26	07:16 (42)
10	09:22	08:25		07:10			06:41	05:22		06:50 (42)	04:31		06:51 (42)
	16:07	17:18		18:26			20:37	21:46	29	07:19 (42)	22:43	24	07:15 (42)
11	09:21	08:23		07:07			06:38	05:20		06:48 (42)	04:30		06:52 (42)
	16:09	17:21		18:28			20:40	21:49	32	07:20 (42)	22:44	23	07:15 (42)
12	09:20	08:20		07:04			06:36	05:17		06:46 (42)	04:29		06:52 (42)
	16:11	17:23		18:31			20:42	21:51	34	07:20 (42)	22:45	22	07:14 (42)
13	09:18	08:18		07:02			06:33	05:15		06:45 (42)	04:29		06:53 (42)
	16:13	17:26		18:33			20:44	21:53	35	07:20 (42)	22:46	21	07:14 (42)
14	09:17	08:15		06:59			06:30	05:13		06:43 (42)	04:28		06:53 (42)
	16:15	17:28		18:35			20:47	21:55	37	07:20 (42)	22:46	22	07:15 (42)
15	09:16	08:13	08:44 (89)	06:56			06:27	05:11		06:41 (42)	04:28		06:53 (42)
	16:17	17:31	6 08:50 (89)	18:38			20:49	21:57	39	07:20 (42)	22:47	21	07:14 (42)
16	09:14	08:10	08:42 (89)	06:53			06:24	05:09		06:41 (42)	04:28		06:54 (42)
	16:19	17:33	10 08:52 (89)	18:40			20:51	22:00	39	07:20 (42)	22:48	20	07:14 (42)
17	09:13	08:07	08:40 (89)	06:50			06:22	05:06		06:40 (42)	04:27		06:54 (42)
	16:21	17:36	13 08:53 (89)	18:42			20:54	22:02	40	07:20 (42)	22:48	20	07:14 (42)
18	09:12	08:05	08:40 (89)	06:47			06:19	05:04		06:41 (42)	04:27		06:55 (42)
	16:24	17:38	14 08:54 (89)	18:45			20:56	22:04	40	07:21 (42)	22:49	19	07:14 (42)
19	09:10	08:02	08:39 (89)	06:44			06:16	05:02		06:41 (42)	04:27		06:55 (42)
	16:26	17:41	15 08:54 (89)	18:47			20:58	22:06	40	07:21 (42)	22:49	19	07:14 (42)
20	09:08	08:00	08:39 (89)	06:42			06:13	05:00		06:41 (42)	04:27		06:55 (42)
	16:28	17:43	15 08:54 (89)	18:49			21:00	22:08	39	07:20 (42)	22:50	19	07:14 (42)
21	09:07	07:57	08:39 (89)	06:39			06:11	04:58		06:41 (42)	04:27		06:55 (42)
	16:30	17:46	14 08:53 (89)	18:52			21:03	22:10	39	07:20 (42)	22:50	19	07:14 (42)
22	09:05	07:54	08:39 (89)	06:36			06:08	04:56		06:41 (42)	04:27		06:56 (42)
	16:32	17:48	13 08:52 (89)	18:54			21:05	22:12	39	07:20 (42)	22:50	19	07:15 (42)
23	09:03	07:52	08:41 (89)	06:33			06:05	04:55		06:41 (42)	04:28		06:56 (42)
	16:35	17:50	11 08:52 (89)	18:56			21:07	22:14	39	07:20 (42)	22:50	19	07:15 (42)
24	09:02	07:49	08:42 (89)	06:30			06:02	04:53		06:42 (42)	04:28		06:56 (42)
	16:37	17:53	8 08:50 (89)	18:58			21:10	22:16	38	07:20 (42)	22:50	19	07:15 (42)
25	09:00	07:46		06:27			06:00	04:51		06:42 (42)	04:28		06:57 (42)
	16:39	17:55		19:01			21:12	22:18	37	07:19 (42)	22:50	19	07:16 (42)
26	08:58	07:44		06:24			05:57	04:49		06:43 (42)	04:29		06:56 (42)
	16:42	17:58		19:03			21:14	22:20	37	07:20 (42)	22:50	20	07:16 (42)
27	08:56	07:41		06:21			05:54	04:48		06:43 (42)	04:29		06:56 (42)
	16:44	18:00		19:05			21:17	22:22	36	07:19 (42)	22:50	21	07:17 (42)
28	08:54	07:38		06:18			05:52	04:46		06:43 (42)	04:30		06:56 (42)
	16:47	18:02		19:08			21:19	22:24	36	07:19 (42)	22:50	21	07:17 (42)
29	08:52			07:16			05:49	04:44		06:44 (42)	04:31		06:56 (42)
	16:49			20:10			21:21	22:25	35	07:19 (42)	22:49	21	07:17 (42)
30	08:50			07:13			05:47	04:43		06:45 (42)	04:32		06:56 (42)
	16:51			20:12			21:24	22:27	34	07:19 (42)	22:49	22	07:18 (42)
31	08:48			07:10				04:41		06:44 (42)			
	16:54			20:14				22:29	34	07:18 (42)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			119		98				945			688	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September	October		November	December
1	04:32		06:56 (42)	05:24	06:57 (42)	06:33	07:39	07:51	09:00
	22:48	23	07:19 (42)	22:01	33 07:30 (42)	20:40	19:13	16:49	15:52
2	04:33		06:56 (42)	05:27	06:59 (42)	06:35	07:42	07:54	09:01
	22:48	24	07:20 (42)	21:58	31 07:30 (42)	20:37	19:10	16:47	15:50
3	04:34		06:55 (42)	05:29	07:01 (42)	06:38	07:44	07:56	09:03
	22:47	25	07:20 (42)	21:56	28 07:29 (42)	20:34	19:07	16:44	15:49
4	04:35		06:55 (42)	05:31	07:03 (42)	06:40	07:46	07:59	09:05
	22:46	25	07:20 (42)	21:54	26 07:29 (42)	20:31	19:05	16:42	15:48
5	04:37		06:54 (42)	05:33	07:05 (42)	06:42	07:48	08:44 (88)	08:01 09:07
	22:46	27	07:21 (42)	21:51	23 07:28 (42)	20:28	19:02	8 08:52 (88)	16:39 15:47
6	04:38		06:55 (42)	05:35	07:06 (42)	06:44	07:51	08:42 (88)	08:03 09:09
	22:45	28	07:23 (42)	21:49	21 07:27 (42)	20:25	18:59	11 08:53 (88)	16:37 15:47
7	04:39		06:55 (42)	05:38	07:08 (42)	06:47	07:53	08:41 (88)	08:06 09:10
	22:44	28	07:23 (42)	21:47	18 07:26 (42)	20:23	18:56	13 08:54 (88)	16:35 15:46
8	04:40		06:54 (42)	05:40	07:10 (42)	06:49	07:55	08:40 (88)	08:08 09:12
	22:43	30	07:24 (42)	21:44	15 07:25 (42)	20:20	18:53	14 08:54 (88)	16:32 15:45
9	04:42		06:54 (42)	05:42	07:12 (42)	06:51	07:57	08:39 (88)	08:11 09:13
	22:42	30	07:24 (42)	21:42	12 07:24 (42)	20:17	18:50	15 08:54 (88)	16:30 15:44
10	04:43		06:53 (42)	05:44	07:13 (42)	06:53	08:00	08:40 (88)	08:13 09:15
	22:40	31	07:24 (42)	21:39	9 07:22 (42)	20:14	18:48	14 08:54 (88)	16:28 15:44
11	04:45		06:54 (42)	05:46	07:15 (42)	06:55	08:02	08:40 (88)	08:15 09:16
	22:39	32	07:26 (42)	21:37	5 07:20 (42)	20:11	18:45	13 08:53 (88)	16:26 15:43
12	04:46		06:53 (42)	05:49		06:58	08:04	08:42 (88)	08:18 09:17
	22:38	33	07:26 (42)	21:34		20:08	18:42	9 08:51 (88)	16:24 15:43
13	04:48		06:53 (42)	05:51		07:00	08:07	08:45 (88)	08:20 09:19
	22:36	33	07:26 (42)	21:32		20:05	18:39	4 08:49 (88)	16:22 15:43
14	04:49		06:53 (42)	05:53		07:02	08:09		08:22 09:20
	22:35	34	07:27 (42)	21:29		20:02	18:36		16:19 15:43
15	04:51		06:52 (42)	05:55		07:04	08:11		08:25 09:21
	22:34	35	07:27 (42)	21:26		19:59	18:34		16:17 15:42
16	04:53		06:52 (42)	05:58		07:06	08:14		08:27 09:22
	22:32	36	07:28 (42)	21:24		19:57	18:31		16:15 15:42
17	04:54		06:52 (42)	06:00		07:09	08:16	09:17 (89)	08:29 09:23
	22:30	36	07:28 (42)	21:21		19:54	18:28	2 09:19 (89)	16:13 15:42
18	04:56		06:52 (42)	06:02		07:11	08:18	09:13 (89)	08:32 09:24
	22:29	37	07:29 (42)	21:18		19:51	18:25	9 09:22 (89)	16:12 15:42
19	04:58		06:52 (42)	06:04		07:13	08:21	09:12 (89)	08:34 09:25
	22:27	38	07:30 (42)	21:16		19:48	18:23	12 09:24 (89)	16:10 15:43
20	05:00		06:51 (42)	06:07		07:15	08:23	09:10 (89)	08:36 09:25
	22:25	38	07:29 (42)	21:13		19:45	18:20	14 09:24 (89)	16:08 15:43
21	05:02		06:51 (42)	06:09		07:17	08:25	09:10 (89)	08:39 09:26
	22:23	39	07:30 (42)	21:10		19:42	18:17	15 09:25 (89)	16:06 15:43
22	05:04		06:52 (42)	06:11		07:19	08:28	09:09 (89)	08:41 09:27
	22:22	39	07:31 (42)	21:08		19:39	18:15	15 09:24 (89)	16:04 15:44
23	05:06		06:51 (42)	06:13		07:22	08:30	09:09 (89)	08:43 09:27
	22:20	39	07:30 (42)	21:05		19:36	18:12	15 09:24 (89)	16:03 15:44
24	05:08		06:51 (42)	06:15		07:24	08:32	09:09 (89)	08:45 09:28
	22:18	40	07:31 (42)	21:02		19:33	18:09	14 09:23 (89)	16:01 15:45
25	05:10		06:51 (42)	06:18		07:26	07:35	08:10 (89)	08:47 09:28
	22:16	40	07:31 (42)	20:59		19:30	17:07	13 08:23 (89)	16:00 15:46
26	05:12		06:51 (42)	06:20		07:28	07:37	08:13 (89)	08:49 09:28
	22:14	40	07:31 (42)	20:57		19:28	17:04	9 08:22 (89)	15:58 15:46
27	05:14		06:52 (42)	06:22		07:31	07:39	08:14 (89)	08:52 09:28
	22:12	39	07:31 (42)	20:54		19:25	17:02	5 08:19 (89)	15:57 15:47
28	05:16		06:52 (42)	06:24		07:33	07:42		08:54 09:28
	22:10	39	07:31 (42)	20:51		19:22	16:59		15:55 15:48
29	05:18		06:52 (42)	06:27		07:35	07:44		08:56 09:28
	22:07	38	07:30 (42)	20:48		19:19	16:56		15:54 15:49
30	05:20		06:54 (42)	06:29		07:37	07:47		08:58 09:28
	22:05	36	07:30 (42)	20:45		19:16	16:54		15:53 15:50
31	05:22		06:55 (42)	06:31			07:49		09:28
	22:03	35	07:30 (42)	20:43			16:51		15:51
Potential sun hours	545			478		386	319		236 200
Total, worst case		1047			221			224	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:24 (2)	08:46		10:12 (1)	07:35	08:22 (26)	07:07	05:44	04:40
	15:53	50	12:55 (4)	16:56	65	13:08 (4)	18:05	42	09:51 (3)	20:17	21:26	22:31
2	09:28		11:22 (2)	08:44		10:12 (1)	07:33	08:21 (26)	07:04	05:41	04:39
	15:54	54	12:56 (4)	16:59	63	13:07 (4)	18:07	37	09:47 (3)	20:19	21:28	22:32
3	09:27		11:20 (2)	08:41		10:13 (1)	07:30	08:21 (26)	07:01	05:39	04:37
	15:56	57	12:56 (4)	17:01	61	13:07 (4)	18:10	24	08:45 (26)	20:21	21:31	22:34
4	09:27		11:20 (2)	08:39		10:13 (1)	07:27	08:20 (26)	06:58	05:36	04:36
	15:57	58	12:57 (4)	17:04	57	13:05 (4)	18:12	25	08:45 (26)	20:24	21:33	22:35
5	09:26		11:20 (2)	08:37		10:14 (1)	07:24	08:20 (26)	06:55	05:34	04:35
	15:59	60	12:58 (4)	17:06	54	13:05 (4)	18:14	24	08:44 (26)	20:26	21:35	22:37
6	09:25		11:20 (2)	08:35		10:15 (1)	07:22	08:20 (26)	06:53	05:31	04:34
	16:00	61	12:58 (4)	17:09	49	13:03 (4)	18:17	24	08:44 (26)	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32		09:40 (3)	07:19	08:20 (26)	06:50	05:29	04:33
	16:02	62	12:59 (4)	17:11	47	13:01 (4)	18:19	23	08:43 (26)	20:31	21:40	22:39
8	09:24		11:21 (2)	08:30		09:36 (3)	07:16	08:21 (26)	06:47	05:27	04:32
	16:04	63	13:00 (4)	17:13	49	12:59 (4)	18:21	20	08:41 (26)	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28		09:21 (6)	07:13	08:22 (26)	06:44	05:24	04:31
	16:05	65	13:01 (4)	17:16	44	12:56 (4)	18:24	19	08:41 (26)	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25		09:18 (6)	07:10	08:24 (26)	06:41	05:22	04:30
	16:07	65	13:01 (4)	17:18	32	09:54 (3)	18:26	15	08:39 (26)	20:38	21:47	22:43
11	09:21		11:21 (2)	08:23		09:16 (6)	07:07	08:26 (26)	06:38	05:20	04:30
	16:09	68	13:03 (4)	17:21	39	09:56 (3)	18:28	10	08:36 (26)	20:40	21:49	22:44
12	09:20		11:21 (2)	08:20		09:14 (6)	07:05			06:36	05:17	04:29
	16:11	68	13:03 (4)	17:23	42	09:56 (3)	18:31			20:42	21:51	22:45
13	09:19		11:22 (2)	08:18		09:13 (6)	07:02			06:33	05:15	04:29
	16:13	68	13:04 (4)	17:26	44	09:57 (3)	18:33			20:44	21:53	22:46
14	09:17		11:22 (2)	08:15		09:13 (6)	06:59	07:37 (28)	06:30	05:13	04:28
	16:15	68	13:04 (4)	17:28	46	09:59 (3)	18:35	4	07:41 (28)	20:47	21:55	22:47
15	09:16		11:22 (2)	08:13		09:13 (6)	06:56	07:33 (28)	06:27	05:11	04:28
	16:17	70	13:05 (4)	17:31	46	09:59 (3)	18:38	11	07:44 (28)	20:49	21:58	22:47
16	09:15		11:22 (2)	08:10		09:12 (6)	06:53	07:31 (28)	06:24	05:08	04:27
	16:19	71	13:05 (4)	17:33	47	09:59 (3)	18:40	15	07:46 (28)	20:51	22:00	22:48
17	09:13		11:23 (2)	08:08		09:13 (6)	06:50	07:30 (28)	06:22	05:06	04:27
	16:21	71	13:06 (4)	17:36	47	10:00 (3)	18:42	16	07:46 (28)	20:54	22:02	22:49
18	09:12		11:23 (2)	08:05		09:13 (6)	06:47	07:29 (28)	06:19	05:04	04:27
	16:23	72	13:07 (4)	17:38	47	10:00 (3)	18:45	18	07:47 (28)	20:56	22:04	22:49
19	09:10		11:24 (2)	08:02		09:14 (6)	06:44	07:28 (28)	06:16	05:02	04:27
	16:26	70	13:07 (4)	17:41	46	10:00 (3)	18:47	19	07:47 (28)	20:58	22:06	22:50
20	09:09		11:24 (2)	08:00		09:14 (6)	06:42	07:27 (28)	06:13	05:00	04:27
	16:28	71	13:08 (4)	17:43	46	10:00 (3)	18:49	19	07:46 (28)	21:01	22:08	22:50
21	09:07		11:25 (2)	07:57		09:15 (6)	06:39	07:28 (28)	06:11	04:58	04:27
	16:30	70	13:08 (4)	17:46	44	09:59 (3)	18:52	19	07:47 (28)	21:03	22:10	22:50
22	09:05		11:25 (2)	07:54		09:19 (6)	06:36	07:28 (28)	06:08	04:56	04:27
	16:32	70	13:08 (4)	17:48	40	10:00 (3)	18:54	18	07:46 (28)	21:05	22:12	22:50
23	09:04		11:25 (2)	07:52		09:26 (3)	06:33	07:28 (28)	06:05	04:54	04:27
	16:35	69	13:08 (4)	17:50	33	09:59 (3)	18:56	17	07:45 (28)	21:08	22:14	22:51
24	09:02		11:26 (2)	07:49		08:32 (26)	06:30	07:29 (28)	06:02	04:53	04:28
	16:37	68	13:08 (4)	17:53	35	09:58 (3)	18:59	14	07:43 (28)	21:10	22:16	22:51
25	09:00		10:27 (1)	07:46		08:28 (26)	06:27	07:31 (28)	06:00	04:51	04:28
	16:39	72	13:09 (4)	17:55	42	09:57 (3)	19:01	10	07:41 (28)	21:12	22:18	22:51
26	08:58		10:23 (1)	07:44		08:25 (26)	06:24			05:57	04:49	04:29
	16:42	74	13:09 (4)	17:58	45	09:56 (3)	19:03			21:14	22:20	22:50
27	08:56		10:20 (1)	07:41		08:23 (26)	06:21			05:54	04:47	04:29
	16:44	75	13:09 (4)	18:00	45	09:54 (3)	19:05			21:17	22:22	22:50
28	08:54		10:15 (1)	07:38		08:23 (26)	06:18			05:52	04:46	04:30
	16:46	76	13:08 (4)	18:02	44	09:53 (3)	19:08			21:19	22:24	22:50
29	08:52		10:11 (1)				07:16			05:49	04:44	04:31
	16:49	73	13:09 (4)				20:10			21:21	22:26	22:50
30	08:50		10:11 (1)				07:13			05:47	04:43	04:31
	16:51	67	13:08 (4)				20:12			21:24	22:27	22:49
31	08:48		10:11 (1)				07:10				04:41	
	16:54	67	13:08 (4)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		2073			1299			443				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:40			07:52		08:47 (6)	09:00		11:03 (2)
	22:49	22:01	20:40			19:13			16:49	36	12:20 (4)	15:51	67	12:45 (4)
2	04:33	05:26	06:35			07:42		09:06 (26)	07:54		09:03 (3)	09:02		11:04 (2)
	22:48	21:59	20:37			19:10	6	09:12 (26)	16:46	43	12:26 (4)	15:50	66	12:45 (4)
3	04:34	05:29	06:38			07:44		09:02 (26)	07:56		09:06 (3)	09:04		11:04 (2)
	22:47	21:56	20:34			19:07	13	09:15 (26)	16:44	50	12:29 (4)	15:49	64	12:44 (4)
4	04:35	05:31	06:40			07:46		09:00 (26)	07:59		09:46 (1)	09:05		11:05 (2)
	22:47	21:54	20:31			19:05	17	09:17 (26)	16:42	44	12:32 (4)	15:48	63	12:44 (4)
5	04:36	05:33	06:42			07:48		08:58 (26)	08:01		09:44 (1)	09:07		11:05 (2)
	22:46	21:52	20:28			19:02	20	09:18 (26)	16:39	51	12:33 (4)	15:47	62	12:44 (4)
6	04:38	05:35	06:44			07:51		08:57 (26)	08:04		09:44 (1)	09:09		11:06 (2)
	22:45	21:49	20:26			18:59	22	09:19 (26)	16:37	55	12:35 (4)	15:46	61	12:45 (4)
7	04:39	05:37	06:47			07:53		08:57 (26)	08:06		09:44 (1)	09:10		11:07 (2)
	22:44	21:47	20:23			18:56	23	09:20 (26)	16:35	58	12:36 (4)	15:46	60	12:45 (4)
8	04:40	05:40	06:49			07:55		08:55 (26)	08:08		09:43 (1)	09:12		11:08 (2)
	22:43	21:44	20:20			18:53	24	09:19 (26)	16:32	60	12:36 (4)	15:45	58	12:45 (4)
9	04:41	05:42	06:51			07:58		08:55 (26)	08:11		09:43 (1)	09:14		11:09 (2)
	22:42	21:42	20:17			18:50	24	09:19 (26)	16:30	64	12:38 (4)	15:44	57	12:45 (4)
10	04:43	05:44	06:53			08:00		08:55 (26)	08:13		09:43 (1)	09:15		11:11 (2)
	22:41	21:39	20:14			18:48	24	09:19 (26)	16:28	65	12:39 (4)	15:44	54	12:45 (4)
11	04:44	05:46	06:55			08:02		08:54 (26)	08:16		09:42 (1)	09:16		11:14 (2)
	22:39	21:37	20:11			18:45	32	10:18 (3)	16:26	67	12:39 (4)	15:43	51	12:45 (4)
12	04:46	05:49	06:58			08:04		08:55 (26)	08:18		09:43 (1)	09:18		11:15 (2)
	22:38	21:34	20:08			18:42	39	10:23 (3)	16:24	67	12:40 (4)	15:43	48	12:45 (4)
13	04:48	05:51	07:00			08:07		08:55 (26)	08:20		09:43 (1)	09:19		11:18 (2)
	22:37	21:32	20:05			18:39	43	10:25 (3)	16:21	73	12:41 (4)	15:43	46	12:46 (4)
14	04:49	05:53	07:02			08:09		08:55 (26)	08:23		09:48 (1)	09:20		11:20 (2)
	22:35	21:29	20:02			18:36	46	10:26 (3)	16:19	75	12:41 (4)	15:42	44	12:46 (4)
15	04:51	05:55	07:04			08:11		08:57 (26)	08:25		09:52 (1)	09:21		11:21 (2)
	22:34	21:26	20:00			18:34	46	10:28 (3)	16:17	75	12:41 (4)	15:42	42	12:46 (4)
16	04:53	05:58	07:06			08:14		08:58 (26)	08:27		09:56 (1)	09:22		11:22 (2)
	22:32	21:24	19:57			18:31	44	10:28 (3)	16:15	74	12:42 (4)	15:42	41	12:46 (4)
17	04:54	06:00	07:09			08:16		09:01 (26)	08:30		10:01 (1)	09:23		11:24 (2)
	22:31	21:21	19:54			18:28	41	10:29 (3)	16:13	71	12:42 (4)	15:42	38	12:46 (4)
18	04:56	06:02	07:11		08:19 (28)	08:18		09:57 (3)	08:32		11:00 (2)	09:24		11:25 (2)
	22:29	21:19	19:51	9	08:28 (28)	18:25	32	10:29 (3)	16:11	68	12:42 (4)	15:42	37	12:47 (4)
19	04:58	06:04	07:13		08:16 (28)	08:21		09:57 (3)	08:34		11:00 (2)	09:25		11:27 (2)
	22:27	21:16	19:48	13	08:29 (28)	18:23	33	10:30 (3)	16:10	69	12:43 (4)	15:43	36	12:47 (4)
20	05:00	06:06	07:15		08:14 (28)	08:23		09:48 (6)	08:37		11:00 (2)	09:26		11:28 (2)
	22:25	21:13	19:45	16	08:30 (28)	18:20	42	10:30 (3)	16:08	70	12:43 (4)	15:43	35	12:48 (4)
21	05:02	06:09	07:17		08:14 (28)	08:25		09:46 (6)	08:39		11:00 (2)	09:26		11:28 (2)
	22:24	21:10	19:42	17	08:31 (28)	18:17	45	10:31 (3)	16:06	70	12:43 (4)	15:43	35	12:48 (4)
22	05:04	06:11	07:20		08:13 (28)	08:28		09:44 (6)	08:41		11:00 (2)	09:27		11:29 (2)
	22:22	21:08	19:39	18	08:31 (28)	18:15	46	10:30 (3)	16:04	71	12:44 (4)	15:44	35	12:49 (4)
23	05:06	06:13	07:22		08:12 (28)	08:30		09:44 (6)	08:43		11:00 (2)	09:27		11:29 (2)
	22:20	21:05	19:36	19	08:31 (28)	18:12	46	10:30 (3)	16:03	70	12:43 (4)	15:44	35	12:49 (4)
24	05:08	06:15	07:24		08:12 (28)	08:32		09:42 (6)	08:45		11:00 (2)	09:28		11:30 (2)
	22:18	21:02	19:33	19	08:31 (28)	18:09	47	10:29 (3)	16:01	72	12:44 (4)	15:45	35	12:50 (4)
25	05:10	06:18	07:26		08:11 (28)	07:35		08:42 (6)	08:48		11:00 (2)	09:28		11:29 (2)
	22:16	20:59	19:31	19	08:30 (28)	17:07	47	09:29 (3)	15:59	71	12:43 (4)	15:45	36	12:50 (4)
26	05:12	06:20	07:28		08:12 (28)	07:37		08:43 (6)	08:50		11:01 (2)	09:28		11:29 (2)
	22:14	20:57	19:28	17	08:29 (28)	17:04	46	09:29 (3)	15:58	71	12:44 (4)	15:46	37	12:51 (4)
27	05:14	06:22	07:31		08:13 (28)	07:40		08:42 (6)	08:52		11:01 (2)	09:28		11:29 (2)
	22:12	20:54	19:25	15	08:28 (28)	17:02	46	09:28 (3)	15:57	71	12:44 (4)	15:47	39	12:52 (4)
28	05:16	06:24	07:33		08:14 (28)	07:42		08:43 (6)	08:54		11:02 (2)	09:29		11:28 (2)
	22:10	20:51	19:22	12	08:26 (28)	16:59	45	09:28 (3)	15:55	68	12:44 (4)	15:48	40	12:52 (4)
29	05:18	06:27	07:35		08:15 (28)	07:44		08:44 (6)	08:56		11:02 (2)	09:29		11:27 (2)
	22:08	20:48	19:19	8	08:23 (28)	16:56	43	09:27 (3)	15:54	68	12:44 (4)	15:49	42	12:52 (4)
30	05:20	06:29	07:37			07:47		08:44 (6)	08:58		11:02 (2)	09:28		11:26 (2)
	22:05	20:45	19:16			16:54	42	09:26 (3)	15:53	68	12:44 (4)	15:50	44	12:53 (4)
31	05:22	06:31				07:49		08:45 (6)				09:28		11:25 (2)
	22:03	20:43				16:51	38	09:25 (3)				15:51	48	12:54 (4)
Potential sun hours	545	478	386			319			236			200		
Total, worst case				182			1062			1935			1456	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:34 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	5	07:39 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:30 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	12	07:42 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:28 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	15	07:43 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:26 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:44 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50		07:25 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	19	07:44 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:24 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:16 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:44 (4)	20:56	22:04	22:49	22:29	21:19	19:51	8 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:24 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:13 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	20	07:44 (4)	20:58	22:06	22:50	22:27	21:16	19:48	13 08:26 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:25 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:11 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:45 (4)	21:01	22:08	22:50	22:26	21:13	19:45	16 08:27 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:25 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:11 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19	07:44 (4)	21:03	22:10	22:50	22:24	21:11	19:42	17 08:28 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:25 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18	07:43 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:29 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:25 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:08 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:42 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:28 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:26 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	14	07:40 (4)	21:10	22:16	22:51	22:18	21:02	19:34	20 08:28 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:28 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:07 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	9	07:37 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:27 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:29	08:08 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	19 08:27 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:08 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	18 08:26 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:08 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	17 08:25 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:09 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	14 08:23 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	8 08:21 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365			432	521	547	545	478	386		319	236	200
Total, worst case				206							210				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:25 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	10 07:35 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:18	15:42
16	09:15	08:10	06:53	07:23 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	13 07:36 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50	07:21 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:13 (4)	08:16	08:30	09:23
	16:21	17:36	18:43	16 07:37 (4)	20:54	22:02	22:49	22:31	21:21	19:54	4	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47	07:20 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:09 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	18 07:38 (4)	20:56	22:04	22:49	22:29	21:19	19:51	11	08:20 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:19 (4)	06:16	05:02	04:27	04:58	06:04	07:13		08:07 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	19 07:38 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14	08:21 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:19 (4)	06:13	05:00	04:27	05:00	06:07	07:15		08:05 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20 07:39 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17	08:22 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:05 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19 07:38 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18	08:23 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:19 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:04 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18 07:37 (4)	21:05	22:12	22:51	22:22	21:08	19:39	19	08:23 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:19 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:03 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17 07:36 (4)	21:08	22:14	22:51	22:20	21:05	19:36	19	08:22 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:20 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:03 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15 07:35 (4)	21:10	22:16	22:51	22:18	21:02	19:34	19	08:22 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:21 (4)	06:00	04:51	04:28	05:10	06:18	07:26		08:02 (4)	07:35	08:48	09:28
	16:40	17:55	19:01	12 07:33 (4)	21:12	22:18	22:51	22:16	21:00	19:31	19	08:21 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24	07:23 (4)	05:57	04:49	04:29	05:12	06:20	07:29		08:04 (4)	07:37	08:50	09:28
	16:42	17:58	19:03	7 07:30 (4)	21:15	22:20	22:51	22:14	20:57	19:28	16	08:20 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31		08:04 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25	15	08:19 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:25	07:33		08:05 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	11	08:16 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35		08:08 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	4	08:12 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:06	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				184							186			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:17 (2)	08:46		10:11 (1)	07:35	08:24 (26)	07:07	05:44	04:40
	15:53	54	12:46 (4)	16:56	61	12:57 (4)	18:05	32	09:46 (3)	20:17	21:26	22:31
2	09:28		11:17 (2)	08:44		10:11 (1)	07:33		08:23 (26)	07:04	05:41	04:39
	15:54	54	12:46 (4)	16:59	58	12:56 (4)	18:07	24	08:47 (26)	20:19	21:28	22:32
3	09:27		11:17 (2)	08:41		10:12 (1)	07:30		08:23 (26)	07:01	05:39	04:37
	15:56	56	12:47 (4)	17:01	55	12:55 (4)	18:10	24	08:47 (26)	20:21	21:31	22:34
4	09:27		11:17 (2)	08:39		10:12 (1)	07:27		08:23 (26)	06:58	05:36	04:36
	15:57	57	12:48 (4)	17:04	52	12:54 (4)	18:12	23	08:46 (26)	20:24	21:33	22:35
5	09:26		11:17 (2)	08:37		10:14 (1)	07:24		08:23 (26)	06:55	05:34	04:35
	15:59	58	12:48 (4)	17:06	46	12:53 (4)	18:14	22	08:45 (26)	20:26	21:35	22:37
6	09:25		11:17 (2)	08:35		10:14 (1)	07:22		08:23 (26)	06:53	05:31	04:34
	16:00	59	12:49 (4)	17:09	41	12:50 (4)	18:17	22	08:45 (26)	20:28	21:38	22:38
7	09:25		11:17 (2)	08:32		09:37 (3)	07:19		08:24 (26)	06:50	05:29	04:33
	16:02	61	12:50 (4)	17:11	43	12:47 (4)	18:19	19	08:43 (26)	20:31	21:40	22:39
8	09:24		11:17 (2)	08:30		09:35 (3)	07:16		08:24 (26)	06:47	05:27	04:32
	16:04	63	12:51 (4)	17:13	36	12:44 (4)	18:21	18	08:42 (26)	20:33	21:42	22:41
9	09:23		11:18 (2)	08:28		09:32 (3)	07:13		08:27 (26)	06:44	05:24	04:31
	16:05	63	12:52 (4)	17:16	21	09:53 (3)	18:24	13	08:40 (26)	20:35	21:44	22:42
10	09:22		11:17 (2)	08:25		09:31 (3)	07:10		08:30 (26)	06:41	05:22	04:30
	16:07	65	12:52 (4)	17:18	24	09:55 (3)	18:26	7	08:37 (26)	20:38	21:47	22:43
11	09:21		11:18 (2)	08:23		09:30 (3)	07:07			06:38	05:20	04:30
	16:09	65	12:53 (4)	17:21	26	09:56 (3)	18:28			20:40	21:49	22:44
12	09:20		11:18 (2)	08:20		09:29 (3)	07:05			06:36	05:17	04:29
	16:11	66	12:53 (4)	17:23	28	09:57 (3)	18:31			20:42	21:51	22:45
13	09:19		11:18 (2)	08:18		09:28 (3)	07:02		07:40 (28)	06:33	05:15	04:29
	16:13	67	12:54 (4)	17:26	29	09:57 (3)	18:33	5	07:45 (28)	20:44	21:53	22:46
14	09:17		11:18 (2)	08:15		09:28 (3)	06:59		07:36 (28)	06:30	05:13	04:28
	16:15	68	12:55 (4)	17:28	31	09:59 (3)	18:35	11	07:47 (28)	20:47	21:55	22:47
15	09:16		11:18 (2)	08:13		09:27 (3)	06:56		07:34 (28)	06:27	05:11	04:28
	16:17	69	12:55 (4)	17:31	32	09:59 (3)	18:38	15	07:49 (28)	20:49	21:58	22:47
16	09:15		11:19 (2)	08:10		09:26 (3)	06:53		07:33 (28)	06:24	05:08	04:27
	16:19	68	12:55 (4)	17:33	33	09:59 (3)	18:40	16	07:49 (28)	20:51	22:00	22:48
17	09:13		11:20 (2)	08:08		09:27 (3)	06:50		07:32 (28)	06:22	05:06	04:27
	16:21	69	12:57 (4)	17:36	33	10:00 (3)	18:42	18	07:50 (28)	20:54	22:02	22:49
18	09:12		11:20 (2)	08:05		09:26 (3)	06:47		07:31 (28)	06:19	05:04	04:27
	16:23	69	12:57 (4)	17:38	34	10:00 (3)	18:45	19	07:50 (28)	20:56	22:04	22:49
19	09:10		11:20 (2)	08:02		09:26 (3)	06:44		07:31 (28)	06:16	05:02	04:27
	16:26	69	12:57 (4)	17:41	33	09:59 (3)	18:47	18	07:49 (28)	20:58	22:06	22:50
20	09:09		11:21 (2)	08:00		09:26 (3)	06:42		07:30 (28)	06:13	05:00	04:27
	16:28	69	12:58 (4)	17:43	33	09:59 (3)	18:49	19	07:49 (28)	21:01	22:08	22:50
21	09:07		11:22 (2)	07:57		09:26 (3)	06:39		07:32 (28)	06:11	04:58	04:27
	16:30	67	12:58 (4)	17:46	32	09:58 (3)	18:52	17	07:49 (28)	21:03	22:10	22:50
22	09:05		11:22 (2)	07:54		09:27 (3)	06:36		07:32 (28)	06:08	04:56	04:27
	16:32	67	12:58 (4)	17:48	32	09:59 (3)	18:54	15	07:47 (28)	21:05	22:12	22:50
23	09:04		11:22 (2)	07:52		09:27 (3)	06:33		07:33 (28)	06:05	04:54	04:27
	16:35	66	12:58 (4)	17:50	31	09:58 (3)	18:56	13	07:46 (28)	21:08	22:14	22:51
24	09:02		10:25 (1)	07:49		08:30 (26)	06:30		07:35 (28)	06:02	04:53	04:28
	16:37	70	12:58 (4)	17:53	41	09:57 (3)	18:59	8	07:43 (28)	21:10	22:16	22:51
25	09:00		10:21 (1)	07:46		08:28 (26)	06:27			06:00	04:51	04:28
	16:39	72	12:58 (4)	17:55	42	09:55 (3)	19:01			21:12	22:18	22:51
26	08:58		10:18 (1)	07:44		08:26 (26)	06:24			05:57	04:49	04:29
	16:42	74	12:59 (4)	17:58	44	09:54 (3)	19:03			21:14	22:20	22:50
27	08:56		10:14 (1)	07:41		08:25 (26)	06:21			05:54	04:47	04:29
	16:44	76	12:59 (4)	18:00	41	09:52 (3)	19:05			21:17	22:22	22:50
28	08:54		10:10 (1)	07:38		08:25 (26)	06:18			05:52	04:46	04:30
	16:46	74	12:58 (4)	18:02	38	09:50 (3)	19:08			21:19	22:24	22:50
29	08:52		10:10 (1)				07:16			05:49	04:44	04:31
	16:49	65	12:58 (4)				20:10			21:21	22:26	22:50
30	08:50		10:10 (1)				07:13			05:47	04:43	04:31
	16:51	63	12:57 (4)				20:12			21:24	22:27	22:49
31	08:48		10:11 (1)				07:10				04:41	
	16:54	61	12:57 (4)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		2024			1050			378				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:40			07:52		09:00 (3)	09:00		11:00 (2)
	22:49	22:01	20:40			19:13			16:49	23	09:23 (3)	15:51	65	12:35 (4)
2	04:33	05:26	06:35			07:42			07:54		09:02 (3)	09:02		11:00 (2)
	22:48	21:59	20:37			19:10			16:46	23	09:54 (1)	15:50	65	12:35 (4)
3	04:34	05:29	06:38			07:44			07:56		09:05 (3)	09:04		11:01 (2)
	22:47	21:56	20:34			19:07			16:44	38	12:14 (4)	15:49	63	12:35 (4)
4	04:35	05:31	06:40			07:46		09:05 (26)	07:59		09:08 (3)	09:05		11:01 (2)
	22:47	21:54	20:31			19:05	11	09:16 (26)	16:42	44	12:19 (4)	15:48	63	12:35 (4)
5	04:36	05:33	06:42			07:48		09:02 (26)	08:01		09:44 (1)	09:07		11:02 (2)
	22:46	21:52	20:28			19:02	16	09:18 (26)	16:39	42	12:20 (4)	15:47	61	12:35 (4)
6	04:38	05:35	06:44			07:51		09:00 (26)	08:04		09:43 (1)	09:09		11:03 (2)
	22:45	21:49	20:26			18:59	19	09:19 (26)	16:37	48	12:23 (4)	15:46	59	12:35 (4)
7	04:39	05:37	06:47			07:53		09:00 (26)	08:06		09:43 (1)	09:10		11:04 (2)
	22:44	21:47	20:23			18:56	20	09:20 (26)	16:35	51	12:24 (4)	15:46	58	12:35 (4)
8	04:40	05:40	06:49			07:55		08:58 (26)	08:08		09:42 (1)	09:12		11:05 (2)
	22:43	21:44	20:20			18:53	23	09:21 (26)	16:32	55	12:25 (4)	15:45	58	12:36 (4)
9	04:41	05:42	06:51			07:58		08:57 (26)	08:11		09:42 (1)	09:14		11:06 (2)
	22:42	21:42	20:17			18:50	23	09:20 (26)	16:30	59	12:27 (4)	15:44	56	12:36 (4)
10	04:43	05:44	06:53			08:00		08:57 (26)	08:13		09:42 (1)	09:15		11:06 (2)
	22:41	21:39	20:14			18:48	24	09:21 (26)	16:28	60	12:28 (4)	15:44	55	12:36 (4)
11	04:44	05:46	06:55			08:02		08:57 (26)	08:16		09:41 (1)	09:16		11:07 (2)
	22:39	21:37	20:11			18:45	23	09:20 (26)	16:26	62	12:28 (4)	15:43	54	12:36 (4)
12	04:46	05:49	06:58			08:04		08:57 (26)	08:18		09:42 (1)	09:18		11:07 (2)
	22:38	21:34	20:08			18:42	24	09:21 (26)	16:24	63	12:29 (4)	15:43	52	12:36 (4)
13	04:48	05:51	07:00			08:07		08:57 (26)	08:20		09:42 (1)	09:19		11:10 (2)
	22:37	21:32	20:05			18:39	35	10:20 (3)	16:21	65	12:30 (4)	15:43	50	12:37 (4)
14	04:49	05:53	07:02			08:09		08:57 (26)	08:23		09:43 (1)	09:20		11:11 (2)
	22:35	21:29	20:02			18:36	39	10:23 (3)	16:19	74	12:31 (4)	15:42	49	12:37 (4)
15	04:51	05:55	07:04			08:11		08:58 (26)	08:25		09:46 (1)	09:21		11:13 (2)
	22:34	21:26	20:00			18:34	42	10:25 (3)	16:17	76	12:31 (4)	15:42	46	12:37 (4)
16	04:53	05:58	07:06			08:14		08:58 (26)	08:27		09:51 (1)	09:22		11:14 (2)
	22:32	21:24	19:57			18:31	43	10:26 (3)	16:15	74	12:32 (4)	15:42	45	12:37 (4)
17	04:54	06:00	07:09			08:16		09:00 (26)	08:30		09:55 (1)	09:23		11:15 (2)
	22:31	21:21	19:54			18:28	43	10:28 (3)	16:13	72	12:32 (4)	15:42	43	12:37 (4)
18	04:56	06:02	07:11			08:18		09:02 (26)	08:32		09:59 (1)	09:24		11:17 (2)
	22:29	21:19	19:51			18:25	39	10:28 (3)	16:11	70	12:32 (4)	15:42	40	12:37 (4)
19	04:58	06:04	07:13		08:22 (28)	08:21		09:58 (3)	08:34		10:57 (2)	09:25		11:18 (2)
	22:27	21:16	19:48	7	08:29 (28)	18:23	31	10:29 (3)	16:10	66	12:33 (4)	15:43	41	12:38 (4)
20	05:00	06:06	07:15		08:19 (28)	08:23		09:57 (3)	08:37		10:57 (2)	09:26		11:19 (2)
	22:25	21:13	19:45	12	08:31 (28)	18:20	32	10:29 (3)	16:08	67	12:33 (4)	15:43	40	12:39 (4)
21	05:02	06:09	07:17		08:18 (28)	08:25		09:57 (3)	08:39		10:57 (2)	09:26		11:19 (2)
	22:24	21:10	19:42	15	08:33 (28)	18:17	33	10:30 (3)	16:06	67	12:33 (4)	15:43	39	12:38 (4)
22	05:04	06:11	07:20		08:16 (28)	08:28		09:56 (3)	08:41		10:57 (2)	09:27		11:20 (2)
	22:22	21:08	19:39	17	08:33 (28)	18:15	33	10:29 (3)	16:04	68	12:34 (4)	15:44	39	12:39 (4)
23	05:06	06:13	07:22		08:15 (28)	08:30		09:56 (3)	08:43		10:57 (2)	09:27		11:20 (2)
	22:20	21:05	19:36	18	08:33 (28)	18:12	34	10:30 (3)	16:03	68	12:33 (4)	15:44	40	12:40 (4)
24	05:08	06:15	07:24		08:14 (28)	08:32		09:56 (3)	08:45		10:57 (2)	09:28		11:21 (2)
	22:18	21:02	19:33	19	08:33 (28)	18:09	33	10:29 (3)	16:01	69	12:34 (4)	15:45	41	12:41 (4)
25	05:10	06:18	07:26		08:14 (28)	07:35		08:56 (3)	08:48		10:57 (2)	09:28		11:21 (2)
	22:16	20:59	19:31	18	08:32 (28)	17:07	33	09:29 (3)	15:59	69	12:34 (4)	15:45	41	12:41 (4)
26	05:12	06:20	07:28		08:14 (28)	07:37		08:57 (3)	08:50		10:58 (2)	09:28		11:21 (2)
	22:14	20:57	19:28	19	08:33 (28)	17:04	32	09:29 (3)	15:58	68	12:34 (4)	15:46	42	12:42 (4)
27	05:14	06:22	07:31		08:14 (28)	07:40		08:56 (3)	08:52		10:57 (2)	09:28		11:20 (2)
	22:12	20:54	19:25	18	08:32 (28)	17:02	32	09:28 (3)	15:57	69	12:34 (4)	15:47	43	12:42 (4)
28	05:16	06:24	07:33		08:15 (28)	07:42		08:57 (3)	08:54		10:58 (2)	09:29		11:20 (2)
	22:10	20:51	19:22	15	08:30 (28)	16:59	31	09:28 (3)	15:55	68	12:35 (4)	15:48	44	12:43 (4)
29	05:18	06:27	07:35		08:15 (28)	07:44		08:58 (3)	08:56		10:59 (2)	09:29		11:18 (2)
	22:08	20:48	19:19	13	08:28 (28)	16:56	29	09:27 (3)	15:54	67	12:35 (4)	15:49	47	12:43 (4)
30	05:20	06:29	07:37		08:18 (28)	07:47		08:58 (3)	08:58		10:59 (2)	09:28		11:18 (2)
	22:05	20:45	19:16	8	08:26 (28)	16:54	28	09:26 (3)	15:53	65	12:34 (4)	15:50	49	12:44 (4)
31	05:22	06:31				07:49		09:00 (3)				09:28		11:16 (2)
	22:03	20:43				16:51	25	09:25 (3)				15:51	52	12:44 (4)
Potential sun hours	545	478	386			319			236			200		
Total, worst case				179			830			1810			1540	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:05 (4)	08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03	10	08:15 (4)	18:37	16:20	15:43
15	09:16	08:13	06:56		06:27	05:11	04:28	04:51	05:55	07:04		08:02 (4)	08:11	08:25	09:21
	16:17	17:31	18:38		20:49	21:58	22:47	22:34	21:27	20:00	14	08:16 (4)	18:34	16:18	15:42
16	09:15	08:10	06:53		06:24	05:09	04:28	04:53	05:58	07:06		08:00 (4)	08:14	08:27	09:22
	16:19	17:33	18:40		20:51	22:00	22:48	22:32	21:24	19:57	17	08:17 (4)	18:31	16:16	15:42
17	09:13	08:08	06:50		06:22	05:06	04:27	04:54	06:00	07:09		07:59 (4)	08:16	08:30	09:23
	16:21	17:36	18:43		20:54	22:02	22:49	22:31	21:21	19:54	18	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11		07:58 (4)	08:18	08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	19	08:17 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13		07:57 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	3 07:28 (4)	20:58	22:06	22:50	22:27	21:16	19:48	20	08:17 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:22 (4)	06:13	05:00	04:27	05:00	06:07	07:15		07:57 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	8 07:30 (4)	21:01	22:08	22:50	22:26	21:13	19:45	19	08:16 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:00 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	11 07:30 (4)	21:03	22:10	22:50	22:24	21:11	19:42	16	08:16 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:15 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:02 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	16 07:31 (4)	21:05	22:12	22:51	22:22	21:08	19:39	13	08:15 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:11 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:05 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	20 07:31 (4)	21:08	22:14	22:51	22:20	21:05	19:36	9	08:14 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:11 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	19 07:30 (4)	21:10	22:16	22:51	22:18	21:02	19:34	4	08:12 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:10 (4)	06:00	04:51	04:28	05:10	06:18	07:26			07:35	08:48	09:28
	16:40	17:55	19:01	20 07:30 (4)	21:12	22:18	22:51	22:16	21:00	19:31			17:07	16:00	15:46
26	08:58	07:44	06:24	07:10 (4)	05:57	04:49	04:29	05:12	06:20	07:29			07:37	08:50	09:28
	16:42	17:58	19:03	19 07:29 (4)	21:15	22:20	22:51	22:14	20:57	19:28			17:04	15:58	15:46
27	08:56	07:41	06:21	07:11 (4)	05:55	04:48	04:29	05:14	06:22	07:31			07:40	08:52	09:29
	16:44	18:00	19:06	17 07:28 (4)	21:17	22:22	22:50	22:12	20:54	19:25			17:02	15:57	15:47
28	08:54	07:38	06:19	07:12 (4)	05:52	04:46	04:30	05:16	06:25	07:33			07:42	08:54	09:29
	16:47	18:03	19:08	14 07:26 (4)	21:19	22:24	22:50	22:10	20:51	19:22			16:59	15:55	15:48
29	08:52		07:16	08:13 (4)	05:49	04:44	04:31	05:18	06:27	07:35			07:44	08:56	09:29
	16:49		20:10	11 08:24 (4)	21:22	22:26	22:50	22:08	20:48	19:19			16:57	15:54	15:49
30	08:50		07:13	08:18 (4)	05:47	04:43	04:32	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12	2 08:20 (4)	21:24	22:27	22:49	22:05	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:52
Potential sun hours	221	260	365		432	521	547	545	478	386			319	236	200
Total, worst case				160							159				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:35 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	8	07:43 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:32 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13	07:45 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:30 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16	07:46 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	19	07:47 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:15	15:42
17	09:13	08:08	06:50		07:27 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20	07:47 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	21	07:47 (4)	20:56	22:04	22:49	22:29	21:19	19:51	9 08:27 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:26 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21	07:47 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:29 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:27 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	21	07:48 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:30 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:13 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	21	07:47 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18 08:31 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:27 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19	07:46 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:31 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:44 (4)	21:08	22:14	22:51	22:20	21:05	19:36	21 08:31 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:10 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15	07:43 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21 08:31 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	10	07:40 (4)	21:12	22:18	22:51	22:16	21:00	19:31	21 08:30 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28	08:10 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	20 08:30 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:10 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	19 08:29 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:10 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18 08:28 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:11 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	15 08:26 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	11 08:24 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				221							224			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:36 (4)	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	24	09:00 (4)	16:49	15:51
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:35 (4)	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	25	09:00 (4)	16:47	15:50
3	09:27	08:41	07:30	08:05 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:34 (4)	07:56	09:04
	15:56	17:01	18:10	12 08:17 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	25	08:59 (4)	16:44	15:49
4	09:27	08:39	07:27	08:02 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:34 (4)	07:59	09:05
	15:57	17:04	18:12	17 08:19 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	26	09:00 (4)	16:42	15:48
5	09:26	08:37	07:24	08:01 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:34 (4)	08:01	09:07
	15:59	17:06	18:14	19 08:20 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	25	08:59 (4)	16:39	15:47
6	09:25	08:35	07:22	07:59 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:34 (4)	08:04	09:09
	16:00	17:09	18:17	22 08:21 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	24	08:58 (4)	16:37	15:47
7	09:25	08:32	07:19	07:58 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:35 (4)	08:06	09:10
	16:02	17:11	18:19	23 08:21 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	22	08:57 (4)	16:35	15:46
8	09:24	08:30	07:16	07:58 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:35 (4)	08:08	09:12
	16:04	17:14	18:22	24 08:22 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	21	08:56 (4)	16:32	15:45
9	09:23	08:28	07:13	07:57 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:36 (4)	08:11	09:14
	16:06	17:16	18:24	25 08:22 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	08:54 (4)	16:30	15:44
10	09:22	08:25	07:10	07:57 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:38 (4)	08:13	09:15
	16:07	17:19	18:26	25 08:22 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	08:53 (4)	16:28	15:44
11	09:21	08:23	07:07	07:57 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:41 (4)	08:16	09:16
	16:09	17:21	18:29	25 08:22 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	8	08:49 (4)	16:26	15:43
12	09:20	08:20	07:05	07:57 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:24	18:31	24 08:21 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18	07:02	07:57 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07			08:20	09:19
	16:13	17:26	18:33	23 08:20 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39			16:22	15:43
14	09:17	08:15	06:59	07:57 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09			08:23	09:20
	16:15	17:28	18:36	22 08:19 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36			16:19	15:42
15	09:16	08:13	06:56	07:58 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11			08:25	09:21
	16:17	17:31	18:38	20 08:18 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34			16:17	15:42
16	09:15	08:10	06:53	07:59 (4)	06:24	05:09	04:27	04:53	05:58	07:06		08:14			08:27	09:22
	16:19	17:33	18:40	17 08:16 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31			16:15	15:42
17	09:13	08:08	06:50	08:00 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16			08:30	09:23
	16:21	17:36	18:43	14 08:14 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28			16:14	15:42
18	09:12	08:05	06:47	08:04 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:18			08:32	09:24
	16:24	17:38	18:45	5 08:09 (4)	20:56	22:04	22:49	22:29	21:19	19:51		18:25			16:12	15:42
19	09:10	08:02	06:45		06:16	05:02	04:27	04:58	06:04	07:13		08:21			08:34	09:25
	16:26	17:41	18:47		20:58	22:06	22:50	22:27	21:16	19:48		18:23			16:10	15:43
20	09:09	08:00	06:42		06:13	05:00	04:27	05:00	06:07	07:15		08:23			08:37	09:26
	16:28	17:43	18:49		21:01	22:08	22:50	22:26	21:13	19:45		18:20			16:08	15:43
21	09:07	07:57	06:39		06:11	04:58	04:27	05:02	06:09	07:17		08:25			08:39	09:26
	16:30	17:46	18:52		21:03	22:10	22:50	22:24	21:11	19:42		18:17			16:06	15:43
22	09:05	07:55	06:36		06:08	04:56	04:27	05:04	06:11	07:20		08:28			08:41	09:27
	16:32	17:48	18:54		21:05	22:12	22:51	22:22	21:08	19:39		18:15			16:04	15:44
23	09:04	07:52	06:33		06:05	04:55	04:28	05:06	06:13	07:22		08:30			08:43	09:27
	16:35	17:50	18:56		21:08	22:14	22:51	22:20	21:05	19:36		18:12			16:03	15:44
24	09:02	07:49	06:30		06:03	04:53	04:28	05:08	06:16	07:24		08:32			08:45	09:28
	16:37	17:53	18:59		21:10	22:16	22:51	22:18	21:02	19:34		18:09			16:01	15:45
25	09:00	07:47	06:27		06:00	04:51	04:28	05:10	06:18	07:26		07:35			08:48	09:28
	16:39	17:55	19:01		21:12	22:18	22:51	22:16	21:00	19:31		17:07			16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:44 (4)	07:37			08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28	11 08:55 (4)	17:04			15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:41 (4)	07:40			08:52	09:29
	16:44	18:00	19:05		21:17	22:22	22:50	22:12	20:54	19:25	16 08:57 (4)	17:02			15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:24	07:33	08:39 (4)	07:42			08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	19 08:58 (4)	16:59			15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:37 (4)	07:44			08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	22 08:59 (4)	16:57			15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:37 (4)	07:47			08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16	23 09:00 (4)	16:54			15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49				09:28
	16:54		20:15			22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200	
Total, worst case				317							91		233			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:36		09:02 (2)	07:07	04:40	04:32	05:24	06:33		07:40		08:45 (4)	07:52	09:00
	15:53	16:56		18:05	4	09:06 (2)	20:17	21:26	22:31	22:49	22:01	20:40		19:13	28	09:13 (4)	16:49	15:51
2	09:28	08:44		07:33			07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:44 (4)	07:54	09:02
	15:54	16:59		18:07			20:19	21:28	22:32	22:48	21:59	20:37		19:10	29	09:13 (4)	16:47	15:50
3	09:27	08:41		07:30		08:17 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:43 (4)	07:56	09:04
	15:56	17:01		18:10	10	08:27 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	29	09:12 (4)	16:44	15:49
4	09:27	08:39		07:27		08:13 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:44 (4)	07:59	09:05
	15:57	17:04		18:12	17	08:30 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	28	09:12 (4)	16:42	15:48
5	09:26	08:37		07:24		08:11 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:44 (4)	08:01	09:07
	15:59	17:06		18:14	20	08:31 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	27	09:11 (4)	16:39	15:47
6	09:25	08:35		07:22		08:09 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:44 (4)	08:04	09:09
	16:00	17:09		18:17	24	08:33 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	26	09:10 (4)	16:37	15:47
7	09:25	08:32		07:19		08:08 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:45 (4)	08:06	09:10
	16:02	17:11		18:19	25	08:33 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	24	09:09 (4)	16:35	15:46
8	09:24	08:30		07:16		08:07 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:46 (4)	08:08	09:12
	16:04	17:14		18:22	27	08:34 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	22	09:08 (4)	16:32	15:45
9	09:23	08:28		07:13		08:07 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:47 (4)	08:11	09:14
	16:06	17:16		18:24	28	08:35 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	09:05 (4)	16:30	15:44
10	09:22	08:25		07:10		08:06 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:49 (4)	08:13	09:15
	16:07	17:19		18:26	29	08:35 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	09:04 (4)	16:28	15:44
11	09:21	08:23		07:07		08:06 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:53 (4)	08:16	09:16
	16:09	17:21		18:29	29	08:35 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	6	08:59 (4)	16:26	15:43
12	09:20	08:20		07:05		08:05 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:23		18:31	29	08:34 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18		07:02		08:05 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07		09:33 (2)	08:20	09:19
	16:13	17:26		18:33	29	08:34 (4)	20:44	21:53	22:46	22:37	21:32	20:05		18:39	7	09:40 (2)	16:22	15:43
14	09:17	08:15		06:59		08:05 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09		09:30 (2)	08:23	09:20
	16:15	17:28		18:36	28	08:33 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36	12	09:42 (2)	16:19	15:42
15	09:16	08:13		06:56		07:33 (3)	06:27	05:11	04:28	04:51	05:55	07:04		08:11		09:29 (2)	08:25	09:21
	16:17	17:31		18:38	32	08:32 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	15	09:44 (2)	16:17	15:42
16	09:15	08:10		06:53		07:30 (3)	06:24	05:09	04:27	04:53	05:58	07:06		08:14		09:27 (2)	08:27	09:22
	16:19	17:33		18:40	36	08:31 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	17	09:44 (2)	16:15	15:42
17	09:13	08:08	09:01 (2)	06:50		07:28 (3)	06:22	05:06	04:27	04:54	06:00	07:09	08:18 (3)	08:16		09:27 (2)	08:30	09:23
	16:21	17:36	9 09:10 (2)	18:43	38	08:30 (4)	20:54	22:02	22:49	22:31	21:21	19:54	5 08:23 (3)	18:28	18	09:45 (2)	16:14	15:42
18	09:12	08:05	08:58 (2)	06:47		07:27 (3)	06:19	05:04	04:27	04:56	06:02	07:11	08:14 (3)	08:18		09:26 (2)	08:32	09:24
	16:24	17:38	14 09:12 (2)	18:45	36	08:28 (4)	20:56	22:04	22:49	22:29	21:19	19:51	11 08:25 (3)	18:25	19	09:45 (2)	16:12	15:42
19	09:10	08:02	08:57 (2)	06:45		07:25 (3)	06:16	05:02	04:27	04:58	06:04	07:13	08:12 (3)	08:21		09:26 (2)	08:34	09:25
	16:26	17:41	16 09:13 (2)	18:47	34	08:25 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:26 (3)	18:23	19	09:45 (2)	16:10	15:43
20	09:09	08:00	08:56 (2)	06:42		07:25 (3)	06:13	05:00	04:27	05:00	06:07	07:15	08:10 (3)	08:23		09:25 (2)	08:37	09:26
	16:28	17:43	17 09:13 (2)	18:49	30	08:23 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:27 (3)	18:20	19	09:44 (2)	16:08	15:43
21	09:07	07:57	08:55 (2)	06:39		07:25 (3)	06:11	04:58	04:27	05:02	06:09	07:17	08:10 (3)	08:25		09:26 (2)	08:39	09:26
	16:30	17:46	18 09:13 (2)	18:52	18	07:43 (3)	21:03	22:10	22:50	22:24	21:10	19:42	18 08:28 (3)	18:17	18	09:44 (2)	16:06	15:43
22	09:05	07:55	08:55 (2)	06:36		07:24 (3)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (3)	08:28		09:26 (2)	08:41	09:27
	16:32	17:48	19 09:14 (2)	18:54	18	07:42 (3)	21:05	22:12	22:51	22:22	21:08	19:39	19 08:28 (3)	18:15	17	09:43 (2)	16:04	15:44
23	09:04	07:52	08:55 (2)	06:33		07:25 (3)	06:05	04:55	04:28	05:06	06:13	07:22	08:09 (3)	08:30		09:27 (2)	08:43	09:27
	16:35	17:50	19 09:14 (2)	18:56	16	07:41 (3)	21:08	22:14	22:51	22:20	21:05	19:36	27 09:06 (4)	18:12	15	09:42 (2)	16:03	15:44
24	09:02	07:49	08:55 (2)	06:30		07:25 (3)	06:02	04:53	04:28	05:08	06:16	07:24	08:08 (3)	08:32		09:29 (2)	08:45	09:28
	16:37	17:53	19 09:14 (2)	18:59	15	07:40 (3)	21:10	22:16	22:51	22:18	21:02	19:33	35 09:09 (4)	18:09	12	09:41 (2)	16:01	15:45
25	09:00	07:46	08:55 (2)	06:27		07:26 (3)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (3)	07:35		08:31 (2)	08:48	09:28
	16:39	17:55	18 09:13 (2)	19:01	12	07:38 (3)	21:12	22:18	22:51	22:16	21:00	19:31	35 09:10 (4)	17:07	7	08:38 (2)	16:00	15:46
26	08:58	07:44	08:55 (2)	06:24		07:28 (3)	05:57	04:49	04:29	05:12	06:20	07:28	08:11 (3)	07:37			08:50	09:28
	16:42	17:58	17 09:12 (2)	19:03	7	07:35 (3)	21:15	22:20	22:51	22:14	20:57	19:28	36 09:12 (4)	17:04			15:58	15:46
27	08:56	07:41	08:56 (2)	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:11 (3)	07:40			08:52	09:29
	16:44	18:00	15 09:11 (2)	19:05			21:17	22:22	22:50	22:12	20:54	19:25	37 09:13 (4)	17:02			15:57	15:47
28	08:54	07:38	08:58 (2)	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:13 (3)	07:42			08:54	09:29
	16:47	18:03	11 09:09 (2)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	34 09:13 (4)	16:59			15:55	15:48
29	08:52			07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:45 (4)	07:44			08:56	09:29
	16:49			20:10			21:21	22:26	22:50	22:08	20:48	19:19	28 09:13 (4)	16:57			15:54	15:49
30	08:50			07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:45 (4)	07:47			08:58	09:28
	16:51			20:12			21:24	22:27	22:49	22:05	20:46	19:16	29 09:14 (4)	16:54			15:53	15:50
31	08:48			07:10				04:41		05:22	06:31			07:49				09:28
	16:54			20:15				22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200	
Total, worst case			192		591							345		447			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:18 (2)	08:46	10:00 (3)	07:35	07:07	05:44	04:40
	15:53	49	12:27 (4)	16:56	25	10:25 (3)	18:05	20:17	21:26	22:31
2	09:28		11:18 (2)	08:44	09:59 (3)	07:33	07:04	05:41	04:39
	15:54	50	12:28 (4)	16:59	25	10:24 (3)	18:07	20:19	21:28	22:32
3	09:27		11:18 (2)	08:41	10:00 (3)	07:30	07:01	05:39	04:37
	15:56	51	12:28 (4)	17:01	25	10:25 (3)	18:10	20:21	21:31	22:34
4	09:27		11:18 (2)	08:39	09:59 (3)	07:27	06:58	05:36	04:36
	15:57	51	12:28 (4)	17:04	26	10:25 (3)	18:12	20:24	21:33	22:35
5	09:26		11:19 (2)	08:37	10:00 (3)	07:24	06:55	05:34	04:35
	15:59	51	12:29 (4)	17:06	26	10:26 (3)	18:14	20:26	21:35	22:37
6	09:25		11:19 (2)	08:35	10:00 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:29 (4)	17:09	25	10:25 (3)	18:17	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32	10:00 (3)	07:19	06:50	05:29	04:33
	16:02	51	12:30 (4)	17:11	25	10:25 (3)	18:19	20:31	21:40	22:39
8	09:24		11:20 (2)	08:30	10:01 (3)	07:16	06:47	05:27	04:32
	16:04	51	12:30 (4)	17:13	24	10:25 (3)	18:21	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28	10:01 (3)	07:13	06:44	05:24	04:31
	16:05	51	12:31 (4)	17:16	23	10:24 (3)	18:24	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25	10:03 (3)	07:10	06:41	05:22	04:30
	16:07	51	12:31 (4)	17:18	21	10:24 (3)	18:26	20:38	21:47	22:43
11	09:21		11:22 (2)	08:23	09:07 (26)	07:07	06:38	05:20	04:30
	16:09	50	12:31 (4)	17:21	25	10:22 (3)	18:28	20:40	21:49	22:44
12	09:20		11:22 (2)	08:20	09:04 (26)	07:05	06:36	05:17	04:29
	16:11	49	12:31 (4)	17:23	27	10:20 (3)	18:31	20:42	21:51	22:45
13	09:19		11:23 (2)	08:18	09:03 (26)	07:02	06:33	05:15	04:28
	16:13	49	12:32 (4)	17:26	26	10:18 (3)	18:33	20:44	21:53	22:46
14	09:17		11:24 (2)	08:15	09:02 (26)	06:59	06:30	05:13	04:28
	16:15	47	12:32 (4)	17:28	17	09:19 (26)	18:35	20:47	21:56	22:47
15	09:16		11:24 (2)	08:13	09:01 (26)	06:56	06:27	05:11	04:28
	16:17	47	12:32 (4)	17:31	19	09:20 (26)	18:38	20:49	21:58	22:47
16	09:15		11:25 (2)	08:10	09:00 (26)	06:53	06:24	05:08	04:27
	16:19	44	12:31 (4)	17:33	20	09:20 (26)	18:40	20:51	22:00	22:48
17	09:13		11:27 (2)	08:08	09:01 (26)	06:50	06:22	05:06	04:27
	16:21	42	12:32 (4)	17:36	20	09:21 (26)	18:42	20:54	22:02	22:49
18	09:12		11:28 (2)	08:05	09:00 (26)	06:47	06:19	05:04	04:27
	16:23	39	12:32 (4)	17:38	21	09:21 (26)	18:45	20:56	22:04	22:49
19	09:10		11:29 (2)	08:02	09:00 (26)	06:44	06:16	05:02	04:27
	16:26	35	12:31 (4)	17:41	20	09:20 (26)	18:47	20:58	22:06	22:50
20	09:09		11:31 (2)	08:00	09:00 (26)	06:42	06:13	05:00	04:27
	16:28	30	12:31 (4)	17:43	19	09:19 (26)	18:49	21:01	22:08	22:50
21	09:07		12:09 (4)	07:57	09:01 (26)	06:39	06:11	04:58	04:27
	16:30	21	12:30 (4)	17:46	17	09:18 (26)	18:52	21:03	22:10	22:50
22	09:05		12:11 (4)	07:55	09:02 (26)	06:36	06:08	04:56	04:27
	16:32	19	12:30 (4)	17:48	16	09:18 (26)	18:54	21:05	22:12	22:51
23	09:04		12:12 (4)	07:52	09:04 (26)	06:33	06:05	04:54	04:27
	16:35	17	12:29 (4)	17:50	12	09:16 (26)	18:56	21:08	22:14	22:51
24	09:02		10:08 (3)	07:49	09:06 (26)	06:30	06:02	04:53	04:28
	16:37	16	12:26 (4)	17:53	7	09:13 (26)	18:59	21:10	22:16	22:51
25	09:00		10:05 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	14	12:22 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:03 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	15	10:18 (3)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:03 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	17	10:20 (3)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:01 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	20	10:21 (3)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:01 (3)			07:16	05:49	04:44	04:31
	16:49	21	10:22 (3)			20:10	21:21	22:26	22:50
30	08:50		10:01 (3)			07:13	05:47	04:43	04:31
	16:51	22	10:23 (3)			20:12	21:24	22:27	22:49
31	08:48		10:00 (3)			07:10		04:41	
	16:54	24	10:24 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1145			511				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:40			07:52		09:32 (3)	09:00		11:04 (2)
	22:49		22:01		20:40		19:13			16:49	21	09:53 (3)	15:51	51	12:14 (4)
2	04:33		05:26		06:35		07:42			07:54		09:31 (3)	09:02		11:04 (2)
	22:48		21:59		20:37		19:10			16:46	22	09:53 (3)	15:50	51	12:14 (4)
3	04:34		05:29		06:38		07:44			07:56		09:31 (3)	09:04		11:04 (2)
	22:47		21:56		20:34		19:07			16:44	23	09:54 (3)	15:49	51	12:14 (4)
4	04:35		05:31		06:40		07:46			07:59		09:30 (3)	09:05		11:04 (2)
	22:47		21:54		20:31		19:05			16:42	25	09:55 (3)	15:48	51	12:14 (4)
5	04:36		05:33		06:42		07:49			08:01		09:29 (3)	09:07		11:05 (2)
	22:46		21:52		20:28		19:02			16:39	26	09:55 (3)	15:47	51	12:15 (4)
6	04:38		05:35		06:44		07:51			08:04		09:30 (3)	09:09		11:05 (2)
	22:45		21:49		20:26		18:59			16:37	25	09:55 (3)	15:46	51	12:15 (4)
7	04:39		05:37		06:47		07:53			08:06		09:30 (3)	09:10		11:06 (2)
	22:44		21:47		20:23		18:56			16:35	26	09:56 (3)	15:46	51	12:16 (4)
8	04:40		05:40		06:49		07:55			08:08		09:29 (3)	09:12		11:06 (2)
	22:43		21:44		20:20		18:53			16:32	26	09:55 (3)	15:45	51	12:16 (4)
9	04:41		05:42		06:51		07:58			08:11		09:30 (3)	09:14		11:07 (2)
	22:42		21:42		20:17		18:50			16:30	25	09:55 (3)	15:44	51	12:17 (4)
10	04:43		05:44		06:53		08:00			08:13		09:31 (3)	09:15		11:07 (2)
	22:41		21:39		20:14		18:48			16:28	24	09:55 (3)	15:44	51	12:17 (4)
11	04:44		05:46		06:55		08:02			08:16		09:31 (3)	09:16		11:08 (2)
	22:39		21:37		20:11		18:45			16:26	23	09:54 (3)	15:43	49	12:17 (4)
12	04:46		05:49		06:58		08:04			08:18		09:32 (3)	09:18		11:08 (2)
	22:38		21:34		20:08		18:42			16:24	22	09:54 (3)	15:43	49	12:17 (4)
13	04:48		05:51		07:00		08:07			08:20		09:33 (3)	09:19		11:09 (2)
	22:37		21:32		20:05		18:39			16:21	21	09:54 (3)	15:43	49	12:18 (4)
14	04:49		05:53		07:02		08:09			08:23		09:34 (3)	09:20		11:09 (2)
	22:35		21:29		20:02		18:36			16:19	20	09:54 (3)	15:42	49	12:18 (4)
15	04:51		05:55		07:04		08:11			08:25		09:35 (3)	09:21		11:10 (2)
	22:34		21:26		20:00		18:34			16:17	17	09:52 (3)	15:42	49	12:19 (4)
16	04:53		05:58		07:06		08:14			08:27		09:36 (3)	09:22		11:11 (2)
	22:32		21:24		19:57		18:31			16:15	15	09:51 (3)	15:42	48	12:20 (4)
17	04:54		06:00		07:09		08:16			08:30		09:39 (3)	09:23		11:12 (2)
	22:31		21:21		19:54		18:28			16:13	15	11:56 (4)	15:42	48	12:20 (4)
18	04:56		06:02		07:11		08:18		09:36 (26)	08:32		09:42 (3)	09:24		11:11 (2)
	22:29		21:19		19:51		18:25	10	09:46 (26)	16:11	16	12:00 (4)	15:42	48	12:20 (4)
19	04:58		06:04		07:13		08:21		09:34 (26)	08:34		11:46 (4)	09:25		11:12 (2)
	22:27		21:16		19:48		18:23	14	09:48 (26)	16:10	17	12:03 (4)	15:42	47	12:20 (4)
20	05:00		06:06		07:15		08:23		09:32 (26)	08:37		11:46 (4)	09:26		11:13 (2)
	22:26		21:13		19:45		18:20	17	09:49 (26)	16:08	19	12:05 (4)	15:43	48	12:21 (4)
21	05:02		06:09		07:17		08:25		09:32 (26)	08:39		11:44 (4)	09:26		11:14 (2)
	22:24		21:10		19:42		18:17	18	09:50 (26)	16:06	21	12:05 (4)	15:43	47	12:22 (4)
22	05:04		06:11		07:20		08:28		09:30 (26)	08:41		11:07 (2)	09:27		11:14 (2)
	22:22		21:08		19:39		18:15	20	09:50 (26)	16:04	30	12:07 (4)	15:44	47	12:22 (4)
23	05:06		06:13		07:22		08:30		09:30 (26)	08:43		11:05 (2)	09:27		11:14 (2)
	22:20		21:05		19:36		18:12	20	09:50 (26)	16:03	36	12:08 (4)	15:44	48	12:22 (4)
24	05:08		06:15		07:24		08:32		09:31 (26)	08:45		11:05 (2)	09:28		11:15 (2)
	22:18		21:02		19:33		18:09	20	09:51 (26)	16:01	39	12:09 (4)	15:45	48	12:23 (4)
25	05:10		06:18		07:26		07:35		08:30 (26)	08:48		11:04 (2)	09:28		11:15 (2)
	22:16		20:59		19:31		17:07	20	08:50 (26)	15:59	42	12:09 (4)	15:45	48	12:24 (4)
26	05:12		06:20		07:28		07:37		08:31 (26)	08:50		11:04 (2)	09:28		11:16 (2)
	22:14		20:57		19:28		17:04	19	08:50 (26)	15:58	43	12:10 (4)	15:46	48	12:24 (4)
27	05:14		06:22		07:31		07:40		08:30 (26)	08:52		11:03 (2)	09:29		11:16 (2)
	22:12		20:54		19:25		17:02	19	08:49 (26)	15:57	47	12:11 (4)	15:47	48	12:25 (4)
28	05:16		06:24		07:33		07:42		08:31 (26)	08:54		11:04 (2)	09:29		11:17 (2)
	22:10		20:51		19:22		16:59	17	08:48 (26)	15:55	47	12:12 (4)	15:48	48	12:25 (4)
29	05:18		06:27		07:35		07:44		08:33 (26)	08:56		11:03 (2)	09:29		11:16 (2)
	22:08		20:48		19:19		16:56	26	09:48 (3)	15:54	49	12:12 (4)	15:49	49	12:25 (4)
30	05:20		06:29		07:37		07:47		08:34 (26)	08:58		11:03 (2)	09:28		11:17 (2)
	22:05		20:45		19:16		16:54	27	09:50 (3)	15:53	50	12:12 (4)	15:50	49	12:26 (4)
31	05:22		06:31				07:49		08:37 (26)				09:28		11:18 (2)
	22:03		20:43				16:51	25	09:52 (3)				15:51	49	12:27 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								272			832			1523	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:00 (1)	08:46		09:41 (26)	07:35	08:28 (28)	07:07	05:44	04:40
	15:53	67	13:34 (4)	16:56	27	11:17 (3)	18:05	19	08:47 (28)	20:17	21:26	22:31
2	09:28		11:00 (1)	08:44		09:37 (26)	07:33		08:27 (28)	07:04	05:41	04:39
	15:54	68	13:34 (4)	16:59	32	11:16 (3)	18:07	20	08:47 (28)	20:19	21:28	22:32
3	09:27		11:00 (1)	08:41		09:35 (26)	07:30		08:27 (28)	07:01	05:39	04:37
	15:56	69	13:34 (4)	17:01	35	11:15 (3)	18:10	20	08:47 (28)	20:21	21:31	22:34
4	09:27		11:00 (1)	08:39		09:34 (26)	07:27		08:27 (28)	06:58	05:36	04:36
	15:57	69	13:35 (4)	17:04	33	11:13 (3)	18:12	19	08:46 (28)	20:24	21:33	22:35
5	09:26		11:00 (1)	08:37		09:33 (26)	07:24		08:28 (28)	06:55	05:34	04:35
	15:59	69	13:35 (4)	17:06	33	11:12 (3)	18:14	17	08:45 (28)	20:26	21:35	22:37
6	09:25		11:00 (1)	08:35		09:32 (26)	07:22		08:28 (28)	06:53	05:31	04:34
	16:00	69	13:35 (4)	17:08	23	11:06 (3)	18:17	16	08:44 (28)	20:28	21:38	22:38
7	09:25		10:54 (3)	08:32		09:31 (26)	07:19		08:29 (28)	06:50	05:29	04:33
	16:02	75	13:36 (4)	17:11	22	09:53 (26)	18:19	13	08:42 (28)	20:31	21:40	22:39
8	09:24		10:53 (3)	08:30		09:32 (26)	07:16		08:31 (28)	06:47	05:27	04:32
	16:04	77	13:37 (4)	17:13	22	09:54 (26)	18:21	8	08:39 (28)	20:33	21:42	22:41
9	09:23		10:52 (3)	08:28		09:31 (26)	07:13			06:44	05:24	04:31
	16:05	76	13:37 (4)	17:16	23	09:54 (26)	18:24			20:35	21:44	22:42
10	09:22		10:51 (3)	08:25		09:32 (26)	07:10			06:41	05:22	04:30
	16:07	78	13:37 (4)	17:18	23	09:55 (26)	18:26			20:38	21:47	22:43
11	09:21		10:50 (3)	08:23		09:31 (26)	07:07			06:38	05:20	04:30
	16:09	78	13:38 (4)	17:21	24	09:55 (26)	18:28			20:40	21:49	22:44
12	09:20		10:49 (3)	08:20		09:31 (26)	07:05			06:36	05:17	04:29
	16:11	76	13:37 (4)	17:23	23	09:54 (26)	18:31			20:42	21:51	22:45
13	09:19		10:50 (3)	08:18		09:31 (26)	07:02			06:33	05:15	04:28
	16:13	74	13:38 (4)	17:26	23	09:54 (26)	18:33			20:44	21:53	22:46
14	09:17		10:49 (3)	08:15		09:33 (26)	06:59			06:30	05:13	04:28
	16:15	73	13:38 (4)	17:28	21	09:54 (26)	18:35			20:47	21:55	22:47
15	09:16		10:48 (3)	08:13		09:33 (26)	06:56			06:27	05:11	04:28
	16:17	69	13:38 (4)	17:31	20	09:53 (26)	18:38			20:49	21:58	22:47
16	09:15		10:48 (3)	08:10		09:34 (26)	06:53			06:24	05:08	04:27
	16:19	62	13:37 (4)	17:33	17	09:51 (26)	18:40			20:51	22:00	22:48
17	09:13		10:49 (3)	08:08		09:36 (26)	06:50			06:22	05:06	04:27
	16:21	61	13:38 (4)	17:36	14	09:50 (26)	18:42			20:54	22:02	22:49
18	09:12		10:48 (3)	08:05		09:39 (26)	06:47			06:19	05:04	04:27
	16:23	61	13:38 (4)	17:38	8	09:47 (26)	18:45			20:56	22:04	22:49
19	09:10		10:48 (3)	08:02			06:44			06:16	05:02	04:27
	16:26	58	13:37 (4)	17:41			18:47			20:58	22:06	22:50
20	09:09		10:48 (3)	08:00			06:42			06:13	05:00	04:27
	16:28	57	13:37 (4)	17:43			18:49			21:01	22:08	22:50
21	09:07		10:48 (3)	07:57			06:39			06:10	04:58	04:27
	16:30	53	13:36 (4)	17:45			18:52			21:03	22:10	22:50
22	09:05		10:49 (3)	07:54			06:36			06:08	04:56	04:27
	16:32	49	13:35 (4)	17:48			18:54			21:05	22:12	22:51
23	09:04		10:49 (3)	07:52			06:33			06:05	04:54	04:27
	16:35	43	13:33 (4)	17:50			18:56			21:08	22:14	22:51
24	09:02		10:48 (3)	07:49		08:36 (28)	06:30			06:02	04:53	04:28
	16:37	29	11:17 (3)	17:53	5	08:41 (28)	18:59			21:10	22:16	22:51
25	09:00		10:49 (3)	07:46		08:32 (28)	06:27			06:00	04:51	04:28
	16:39	29	11:18 (3)	17:55	12	08:44 (28)	19:01			21:12	22:18	22:51
26	08:58		10:49 (3)	07:44		08:30 (28)	06:24			05:57	04:49	04:29
	16:42	29	11:18 (3)	17:58	15	08:45 (28)	19:03			21:14	22:20	22:51
27	08:56		10:50 (3)	07:41		08:29 (28)	06:21			05:54	04:47	04:29
	16:44	29	11:19 (3)	18:00	17	08:46 (28)	19:05			21:17	22:22	22:50
28	08:54		10:50 (3)	07:38		08:29 (28)	06:18			05:52	04:46	04:30
	16:46	28	11:18 (3)	18:02	18	08:47 (28)	19:08			21:19	22:24	22:50
29	08:52		10:51 (3)				07:16			05:49	04:44	04:30
	16:49	27	11:18 (3)				20:10			21:21	22:26	22:50
30	08:50		10:51 (3)				07:13			05:47	04:43	04:31
	16:51	26	11:17 (3)				20:12			21:24	22:27	22:49
31	08:48		10:52 (3)				07:10				04:41	
	16:54	25	11:17 (3)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		1753			490			132				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:52		09:00 (26)	09:00		10:33 (3)
	22:49		22:01		20:40		19:13			16:49	24	09:24 (26)	15:51	76	13:20 (4)
2	04:33		05:26		06:35		07:42			07:54		09:01 (26)	09:02		10:34 (3)
	22:48		21:59		20:37		19:10			16:46	23	09:24 (26)	15:50	78	13:20 (4)
3	04:34		05:29		06:38		07:44			07:56		09:01 (26)	09:04		10:35 (3)
	22:47		21:56		20:34		19:07			16:44	23	09:24 (26)	15:49	78	13:20 (4)
4	04:35		05:31		06:40		07:46			07:59		09:02 (26)	09:05		10:37 (3)
	22:47		21:54		20:31		19:05			16:42	22	09:24 (26)	15:48	77	13:21 (4)
5	04:36		05:33		06:42		07:48		09:11 (28)	08:01		09:02 (26)	09:07		10:39 (3)
	22:46		21:52		20:28		19:02	3	09:14 (28)	16:39	26	10:37 (3)	15:47	76	13:21 (4)
6	04:37		05:35		06:44		07:51		09:06 (28)	08:04		09:03 (26)	09:09		10:46 (1)
	22:45		21:49		20:26		18:59	11	09:17 (28)	16:37	32	10:42 (3)	15:46	70	13:22 (4)
7	04:39		05:37		06:47		07:53		09:05 (28)	08:06		09:05 (26)	09:10		10:47 (1)
	22:44		21:47		20:23		18:56	15	09:20 (28)	16:35	34	10:44 (3)	15:46	69	13:22 (4)
8	04:40		05:40		06:49		07:55		09:03 (28)	08:08		09:05 (26)	09:12		10:48 (1)
	22:43		21:44		20:20		18:53	17	09:20 (28)	16:32	35	10:45 (3)	15:45	69	13:23 (4)
9	04:41		05:42		06:51		07:58		09:02 (28)	08:11		09:08 (26)	09:14		10:49 (1)
	22:42		21:42		20:17		18:50	18	09:20 (28)	16:30	33	10:47 (3)	15:44	68	13:23 (4)
10	04:43		05:44		06:53		08:00		09:02 (28)	08:13		09:13 (26)	09:15		10:49 (1)
	22:41		21:39		20:14		18:48	19	09:21 (28)	16:28	25	10:48 (3)	15:44	69	13:23 (4)
11	04:44		05:46		06:55		08:02		09:01 (28)	08:16		10:22 (3)	09:16		10:50 (1)
	22:39		21:37		20:11		18:45	20	09:21 (28)	16:26	26	10:48 (3)	15:43	69	13:24 (4)
12	04:46		05:49		06:58		08:04		09:01 (28)	08:18		10:22 (3)	09:18		10:50 (1)
	22:38		21:34		20:08		18:42	20	09:21 (28)	16:24	27	10:49 (3)	15:43	67	13:24 (4)
13	04:47		05:51		07:00		08:07		09:01 (28)	08:20		10:22 (3)	09:19		10:51 (1)
	22:37		21:32		20:05		18:39	19	09:20 (28)	16:21	28	10:50 (3)	15:43	68	13:25 (4)
14	04:49		05:53		07:02		08:09		09:01 (28)	08:23		10:23 (3)	09:20		10:52 (1)
	22:35		21:29		20:02		18:36	18	09:19 (28)	16:19	28	10:51 (3)	15:42	67	13:25 (4)
15	04:51		05:55		07:04		08:11		09:02 (28)	08:25		10:22 (3)	09:21		10:52 (1)
	22:34		21:26		20:00		18:34	16	09:18 (28)	16:17	29	10:51 (3)	15:42	66	13:25 (4)
16	04:53		05:57		07:06		08:14		09:03 (28)	08:27		10:22 (3)	09:22		10:53 (1)
	22:32		21:24		19:57		18:31	13	09:16 (28)	16:15	29	10:51 (3)	15:42	64	13:25 (4)
17	04:54		06:00		07:09		08:16		09:05 (28)	08:30		10:23 (3)	09:23		10:54 (1)
	22:31		21:21		19:54		18:28	10	09:15 (28)	16:13	29	10:52 (3)	15:42	67	13:27 (4)
18	04:56		06:02		07:11		08:18			08:32		10:22 (3)	09:24		10:54 (1)
	22:29		21:19		19:51		18:25			16:11	29	10:51 (3)	15:42	64	13:26 (4)
19	04:58		06:04		07:13		08:21			08:34		10:23 (3)	09:25		10:55 (1)
	22:27		21:16		19:48		18:23			16:10	43	13:07 (4)	15:42	65	13:27 (4)
20	05:00		06:06		07:15		08:23			08:37		10:24 (3)	09:26		10:55 (1)
	22:25		21:13		19:45		18:20			16:08	49	13:10 (4)	15:43	66	13:28 (4)
21	05:02		06:09		07:17		08:25			08:39		10:23 (3)	09:26		10:56 (1)
	22:24		21:10		19:42		18:17			16:06	53	13:11 (4)	15:43	66	13:29 (4)
22	05:04		06:11		07:20		08:28			08:41		10:24 (3)	09:27		10:56 (1)
	22:22		21:08		19:39		18:15			16:04	57	13:13 (4)	15:44	65	13:28 (4)
23	05:06		06:13		07:22		08:30			08:43		10:24 (3)	09:27		10:56 (1)
	22:20		21:05		19:36		18:12			16:03	58	13:13 (4)	15:44	66	13:29 (4)
24	05:08		06:15		07:24		08:32		10:07 (26)	08:45		10:26 (3)	09:28		10:58 (1)
	22:18		21:02		19:33		18:09	10	10:17 (26)	16:01	60	13:15 (4)	15:45	64	13:30 (4)
25	05:10		06:18		07:26		07:35		09:05 (26)	08:48		10:26 (3)	09:28		10:58 (1)
	22:16		20:59		19:30		17:07	15	09:20 (26)	15:59	61	13:15 (4)	15:45	65	13:30 (4)
26	05:12		06:20		07:28		07:37		09:04 (26)	08:50		10:27 (3)	09:28		10:58 (1)
	22:14		20:57		19:28		17:04	18	09:22 (26)	15:58	62	13:16 (4)	15:46	66	13:31 (4)
27	05:14		06:22		07:31		07:40		09:02 (26)	08:52		10:28 (3)	09:28		10:58 (1)
	22:12		20:54		19:25		17:02	20	09:22 (26)	15:56	67	13:17 (4)	15:47	66	13:31 (4)
28	05:16		06:24		07:33		07:42		09:02 (26)	08:54		10:29 (3)	09:29		10:59 (1)
	22:10		20:51		19:22		16:59	21	09:23 (26)	15:55	72	13:18 (4)	15:48	67	13:32 (4)
29	05:18		06:27		07:35		07:44		09:02 (26)	08:56		10:30 (3)	09:29		10:58 (1)
	22:08		20:48		19:19		16:56	22	09:24 (26)	15:54	74	13:18 (4)	15:49	67	13:32 (4)
30	05:20		06:29		07:37		07:47		09:01 (26)	08:58		10:31 (3)	09:28		10:59 (1)
	22:05		20:45		19:16		16:54	23	09:24 (26)	15:53	75	13:18 (4)	15:50	66	13:32 (4)
31	05:22		06:31				07:49		09:01 (26)				09:28		11:00 (1)
	22:03		20:43				16:51	23	09:24 (26)				15:51	66	13:33 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								351			1233			2117	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:05 (1)	08:46		09:41 (26)	07:35	08:31 (28)	07:07	05:44	04:40
	15:53	69	13:41 (4)	16:56	36	11:24 (3)	18:05	20	08:51 (28)	20:17	21:26	22:31
2	09:28		11:05 (1)	08:44		09:40 (26)	07:33		08:31 (28)	07:04	05:41	04:39
	15:54	68	13:41 (4)	16:59	35	11:22 (3)	18:07	20	08:51 (28)	20:19	21:28	22:32
3	09:27		11:05 (1)	08:41		09:39 (26)	07:30		08:31 (28)	07:01	05:39	04:37
	15:56	69	13:41 (4)	17:01	35	11:21 (3)	18:10	19	08:50 (28)	20:21	21:31	22:34
4	09:27		11:00 (3)	08:39		09:38 (26)	07:27		08:31 (28)	06:58	05:36	04:36
	15:57	74	13:42 (4)	17:04	32	11:19 (3)	18:12	19	08:50 (28)	20:24	21:33	22:35
5	09:26		10:59 (3)	08:37		09:38 (26)	07:24		08:32 (28)	06:55	05:34	04:35
	15:59	76	13:42 (4)	17:06	22	10:00 (26)	18:14	16	08:48 (28)	20:26	21:35	22:37
6	09:25		10:58 (3)	08:35		09:37 (26)	07:22		08:33 (28)	06:53	05:31	04:34
	16:00	77	13:43 (4)	17:08	23	10:00 (26)	18:17	14	08:47 (28)	20:28	21:38	22:38
7	09:25		10:58 (3)	08:32		09:36 (26)	07:19		08:35 (28)	06:50	05:29	04:33
	16:02	76	13:43 (4)	17:11	24	10:00 (26)	18:19	9	08:44 (28)	20:31	21:40	22:39
8	09:24		10:57 (3)	08:30		09:37 (26)	07:16			06:47	05:27	04:32
	16:04	78	13:44 (4)	17:13	24	10:01 (26)	18:21			20:33	21:42	22:41
9	09:23		10:57 (3)	08:28		09:36 (26)	07:13			06:44	05:24	04:31
	16:05	77	13:44 (4)	17:16	24	10:00 (26)	18:24			20:35	21:44	22:42
10	09:22		10:56 (3)	08:25		09:37 (26)	07:10			06:41	05:22	04:30
	16:07	77	13:44 (4)	17:18	24	10:01 (26)	18:26			20:38	21:47	22:43
11	09:21		10:56 (3)	08:23		09:37 (26)	07:07			06:38	05:20	04:30
	16:09	76	13:45 (4)	17:21	23	10:00 (26)	18:28			20:40	21:49	22:44
12	09:20		10:56 (3)	08:20		09:37 (26)	07:05			06:36	05:17	04:29
	16:11	74	13:44 (4)	17:23	23	10:00 (26)	18:31			20:42	21:51	22:45
13	09:19		10:56 (3)	08:18		09:38 (26)	07:02			06:33	05:15	04:28
	16:13	73	13:45 (4)	17:26	21	09:59 (26)	18:33			20:44	21:53	22:46
14	09:17		10:56 (3)	08:15		09:39 (26)	06:59			06:30	05:13	04:28
	16:15	69	13:45 (4)	17:28	20	09:59 (26)	18:35			20:47	21:55	22:47
15	09:16		10:55 (3)	08:13		09:40 (26)	06:56			06:27	05:11	04:28
	16:17	61	13:45 (4)	17:31	17	09:57 (26)	18:38			20:49	21:58	22:47
16	09:15		10:55 (3)	08:10		09:42 (26)	06:53			06:24	05:08	04:27
	16:19	59	13:44 (4)	17:33	13	09:55 (26)	18:40			20:51	22:00	22:48
17	09:13		10:56 (3)	08:08		09:45 (26)	06:50			06:21	05:06	04:27
	16:21	59	13:45 (4)	17:36	8	09:53 (26)	18:42			20:54	22:02	22:49
18	09:12		10:56 (3)	08:05			06:47			06:19	05:04	04:27
	16:23	58	13:45 (4)	17:38			18:45			20:56	22:04	22:49
19	09:10		10:56 (3)	08:02			06:44			06:16	05:02	04:27
	16:26	55	13:44 (4)	17:41			18:47			20:58	22:06	22:50
20	09:09		10:56 (3)	08:00			06:42			06:13	05:00	04:27
	16:28	54	13:44 (4)	17:43			18:49			21:01	22:08	22:50
21	09:07		10:56 (3)	07:57			06:39			06:10	04:58	04:27
	16:30	50	13:43 (4)	17:45			18:52			21:03	22:10	22:50
22	09:05		10:56 (3)	07:54			06:36			06:08	04:56	04:27
	16:32	45	13:42 (4)	17:48			18:54			21:05	22:12	22:51
23	09:04		10:57 (3)	07:52		08:40 (28)	06:33			06:05	04:54	04:27
	16:35	40	13:40 (4)	17:50	5	08:45 (28)	18:56			21:08	22:14	22:51
24	09:02		10:56 (3)	07:49		08:36 (28)	06:30			06:02	04:53	04:28
	16:37	32	13:36 (4)	17:53	12	08:48 (28)	18:59			21:10	22:16	22:51
25	09:00		10:57 (3)	07:46		08:34 (28)	06:27			06:00	04:51	04:28
	16:39	29	11:26 (3)	17:55	15	08:49 (28)	19:01			21:12	22:18	22:51
26	08:58		10:57 (3)	07:44		08:33 (28)	06:24			05:57	04:49	04:29
	16:42	29	11:26 (3)	17:58	17	08:50 (28)	19:03			21:14	22:20	22:51
27	08:56		10:58 (3)	07:41		08:32 (28)	06:21			05:54	04:47	04:29
	16:44	28	11:26 (3)	18:00	18	08:50 (28)	19:05			21:17	22:22	22:50
28	08:54		10:58 (3)	07:38		08:32 (28)	06:18			05:52	04:46	04:30
	16:46	28	11:26 (3)	18:02	19	08:51 (28)	19:08			21:19	22:24	22:50
29	08:52		10:59 (3)				07:16			05:49	04:44	04:30
	16:49	27	11:26 (3)				20:10			21:21	22:26	22:50
30	08:50		10:59 (3)				07:13			05:47	04:43	04:31
	16:51	26	11:25 (3)				20:12			21:24	22:27	22:49
31	08:48		09:43 (26)				07:10				04:41	
	16:54	32	11:24 (3)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		1745			490			117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December		
1	04:32	05:24	06:33	07:39		07:51		09:06 (26)	09:00	10:39 (3)
	22:49	22:01	20:40	19:13		16:49	24	09:30 (26)	15:51	75 13:27 (4)
2	04:33	05:26	06:35	07:42		07:54		09:06 (26)	09:02	10:39 (3)
	22:48	21:59	20:37	19:10		16:46	24	09:30 (26)	15:50	77 13:27 (4)
3	04:34	05:29	06:38	07:44		07:56		09:06 (26)	09:04	10:40 (3)
	22:47	21:56	20:34	19:07		16:44	24	09:30 (26)	15:49	78 13:27 (4)
4	04:35	05:31	06:40	07:46		07:59		09:07 (26)	09:05	10:41 (3)
	22:47	21:54	20:31	19:05		16:42	23	09:30 (26)	15:48	79 13:28 (4)
5	04:36	05:33	06:42	07:48		08:01		09:07 (26)	09:07	10:43 (3)
	22:46	21:52	20:28	19:02		16:39	22	09:29 (26)	15:47	76 13:28 (4)
6	04:37	05:35	06:44	07:51	09:12 (28)	08:04		09:08 (26)	09:09	10:44 (3)
	22:45	21:49	20:26	18:59	7 09:19 (28)	16:37	21	09:29 (26)	15:46	77 13:29 (4)
7	04:39	05:37	06:47	07:53	09:10 (28)	08:06		09:09 (26)	09:10	10:46 (3)
	22:44	21:47	20:23	18:56	12 09:22 (28)	16:35	32	10:50 (3)	15:46	76 13:29 (4)
8	04:40	05:40	06:49	07:55	09:08 (28)	08:08		09:09 (26)	09:12	10:48 (3)
	22:43	21:44	20:20	18:53	15 09:23 (28)	16:32	34	10:51 (3)	15:45	74 13:30 (4)
9	04:41	05:42	06:51	07:58	09:06 (28)	08:11		09:10 (26)	09:14	10:51 (3)
	22:42	21:42	20:17	18:50	18 09:24 (28)	16:30	36	10:53 (3)	15:44	72 13:30 (4)
10	04:43	05:44	06:53	08:00	09:06 (28)	08:13		09:12 (26)	09:15	10:54 (1)
	22:41	21:39	20:14	18:48	19 09:25 (28)	16:28	35	10:55 (3)	15:44	68 13:30 (4)
11	04:44	05:46	06:55	08:02	09:05 (28)	08:16		09:14 (26)	09:16	10:55 (1)
	22:39	21:37	20:11	18:45	19 09:24 (28)	16:26	33	10:55 (3)	15:43	68 13:31 (4)
12	04:46	05:49	06:58	08:04	09:05 (28)	08:18		10:31 (3)	09:18	10:55 (1)
	22:38	21:34	20:08	18:42	20 09:25 (28)	16:24	26	10:57 (3)	15:43	68 13:31 (4)
13	04:47	05:51	07:00	08:07	09:04 (28)	08:20		10:31 (3)	09:19	10:56 (1)
	22:37	21:32	20:05	18:39	20 09:24 (28)	16:21	27	10:58 (3)	15:43	68 13:32 (4)
14	04:49	05:53	07:02	08:09	09:04 (28)	08:23		10:31 (3)	09:20	10:57 (1)
	22:35	21:29	20:02	18:36	19 09:23 (28)	16:19	28	10:59 (3)	15:42	67 13:32 (4)
15	04:51	05:55	07:04	08:11	09:05 (28)	08:25		10:30 (3)	09:21	10:57 (1)
	22:34	21:26	20:00	18:34	18 09:23 (28)	16:17	28	10:58 (3)	15:42	68 13:32 (4)
16	04:53	05:57	07:06	08:14	09:05 (28)	08:27		10:30 (3)	09:22	10:57 (1)
	22:32	21:24	19:57	18:31	16 09:21 (28)	16:15	29	10:59 (3)	15:42	68 13:32 (4)
17	04:54	06:00	07:09	08:16	09:07 (28)	08:30		10:31 (3)	09:23	10:59 (1)
	22:31	21:21	19:54	18:28	14 09:21 (28)	16:13	29	11:00 (3)	15:42	66 13:34 (4)
18	04:56	06:02	07:11	08:18	09:08 (28)	08:32		10:30 (3)	09:24	10:59 (1)
	22:29	21:19	19:51	18:25	10 09:18 (28)	16:11	32	13:10 (4)	15:42	66 13:33 (4)
19	04:58	06:04	07:13	08:21		08:34		10:31 (3)	09:25	10:59 (1)
	22:27	21:16	19:48	18:23		16:10	40	13:14 (4)	15:42	67 13:34 (4)
20	05:00	06:06	07:15	08:23		08:37		10:31 (3)	09:26	11:00 (1)
	22:25	21:13	19:45	18:20		16:08	45	13:17 (4)	15:43	66 13:35 (4)
21	05:02	06:09	07:17	08:25		08:39		10:31 (3)	09:26	11:01 (1)
	22:24	21:10	19:42	18:17		16:06	50	13:18 (4)	15:43	66 13:35 (4)
22	05:04	06:11	07:20	08:28		08:41		10:32 (3)	09:27	11:01 (1)
	22:22	21:08	19:39	18:15		16:04	54	13:20 (4)	15:44	66 13:35 (4)
23	05:06	06:13	07:22	08:30		08:43		10:32 (3)	09:27	11:01 (1)
	22:20	21:05	19:36	18:12		16:03	55	13:20 (4)	15:44	66 13:36 (4)
24	05:08	06:15	07:24	08:32		08:45		10:33 (3)	09:28	11:02 (1)
	22:18	21:02	19:33	18:09		16:01	58	13:22 (4)	15:45	66 13:37 (4)
25	05:10	06:18	07:26	07:35	09:13 (26)	08:48		10:33 (3)	09:28	11:03 (1)
	22:16	20:59	19:30	17:07	10 09:23 (26)	15:59	59	13:22 (4)	15:45	66 13:37 (4)
26	05:12	06:20	07:28	07:37	09:11 (26)	08:50		10:34 (3)	09:28	11:03 (1)
	22:14	20:57	19:28	17:04	15 09:26 (26)	15:58	60	13:24 (4)	15:46	67 13:38 (4)
27	05:14	06:22	07:31	07:40	09:09 (26)	08:52		10:34 (3)	09:28	11:03 (1)
	22:12	20:54	19:25	17:01	18 09:27 (26)	15:56	62	13:24 (4)	15:47	68 13:38 (4)
28	05:16	06:24	07:33	07:42	09:08 (26)	08:54		10:36 (3)	09:29	11:04 (1)
	22:10	20:51	19:22	16:59	20 09:28 (26)	15:55	69	13:25 (4)	15:48	66 13:39 (4)
29	05:18	06:27	07:35	07:44	09:08 (26)	08:56		10:36 (3)	09:29	11:03 (1)
	22:08	20:48	19:19	16:56	21 09:29 (26)	15:54	72	13:25 (4)	15:49	68 13:39 (4)
30	05:20	06:29	07:37	07:47	09:07 (26)	08:58		10:37 (3)	09:28	11:04 (1)
	22:05	20:45	19:16	16:54	22 09:29 (26)	15:53	74	13:26 (4)	15:50	68 13:39 (4)
31	05:22	06:31		07:49	09:07 (26)				09:28	11:05 (1)
	22:03	20:43		16:51	23 09:30 (26)				15:51	68 13:40 (4)
Potential sun hours	546	478	386	319		236			199	
Total, worst case					336		1205			2159

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:16 (4)	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	3	08:19 (4)	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42			07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10			16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44			07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08			16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46			07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05			16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49			08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02			16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51			08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59			16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53			08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56			16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55			08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53			16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58			08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51			16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00			08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48			16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02			08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45			16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05			08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18	07:02		07:33 (4)	06:33	05:15	04:29	04:48	05:51		07:00			08:20	09:19
	16:13	17:26	18:33	9	07:42 (4)	20:45	21:53	22:46	22:37	21:32		20:05			16:22	15:43
14	09:17	08:15	06:59		07:31 (4)	06:30	05:13	04:28	04:49	05:53		07:02			08:23	09:20
	16:15	17:28	18:36	13	07:44 (4)	20:47	21:56	22:47	22:35	21:29		20:03			16:20	15:43
15	09:16	08:13	06:56		07:29 (4)	06:27	05:11	04:28	04:51	05:55		07:04			08:25	09:21
	16:17	17:31	18:38	16	07:45 (4)	20:49	21:58	22:47	22:34	21:27		20:00			16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58		07:06			08:27	09:22
	16:19	17:33	18:40	18	07:46 (4)	20:51	22:00	22:48	22:32	21:24		19:57			16:15	15:42
17	09:13	08:08	06:50		07:26 (4)	06:22	05:06	04:27	04:54	06:00		07:09			08:30	09:23
	16:21	17:36	18:43	20	07:46 (4)	20:54	22:02	22:49	22:31	21:21		19:54			16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02		07:11		08:19 (4)	08:32	09:24
	16:24	17:38	18:45	20	07:46 (4)	20:56	22:04	22:49	22:29	21:19		19:51	5	08:24 (4)	16:12	15:42
19	09:10	08:03	06:45		07:25 (4)	06:16	05:02	04:27	04:58	06:04		07:13		08:15 (4)	08:34	09:25
	16:26	17:41	18:47	21	07:46 (4)	20:58	22:06	22:50	22:27	21:16		19:48	12	08:27 (4)	16:10	15:43
20	09:09	08:00	06:42		07:26 (4)	06:13	05:00	04:27	05:00	06:07		07:15		08:13 (4)	08:37	09:26
	16:28	17:43	18:49	20	07:46 (4)	21:01	22:08	22:50	22:26	21:13		19:45	15	08:28 (4)	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09		07:17		08:12 (4)	08:39	09:26
	16:30	17:46	18:52	20	07:46 (4)	21:03	22:10	22:50	22:24	21:11		19:42	18	08:30 (4)	16:06	15:43
22	09:05	07:55	06:36		07:26 (4)	06:08	04:56	04:27	05:04	06:11		07:20		08:11 (4)	08:41	09:27
	16:33	17:48	18:54	19	07:45 (4)	21:05	22:12	22:51	22:22	21:08		19:39	19	08:30 (4)	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13		07:22		08:10 (4)	08:43	09:27
	16:35	17:51	18:56	16	07:43 (4)	21:08	22:14	22:51	22:20	21:05		19:36	20	08:30 (4)	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16		07:24		08:09 (4)	08:46	09:28
	16:37	17:53	18:59	13	07:41 (4)	21:10	22:16	22:51	22:18	21:02		19:34	21	08:30 (4)	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18		07:26		08:09 (4)	08:48	09:28
	16:39	17:55	19:01	8	07:38 (4)	21:12	22:18	22:51	22:16	21:00		19:31	20	08:29 (4)	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20		07:28		08:09 (4)	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57		19:28	20	08:29 (4)	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22		07:31		08:09 (4)	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54		19:25	19	08:28 (4)	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24		07:33		08:09 (4)	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51		19:22	18	08:27 (4)	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27		07:35		08:10 (4)	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48		19:19	15	08:25 (4)	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29		07:37		08:12 (4)	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46		19:16	12	08:24 (4)	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31				07:49		09:28
	16:54		20:15				22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200	
Total, worst case				213							214		3			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:26 (2)	08:46	10:08 (3)	07:35	07:07	05:44	04:40
	15:53	51	12:42 (4)	16:56	26	10:34 (3)	18:05	20:17	21:26	22:31
2	09:28		11:26 (2)	08:44	10:07 (3)	07:33	07:04	05:41	04:39
	15:54	51	12:42 (4)	16:59	27	10:34 (3)	18:07	20:19	21:28	22:32
3	09:27		11:26 (2)	08:41	10:08 (3)	07:30	07:01	05:39	04:37
	15:56	52	12:42 (4)	17:01	26	10:34 (3)	18:10	20:21	21:31	22:34
4	09:27		11:27 (2)	08:39	10:07 (3)	07:27	06:58	05:36	04:36
	15:57	52	12:43 (4)	17:04	27	10:34 (3)	18:12	20:24	21:33	22:35
5	09:26		11:27 (2)	08:37	10:08 (3)	07:24	06:55	05:34	04:35
	15:59	52	12:43 (4)	17:06	26	10:34 (3)	18:14	20:26	21:35	22:37
6	09:25		11:28 (2)	08:35	10:08 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:43 (4)	17:09	26	10:34 (3)	18:17	20:28	21:38	22:38
7	09:25		11:28 (2)	08:32	10:08 (3)	07:19	06:50	05:29	04:33
	16:02	52	12:44 (4)	17:11	25	10:33 (3)	18:19	20:31	21:40	22:39
8	09:24		10:35 (1)	08:30	10:10 (3)	07:16	06:47	05:27	04:32
	16:04	58	12:45 (4)	17:13	23	10:33 (3)	18:21	20:33	21:42	22:41
9	09:23		10:34 (1)	08:28	10:10 (3)	07:13	06:44	05:24	04:31
	16:05	60	12:45 (4)	17:16	22	10:32 (3)	18:24	20:35	21:44	22:42
10	09:22		10:33 (1)	08:25	09:11 (26)	07:10	06:41	05:22	04:30
	16:07	62	12:45 (4)	17:18	27	10:31 (3)	18:26	20:38	21:47	22:43
11	09:21		10:33 (1)	08:23	09:09 (26)	07:07	06:38	05:20	04:30
	16:09	63	12:46 (4)	17:21	28	10:29 (3)	18:28	20:40	21:49	22:44
12	09:20		10:32 (1)	08:20	09:07 (26)	07:05	06:36	05:17	04:29
	16:11	64	12:46 (4)	17:23	27	10:27 (3)	18:31	20:42	21:51	22:45
13	09:19		10:33 (1)	08:18	09:06 (26)	07:02	06:33	05:15	04:28
	16:13	64	12:46 (4)	17:26	18	09:24 (26)	18:33	20:44	21:53	22:46
14	09:17		10:32 (1)	08:15	09:05 (26)	06:59	06:30	05:13	04:28
	16:15	64	12:46 (4)	17:28	20	09:25 (26)	18:35	20:47	21:56	22:47
15	09:16		10:32 (1)	08:13	09:05 (26)	06:56	06:27	05:11	04:28
	16:17	63	12:46 (4)	17:31	20	09:25 (26)	18:38	20:49	21:58	22:47
16	09:15		10:31 (1)	08:10	09:04 (26)	06:53	06:24	05:08	04:27
	16:19	63	12:46 (4)	17:33	21	09:25 (26)	18:40	20:51	22:00	22:48
17	09:13		10:32 (1)	08:08	09:05 (26)	06:50	06:22	05:06	04:27
	16:21	60	12:46 (4)	17:36	21	09:26 (26)	18:42	20:54	22:02	22:49
18	09:12		10:32 (1)	08:05	09:05 (26)	06:47	06:19	05:04	04:27
	16:23	58	12:46 (4)	17:38	20	09:25 (26)	18:45	20:56	22:04	22:49
19	09:10		10:32 (1)	08:02	09:05 (26)	06:44	06:16	05:02	04:27
	16:26	53	12:46 (4)	17:41	20	09:25 (26)	18:47	20:58	22:06	22:50
20	09:09		10:33 (1)	08:00	09:05 (26)	06:42	06:13	05:00	04:27
	16:28	42	12:45 (4)	17:43	19	09:24 (26)	18:49	21:01	22:08	22:50
21	09:07		10:33 (1)	07:57	09:05 (26)	06:39	06:11	04:58	04:27
	16:30	42	12:45 (4)	17:46	18	09:23 (26)	18:52	21:03	22:10	22:50
22	09:05		10:16 (3)	07:54	09:07 (26)	06:36	06:08	04:56	04:27
	16:32	44	12:44 (4)	17:48	15	09:22 (26)	18:54	21:05	22:12	22:51
23	09:04		10:13 (3)	07:52	09:09 (26)	06:33	06:05	04:54	04:27
	16:35	48	12:43 (4)	17:50	11	09:20 (26)	18:56	21:08	22:14	22:51
24	09:02		10:11 (3)	07:49	09:13 (26)	06:30	06:02	04:53	04:28
	16:37	45	12:40 (4)	17:53	3	09:16 (26)	18:59	21:10	22:16	22:51
25	09:00		10:10 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	40	12:37 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:09 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	36	10:52 (1)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:09 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	37	10:52 (1)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:08 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	35	10:50 (1)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:08 (3)			07:16	05:49	04:44	04:30
	16:49	33	10:49 (1)			20:10	21:21	22:26	22:50
30	08:50		10:08 (3)			07:13	05:47	04:43	04:31
	16:51	25	10:33 (3)			20:12	21:24	22:27	22:49
31	08:48		10:07 (3)			07:10		04:41	
	16:54	26	10:33 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1546			516				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:40			07:52		08:41 (26)	09:00		10:15 (1)
	22:49	22:01	20:40	19:13			16:49	27	10:01 (3)	15:51	63	12:28 (4)
2	04:33	05:26	06:35	07:42			07:54		09:40 (3)	09:02		10:16 (1)
	22:48	21:59	20:37	19:10			16:46	22	10:02 (3)	15:50	62	12:28 (4)
3	04:34	05:29	06:38	07:44			07:56		09:39 (3)	09:04		10:17 (1)
	22:47	21:56	20:34	19:07			16:44	24	10:03 (3)	15:49	60	12:28 (4)
4	04:35	05:31	06:40	07:46			07:59		09:39 (3)	09:05		10:19 (1)
	22:47	21:54	20:31	19:05			16:42	25	10:04 (3)	15:48	57	12:29 (4)
5	04:36	05:33	06:42	07:48			08:01		09:38 (3)	09:07		11:13 (2)
	22:46	21:52	20:28	19:02			16:39	26	10:04 (3)	15:47	52	12:29 (4)
6	04:37	05:35	06:44	07:51			08:04		09:38 (3)	09:09		11:14 (2)
	22:45	21:49	20:26	18:59			16:37	26	10:04 (3)	15:46	52	12:30 (4)
7	04:39	05:37	06:47	07:53			08:06		09:38 (3)	09:10		11:14 (2)
	22:44	21:47	20:23	18:56			16:35	27	10:05 (3)	15:46	52	12:30 (4)
8	04:40	05:40	06:49	07:55			08:08		09:37 (3)	09:12		11:15 (2)
	22:43	21:44	20:20	18:53			16:32	27	10:04 (3)	15:45	52	12:31 (4)
9	04:41	05:42	06:51	07:58			08:11		09:38 (3)	09:14		11:16 (2)
	22:42	21:42	20:17	18:50			16:30	26	10:04 (3)	15:44	51	12:31 (4)
10	04:43	05:44	06:53	08:00			08:13		09:38 (3)	09:15		11:15 (2)
	22:41	21:39	20:14	18:48			16:28	27	10:05 (3)	15:44	52	12:31 (4)
11	04:44	05:46	06:55	08:02			08:16		09:38 (3)	09:16		11:16 (2)
	22:39	21:37	20:11	18:45			16:26	26	10:04 (3)	15:43	51	12:32 (4)
12	04:46	05:49	06:58	08:04			08:18		09:39 (3)	09:18		11:16 (2)
	22:38	21:34	20:08	18:42			16:24	25	10:04 (3)	15:43	51	12:32 (4)
13	04:48	05:51	07:00	08:07			08:20		09:40 (3)	09:19		11:17 (2)
	22:37	21:32	20:05	18:39			16:21	33	10:21 (1)	15:43	51	12:33 (4)
14	04:49	05:53	07:02	08:09			08:23		09:41 (3)	09:20		11:18 (2)
	22:35	21:29	20:02	18:36			16:19	35	10:23 (1)	15:42	50	12:33 (4)
15	04:51	05:55	07:04	08:11			08:25		09:41 (3)	09:21		11:18 (2)
	22:34	21:26	20:00	18:34			16:17	37	10:24 (1)	15:42	50	12:33 (4)
16	04:53	05:58	07:06	08:14			08:27		09:42 (3)	09:22		11:19 (2)
	22:32	21:24	19:57	18:31			16:15	36	10:25 (1)	15:42	50	12:34 (4)
17	04:54	06:00	07:09	08:16			08:30		09:44 (3)	09:23		11:20 (2)
	22:31	21:21	19:54	18:28			16:13	40	12:11 (4)	15:42	50	12:35 (4)
18	04:56	06:02	07:11	08:18		09:42 (26)	08:32		09:45 (3)	09:24		11:19 (2)
	22:29	21:19	19:51	18:25	7	09:49 (26)	16:11	45	12:14 (4)	15:42	49	12:34 (4)
19	04:58	06:04	07:13	08:21		09:39 (26)	08:34		09:47 (3)	09:25		11:20 (2)
	22:27	21:16	19:48	18:23	13	09:52 (26)	16:10	48	12:17 (4)	15:42	50	12:35 (4)
20	05:00	06:06	07:15	08:23		09:37 (26)	08:37		09:51 (3)	09:26		11:21 (2)
	22:26	21:13	19:45	18:20	16	09:53 (26)	16:08	44	12:19 (4)	15:43	50	12:36 (4)
21	05:02	06:09	07:17	08:25		09:36 (26)	08:39		10:08 (1)	09:26		11:22 (2)
	22:24	21:10	19:42	18:17	18	09:54 (26)	16:06	42	12:20 (4)	15:43	49	12:36 (4)
22	05:04	06:11	07:20	08:28		09:35 (26)	08:41		10:09 (1)	09:27		11:22 (2)
	22:22	21:08	19:39	18:15	19	09:54 (26)	16:04	42	12:21 (4)	15:44	49	12:36 (4)
23	05:06	06:13	07:22	08:30		09:35 (26)	08:43		10:08 (1)	09:27		11:22 (2)
	22:20	21:05	19:36	18:12	20	09:55 (26)	16:03	54	12:22 (4)	15:44	49	12:36 (4)
24	05:08	06:15	07:24	08:32		09:34 (26)	08:45		10:09 (1)	09:28		11:23 (2)
	22:18	21:02	19:33	18:09	21	09:55 (26)	16:01	58	12:23 (4)	15:45	50	12:38 (4)
25	05:10	06:18	07:26	07:35		08:34 (26)	08:48		10:09 (1)	09:28		11:23 (2)
	22:16	20:59	19:31	17:07	21	08:55 (26)	15:59	61	12:24 (4)	15:45	49	12:38 (4)
26	05:12	06:20	07:28	07:37		08:34 (26)	08:50		10:10 (1)	09:28		11:24 (2)
	22:14	20:57	19:28	17:04	21	08:55 (26)	15:58	62	12:25 (4)	15:46	49	12:38 (4)
27	05:14	06:22	07:31	07:40		08:34 (26)	08:52		10:11 (1)	09:29		11:24 (2)
	22:12	20:54	19:25	17:02	20	08:54 (26)	15:57	63	12:25 (4)	15:47	50	12:39 (4)
28	05:16	06:24	07:33	07:42		08:35 (26)	08:54		10:12 (1)	09:29		11:25 (2)
	22:10	20:51	19:22	16:59	19	08:54 (26)	15:55	63	12:26 (4)	15:48	50	12:40 (4)
29	05:18	06:27	07:35	07:44		08:36 (26)	08:56		10:13 (1)	09:29		11:24 (2)
	22:08	20:48	19:19	16:56	21	09:53 (3)	15:54	64	12:26 (4)	15:49	50	12:39 (4)
30	05:20	06:29	07:37	07:47		08:36 (26)	08:58		10:13 (1)	09:28		11:25 (2)
	22:05	20:45	19:16	16:54	29	09:57 (3)	15:53	65	12:27 (4)	15:50	50	12:40 (4)
31	05:22	06:31		07:49		08:38 (26)				09:28		11:26 (2)
	22:03	20:43		16:51	29	09:59 (3)				15:51	51	12:41 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					274			1200			1601	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June	July	August	September			October			November	December
1	09:28	08:46			07:36		08:20 (4)	07:07	05:44	04:40	04:32	05:24	06:33			07:40		08:51 (4)	07:52	09:00
	15:53	16:56			18:05	13	08:33 (4)	20:17	21:26	22:31	22:49	22:01	20:40			19:13	25	09:16 (4)	16:49	15:51
2	09:28	08:44			07:33		08:18 (4)	07:04	05:42	04:39	04:33	05:27	06:36			07:42		08:49 (4)	07:54	09:02
	15:54	16:59			18:07	17	08:35 (4)	20:19	21:28	22:32	22:48	21:59	20:37			19:10	27	09:16 (4)	16:47	15:50
3	09:27	08:41			07:30		08:16 (4)	07:01	05:39	04:37	04:34	05:29	06:38			07:44		08:48 (4)	07:56	09:04
	15:56	17:01			18:10	20	08:36 (4)	20:22	21:31	22:34	22:47	21:56	20:34			19:08	28	09:16 (4)	16:44	15:49
4	09:27	08:39			07:27		08:14 (4)	06:58	05:37	04:36	04:35	05:31	06:40			07:46		08:49 (4)	07:59	09:05
	15:57	17:04			18:12	23	08:37 (4)	20:24	21:33	22:35	22:47	21:54	20:31			19:05	27	09:16 (4)	16:42	15:48
5	09:26	08:37			07:24		08:13 (4)	06:56	05:34	04:35	04:36	05:33	06:42			07:49		08:48 (4)	08:01	09:07
	15:59	17:06			18:14	25	08:38 (4)	20:26	21:35	22:37	22:46	21:52	20:28			19:02	28	09:16 (4)	16:39	15:47
6	09:25	08:35			07:22		08:12 (4)	06:53	05:32	04:34	04:38	05:35	06:44			07:51		08:47 (4)	08:04	09:09
	16:00	17:09			18:17	26	08:38 (4)	20:28	21:38	22:38	22:45	21:49	20:26			18:59	28	09:15 (4)	16:37	15:47
7	09:25	08:32			07:19		08:11 (4)	06:50	05:29	04:33	04:39	05:38	06:47			07:53		08:48 (4)	08:06	09:10
	16:02	17:11			18:19	27	08:38 (4)	20:31	21:40	22:39	22:44	21:47	20:23			18:56	27	09:15 (4)	16:35	15:46
8	09:24	08:30			07:16		08:11 (4)	06:47	05:27	04:32	04:40	05:40	06:49			07:55		08:48 (4)	08:08	09:12
	16:04	17:14			18:22	27	08:38 (4)	20:33	21:42	22:41	22:43	21:44	20:20			18:53	26	09:14 (4)	16:32	15:45
9	09:23	08:28			07:13		08:11 (4)	06:44	05:24	04:31	04:42	05:42	06:51			07:58		08:48 (4)	08:11	09:14
	16:06	17:16			18:24	28	08:39 (4)	20:35	21:44	22:42	22:42	21:42	20:17			18:50	24	09:12 (4)	16:30	15:44
10	09:22	08:25			07:10		08:11 (4)	06:41	05:22	04:31	04:43	05:44	06:53			08:00		08:50 (4)	08:13	09:15
	16:07	17:19			18:26	28	08:39 (4)	20:38	21:47	22:43	22:41	21:39	20:14			18:48	22	09:12 (4)	16:28	15:44
11	09:21	08:23			07:07		08:11 (4)	06:38	05:20	04:30	04:45	05:46	06:55			08:02		08:50 (4)	08:16	09:16
	16:09	17:21			18:29	27	08:38 (4)	20:40	21:49	22:44	22:39	21:37	20:11			18:45	20	09:10 (4)	16:26	15:43
12	09:20	08:20			07:05		08:11 (4)	06:36	05:17	04:29	04:46	05:49	06:58			08:04		08:53 (4)	08:18	09:18
	16:11	17:23			18:31	26	08:37 (4)	20:42	21:51	22:45	22:38	21:34	20:08			18:42	15	09:08 (4)	16:24	15:43
13	09:19	08:18			07:02		08:12 (4)	06:33	05:15	04:29	04:48	05:51	07:00			08:07		08:55 (4)	08:20	09:19
	16:13	17:26			18:33	24	08:36 (4)	20:45	21:53	22:46	22:37	21:32	20:05			18:39	10	09:05 (4)	16:22	15:43
14	09:17	08:15			06:59		08:12 (4)	06:30	05:13	04:28	04:49	05:53	07:02			08:09			08:23	09:20
	16:15	17:28			18:36	23	08:35 (4)	20:47	21:56	22:47	22:35	21:29	20:03			18:36			16:19	15:42
15	09:16	08:13			06:56		08:13 (4)	06:27	05:11	04:28	04:51	05:55	07:04			08:11			08:25	09:21
	16:17	17:31			18:38	20	08:33 (4)	20:49	21:58	22:47	22:34	21:27	20:00			18:34			16:17	15:42
16	09:15	08:10			06:53		08:15 (4)	06:24	05:09	04:27	04:53	05:58	07:06			08:14			08:27	09:22
	16:19	17:33			18:40	15	08:30 (4)	20:51	22:00	22:48	22:32	21:24	19:57			18:31			16:15	15:42
17	09:13	08:08			06:50		08:17 (4)	06:22	05:06	04:27	04:54	06:00	07:09			08:16			08:30	09:23
	16:21	17:36			18:43	10	08:27 (4)	20:54	22:02	22:49	22:31	21:21	19:54			18:28			16:14	15:42
18	09:12	08:05			06:47			06:19	05:04	04:27	04:56	06:02	07:11			08:18			08:32	09:24
	16:24	17:38			18:45			20:56	22:04	22:49	22:29	21:19	19:51			18:25			16:12	15:42
19	09:10	08:02			06:45			06:16	05:02	04:27	04:58	06:04	07:13			08:21			08:34	09:25
	16:26	17:41			18:47			20:58	22:06	22:50	22:27	21:16	19:48			18:23			16:10	15:43
20	09:09	08:00			06:42			06:13	05:00	04:27	05:00	06:07	07:15			08:23			08:37	09:26
	16:28	17:43			18:49			21:01	22:08	22:50	22:26	21:13	19:45			18:20			16:08	15:43
21	09:07	07:57			06:39			06:11	04:58	04:27	05:02	06:09	07:17			08:25			08:39	09:26
	16:30	17:46			18:52			21:03	22:10	22:50	22:24	21:10	19:42			18:17			16:06	15:43
22	09:05	07:55			06:36			06:08	04:56	04:27	05:04	06:11	07:20			08:28			08:41	09:27
	16:32	17:48			18:54			21:05	22:12	22:51	22:22	21:08	19:39			18:15			16:04	15:44
23	09:04	07:52			06:33			06:05	04:55	04:28	05:06	06:13	07:22			08:30			08:43	09:27
	16:35	17:50			18:56			21:08	22:14	22:51	22:20	21:05	19:36			18:12			16:03	15:44
24	09:02	07:49			06:30			06:02	04:53	04:28	05:08	06:16	07:24			08:32			08:45	09:28
	16:37	17:53			18:59			21:10	22:16	22:51	22:18	21:02	19:33			18:09			16:01	15:45
25	09:00	07:46			06:27			06:00	04:51	04:28	05:10	06:18	07:26			07:35			08:48	09:28
	16:39	17:55			19:01			21:12	22:18	22:51	22:16	21:00	19:31			17:07			16:00	15:46
26	08:58	07:44			06:24			05:57	04:49	04:29	05:12	06:20	07:28		09:02 (4)	07:37			08:50	09:28
	16:42	17:58			19:03			21:15	22:20	22:51	22:14	20:57	19:28	6	09:08 (4)	17:04			15:58	15:46
27	08:56	07:41			06:21			05:55	04:48	04:29	05:14	06:22	07:31		08:57 (4)	07:40			08:52	09:29
	16:44	18:00			19:05			21:17	22:22	22:50	22:12	20:54	19:25	14	09:11 (4)	17:02			15:57	15:47
28	08:54	07:38		08:26 (4)	06:19			05:52	04:46	04:30	05:16	06:24	07:33		08:55 (4)	07:42			08:54	09:29
	16:47	18:03	2	08:28 (4)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18	09:13 (4)	16:59			15:55	15:48
29	08:52				07:16			05:49	04:44	04:31	05:18	06:27	07:35		08:53 (4)	07:44			08:56	09:29
	16:49				20:10			21:21	22:26	22:50	22:08	20:48	19:19	21	09:14 (4)	16:57			15:54	15:49
30	08:50				07:13			05:47	04:43	04:31	05:20	06:29	07:37		08:52 (4)	07:47			08:58	09:28
	16:51				20:12			21:24	22:27	22:49	22:05	20:46	19:16	24	09:16 (4)	16:54			15:53	15:50
31	08:48				07:10				04:41		05:22	06:31				07:49				09:28
	16:54				20:15				22:29		22:03	20:43				16:52				15:51
Potential sun hours	221	260			365			432	521	547	545	478	386			319			236	200
Total, worst case			2			379								83			307			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		12:21 (28)	08:46		10:00 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:36 (32)	09:00	10:51 (27)
	15:53	20	12:41 (28)	16:56	20	10:20 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6	09:42 (32)	15:51	28	12:23 (28)
2	09:28		12:22 (28)	08:44		09:59 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:34 (32)	09:02		10:51 (27)
	15:54	19	12:41 (28)	16:58	21	10:20 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11	09:45 (32)	15:50	30	12:24 (28)
3	09:27		12:22 (28)	08:41		10:00 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:33 (32)	09:04		10:52 (27)
	15:55	19	12:41 (28)	17:01	20	10:20 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14	09:47 (32)	15:49	29	12:25 (28)
4	09:27		11:12 (27)	08:39		10:00 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:31 (32)	09:05		10:53 (27)
	15:57	22	12:41 (28)	17:03	20	10:20 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	09:48 (32)	15:48	30	12:26 (28)
5	09:26		11:11 (27)	08:37		10:01 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:31 (32)	09:07		10:54 (27)
	15:58	26	12:42 (28)	17:06	19	10:20 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18	09:49 (32)	15:47	29	12:27 (28)
6	09:25		11:10 (27)	08:35		10:01 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:30 (32)	09:09		10:56 (27)
	16:00	28	12:42 (28)	17:08	18	10:19 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20	09:50 (32)	15:46	28	12:28 (28)
7	09:25		11:09 (27)	08:32		10:01 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:30 (32)	09:10		10:58 (27)
	16:02	29	12:42 (28)	17:11	17	10:18 (32)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20	09:50 (32)	15:45	26	12:29 (28)
8	09:24		11:09 (27)	08:30		10:03 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:30 (32)	09:12		11:00 (27)
	16:03	30	12:42 (28)	17:13	15	10:18 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20	09:50 (32)	15:45	23	12:30 (28)
9	09:23		11:09 (27)	08:27		10:04 (32)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:30 (32)	09:13		12:11 (28)
	16:05	30	12:42 (28)	17:16	12	10:16 (32)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20	09:50 (32)	15:44	19	12:30 (28)
10	09:22		11:08 (27)	08:25		10:07 (32)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:31 (32)	09:15		12:11 (28)
	16:07	30	12:41 (28)	17:18	5	10:12 (32)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20	09:51 (32)	15:44	19	12:30 (28)
11	09:21		11:09 (27)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:30 (32)	09:16		12:11 (28)
	16:09	28	12:41 (28)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20	09:50 (32)	15:43	20	12:31 (28)
12	09:20		11:08 (27)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:31 (32)	09:18		12:11 (28)
	16:11	27	12:40 (28)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27	10:58 (27)	15:43	20	12:31 (28)
13	09:19		11:08 (27)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:32 (32)	09:19		12:12 (28)
	16:13	25	12:39 (28)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31	11:01 (27)	15:42	21	12:33 (28)
14	09:17		11:08 (27)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:33 (32)	09:20		12:12 (28)
	16:15	20	11:28 (27)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32	11:03 (27)	15:42	21	12:33 (28)
15	09:16		11:08 (27)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:34 (32)	09:21		12:12 (28)
	16:17	21	11:29 (27)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31	11:03 (27)	15:42	21	12:33 (28)
16	09:15		11:08 (27)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:36 (32)	09:22		12:13 (28)
	16:19	21	11:29 (27)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31	11:05 (27)	15:42	20	12:33 (28)
17	09:13		11:09 (27)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:38 (32)	09:23		12:14 (28)
	16:21	22	11:31 (27)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28	11:06 (27)	15:42	21	12:35 (28)
18	09:12		11:09 (27)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:44 (27)	09:24		12:14 (28)
	16:23	22	11:31 (27)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22	11:06 (27)	15:42	21	12:35 (28)
19	09:10		11:09 (27)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		10:45 (27)	09:25		12:14 (28)
	16:25	22	11:31 (27)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22	11:07 (27)	15:42	21	12:35 (28)
20	09:09		11:09 (27)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:45 (27)	09:26		12:15 (28)
	16:28	23	11:32 (27)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22	11:07 (27)	15:43	21	12:36 (28)
21	09:07		11:09 (27)	07:57			06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39		10:45 (27)	09:26		12:16 (28)
	16:30	23	11:32 (27)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	11:07 (27)	15:43	21	12:37 (28)
22	09:05		11:10 (27)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		10:45 (27)	09:27		12:16 (28)
	16:32	22	11:32 (27)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	11:08 (27)	15:43	21	12:37 (28)
23	09:03		11:10 (27)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:45 (27)	09:27		12:16 (28)
	16:34	22	11:32 (27)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	11:08 (27)	15:44	21	12:37 (28)
24	09:02		11:10 (27)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:46 (27)	09:28		12:17 (28)
	16:37	22	11:32 (27)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22	11:08 (27)	15:45	21	12:38 (28)
25	09:00		10:04 (32)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:46 (27)	09:28		12:17 (28)
	16:39	28	11:32 (27)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22	11:08 (27)	15:45	21	12:38 (28)
26	08:58		10:03 (32)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:47 (27)	09:28		12:18 (28)
	16:42	31	11:32 (27)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21	11:08 (27)	15:46	21	12:39 (28)
27	08:56		10:02 (32)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:47 (27)	09:28		12:18 (28)
	16:44	31	11:31 (27)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21	11:08 (27)	15:47	21	12:39 (28)
28	08:54		10:00 (32)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:48 (27)	09:29		12:19 (28)
	16:46	32	11:30 (27)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21	11:09 (27)	15:48	21	12:40 (28)
29	08:52		10:00 (32)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:49 (27)	09:29		12:19 (28)
	16:49	31	11:29 (27)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	12:18 (28)	15:49	21	12:40 (28)
30	08:50		09:59 (32)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:49 (27)	09:28		12:20 (28)
	16:51	27	11:26 (27)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28	12:21 (28)	15:50	20	12:40 (28)
31	08:48		09:59 (32)				07:10		04:41		05:22	06:31		07:49				09:28		12:21 (28)
	16:54	20	10:19 (32)				20:14		22:29		22:03	20:43		16:51				15:51	20	12:41 (28)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		773			167											657			697	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April		May	June
1	09:27	08:45		07:35			07:06		05:44	04:40
	15:53	16:56		18:04			20:16		21:25	22:30
2	09:27	08:43		07:32			07:04		05:41	04:38
	15:54	16:58		18:07			20:19		21:28	22:31
3	09:26	08:41		07:29			07:01		05:39	04:37
	15:55	17:01		18:09			20:21		21:30	22:33
4	09:26	08:39		07:27			06:58	19:38 (67)	05:36	04:36
	15:57	17:03		18:12			20:23	2 19:40 (67)	21:32	22:34
5	09:25	08:36		07:24			06:55	19:34 (67)	05:34	04:35
	15:58	17:06		18:14			20:25	8 19:42 (67)	21:35	22:36
6	09:25	08:34		07:21			06:52	19:32 (67)	05:31	04:34
	16:00	17:08		18:16			20:28	11 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18			06:49	19:31 (67)	05:29	04:33
	16:02	17:11		18:19			20:30	12 19:43 (67)	21:39	22:39
8	09:23	08:29		07:15			06:46	19:31 (67)	05:26	04:32
	16:03	17:13		18:21			20:32	13 19:44 (67)	21:41	22:40
9	09:22	08:27		07:13			06:44	19:31 (67)	05:24	04:31
	16:05	17:16		18:23			20:35	12 19:43 (67)	21:44	22:41
10	09:21	08:24		07:10			06:41	19:31 (67)	05:22	04:30
	16:07	17:18		18:26			20:37	11 19:42 (67)	21:46	22:42
11	09:20	08:22		07:07			06:38	19:32 (67)	05:19	04:30
	16:09	17:21		18:28			20:39	8 19:40 (67)	21:48	22:43
12	09:19	08:20		07:04			06:35	19:34 (67)	05:17	04:29
	16:11	17:23		18:30			20:42	4 19:38 (67)	21:50	22:44
13	09:18	08:17		07:01			06:32		05:15	04:28
	16:13	17:25		18:33			20:44		21:53	22:45
14	09:17	08:15		06:58			06:29		05:13	04:28
	16:15	17:28		18:35			20:46		21:55	22:46
15	09:15	08:12		06:55			06:27	19:48 (66)	05:10	04:27
	16:17	17:30		18:37			20:48	9 19:57 (66)	21:57	22:47
16	09:14	08:10	16:48 (70)	06:53			06:24	19:47 (66)	05:08	04:27
	16:19	17:33	1 16:49 (70)	18:40			20:51	13 20:00 (66)	21:59	22:47
17	09:13	08:07	16:44 (70)	06:50			06:21	19:45 (66)	05:06	04:27
	16:21	17:35	8 16:52 (70)	18:42			20:53	15 20:00 (66)	22:01	22:48
18	09:11	08:04	16:42 (70)	06:47			06:18	19:44 (66)	05:04	04:27
	16:23	17:38	12 16:54 (70)	18:44			20:55	16 20:00 (66)	22:03	22:48
19	09:09	08:02	16:41 (70)	06:44			06:16	19:44 (66)	05:02	04:27
	16:25	17:40	13 16:54 (70)	18:47			20:58	17 20:01 (66)	22:05	22:49
20	09:08	07:59	16:42 (70)	06:41			06:13	19:43 (66)	05:00	04:27
	16:28	17:43	13 16:55 (70)	18:49			21:00	18 20:01 (66)	22:08	22:49
21	09:06	07:57	16:41 (70)	06:38		18:02 (69)	06:10	19:42 (66)	04:58	04:27
	16:30	17:45	14 16:55 (70)	18:51	2	18:04 (69)	21:02	18 20:00 (66)	22:10	22:49
22	09:05	07:54	16:41 (70)	06:35		17:58 (69)	06:07	19:43 (66)	04:56	04:27
	16:32	17:48	13 16:54 (70)	18:53	9	18:07 (69)	21:05	17 20:00 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32		17:56 (69)	06:05	19:43 (66)	04:54	04:27
	16:34	17:50	11 16:53 (70)	18:56	12	18:08 (69)	21:07	16 19:59 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30		17:55 (69)	06:02	19:44 (66)	04:52	04:28
	16:37	17:52	9 16:52 (70)	18:58	14	18:09 (69)	21:09	15 19:59 (66)	22:16	22:50
25	08:59	07:46	16:45 (70)	06:27		17:54 (69)	05:59	19:45 (66)	04:51	04:28
	16:39	17:55	4 16:49 (70)	19:00	15	18:09 (69)	21:12	12 19:57 (66)	22:17	22:50
26	08:57	07:43		06:24		17:53 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57		19:03	15	18:08 (69)	21:14	8 19:55 (66)	22:19	22:50
27	08:55	07:40		06:21		17:54 (69)	05:54		04:47	04:29
	16:44	18:00		19:05	15	18:09 (69)	21:16		22:21	22:49
28	08:53	07:38		06:18		17:55 (69)	05:51		04:46	04:30
	16:46	18:02		19:07	13	18:08 (69)	21:18		22:23	22:49
29	08:51			07:15		18:55 (69)	05:49		04:44	04:30
	16:49			20:09	11	19:06 (69)	21:21		22:25	22:49
30	08:49			07:12		18:57 (69)	05:46		04:43	04:31
	16:51			20:12	6	19:03 (69)	21:23		22:26	22:48
31	08:47			07:09					04:41	
	16:53			20:14					22:28	
Potential sun hours	222	260		365			432		521	547
Total, worst case			98		112			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:31 (67)	07:39			07:51	08:59
	22:48	22:00			20:39	8	19:39 (67)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:29 (67)	07:41			07:53	09:01
	22:47	21:58			20:36	11	19:40 (67)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:29 (67)	07:43			07:56	09:03
	22:47	21:56			20:34	12	19:41 (67)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:28 (67)	07:46			07:58	09:05
	22:46	21:53			20:31	13	19:41 (67)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:28 (67)	07:48			08:00	09:06
	22:45	21:51			20:28	12	19:40 (67)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:28 (67)	07:50			08:03	09:08
	22:44	21:48			20:25	11	19:39 (67)	18:58			16:37	15:46
7	04:39	05:37			06:46		19:29 (67)	07:52			08:05	09:10
	22:43	21:46			20:22	8	19:37 (67)	18:56			16:34	15:45
8	04:40	05:39			06:48		19:31 (67)	07:55			08:08	09:11
	22:42	21:44			20:19	3	19:34 (67)	18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55			08:02			08:15	09:16
	22:39	21:36			20:11			18:44			16:25	15:43
12	04:46	05:48			06:57			08:04			08:17	09:17
	22:37	21:34			20:08			18:42			16:23	15:43
13	04:47	05:50			06:59		18:49 (69)	08:06			08:20	09:18
	22:36	21:31			20:05	5	18:54 (69)	18:39			16:21	15:42
14	04:49	05:53			07:01		18:46 (69)	08:08			08:22	09:19
	22:34	21:28			20:02	10	18:56 (69)	18:36			16:19	15:42
15	04:51	05:55			07:04		18:44 (69)	08:11			08:24	09:20
	22:33	21:26			19:59	13	18:57 (69)	18:33			16:17	15:42
16	04:52	05:57		19:56 (66)	07:06		18:43 (69)	08:13			08:27	09:21
	22:31	21:23	4	20:00 (66)	19:56	14	18:57 (69)	18:30			16:15	15:42
17	04:54	05:59		19:53 (66)	07:08		18:42 (69)	08:15		17:16 (70)	08:29	09:22
	22:30	21:21	9	20:02 (66)	19:53	15	18:57 (69)	18:28	6	17:22 (70)	16:13	15:42
18	04:56	06:02		19:51 (66)	07:10		18:41 (69)	08:18		17:14 (70)	08:31	09:23
	22:28	21:18	13	20:04 (66)	19:50	15	18:56 (69)	18:25	10	17:24 (70)	16:11	15:42
19	04:58	06:04		19:49 (66)	07:12		18:42 (69)	08:20		17:13 (70)	08:34	09:24
	22:26	21:15	15	20:04 (66)	19:47	14	18:56 (69)	18:22	12	17:25 (70)	16:09	15:42
20	05:00	06:06		19:48 (66)	07:15		18:42 (69)	08:22		17:12 (70)	08:36	09:25
	22:25	21:12	17	20:05 (66)	19:44	13	18:55 (69)	18:20	14	17:26 (70)	16:08	15:43
21	05:01	06:08		19:48 (66)	07:17		18:43 (69)	08:25		17:12 (70)	08:38	09:26
	22:23	21:10	17	20:05 (66)	19:42	10	18:53 (69)	18:17	13	17:25 (70)	16:06	15:43
22	05:03	06:11		19:47 (66)	07:19		18:45 (69)	08:27		17:12 (70)	08:40	09:26
	22:21	21:07	18	20:05 (66)	19:39	5	18:50 (69)	18:14	13	17:25 (70)	16:04	15:43
23	05:05	06:13		19:48 (66)	07:21			08:29		17:12 (70)	08:43	09:27
	22:19	21:04	18	20:06 (66)	19:36			18:12	12	17:24 (70)	16:02	15:44
24	05:07	06:15		19:48 (66)	07:23			08:32		17:13 (70)	08:45	09:27
	22:17	21:02	17	20:05 (66)	19:33			18:09	10	17:23 (70)	16:01	15:45
25	05:09	06:17		19:48 (66)	07:26			07:34		16:14 (70)	08:47	09:27
	22:15	20:59	16	20:04 (66)	19:30			17:06	7	16:21 (70)	15:59	15:45
26	05:11	06:20		19:48 (66)	07:28			07:37			08:49	09:28
	22:13	20:56	15	20:03 (66)	19:27			17:04			15:58	15:46
27	05:13	06:22		19:49 (66)	07:30			07:39			08:51	09:28
	22:11	20:53	12	20:01 (66)	19:24			17:01			15:56	15:47
28	05:16	06:24		19:50 (66)	07:32			07:41			08:53	09:28
	22:09	20:50	9	19:59 (66)	19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28			07:37			07:46			08:57	09:28
	22:05	20:45			19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (67)				07:48				09:27
	22:02	20:42	5	19:38 (67)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			185			192			97			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April		May	June
1	09:27	08:45		07:35			07:06	19:00 (69)	05:44	04:40
	15:53	16:56		18:04			20:16	4 19:04 (69)	21:25	22:30
2	09:27	08:43		07:32			07:04		05:41	04:38
	15:54	16:58		18:07			20:19		21:28	22:31
3	09:26	08:41		07:29			07:01		05:39	04:37
	15:55	17:01		18:09			20:21		21:30	22:33
4	09:26	08:39		07:27			06:58		05:36	04:36
	15:57	17:03		18:12			20:23		21:32	22:34
5	09:25	08:36		07:24			06:55		05:34	04:35
	15:58	17:06		18:14			20:25		21:35	22:36
6	09:25	08:34		07:21			06:52	19:37 (67)	05:31	04:34
	16:00	17:08		18:16			20:28	6 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18			06:49	19:35 (67)	05:29	04:33
	16:02	17:11		18:19			20:30	10 19:45 (67)	21:39	22:39
8	09:23	08:29		07:15			06:46	19:34 (67)	05:26	04:32
	16:03	17:13		18:21			20:32	12 19:46 (67)	21:41	22:40
9	09:22	08:27		07:13			06:44	19:33 (67)	05:24	04:31
	16:05	17:16		18:23			20:35	13 19:46 (67)	21:44	22:41
10	09:21	08:24		07:10			06:41	19:33 (67)	05:22	04:30
	16:07	17:18		18:26			20:37	12 19:45 (67)	21:46	22:42
11	09:20	08:22		07:07			06:38	19:33 (67)	05:19	04:30
	16:09	17:21		18:28			20:39	11 19:44 (67)	21:48	22:43
12	09:19	08:20		07:04			06:35	19:33 (67)	05:17	04:29
	16:11	17:23		18:30			20:42	10 19:43 (67)	21:50	22:44
13	09:18	08:17		07:01			06:32	19:35 (67)	05:15	04:28
	16:13	17:25		18:33			20:44	7 19:42 (67)	21:53	22:45
14	09:17	08:15		06:58			06:29		05:13	04:28
	16:15	17:28		18:35			20:46		21:55	22:46
15	09:15	08:12		06:55			06:27		05:10	04:27
	16:17	17:30		18:37			20:48		21:57	22:47
16	09:14	08:10		06:53			06:24		05:08	04:27
	16:19	17:33		18:40			20:51		21:59	22:47
17	09:13	08:07		06:50			06:21	19:53 (66)	05:06	04:27
	16:21	17:35		18:42			20:53	8 20:01 (66)	22:01	22:48
18	09:11	08:04	16:45 (70)	06:47			06:18	19:50 (66)	05:04	04:27
	16:23	17:38	8 16:53 (70)	18:44			20:55	12 20:02 (66)	22:03	22:48
19	09:09	08:02	16:43 (70)	06:44			06:16	19:49 (66)	05:02	04:27
	16:25	17:40	12 16:55 (70)	18:47			20:58	15 20:04 (66)	22:05	22:49
20	09:08	07:59	16:43 (70)	06:41			06:13	19:48 (66)	05:00	04:27
	16:28	17:43	13 16:56 (70)	18:49			21:00	16 20:04 (66)	22:08	22:49
21	09:06	07:57	16:43 (70)	06:38			06:10	19:46 (66)	04:58	04:27
	16:30	17:45	13 16:56 (70)	18:51			21:02	18 20:04 (66)	22:10	22:49
22	09:05	07:54	16:42 (70)	06:35			06:07	19:47 (66)	04:56	04:27
	16:32	17:48	14 16:56 (70)	18:53			21:05	17 20:04 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32		18:01 (69)	06:05	19:46 (66)	04:54	04:27
	16:34	17:50	13 16:55 (70)	18:56	7	18:08 (69)	21:07	18 20:04 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30		17:59 (69)	06:02	19:46 (66)	04:52	04:28
	16:37	17:52	11 16:54 (70)	18:58	11	18:10 (69)	21:09	18 20:04 (66)	22:16	22:50
25	08:59	07:46	16:44 (70)	06:27		17:57 (69)	05:59	19:46 (66)	04:51	04:28
	16:39	17:55	9 16:53 (70)	19:00	14	18:11 (69)	21:12	17 20:03 (66)	22:17	22:50
26	08:57	07:43	16:47 (70)	06:24		17:56 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57	4 16:51 (70)	19:03	15	18:11 (69)	21:14	16 20:03 (66)	22:19	22:50
27	08:55	07:40		06:21		17:56 (69)	05:54	19:47 (66)	04:47	04:29
	16:44	18:00		19:05	16	18:12 (69)	21:16	14 20:01 (66)	22:21	22:49
28	08:53	07:38		06:18		17:56 (69)	05:51	19:49 (66)	04:46	04:30
	16:46	18:02		19:07	15	18:11 (69)	21:18	11 20:00 (66)	22:23	22:49
29	08:51			07:15		18:56 (69)	05:49	19:50 (66)	04:44	04:30
	16:49			20:09	14	19:10 (69)	21:21	7 19:57 (66)	22:25	22:49
30	08:49			07:12		18:56 (69)	05:46		04:43	04:31
	16:51			20:12	13	19:09 (69)	21:23		22:26	22:48
31	08:47			07:09		18:57 (69)			04:41	
	16:53			20:14	10	19:07 (69)			22:28	
Potential sun hours	222	260		365			432		521	547
Total, worst case			97		115			272		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:32 (67)	07:39			07:51	08:59
	22:48	22:00			20:39	11	19:43 (67)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:31 (67)	07:41			07:53	09:01
	22:47	21:58			20:36	12	19:43 (67)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:31 (67)	07:43			07:56	09:03
	22:47	21:56			20:34	13	19:44 (67)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:31 (67)	07:46			07:58	09:05
	22:46	21:53			20:31	12	19:43 (67)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:32 (67)	07:48			08:00	09:06
	22:45	21:51			20:28	10	19:42 (67)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:33 (67)	07:50			08:03	09:08
	22:44	21:48			20:25	7	19:40 (67)	18:58			16:37	15:46
7	04:39	05:37			06:46			07:52			08:05	09:10
	22:43	21:46			20:22			18:56			16:34	15:45
8	04:40	05:39			06:48			07:55			08:08	09:11
	22:42	21:44			20:19			18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55		18:54 (69)	08:02			08:15	09:16
	22:39	21:36			20:11	1	18:55 (69)	18:44			16:25	15:43
12	04:46	05:48			06:57		18:50 (69)	08:04			08:17	09:17
	22:37	21:34			20:08	9	18:59 (69)	18:42			16:23	15:43
13	04:47	05:50			06:59		18:48 (69)	08:06			08:20	09:18
	22:36	21:31			20:05	12	19:00 (69)	18:39			16:21	15:42
14	04:49	05:53		19:58 (66)	07:01		18:47 (69)	08:08			08:22	09:19
	22:34	21:28	8	20:06 (66)	20:02	14	19:01 (69)	18:36			16:19	15:42
15	04:51	05:55		19:56 (66)	07:04		18:46 (69)	08:11			08:24	09:20
	22:33	21:26	12	20:08 (66)	19:59	15	19:01 (69)	18:33			16:17	15:42
16	04:52	05:57		19:54 (66)	07:06		18:45 (69)	08:13		17:18 (70)	08:27	09:21
	22:31	21:23	15	20:09 (66)	19:56	15	19:00 (69)	18:30	7	17:25 (70)	16:15	15:42
17	04:54	05:59		19:53 (66)	07:08		18:45 (69)	08:15		17:15 (70)	08:29	09:22
	22:30	21:21	16	20:09 (66)	19:53	14	18:59 (69)	18:28	11	17:26 (70)	16:13	15:42
18	04:56	06:02		19:52 (66)	07:10		18:45 (69)	08:18		17:14 (70)	08:31	09:23
	22:28	21:18	18	20:10 (66)	19:50	13	18:58 (69)	18:25	13	17:27 (70)	16:11	15:42
19	04:58	06:04		19:52 (66)	07:12		18:46 (69)	08:20		17:13 (70)	08:34	09:24
	22:26	21:15	18	20:10 (66)	19:47	12	18:58 (69)	18:22	14	17:27 (70)	16:09	15:42
20	05:00	06:06		19:51 (66)	07:15		18:47 (69)	08:22		17:13 (70)	08:36	09:25
	22:25	21:12	18	20:09 (66)	19:44	8	18:55 (69)	18:20	14	17:27 (70)	16:08	15:43
21	05:01	06:08		19:51 (66)	07:17			08:25		17:13 (70)	08:38	09:26
	22:23	21:10	18	20:09 (66)	19:42			18:17	13	17:26 (70)	16:06	15:43
22	05:03	06:11		19:51 (66)	07:19			08:27		17:14 (70)	08:40	09:26
	22:21	21:07	17	20:08 (66)	19:39			18:14	12	17:26 (70)	16:04	15:43
23	05:05	06:13		19:52 (66)	07:21			08:29		17:14 (70)	08:43	09:27
	22:19	21:04	17	20:09 (66)	19:36			18:12	10	17:24 (70)	16:02	15:44
24	05:07	06:15		19:53 (66)	07:23			08:32		17:16 (70)	08:45	09:27
	22:17	21:02	14	20:07 (66)	19:33			18:09	7	17:23 (70)	16:01	15:45
25	05:09	06:17		19:54 (66)	07:26			07:34			08:47	09:27
	22:15	20:59	12	20:06 (66)	19:30			17:06			15:59	15:45
26	05:11	06:20		19:56 (66)	07:28			07:37			08:49	09:28
	22:13	20:56	7	20:03 (66)	19:27			17:04			15:58	15:46
27	05:13	06:22			07:30			07:39			08:51	09:28
	22:11	20:53			19:24			17:01			15:56	15:47
28	05:16	06:24			07:32			07:41			08:53	09:28
	22:09	20:50			19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28		19:35 (67)	07:37			07:46			08:57	09:28
	22:05	20:45	7	19:42 (67)	19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (67)				07:48				09:27
	22:02	20:42	10	19:43 (67)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			207			178			101			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 3.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

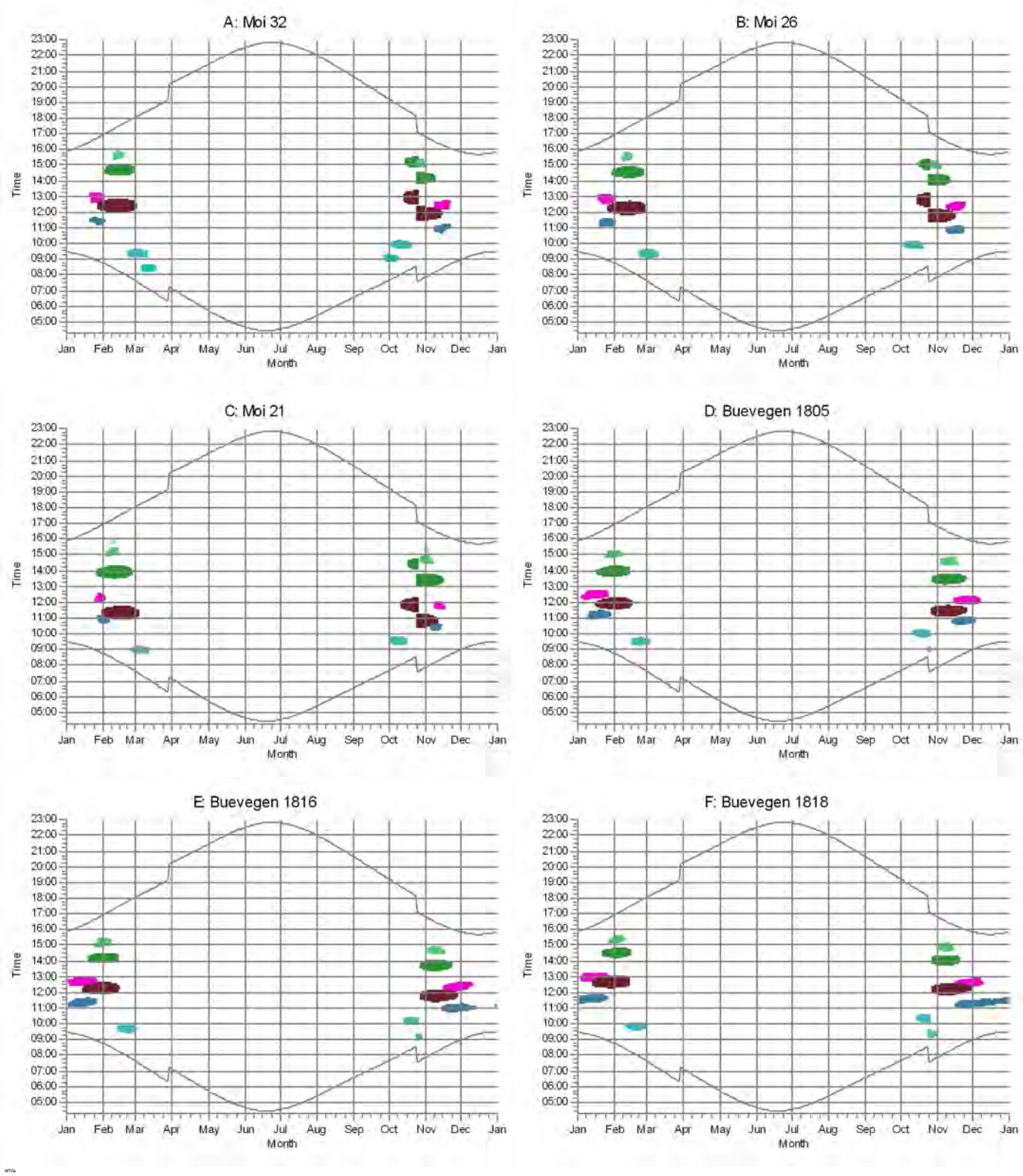
Med nærliggende – worst case

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

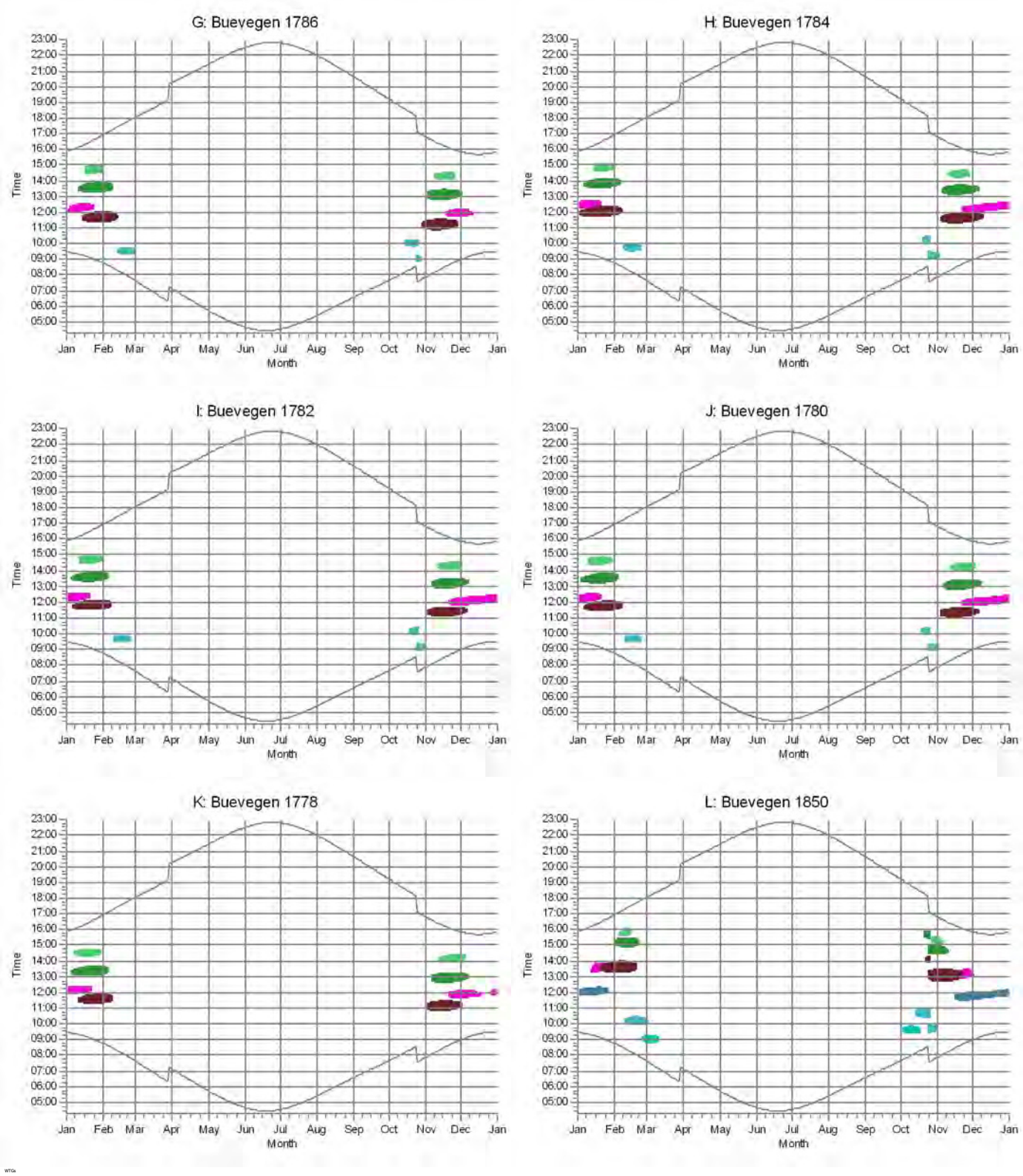


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

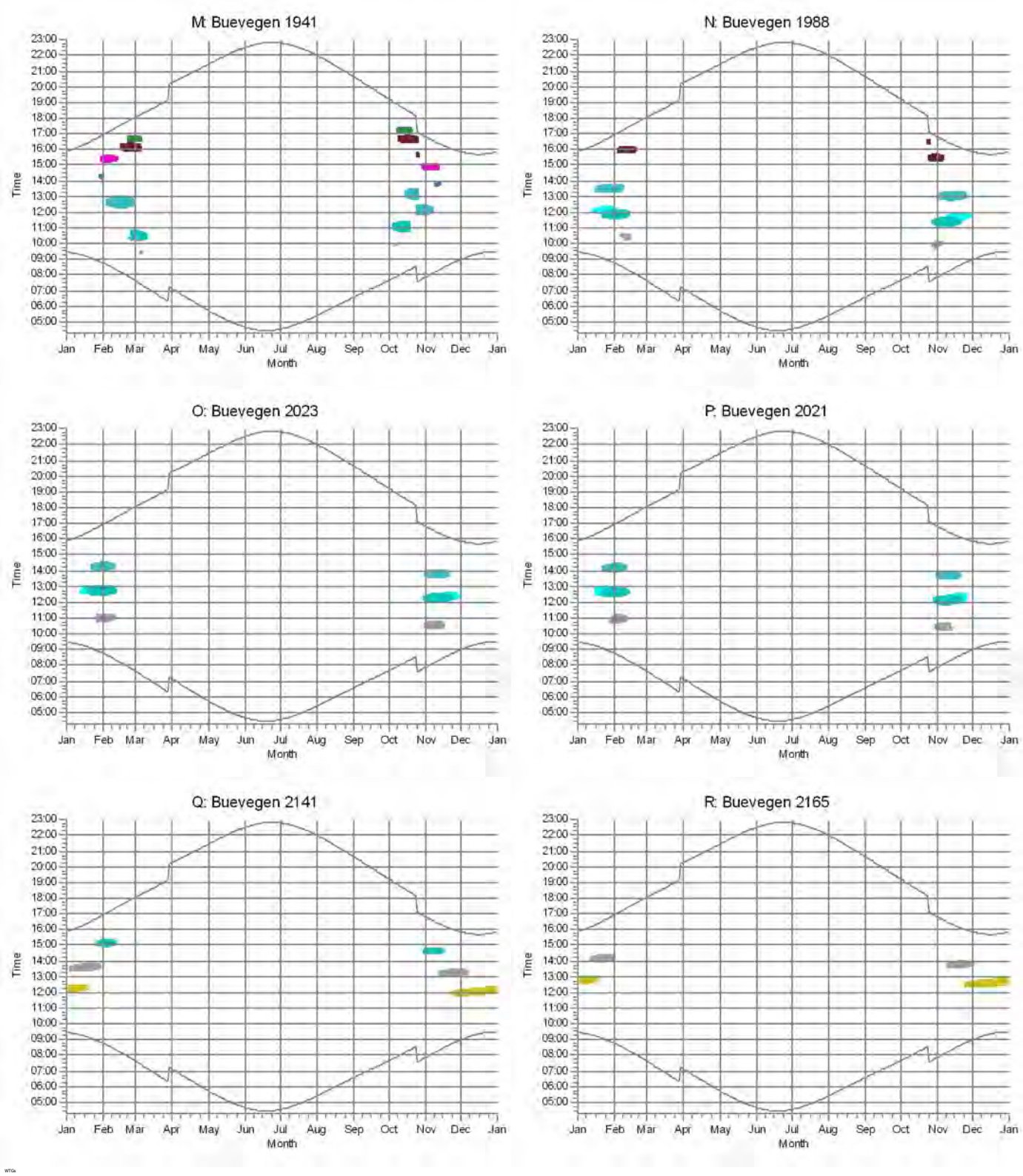


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

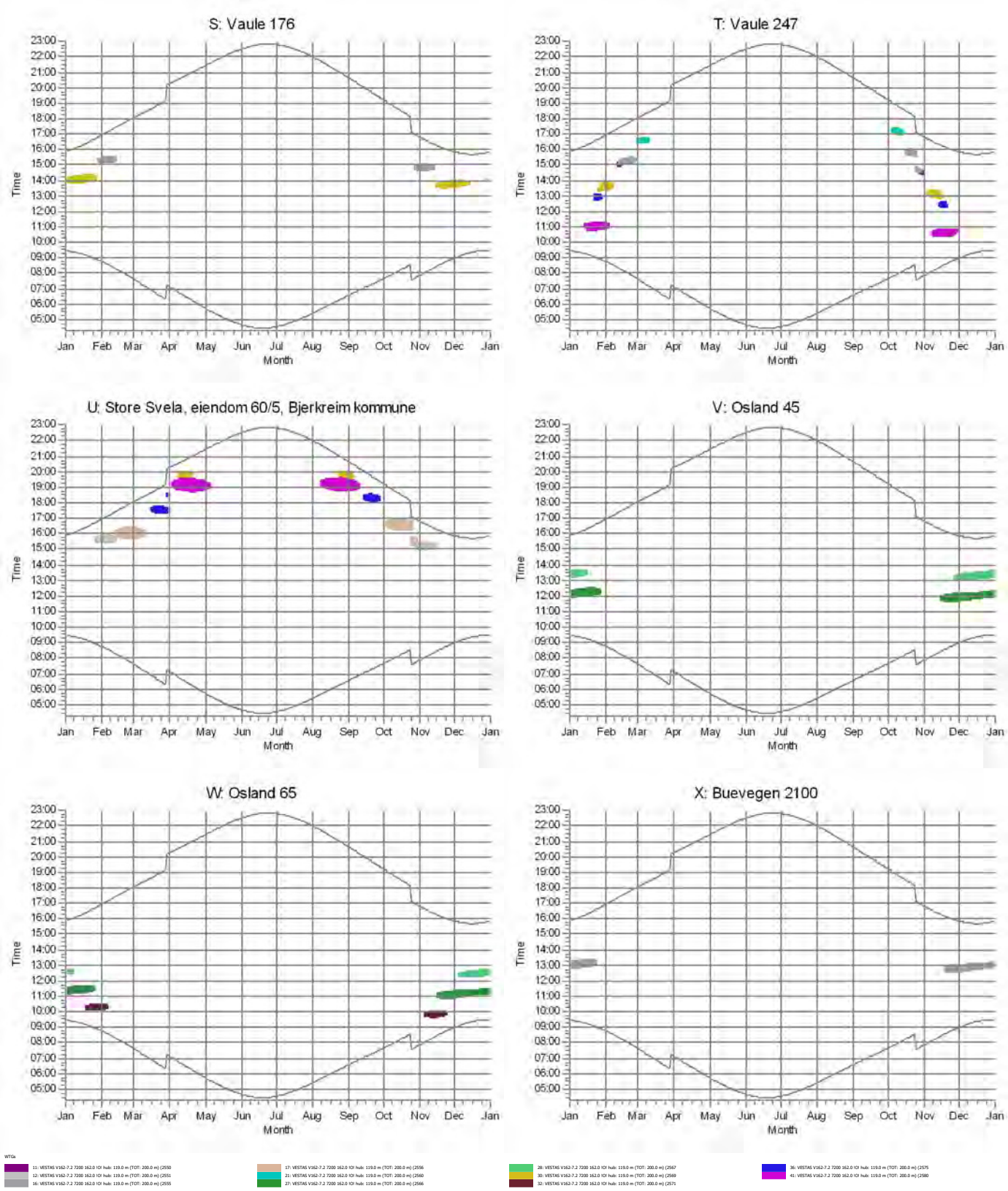


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

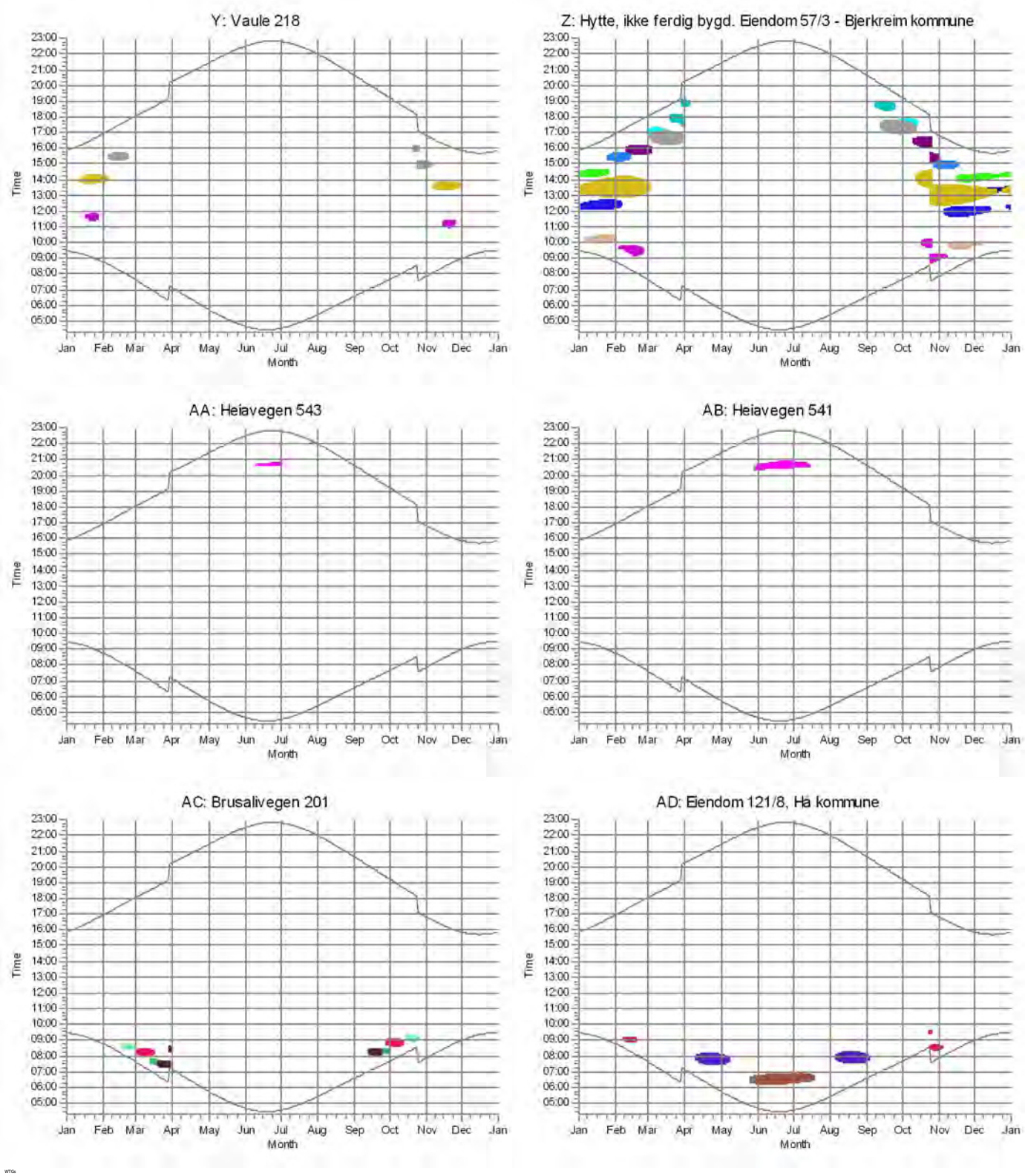


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

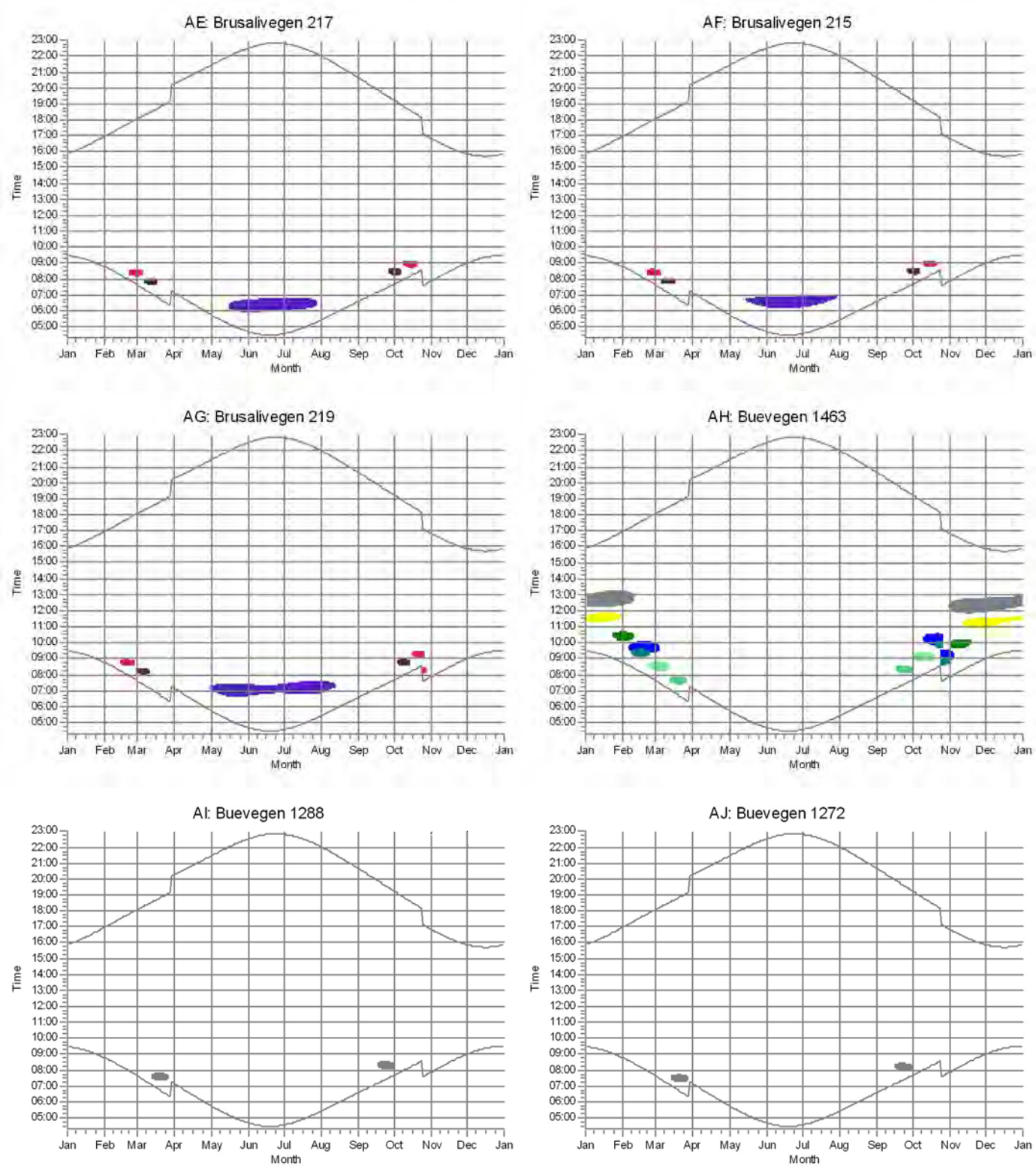


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

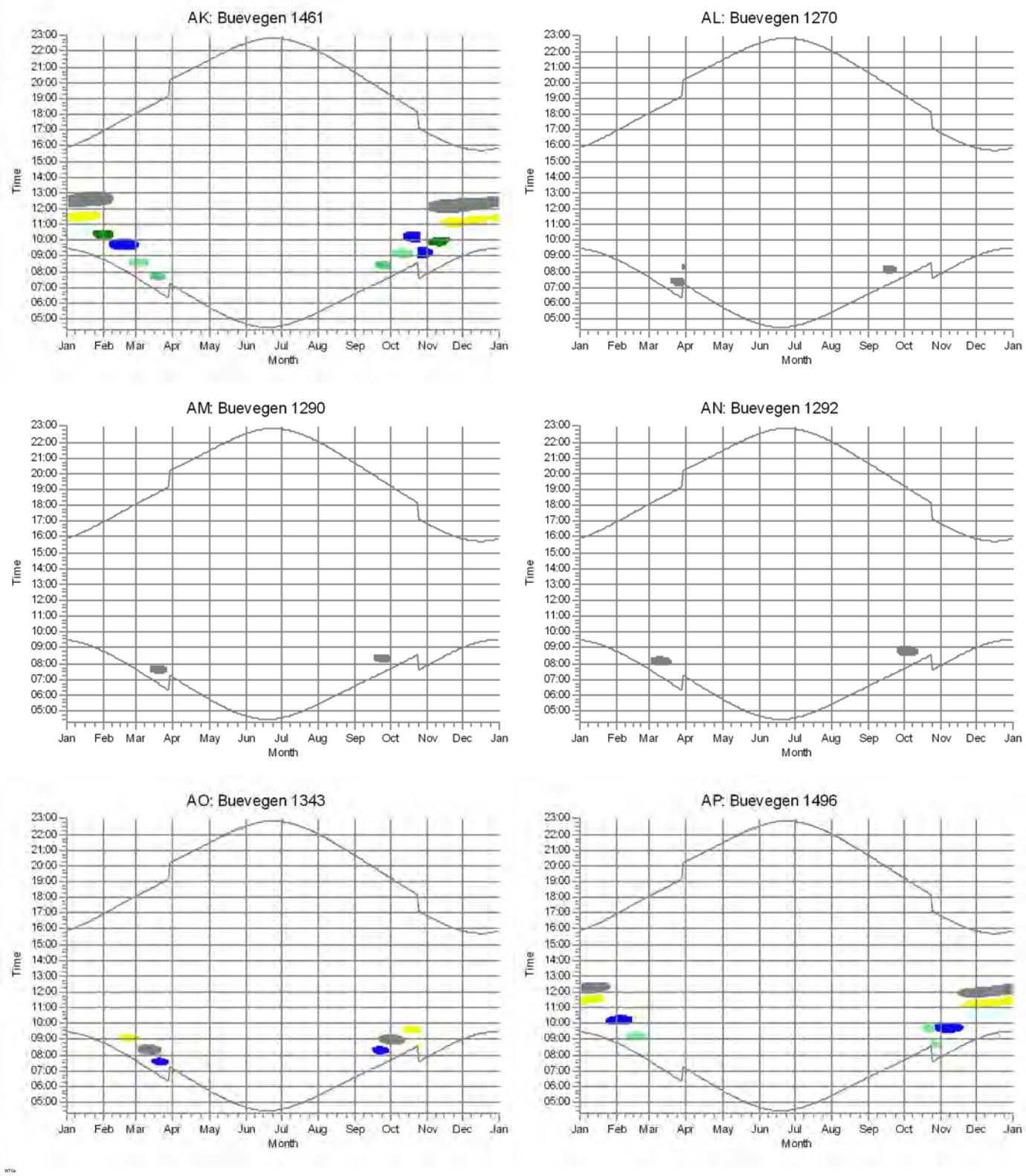


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

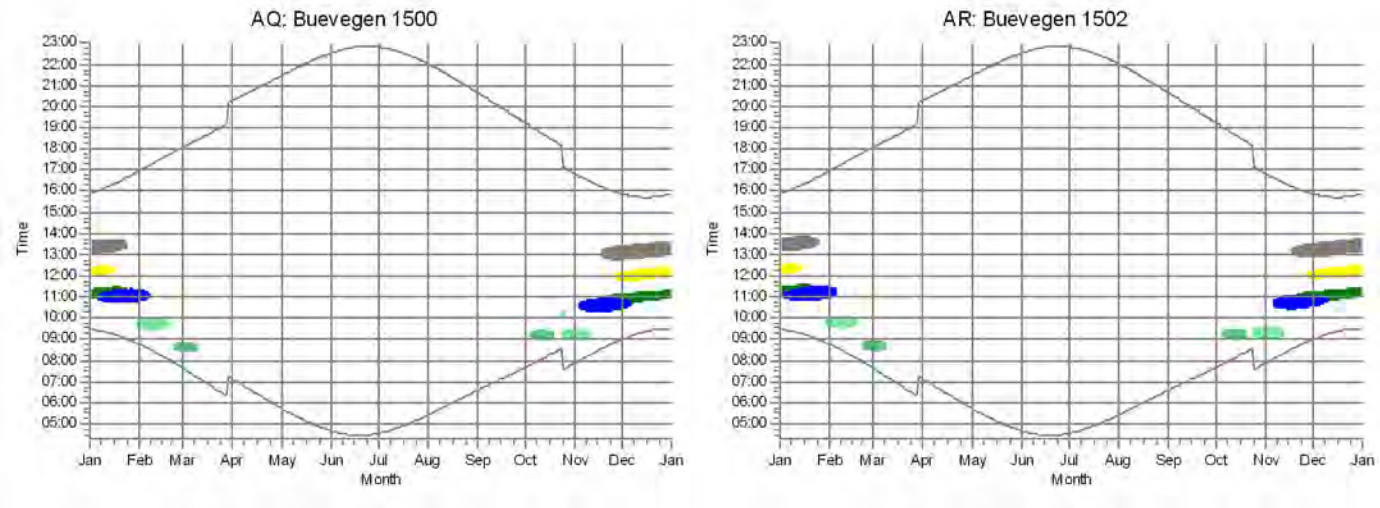


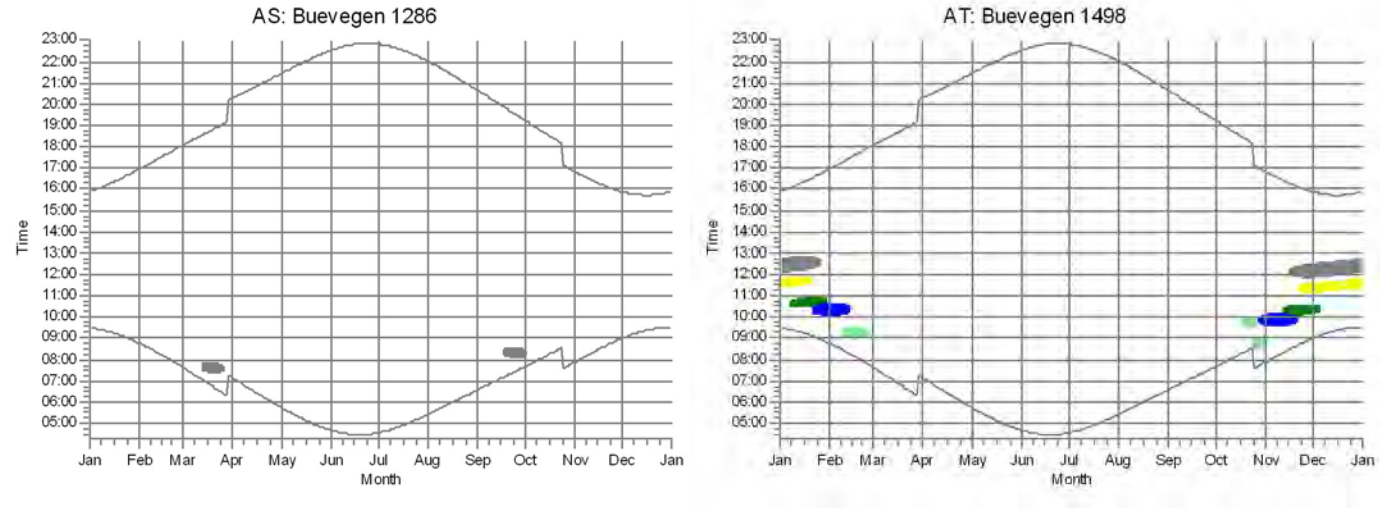
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Martine / martine.bjugg@multiconsult.no

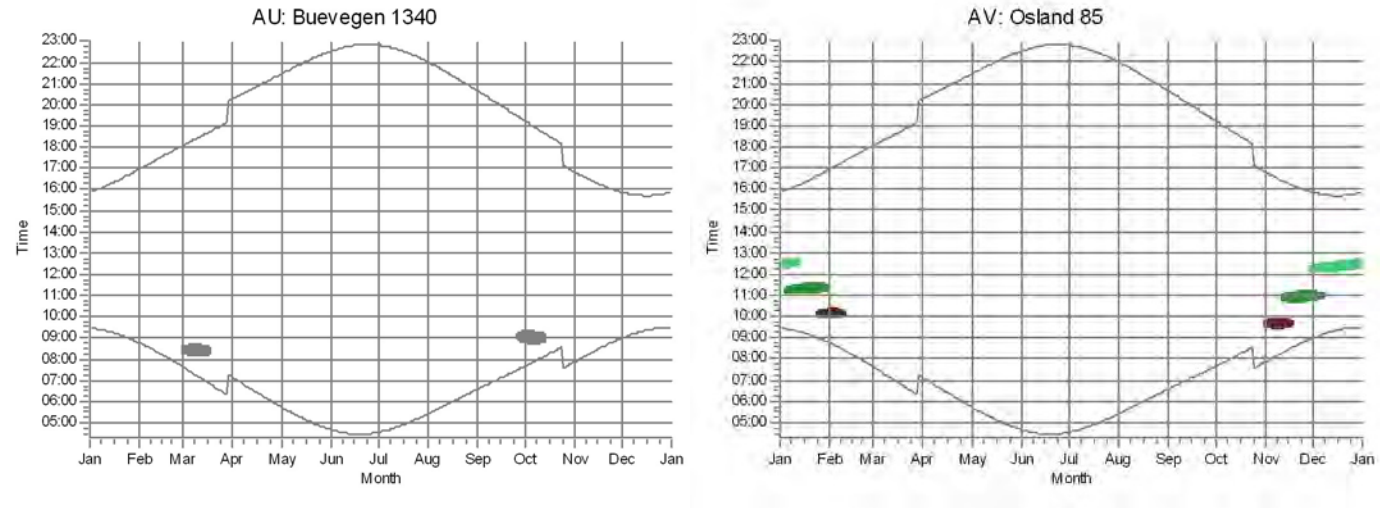
Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere





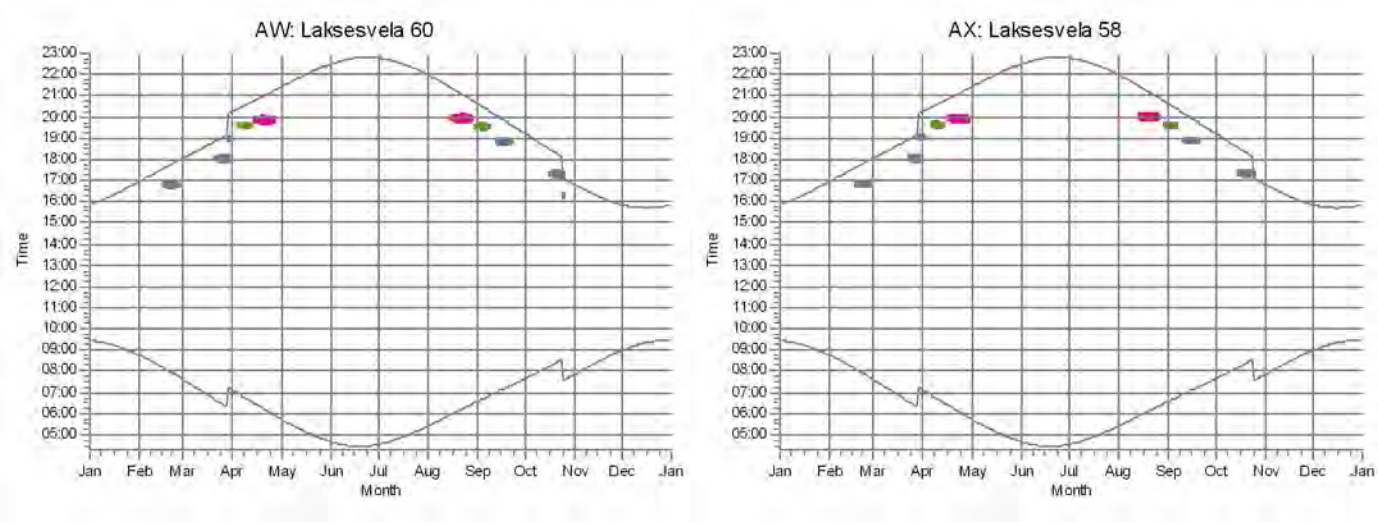


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere



Vedlegg 4.1

Tabell Moifjellet og Mellomstrand vindkraftverk

Med nærliggende – realistic case

Project:

Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (37)	07:35		09:10 (19)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (24)	18:05	24	09:34 (19)	20:17	21:26	22:30
2	09:27			08:43		11:24 (37)	07:33		09:10 (19)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (32)	18:07	25	09:35 (19)	20:19	21:28	22:32
3	09:27			08:41		12:08 (32)	07:30		09:10 (19)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (27)	18:09	24	09:34 (19)	20:21	21:30	22:34
4	09:26			08:39		12:07 (32)	07:27		09:10 (19)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (27)	18:12	24	09:34 (19)	20:24	21:33	22:35
5	09:26			08:37		12:06 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (27)	18:14	23	09:33 (19)	20:26	21:35	22:37
6	09:25			08:34		12:06 (32)	07:21		08:24 (21)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (27)	18:17	28	09:32 (19)	20:28	21:37	22:38
7	09:24			08:32		12:05 (32)	07:19		08:21 (21)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (27)	18:19	32	09:30 (19)	20:30	21:40	22:39
8	09:24			08:30		12:05 (32)	07:16		08:19 (21)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (27)	18:21	32	09:28 (19)	20:33	21:42	22:40
9	09:23			08:27		12:04 (32)	07:13		08:18 (21)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (27)	18:24	29	09:26 (19)	20:35	21:44	22:42
10	09:22			08:25		12:04 (32)	07:10		08:17 (21)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (28)	18:26	18	08:35 (21)	20:37	21:46	22:43
11	09:21			08:23		12:04 (32)	07:07		08:17 (21)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (28)	18:28	18	08:35 (21)	20:40	21:49	22:44
12	09:20			08:20		12:04 (32)	07:04		08:17 (21)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (28)	18:31	19	08:36 (21)	20:42	21:51	22:45
13	09:18			08:18		12:03 (32)	07:01		08:17 (21)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (28)	18:33	18	08:35 (21)	20:44	21:53	22:46
14	09:17			08:15		12:04 (32)	06:59		08:17 (21)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (28)	18:35	17	08:34 (21)	20:47	21:55	22:47
15	09:16			08:13		12:04 (32)	06:56		08:18 (21)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (28)	18:38	15	08:33 (21)	20:49	21:58	22:47
16	09:15			08:10		12:03 (32)	06:53		08:19 (21)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (28)	18:40	12	08:31 (21)	20:51	22:00	22:48
17	09:13			08:07		12:03 (32)	06:50		08:22 (21)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (28)	18:42	5	08:27 (21)	20:53	22:02	22:49
18	09:12			08:05		12:04 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (27)	18:49			21:00	22:08	22:50
21	09:07		11:29 (37)	07:57		12:05 (32)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (24)	17:45	71	14:56 (27)	18:51			21:03	22:10	22:50
22	09:05		11:28 (37)	07:54		12:06 (32)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (24)	17:48	66	14:55 (27)	18:54			21:05	22:12	22:50
23	09:03		11:29 (37)	07:52		09:20 (19)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (24)	17:50	69	14:54 (27)	18:56			21:07	22:14	22:50
24	09:02		11:28 (37)	07:49		09:16 (19)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (24)	17:53	69	14:52 (27)	18:58			21:10	22:16	22:51
25	09:00		11:27 (37)	07:46		09:14 (19)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (24)	17:55	64	14:49 (27)	19:01			21:12	22:18	22:50
26	08:58		11:22 (37)	07:44		09:13 (19)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (24)	17:57	54	14:45 (27)	19:03			21:14	22:20	22:50
27	08:56		11:14 (37)	07:41		09:12 (19)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (24)	18:00	41	12:35 (32)	19:05			21:17	22:22	22:50
28	08:54		11:14 (37)	07:38		09:11 (19)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (24)	18:02	33	12:29 (32)	19:07			21:19	22:24	22:50
29	08:52		11:15 (37)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (24)				20:10			21:21	22:25	22:50
30	08:50		11:15 (37)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (24)				20:12			21:24	22:27	22:49
31	08:48		11:17 (37)				07:10				04:41	
	16:54	57	13:05 (24)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (21)	07:51		11:33 (32)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (21)	16:49	78	14:57 (28)	15:51
2	04:33		05:26		06:35			07:42		08:56 (21)	07:54		11:34 (32)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (21)	16:46	74	14:26 (27)	15:50
3	04:34		05:28		06:37			07:44		08:55 (21)	07:56		11:35 (32)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (21)	16:44	71	14:25 (27)	15:49
4	04:35		05:31		06:40			07:46		08:55 (21)	07:59		11:35 (32)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (19)	16:41	69	14:24 (27)	15:48
5	04:36		05:33		06:42			07:48		08:56 (21)	08:01		11:36 (32)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (19)	16:39	64	14:23 (27)	15:47
6	04:37		05:35		06:44			07:51		08:57 (21)	08:03		11:37 (32)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (19)	16:37	61	14:22 (27)	15:46
7	04:39		05:37		06:46			07:53		08:58 (21)	08:06		11:37 (32)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (19)	16:34	53	14:17 (27)	15:45
8	04:40		05:39		06:49			07:55		09:03 (21)	08:08		11:39 (32)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (19)	16:32	42	14:11 (27)	15:45
9	04:41		05:42		06:51			07:57		09:45 (19)	08:11		10:53 (37)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (19)	16:30	37	12:12 (32)	15:44
10	04:43		05:44		06:53			08:00		09:45 (19)	08:13		10:50 (37)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (19)	16:28	52	12:34 (24)	15:44
11	04:44		05:46		06:55			08:02		09:44 (19)	08:15		10:48 (37)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (19)	16:25	57	12:36 (24)	15:43
12	04:46		05:48		06:57			08:04		09:43 (19)	08:18		10:47 (37)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (19)	16:23	58	12:37 (24)	15:43
13	04:47		05:51		07:00			08:07		09:44 (19)	08:20		10:47 (37)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (19)	16:21	57	12:39 (24)	15:42
14	04:49		05:53		07:02			08:09		09:44 (19)	08:22		10:46 (37)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (32)	16:19	52	12:39 (24)	15:42
15	04:51		05:55		07:04			08:11		09:45 (19)	08:25		10:47 (37)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (32)	16:17	43	12:40 (24)	15:42
16	04:52		05:57		07:06			08:13		09:45 (19)	08:27		10:55 (37)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (27)	16:15	37	12:41 (24)	15:42
17	04:54		06:00		07:08			08:16		09:47 (19)	08:29		11:00 (37)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (27)	16:13	33	12:41 (24)	15:42
18	04:56		06:02		07:11			08:18		09:48 (19)	08:32		11:02 (37)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (27)	16:11	33	12:42 (24)	15:42
19	04:58		06:04		07:13			08:20		09:52 (19)	08:34		11:04 (37)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (27)	16:09	21	12:43 (24)	15:42
20	05:00		06:06		07:15			08:23		12:37 (32)	08:36		11:03 (37)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (27)	16:08	22	12:42 (24)	15:43
21	05:01		06:08		07:17			08:25		12:36 (32)	08:39		11:04 (37)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (27)	16:06	8	12:43 (24)	15:43
22	05:03		06:11		07:19			08:27		12:35 (32)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (27)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (32)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (27)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (32)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (27)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (32)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (28)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (32)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (28)	15:58			15:46
27	05:13		06:22		07:30		09:02 (21)	07:39		11:33 (32)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (21)	17:01	97	15:16 (28)	15:56			15:47
28	05:16		06:24		07:33		09:00 (21)	07:42		11:33 (32)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (21)	16:59	101	15:18 (28)	15:55			15:48
29	05:18		06:26		07:35		08:58 (21)	07:44		11:33 (32)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (21)	16:56	102	15:18 (28)	15:54			15:49
30	05:20		06:29		07:37		08:56 (21)	07:47		11:33 (32)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (21)	16:54	99	15:15 (28)	15:52			15:50
31	05:22		06:31					07:49		11:34 (32)				09:28
	22:03		20:42					16:51	90	15:09 (28)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (37)	07:35		09:09 (19)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (27)	18:05	23	09:32 (19)	20:17	21:26	22:30
2	09:27			08:43		12:00 (32)	07:33		09:09 (19)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (27)	18:07	24	09:33 (19)	20:19	21:28	22:32
3	09:27			08:41		11:58 (32)	07:30		09:09 (19)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (27)	18:09	24	09:33 (19)	20:21	21:30	22:34
4	09:26			08:39		11:58 (32)	07:27		09:09 (19)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (27)	18:12	23	09:32 (19)	20:24	21:33	22:35
5	09:26			08:37		11:57 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (27)	18:14	21	09:31 (19)	20:26	21:35	22:37
6	09:25			08:34		11:57 (32)	07:21		09:10 (19)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (27)	18:17	20	09:30 (19)	20:28	21:37	22:38
7	09:24			08:32		11:56 (32)	07:19		09:11 (19)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (27)	18:19	17	09:28 (19)	20:30	21:40	22:39
8	09:24			08:30		11:56 (32)	07:16		09:13 (19)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (28)	18:21	12	09:25 (19)	20:33	21:42	22:40
9	09:23			08:27		11:56 (32)	07:13		09:16 (19)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (28)	18:24	5	09:21 (19)	20:35	21:44	22:42
10	09:22			08:25		11:55 (32)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (28)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (32)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (28)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (32)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (28)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (28)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (27)	18:45			20:56	22:04	22:49
19	09:10		12:54 (24)	08:02		11:57 (32)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (24)	17:40	70	14:48 (27)	18:47			20:58	22:06	22:50
20	09:08		11:12 (37)	08:00		11:57 (32)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (24)	17:43	68	14:47 (27)	18:49			21:00	22:08	22:50
21	09:07		11:11 (37)	07:57		11:58 (32)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (24)	17:45	64	14:46 (27)	18:51			21:03	22:10	22:50
22	09:05		11:11 (37)	07:54		11:59 (32)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (24)	17:48	58	14:44 (27)	18:54			21:05	22:12	22:50
23	09:03		11:11 (37)	07:52		09:17 (19)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (24)	17:50	62	14:43 (27)	18:56			21:07	22:14	22:50
24	09:02		11:10 (37)	07:49		09:14 (19)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (24)	17:53	57	14:39 (27)	18:58			21:10	22:16	22:51
25	09:00		11:08 (37)	07:46		09:13 (19)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (24)	17:55	42	12:28 (32)	19:01			21:12	22:18	22:50
26	08:58		11:09 (37)	07:44		09:11 (19)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (24)	17:57	38	12:24 (32)	19:03			21:14	22:20	22:50
27	08:56		11:09 (37)	07:41		09:10 (19)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (24)	18:00	22	09:32 (19)	19:05			21:17	22:22	22:50
28	08:54		11:10 (37)	07:38		09:09 (19)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (24)	18:02	23	09:32 (19)	19:07			21:19	22:24	22:50
29	08:52		11:12 (37)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (24)				20:10			21:21	22:25	22:50
30	08:50		11:12 (37)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (24)				20:12			21:24	22:27	22:49
31	08:48		11:14 (37)				07:10				04:41	
	16:54	56	14:29 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (32)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (28)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (32)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (28)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (32)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (28)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (32)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (27)	15:48
5	04:36	05:33	06:42	07:48		09:51 (19)	08:01		11:27 (32)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (19)	16:39	70	14:17 (27)	15:47
6	04:37	05:35	06:44	07:51		09:48 (19)	08:03		11:28 (32)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (19)	16:37	65	14:16 (27)	15:46
7	04:39	05:37	06:46	07:53		09:46 (19)	08:06		11:28 (32)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (19)	16:34	62	14:14 (27)	15:45
8	04:40	05:39	06:49	07:55		09:45 (19)	08:08		11:29 (32)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (19)	16:32	57	14:13 (27)	15:45
9	04:41	05:42	06:51	07:57		09:44 (19)	08:11		11:30 (32)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (19)	16:30	53	14:12 (27)	15:44
10	04:43	05:44	06:53	08:00		09:44 (19)	08:13		10:47 (37)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (19)	16:28	58	14:10 (27)	15:44
11	04:44	05:46	06:55	08:02		09:43 (19)	08:15		10:45 (37)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (19)	16:25	55	13:59 (27)	15:43
12	04:46	05:48	06:57	08:04		09:42 (19)	08:18		10:44 (37)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (19)	16:23	57	12:31 (24)	15:43
13	04:47	05:51	07:00	08:07		09:43 (19)	08:20		10:43 (37)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (19)	16:21	59	12:32 (24)	15:42
14	04:49	05:53	07:02	08:09		09:42 (19)	08:22		10:42 (37)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (19)	16:19	58	12:33 (24)	15:42
15	04:51	05:55	07:04	08:11		09:43 (19)	08:25		10:42 (37)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (32)	16:17	53	12:34 (24)	15:42
16	04:52	05:57	07:06	08:13		09:44 (19)	08:27		10:42 (37)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (32)	16:15	45	12:35 (24)	15:42
17	04:54	06:00	07:08	08:16		09:45 (19)	08:29		10:41 (37)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (27)	16:13	47	12:35 (24)	15:42
18	04:56	06:02	07:11	08:18		09:46 (19)	08:32		10:44 (37)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (27)	16:11	46	12:36 (24)	15:42
19	04:58	06:04	07:13	08:20		09:49 (19)	08:34		10:46 (37)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (27)	16:09	45	12:37 (24)	15:42
20	05:00	06:06	07:15	08:23		12:30 (32)	08:36		10:46 (37)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (27)	16:08	45	12:37 (24)	15:43
21	05:01	06:08	07:17	08:25		12:29 (32)	08:39		10:46 (37)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (27)	16:06	36	12:37 (24)	15:43
22	05:03	06:11	07:19	08:27		12:27 (32)	08:41		10:48 (37)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (27)	16:04	30	12:38 (24)	15:43
23	05:05	06:13	07:22	08:30		12:27 (32)	08:43		12:30 (24)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (27)	16:02	5	12:35 (24)	15:44
24	05:07	06:15	07:24	08:32		12:26 (32)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (27)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (32)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (27)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (32)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (32)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (28)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (32)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (28)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (32)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (28)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (32)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (28)	15:52			15:50
31	05:22	06:31		07:49		11:25 (32)				09:28
	22:03	20:42		16:51	101	15:13 (28)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (37)	07:35		08:50 (19)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (27)	18:05	39	11:29 (32)	20:17	21:26	22:30
2	09:27			08:43		10:44 (37)	07:33		08:50 (19)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (27)	18:07	31	11:25 (32)	20:19	21:28	22:32
3	09:27			08:41		10:46 (37)	07:30		08:49 (19)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (27)	18:09	21	09:10 (19)	20:21	21:31	22:34
4	09:26			08:39		10:47 (37)	07:27		08:48 (19)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (28)	18:12	22	09:10 (19)	20:24	21:33	22:35
5	09:26			08:37		10:50 (37)	07:24		08:48 (19)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (28)	18:14	21	09:09 (19)	20:26	21:35	22:37
6	09:25			08:34		11:05 (32)	07:21		08:48 (19)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (28)	18:17	21	09:09 (19)	20:28	21:37	22:38
7	09:24			08:32		11:03 (32)	07:19		08:48 (19)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (28)	18:19	20	09:08 (19)	20:30	21:40	22:39
8	09:24			08:30		11:03 (32)	07:16		08:48 (19)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (28)	18:21	19	09:07 (19)	20:33	21:42	22:40
9	09:23			08:27		11:02 (32)	07:13		08:48 (19)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (26)	18:24	18	09:06 (19)	20:35	21:44	22:42
10	09:22			08:25		11:01 (32)	07:10		08:49 (19)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (26)	18:26	15	09:04 (19)	20:37	21:46	22:43
11	09:21			08:23		11:01 (32)	07:07		08:51 (19)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (28)	18:28	10	09:01 (19)	20:40	21:49	22:44
12	09:20			08:20		11:00 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (32)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (27)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (27)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (27)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (32)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (27)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (32)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (27)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (32)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (27)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (32)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (27)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (32)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (32)	19:01			21:12	22:18	22:50
26	08:58		12:05 (24)	07:44		08:58 (19)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (24)	17:57	36	11:36 (32)	19:03			21:14	22:20	22:50
27	08:56		12:05 (24)	07:41		08:54 (19)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (27)	18:00	41	11:34 (32)	19:05			21:17	22:22	22:50
28	08:54		11:00 (37)	07:38		08:52 (19)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (27)	18:02	41	11:32 (32)	19:08			21:19	22:24	22:50
29	08:52		10:56 (37)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (27)				20:10			21:21	22:25	22:50
30	08:50		10:50 (37)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (27)				20:12			21:24	22:27	22:49
31	08:48		10:44 (37)				07:10				04:41	
	16:54	62	14:05 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (32)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (26)	15:51
2	04:33		05:26		06:35		07:42		09:32 (19)	07:54		10:32 (32)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (19)	16:46	110	15:25 (26)	15:50
3	04:34		05:28		06:37		07:44		09:28 (19)	07:56		10:33 (32)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (19)	16:44	97	14:53 (28)	15:49
4	04:35		05:31		06:40		07:46		09:26 (19)	07:59		10:33 (32)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (19)	16:41	89	14:46 (28)	15:48
5	04:36		05:33		06:42		07:48		09:25 (19)	08:01		10:35 (32)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (19)	16:39	81	14:41 (28)	15:47
6	04:37		05:35		06:44		07:51		09:24 (19)	08:03		10:20 (37)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (19)	16:37	77	14:35 (28)	15:46
7	04:39		05:37		06:46		07:53		09:23 (19)	08:06		10:16 (37)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (19)	16:34	77	14:32 (28)	15:45
8	04:40		05:39		06:49		07:55		09:23 (19)	08:08		10:15 (37)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (19)	16:32	71	13:39 (27)	15:45
9	04:41		05:42		06:51		07:57		09:22 (19)	08:11		10:15 (37)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (19)	16:30	72	13:39 (27)	15:44
10	04:43		05:44		06:53		08:00		09:23 (19)	08:13		10:14 (37)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (19)	16:28	71	13:38 (27)	15:44
11	04:44		05:46		06:55		08:02		09:23 (19)	08:15		10:15 (37)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (19)	16:25	61	13:36 (27)	15:43
12	04:46		05:48		06:57		08:04		09:23 (19)	08:18		10:24 (37)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (32)	16:23	52	13:35 (27)	15:43
13	04:47		05:51		07:00		08:07		09:24 (19)	08:20		10:28 (37)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (32)	16:21	47	13:33 (27)	15:42
14	04:49		05:53		07:02		08:09		09:25 (19)	08:22		10:32 (37)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (32)	16:19	39	13:30 (27)	15:42
15	04:51		05:55		07:04		08:11		09:28 (19)	08:25		11:38 (24)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (32)	16:17	19	13:26 (27)	15:42
16	04:52		05:57		07:06		08:13		11:35 (32)	08:27		11:38 (24)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (32)	16:15	4	11:42 (24)	15:42
17	04:54		06:00		07:08		08:16		11:34 (32)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (32)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (32)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (27)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (32)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (27)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (32)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (27)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (32)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (27)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (32)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (27)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (32)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (27)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (32)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (27)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (32)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (27)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (32)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (27)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (32)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (27)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (32)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (28)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (32)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (28)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (32)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (28)	15:52			15:50
31	05:22		06:31				07:49		10:31 (32)				09:28
	22:03		20:42				16:51	99	14:52 (28)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no
Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46		11:39 (32)	07:35	09:25 (19)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (28)	18:05	9 09:34 (19)	20:17	21:26	22:31
2	09:27		08:43		11:39 (32)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (28)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (32)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (28)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (32)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (28)	18:12		20:24	21:33	22:35
5	09:26	12:20 (24)	08:37		11:39 (32)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (24)	17:06	80	15:09 (28)	18:14		20:26	21:35	22:37
6	09:25	12:19 (24)	08:34		11:40 (32)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (24)	17:08	74	15:08 (28)	18:17		20:28	21:37	22:38
7	09:24	12:17 (24)	08:32		11:40 (32)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (24)	17:11	62	14:11 (27)	18:19		20:30	21:40	22:39
8	09:24	12:17 (24)	08:30		11:41 (32)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (24)	17:13	61	14:11 (27)	18:21		20:33	21:42	22:40
9	09:23	12:18 (24)	08:27		11:42 (32)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (24)	17:16	57	14:10 (27)	18:24		20:35	21:44	22:42
10	09:22	11:06 (37)	08:25		11:42 (32)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (24)	17:18	54	14:09 (27)	18:26		20:37	21:46	22:43
11	09:21	11:02 (37)	08:23		11:44 (32)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (24)	17:21	48	14:08 (27)	18:28		20:40	21:49	22:44
12	09:20	11:01 (37)	08:20		11:45 (32)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (24)	17:23	42	14:06 (27)	18:31		20:42	21:51	22:45
13	09:18	11:02 (37)	08:18		11:46 (32)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (24)	17:26	32	14:02 (27)	18:33		20:44	21:53	22:46
14	09:17	11:02 (37)	08:15		11:49 (32)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (24)	17:28	18	12:07 (32)	18:35		20:47	21:55	22:47
15	09:16	11:02 (37)	08:13		11:52 (32)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (24)	17:31	12	12:04 (32)	18:38		20:49	21:58	22:47
16	09:15	11:02 (37)	08:10		09:29 (19)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (24)	17:33	5	09:34 (19)	18:40		20:51	22:00	22:48
17	09:13	11:02 (37)	08:07		09:25 (19)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (24)	17:36	12	09:37 (19)	18:42		20:53	22:02	22:49
18	09:12	11:03 (37)	08:05		09:24 (19)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (27)	17:38	16	09:40 (19)	18:45		20:56	22:04	22:49
19	09:10	11:03 (37)	08:02		09:23 (19)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (27)	17:40	17	09:40 (19)	18:47		20:58	22:06	22:50
20	09:08	11:04 (37)	08:00		09:22 (19)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (27)	17:43	19	09:41 (19)	18:49		21:00	22:08	22:50
21	09:07	11:04 (37)	07:57		09:21 (19)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (27)	17:45	20	09:41 (19)	18:51		21:03	22:10	22:50
22	09:05	11:05 (37)	07:54		09:20 (19)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (27)	17:48	21	09:41 (19)	18:54		21:05	22:12	22:50
23	09:03	11:05 (37)	07:52		09:21 (19)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (27)	17:50	21	09:42 (19)	18:56		21:07	22:14	22:51
24	09:02	11:06 (37)	07:49		09:21 (19)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (27)	17:53	20	09:41 (19)	18:58		21:10	22:16	22:51
25	09:00	11:07 (37)	07:46		09:21 (19)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (28)	17:55	20	09:41 (19)	19:01		21:12	22:18	22:51
26	08:58	11:09 (37)	07:44		09:21 (19)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (28)	17:57	19	09:40 (19)	19:03		21:14	22:20	22:50
27	08:56	11:10 (37)	07:41		09:22 (19)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (28)	18:00	16	09:38 (19)	19:05		21:17	22:22	22:50
28	08:54	11:13 (37)	07:38		09:23 (19)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (28)	18:02	14	09:37 (19)	19:08		21:19	22:24	22:50
29	08:52	11:40 (32)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (28)				20:10		21:21	22:25	22:50
30	08:50	11:39 (32)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (28)				20:12		21:24	22:27	22:49
31	08:48	11:39 (32)				07:10			04:41	
	16:54	88 15:13 (28)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				
Sun reduction		0,50		0,50		0,50				
Oper. time red.		0,80		0,80		0,80				
Wind dir. red.		0,62		0,63		0,73				
Total reduction		0,25		0,25		0,29				
Total, real		371		276		3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (32)	09:00		10:44 (37)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (27)	15:51	31	12:23 (24)
2	04:33	05:26	06:35	07:42			07:54		11:11 (32)	09:02		10:48 (37)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (27)	15:50	27	12:23 (24)
3	04:34	05:28	06:37	07:44			07:56		11:11 (32)	09:03		12:01 (24)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (27)	15:49	17	12:18 (24)
4	04:35	05:31	06:40	07:46			07:59		11:10 (32)	09:05		12:01 (24)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (27)	15:48	13	12:14 (24)
5	04:36	05:33	06:42	07:48			08:01		11:10 (32)	09:07		12:02 (24)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (28)	15:47	11	12:13 (24)
6	04:37	05:35	06:44	07:51			08:03		11:10 (32)	09:09		12:05 (24)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (28)	15:46	5	12:10 (24)
7	04:39	05:37	06:46	07:53			08:06		11:09 (32)	09:10		12:07 (24)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (28)	15:45	2	12:09 (24)
8	04:40	05:39	06:49	07:55			08:08		11:09 (32)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (28)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (28)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (28)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (28)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (19)	08:18		11:11 (32)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (19)	16:23	88	14:45 (28)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (19)	08:20		11:12 (32)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (19)	16:21	86	14:45 (28)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (19)	08:22		10:45 (37)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (19)	16:19	89	14:45 (28)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (19)	08:25		10:42 (37)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (19)	16:17	87	14:45 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (19)	08:27		10:41 (37)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (19)	16:15	81	14:30 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (19)	08:30		10:41 (37)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (19)	16:13	83	14:25 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (19)	08:32		10:40 (37)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (19)	16:11	84	13:41 (27)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (19)	08:34		10:40 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (19)	16:09	83	13:40 (27)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (19)	08:36		10:39 (37)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (19)	16:08	82	13:39 (27)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (19)	08:39		10:39 (37)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (19)	16:06	80	13:38 (27)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		10:40 (37)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (19)	16:04	75	13:37 (27)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		10:39 (37)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (19)	16:02	69	13:35 (27)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (19)	08:45		10:40 (37)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (19)	16:01	58	13:32 (27)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (19)	08:47		10:40 (37)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (19)	15:59	45	12:20 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		10:41 (37)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (19)	15:58	43	12:21 (24)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (32)	08:52		10:41 (37)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (32)	15:56	43	12:21 (24)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (32)	08:54		10:42 (37)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (32)	15:55	42	12:22 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (32)	08:56		10:42 (37)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (27)	15:54	42	12:22 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (32)	08:58		10:42 (37)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (27)	15:52	40	12:22 (24)	15:50		
31	05:22	06:31		07:49		11:13 (32)				09:28		
	22:03	20:42		16:51	50	13:38 (27)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (37)	08:46		11:58 (32)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (37)	16:56	88	15:21 (28)	18:05	20:17	21:26	22:30
2	09:27		11:11 (37)	08:43		11:59 (32)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (37)	16:58	85	15:21 (28)	18:07	20:19	21:28	22:32
3	09:27		11:11 (37)	08:41		12:00 (32)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (24)	17:01	84	15:21 (28)	18:09	20:21	21:31	22:34
4	09:27		11:11 (37)	08:39		11:59 (32)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (24)	17:03	82	15:20 (28)	18:12	20:24	21:33	22:35
5	09:26		11:11 (37)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (24)	17:06	81	15:19 (28)	18:14	20:26	21:35	22:37
6	09:25		11:11 (37)	08:34		12:00 (32)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (24)	17:08	75	15:18 (28)	18:17	20:28	21:37	22:38
7	09:24		11:11 (37)	08:32		12:01 (32)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (24)	17:11	64	15:14 (28)	18:19	20:30	21:40	22:39
8	09:24		11:11 (37)	08:30		12:02 (32)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (24)	17:13	57	14:25 (27)	18:21	20:33	21:42	22:40
9	09:23		11:12 (37)	08:27		12:03 (32)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (24)	17:16	53	14:24 (27)	18:24	20:35	21:44	22:42
10	09:22		11:11 (37)	08:25		12:04 (32)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (24)	17:18	48	14:23 (27)	18:26	20:37	21:46	22:43
11	09:21		11:12 (37)	08:23		12:06 (32)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (24)	17:21	43	14:22 (27)	18:28	20:40	21:49	22:44
12	09:20		11:12 (37)	08:20		12:07 (32)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (24)	17:23	35	14:20 (27)	18:31	20:42	21:51	22:45
13	09:18		11:12 (37)	08:18		12:10 (32)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (24)	17:26	22	14:16 (27)	18:33	20:44	21:53	22:46
14	09:17		11:12 (37)	08:15		09:38 (19)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (24)	17:28	10	12:19 (32)	18:35	20:47	21:55	22:47
15	09:16		11:12 (37)	08:13		09:35 (19)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (24)	17:31	12	09:47 (19)	18:38	20:49	21:58	22:47
16	09:15		11:12 (37)	08:10		09:33 (19)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (24)	17:33	16	09:49 (19)	18:40	20:51	22:00	22:48
17	09:13		11:13 (37)	08:07		09:32 (19)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (24)	17:36	18	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:14 (37)	08:05		09:31 (19)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (24)	17:38	20	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:15 (37)	08:02		09:31 (19)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (24)	17:40	20	09:51 (19)	18:47	20:58	22:06	22:50
20	09:08		11:15 (37)	08:00		09:30 (19)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (27)	17:43	21	09:51 (19)	18:49	21:00	22:08	22:50
21	09:07		11:16 (37)	07:57		09:30 (19)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (27)	17:45	21	09:51 (19)	18:51	21:03	22:10	22:50
22	09:05		11:16 (37)	07:54		09:29 (19)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (27)	17:48	22	09:51 (19)	18:54	21:05	22:12	22:50
23	09:03		11:17 (37)	07:52		09:30 (19)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (27)	17:50	21	09:51 (19)	18:56	21:07	22:14	22:51
24	09:02		11:19 (37)	07:49		09:31 (19)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (27)	17:53	19	09:50 (19)	18:58	21:10	22:16	22:51
25	09:00		11:20 (37)	07:46		09:31 (19)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (27)	17:55	18	09:49 (19)	19:01	21:12	22:18	22:51
26	08:58		11:23 (37)	07:44		09:32 (19)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (28)	17:57	15	09:47 (19)	19:03	21:14	22:20	22:50
27	08:56		11:58 (32)	07:41		09:34 (19)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (28)	18:00	11	09:45 (19)	19:05	21:17	22:22	22:50
28	08:54		11:58 (32)	07:38		09:38 (19)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (28)	18:02	2	09:40 (19)	19:07	21:19	22:24	22:50
29	08:52		11:59 (32)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (28)				20:10	21:21	22:25	22:50
30	08:50		11:58 (32)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (28)				20:12	21:24	22:27	22:49
31	08:48		11:58 (32)				07:10		04:41	
	16:54	88	15:22 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (32)	09:00		10:54 (37)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (27)	15:51	43	12:35 (24)
2	04:33		05:26		06:35		07:42			07:54		11:32 (32)	09:02		10:54 (37)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (27)	15:50	42	12:35 (24)
3	04:34		05:28		06:37		07:44			07:56		11:32 (32)	09:03		10:55 (37)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (27)	15:49	40	12:35 (24)
4	04:35		05:31		06:40		07:46			07:59		11:30 (32)	09:05		10:56 (37)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (28)	15:48	39	12:35 (24)
5	04:36		05:33		06:42		07:48			08:01		11:30 (32)	09:07		10:56 (37)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (28)	15:47	39	12:36 (24)
6	04:37		05:35		06:44		07:51			08:03		11:30 (32)	09:09		10:57 (37)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (28)	15:46	30	12:36 (24)
7	04:39		05:37		06:46		07:53			08:06		11:29 (32)	09:10		10:58 (37)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (28)	15:45	29	12:36 (24)
8	04:40		05:39		06:49		07:55			08:08		11:29 (32)	09:12		10:59 (37)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (28)	15:45	15	12:33 (24)
9	04:41		05:42		06:51		07:57			08:11		11:29 (32)	09:13		11:00 (37)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (28)	15:44	12	12:34 (24)
10	04:43		05:44		06:53		08:00			08:13		11:30 (32)	09:15		11:00 (37)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (28)	15:43	4	12:31 (24)
11	04:44		05:46		06:55		08:02			08:15		11:29 (32)	09:16		11:02 (37)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (28)	15:43	2	11:04 (37)
12	04:46		05:48		06:57		08:04			08:18		11:30 (32)	09:18		11:02 (37)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (28)	15:43	2	11:04 (37)
13	04:47		05:51		07:00		08:07			08:20		11:30 (32)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (28)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (19)	08:22		11:30 (32)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (19)	16:19	74	14:42 (28)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (19)	08:25		11:31 (32)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (19)	16:17	68	14:38 (28)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (19)	08:27		10:56 (37)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (19)	16:15	69	14:36 (28)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (19)	08:30		10:54 (37)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (19)	16:13	73	13:55 (27)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (19)	08:32		10:52 (37)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (19)	16:11	78	13:54 (27)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (19)	08:34		10:52 (37)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (19)	16:09	81	13:54 (27)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (19)	08:36		10:51 (37)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (19)	16:08	80	13:52 (27)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (19)	08:39		10:51 (37)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (19)	16:06	78	13:51 (27)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (19)	08:41		10:51 (37)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (19)	16:04	75	13:50 (27)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (19)	08:43		10:51 (37)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (19)	16:02	64	12:31 (24)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (19)	08:45		10:51 (37)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (19)	16:01	63	12:32 (24)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (19)	08:47		10:51 (37)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (19)	15:59	60	12:32 (24)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (19)	08:50		10:52 (37)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (19)	15:58	56	12:33 (24)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (19)	08:52		10:51 (37)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (19)	15:56	53	12:33 (24)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (19)	08:54		10:52 (37)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (32)	15:55	44	12:34 (24)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (32)	08:56		10:53 (37)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (27)	15:54	43	12:34 (24)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (32)	08:58		10:53 (37)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (27)	15:52	43	12:34 (24)	15:50		
31	05:22		06:31				07:49		11:35 (32)				09:28		11:11 (37)
	22:03		20:42				16:51	44	13:52 (27)				15:51	1	11:12 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (37)	08:46		12:23 (32)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (37)	16:56	82	15:30 (28)	18:05	20:17	21:26	22:30
2	09:27		11:23 (37)	08:43		12:24 (32)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (37)	16:58	86	15:34 (28)	18:07	20:19	21:28	22:32
3	09:27		11:23 (37)	08:41		12:25 (32)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (37)	17:01	84	15:34 (28)	18:09	20:21	21:31	22:34
4	09:26		11:23 (37)	08:39		12:25 (32)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (24)	17:03	85	15:34 (28)	18:12	20:24	21:33	22:35
5	09:26		11:23 (37)	08:37		12:25 (32)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (24)	17:06	82	15:33 (28)	18:14	20:26	21:35	22:37
6	09:25		11:24 (37)	08:34		12:26 (32)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (24)	17:08	79	15:33 (28)	18:17	20:28	21:37	22:38
7	09:24		11:24 (37)	08:32		12:26 (32)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (24)	17:11	74	15:31 (28)	18:19	20:30	21:40	22:39
8	09:24		11:24 (37)	08:30		12:28 (32)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (24)	17:13	68	15:30 (28)	18:21	20:33	21:42	22:40
9	09:23		11:24 (37)	08:27		12:28 (32)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (24)	17:16	60	15:26 (28)	18:24	20:35	21:44	22:42
10	09:22		11:25 (37)	08:25		12:29 (32)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (24)	17:18	51	14:44 (27)	18:26	20:37	21:46	22:43
11	09:21		11:25 (37)	08:23		12:32 (32)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (24)	17:21	45	14:43 (27)	18:28	20:40	21:49	22:44
12	09:20		11:25 (37)	08:20		09:49 (19)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (24)	17:23	45	14:42 (27)	18:31	20:42	21:51	22:45
13	09:18		11:26 (37)	08:18		09:45 (19)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (24)	17:26	43	14:40 (27)	18:33	20:44	21:53	22:46
14	09:17		11:26 (37)	08:15		09:44 (19)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (24)	17:28	27	14:38 (27)	18:35	20:47	21:55	22:47
15	09:16		11:26 (37)	08:13		09:43 (19)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (24)	17:31	18	10:01 (19)	18:38	20:49	21:58	22:47
16	09:15		11:27 (37)	08:10		09:42 (19)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (24)	17:33	20	10:02 (19)	18:40	20:51	22:00	22:48
17	09:13		11:27 (37)	08:07		09:41 (19)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (24)	17:35	21	10:02 (19)	18:42	20:53	22:02	22:49
18	09:12		11:28 (37)	08:05		09:41 (19)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (24)	17:38	22	10:03 (19)	18:45	20:56	22:04	22:49
19	09:10		11:29 (37)	08:02		09:40 (19)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (24)	17:40	23	10:03 (19)	18:47	20:58	22:06	22:50
20	09:08		11:30 (37)	08:00		09:40 (19)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (24)	17:43	23	10:03 (19)	18:49	21:00	22:08	22:50
21	09:07		11:31 (37)	07:57		09:40 (19)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (24)	17:45	22	10:02 (19)	18:51	21:03	22:10	22:50
22	09:05		11:31 (37)	07:54		09:40 (19)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (24)	17:48	22	10:02 (19)	18:54	21:05	22:12	22:50
23	09:03		11:33 (37)	07:52		09:42 (19)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (27)	17:50	20	10:02 (19)	18:56	21:07	22:14	22:50
24	09:02		11:35 (37)	07:49		09:42 (19)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (27)	17:53	18	10:00 (19)	18:58	21:10	22:16	22:51
25	09:00		11:39 (37)	07:46		09:43 (19)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (27)	17:55	16	09:59 (19)	19:01	21:12	22:18	22:50
26	08:58		12:24 (32)	07:44		09:45 (19)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (27)	17:57	11	09:56 (19)	19:03	21:14	22:20	22:50
27	08:56		12:23 (32)	07:41		09:49 (19)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (27)	18:00	2	09:51 (19)	19:05	21:17	22:22	22:50
28	08:54		12:23 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (28)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (32)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (28)				20:10	21:21	22:25	22:50
30	08:50		12:23 (32)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (28)				20:12	21:24	22:27	22:49
31	08:48		12:24 (32)				07:10		04:41	
	16:53	77	15:26 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,62			0,62					
Total reduction		0,25			0,25					
Total, real		386			284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (32)	09:00		11:07 (37)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (27)	15:51	43	12:51 (24)
2	04:33		05:26		06:35		07:42			07:54		11:58 (32)	09:02		11:08 (37)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (28)	15:50	42	12:51 (24)
3	04:34		05:28		06:37		07:44			07:56		11:57 (32)	09:03		11:08 (37)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (28)	15:49	42	12:51 (24)
4	04:35		05:31		06:40		07:46			07:59		11:56 (32)	09:05		11:09 (37)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (28)	15:48	41	12:52 (24)
5	04:36		05:33		06:42		07:48			08:01		11:55 (32)	09:07		11:09 (37)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (28)	15:47	35	12:52 (24)
6	04:37		05:35		06:44		07:51			08:03		11:55 (32)	09:09		11:10 (37)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (28)	15:46	31	12:52 (24)
7	04:38		05:37		06:46		07:53			08:06		11:54 (32)	09:10		11:11 (37)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (28)	15:45	24	12:40 (24)
8	04:40		05:39		06:49		07:55			08:08		11:54 (32)	09:12		11:11 (37)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (28)	15:45	24	12:41 (24)
9	04:41		05:42		06:51		07:57			08:11		11:55 (32)	09:13		11:12 (37)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (28)	15:44	20	12:37 (24)
10	04:43		05:44		06:53		08:00			08:13		11:55 (32)	09:15		11:12 (37)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (28)	15:43	17	11:29 (37)
11	04:44		05:46		06:55		08:02			08:15		11:54 (32)	09:16		11:14 (37)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (28)	15:43	16	11:30 (37)
12	04:46		05:48		06:57		08:04			08:18		11:55 (32)	09:18		11:14 (37)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (28)	15:43	15	11:29 (37)
13	04:47		05:51		07:00		08:07			08:20		11:56 (32)	09:19		11:15 (37)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (28)	15:42	15	11:30 (37)
14	04:49		05:53		07:02		08:09			08:22		11:55 (32)	09:20		11:16 (37)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (28)	15:42	14	11:30 (37)
15	04:51		05:55		07:04		08:11		10:19 (19)	08:25		11:56 (32)	09:21		11:16 (37)
	22:34		21:26		19:59		18:33	8	10:27 (19)	16:17	57	14:13 (27)	15:42	14	11:30 (37)
16	04:52		05:57		07:06		08:13		10:16 (19)	08:27		11:57 (32)	09:22		11:17 (37)
	22:32		21:24		19:56		18:31	13	10:29 (19)	16:15	54	14:12 (27)	15:42	12	11:29 (37)
17	04:54		06:00		07:08		08:16		10:15 (19)	08:29		11:12 (37)	09:23		11:17 (37)
	22:30		21:21		19:54		18:28	16	10:31 (19)	16:13	58	14:11 (27)	15:42	12	11:29 (37)
18	04:56		06:02		07:11		08:18		10:13 (19)	08:32		11:09 (37)	09:24		11:18 (37)
	22:29		21:18		19:51		18:25	19	10:32 (19)	16:11	67	14:10 (27)	15:42	11	11:29 (37)
19	04:58		06:04		07:13		08:20		10:12 (19)	08:34		11:08 (37)	09:25		11:19 (37)
	22:27		21:16		19:48		18:22	21	10:33 (19)	16:09	66	14:08 (27)	15:42	11	11:30 (37)
20	05:00		06:06		07:15		08:23		10:11 (19)	08:36		11:06 (37)	09:26		11:20 (37)
	22:25		21:13		19:45		18:20	22	10:33 (19)	16:08	60	12:44 (24)	15:43	10	11:30 (37)
21	05:01		06:08		07:17		08:25		10:11 (19)	08:39		11:06 (37)	09:26		11:20 (37)
	22:24		21:10		19:42		18:17	23	10:34 (19)	16:06	62	12:46 (24)	15:43	10	11:30 (37)
22	05:03		06:11		07:19		08:27		10:10 (19)	08:41		11:06 (37)	09:27		11:21 (37)
	22:22		21:08		19:39		18:14	23	10:33 (19)	16:04	63	12:47 (24)	15:43	10	11:31 (37)
23	05:05		06:13		07:22		08:30		10:11 (19)	08:43		11:05 (37)	09:27		11:21 (37)
	22:20		21:05		19:36		18:12	22	10:33 (19)	16:02	63	12:47 (24)	15:44	10	11:31 (37)
24	05:07		06:15		07:24		08:32		10:10 (19)	08:45		11:05 (37)	09:28		11:22 (37)
	22:18		21:02		19:33		18:09	22	10:32 (19)	16:01	64	12:48 (24)	15:44	10	11:32 (37)
25	05:09		06:17		07:26		07:35		09:11 (19)	08:47		11:05 (37)	09:28		11:22 (37)
	22:16		20:59		19:30		17:06	21	09:32 (19)	15:59	63	12:48 (24)	15:45	11	11:33 (37)
26	05:11		06:20		07:28		07:37		09:11 (19)	08:50		11:06 (37)	09:28		11:22 (37)
	22:14		20:56		19:27		17:04	20	09:31 (19)	15:58	59	12:49 (24)	15:46	12	11:34 (37)
27	05:13		06:22		07:30		07:39		09:12 (19)	08:52		11:05 (37)	09:28		11:23 (37)
	22:12		20:54		19:25		17:01	18	09:30 (19)	15:56	57	12:49 (24)	15:47	11	11:34 (37)
28	05:16		06:24		07:33		07:42		09:14 (19)	08:54		11:06 (37)	09:28		11:23 (37)
	22:10		20:51		19:22		16:59	28	14:08 (27)	15:55	53	12:50 (24)	15:48	13	11:36 (37)
29	05:18		06:26		07:35		07:44		09:15 (19)	08:56		11:06 (37)	09:28		11:22 (37)
	22:07		20:48		19:19		16:56	44	14:10 (27)	15:54	44	12:50 (24)	15:49	14	11:36 (37)
30	05:20		06:29		07:37		07:47		09:19 (19)	08:58		11:06 (37)	09:28		11:23 (37)
	22:05		20:45		19:16		16:54	44	14:11 (27)	15:52	43	12:50 (24)	15:50	15	11:38 (37)
31	05:22		06:31				07:49		12:01 (32)				09:28		11:23 (37)
	22:03		20:42				16:51	46	14:13 (27)				15:51	15	11:38 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		08:46		11:27 (32)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (28)	18:05	20:17	21:26	22:31
2	09:27	12:04 (24)	08:43		11:27 (32)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (24)	16:58	60	13:50 (27)	18:07	20:19	21:28	22:32
3	09:27	12:04 (24)	08:41		11:28 (32)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (24)	17:01	58	13:50 (27)	18:09	20:21	21:31	22:34
4	09:27	12:04 (24)	08:39		11:28 (32)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (24)	17:03	54	13:48 (27)	18:12	20:24	21:33	22:35
5	09:26	12:04 (24)	08:37		11:28 (32)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (24)	17:06	52	13:47 (27)	18:14	20:26	21:35	22:37
6	09:25	12:05 (24)	08:34		11:29 (32)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (24)	17:08	49	13:47 (27)	18:17	20:28	21:37	22:38
7	09:24	12:05 (24)	08:32		11:29 (32)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (24)	17:11	43	13:44 (27)	18:19	20:30	21:40	22:39
8	09:24	12:05 (24)	08:30		11:31 (32)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (24)	17:13	35	13:42 (27)	18:21	20:33	21:42	22:40
9	09:23	12:06 (24)	08:27		11:32 (32)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (24)	17:16	22	11:54 (32)	18:24	20:35	21:44	22:42
10	09:22	12:06 (24)	08:25		11:34 (32)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (24)	17:18	18	11:52 (32)	18:26	20:37	21:46	22:43
11	09:21	12:07 (24)	08:23		11:37 (32)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (24)	17:21	14	11:51 (32)	18:28	20:40	21:49	22:44
12	09:20	12:07 (24)	08:20		11:41 (32)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (27)	17:23	4	11:45 (32)	18:31	20:42	21:51	22:45
13	09:18	12:08 (24)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (27)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (24)	08:15		09:30 (19)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (27)	17:28	5	09:35 (19)	18:35	20:47	21:55	22:47
15	09:16	11:34 (32)	08:13		09:27 (19)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (27)	17:31	11	09:38 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10		09:25 (19)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (27)	17:33	14	09:39 (19)	18:40	20:51	22:00	22:48
17	09:13	11:31 (32)	08:07		09:23 (19)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (27)	17:36	17	09:40 (19)	18:42	20:53	22:02	22:49
18	09:12	11:30 (32)	08:05		09:23 (19)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (28)	17:38	18	09:41 (19)	18:45	20:56	22:04	22:49
19	09:10	11:29 (32)	08:02		09:22 (19)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (28)	17:40	19	09:41 (19)	18:47	20:58	22:06	22:50
20	09:09	11:28 (32)	08:00		09:22 (19)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (28)	17:43	19	09:41 (19)	18:49	21:00	22:08	22:50
21	09:07	11:28 (32)	07:57		09:22 (19)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (28)	17:45	19	09:41 (19)	18:51	21:03	22:10	22:50
22	09:05	11:28 (32)	07:54		09:22 (19)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (28)	17:48	19	09:41 (19)	18:54	21:05	22:12	22:50
23	09:03	11:26 (32)	07:52		09:23 (19)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (28)	17:50	18	09:41 (19)	18:56	21:07	22:14	22:51
24	09:02	11:26 (32)	07:49		09:23 (19)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (28)	17:53	17	09:40 (19)	18:58	21:10	22:16	22:51
25	09:00	11:26 (32)	07:46		09:24 (19)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (28)	17:55	14	09:38 (19)	19:01	21:12	22:18	22:51
26	08:58	11:26 (32)	07:44		09:25 (19)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (28)	17:57	11	09:36 (19)	19:03	21:14	22:20	22:50
27	08:56	11:25 (32)	07:41		09:30 (19)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (28)	18:00	1	09:31 (19)	19:05	21:17	22:22	22:50
28	08:54	11:26 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (32)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (28)				20:10	21:21	22:25	22:50
30	08:50	11:26 (32)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (28)				20:12	21:24	22:27	22:49
31	08:48	11:26 (32)				07:10		04:41	
	16:54	76 14:52 (28)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,66					
Total reduction		0,24		0,26					
Total, real		382		180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (32)	09:00		11:49 (24)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (32)	15:51	22	12:11 (24)
2	04:33		05:26		06:35		07:42			07:54		11:01 (32)	09:02		11:49 (24)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (32)	15:50	22	12:11 (24)
3	04:34		05:28		06:37		07:44			07:56		11:01 (32)	09:03		11:49 (24)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (27)	15:49	22	12:11 (24)
4	04:35		05:31		06:40		07:46			07:59		10:59 (32)	09:05		11:50 (24)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (27)	15:48	21	12:11 (24)
5	04:36		05:33		06:42		07:48			08:01		10:59 (32)	09:07		11:50 (24)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (27)	15:47	21	12:11 (24)
6	04:37		05:35		06:44		07:51			08:03		10:58 (32)	09:09		11:51 (24)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (27)	15:46	16	12:07 (24)
7	04:39		05:37		06:46		07:53			08:06		10:57 (32)	09:10		11:51 (24)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (27)	15:45	17	12:08 (24)
8	04:40		05:39		06:49		07:55			08:08		10:57 (32)	09:12		11:52 (24)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (27)	15:45	8	12:00 (24)
9	04:41		05:42		06:51		07:57			08:11		10:57 (32)	09:13		11:53 (24)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (28)	15:44	4	11:57 (24)
10	04:43		05:44		06:53		08:00			08:13		10:58 (32)	09:15		11:53 (24)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (28)	15:43	1	11:54 (24)
11	04:44		05:46		06:55		08:02			08:15		10:57 (32)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (28)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (32)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (28)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (32)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (28)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (32)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (28)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (19)	08:25		10:58 (32)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (19)	16:17	83	14:27 (28)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (19)	08:27		10:59 (32)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (19)	16:15	83	14:28 (28)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (19)	08:30		11:00 (32)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (19)	16:13	83	14:29 (28)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (19)	08:32		11:00 (32)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (19)	16:11	81	14:29 (28)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (19)	08:34		11:01 (32)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (19)	16:09	87	14:29 (28)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (19)	08:36		11:02 (32)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (19)	16:08	88	14:29 (28)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (19)	08:39		11:03 (32)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (19)	16:06	88	14:29 (28)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (19)	08:41		11:04 (32)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (19)	16:04	88	14:30 (28)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (19)	08:43		11:05 (32)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (19)	16:02	84	14:29 (28)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (19)	08:45		11:07 (32)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (19)	16:01	72	14:30 (28)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (19)	08:47		11:08 (32)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (19)	15:59	58	13:20 (27)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (19)	08:50		11:11 (32)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (19)	15:58	53	13:20 (27)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (19)	08:52		11:13 (32)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (19)	15:56	47	13:19 (27)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (24)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (27)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (24)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (27)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (32)	08:58		11:48 (24)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (32)	15:52	30	13:15 (27)	15:50		
31	05:22		06:31				07:49		11:06 (32)				09:28		
	22:03		20:42				16:51	15	11:21 (32)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (24)	08:46	11:53 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (24)	16:56	49	14:04 (27)	18:05	20:17	21:26	22:31
2	09:27		12:18 (24)	08:43	11:54 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (24)	16:58	44	14:02 (27)	18:07	20:19	21:28	22:32
3	09:27		11:54 (32)	08:41	11:56 (32)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (24)	17:01	39	14:01 (27)	18:09	20:21	21:31	22:34
4	09:27		11:52 (32)	08:39	11:57 (32)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (24)	17:03	32	13:59 (27)	18:12	20:24	21:33	22:35
5	09:26		11:51 (32)	08:37	11:59 (32)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (24)	17:06	19	13:55 (27)	18:14	20:26	21:35	22:37
6	09:25		11:50 (32)	08:34	12:04 (32)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (24)	17:08	5	12:09 (32)	18:17	20:28	21:37	22:38
7	09:24		11:50 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (27)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (27)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (32)	08:27		09:42 (19)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (27)	17:16	7	09:49 (19)	18:24	20:35	21:44	22:42
10	09:22		11:49 (32)	08:25		09:40 (19)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (27)	17:18	12	09:52 (19)	18:26	20:37	21:46	22:43
11	09:21		11:49 (32)	08:23		09:39 (19)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (27)	17:21	15	09:54 (19)	18:28	20:40	21:49	22:44
12	09:20		11:48 (32)	08:20		09:37 (19)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (27)	17:23	17	09:54 (19)	18:31	20:42	21:51	22:45
13	09:18		11:49 (32)	08:18		09:36 (19)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (27)	17:26	19	09:55 (19)	18:33	20:44	21:53	22:46
14	09:17		11:48 (32)	08:15		09:37 (19)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (27)	17:28	19	09:56 (19)	18:35	20:47	21:55	22:47
15	09:16		11:48 (32)	08:13		09:36 (19)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (28)	17:31	20	09:56 (19)	18:38	20:49	21:58	22:47
16	09:15		11:47 (32)	08:10		09:36 (19)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (28)	17:33	20	09:56 (19)	18:40	20:51	22:00	22:48
17	09:13		11:48 (32)	08:07		09:36 (19)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (28)	17:36	19	09:55 (19)	18:42	20:53	22:02	22:49
18	09:12		11:48 (32)	08:05		09:37 (19)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (28)	17:38	19	09:56 (19)	18:45	20:56	22:04	22:49
19	09:10		11:48 (32)	08:02		09:37 (19)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (28)	17:40	18	09:55 (19)	18:47	20:58	22:06	22:50
20	09:08		11:48 (32)	08:00		09:38 (19)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (28)	17:43	15	09:53 (19)	18:49	21:00	22:08	22:50
21	09:07		11:48 (32)	07:57		09:39 (19)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (28)	17:45	13	09:52 (19)	18:51	21:03	22:10	22:50
22	09:05		11:48 (32)	07:54		09:41 (19)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (28)	17:48	8	09:49 (19)	18:54	21:05	22:12	22:50
23	09:03		11:48 (32)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (28)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (32)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (28)				20:10	21:21	22:25	22:50
30	08:50		11:51 (32)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (28)				20:12	21:24	22:27	22:49
31	08:48		11:52 (32)				07:10		04:41	
	16:54	55	14:55 (28)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (19)	09:00		11:31 (32)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (19)	15:51	60	13:37 (27)
2	04:33	05:26	06:35	07:42			07:54		09:12 (19)	09:02		11:32 (32)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (19)	15:50	56	13:36 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (27)
5	04:36	05:33	06:42	07:48			08:01		11:32 (32)	09:07		11:35 (32)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (32)	15:47	43	13:32 (27)
6	04:37	05:35	06:44	07:51			08:03		11:29 (32)	09:09		11:37 (32)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (27)	15:46	36	12:27 (24)
7	04:38	05:37	06:46	07:53			08:06		11:27 (32)	09:10		11:38 (32)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (27)	15:45	34	12:27 (24)
8	04:40	05:39	06:49	07:55			08:08		11:25 (32)	09:12		11:40 (32)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (27)	15:45	32	12:28 (24)
9	04:41	05:42	06:51	07:57			08:11		11:25 (32)	09:13		11:42 (32)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (27)	15:44	28	12:28 (24)
10	04:43	05:44	06:53	08:00			08:13		11:24 (32)	09:15		12:07 (24)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (27)	15:43	21	12:28 (24)
11	04:44	05:46	06:55	08:02			08:15		11:23 (32)	09:16		12:08 (24)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (28)	15:43	21	12:29 (24)
12	04:46	05:48	06:57	08:04			08:18		11:23 (32)	09:18		12:08 (24)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (28)	15:43	21	12:29 (24)
13	04:47	05:51	07:00	08:07			08:20		11:23 (32)	09:19		12:09 (24)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (28)	15:42	21	12:30 (24)
14	04:49	05:53	07:02	08:09			08:22		11:22 (32)	09:20		12:09 (24)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (28)	15:42	21	12:30 (24)
15	04:51	05:55	07:04	08:11			08:25		11:22 (32)	09:21		12:09 (24)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (28)	15:42	21	12:30 (24)
16	04:52	05:57	07:06	08:13			08:27		11:22 (32)	09:22		12:10 (24)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (28)	15:42	20	12:30 (24)
17	04:54	06:00	07:08	08:16			08:30		11:23 (32)	09:23		12:10 (24)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (28)	15:42	21	12:31 (24)
18	04:56	06:02	07:11	08:18			08:32		11:22 (32)	09:24		12:11 (24)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (28)	15:42	20	12:31 (24)
19	04:58	06:04	07:13	08:20			08:34		11:23 (32)	09:25		12:12 (24)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (28)	15:42	20	12:32 (24)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:22 (32)	09:26		12:12 (24)
	22:25	21:13	19:45	18:20	10	10:21 (19)	16:08	82	14:37 (28)	15:43	20	12:32 (24)
21	05:01	06:08	07:17	08:25		10:10 (19)	08:39		11:23 (32)	09:26		12:12 (24)
	22:24	21:10	19:42	18:17	13	10:23 (19)	16:06	80	14:37 (28)	15:43	20	12:32 (24)
22	05:03	06:11	07:19	08:27		10:08 (19)	08:41		11:24 (32)	09:27		12:13 (24)
	22:22	21:08	19:39	18:14	16	10:24 (19)	16:04	79	14:38 (28)	15:43	20	12:33 (24)
23	05:05	06:13	07:22	08:30		10:07 (19)	08:43		11:24 (32)	09:27		12:13 (24)
	22:20	21:05	19:36	18:12	18	10:25 (19)	16:02	84	14:38 (28)	15:44	20	12:33 (24)
24	05:07	06:15	07:24	08:32		10:06 (19)	08:45		11:25 (32)	09:28		12:14 (24)
	22:18	21:02	19:33	18:09	19	10:25 (19)	16:01	88	14:38 (28)	15:44	21	12:35 (24)
25	05:09	06:17	07:26	07:35		09:06 (19)	08:47		11:25 (32)	09:28		12:15 (24)
	22:16	20:59	19:30	17:06	20	09:26 (19)	15:59	88	14:38 (28)	15:45	20	12:35 (24)
26	05:11	06:20	07:28	07:37		09:06 (19)	08:50		11:26 (32)	09:28		12:15 (24)
	22:14	20:57	19:27	17:04	20	09:26 (19)	15:58	81	14:37 (28)	15:46	20	12:35 (24)
27	05:13	06:22	07:30	07:39		09:06 (19)	08:52		11:27 (32)	09:28		12:16 (24)
	22:12	20:54	19:25	17:01	19	09:25 (19)	15:56	73	14:26 (28)	15:47	20	12:36 (24)
28	05:16	06:24	07:33	07:42		09:06 (19)	08:54		11:28 (32)	09:28		12:16 (24)
	22:10	20:51	19:22	16:59	19	09:25 (19)	15:55	65	13:38 (27)	15:48	21	12:37 (24)
29	05:18	06:26	07:35	07:44		09:06 (19)	08:56		11:29 (32)	09:28		12:16 (24)
	22:07	20:48	19:19	16:56	18	09:24 (19)	15:54	64	13:37 (27)	15:49	20	12:36 (24)
30	05:20	06:29	07:37	07:47		09:07 (19)	08:58		11:29 (32)	09:28		12:17 (24)
	22:05	20:45	19:16	16:54	17	09:24 (19)	15:52	62	13:37 (27)	15:50	20	12:37 (24)
31	05:22	06:31		07:49		09:08 (19)				09:28		12:16 (24)
	22:03	20:42		16:51	15	09:23 (19)				15:51	21	12:37 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:08 (24)	08:46	11:39 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (24)	16:56 49	13:50 (27)	18:05	20:17	21:26	22:31
2	09:27		12:08 (24)	08:43	11:40 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (24)	16:58 44	13:48 (27)	18:07	20:19	21:28	22:32
3	09:27		12:09 (24)	08:41	11:41 (32)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (24)	17:01 39	13:47 (27)	18:09	20:21	21:31	22:34
4	09:27		12:09 (24)	08:39	11:42 (32)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (24)	17:03 32	13:45 (27)	18:12	20:24	21:33	22:35
5	09:26		12:09 (24)	08:37	11:43 (32)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (24)	17:06 19	12:02 (32)	18:14	20:26	21:35	22:37
6	09:25		12:10 (24)	08:34	11:46 (32)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (27)	17:08 14	12:00 (32)	18:17	20:28	21:37	22:38
7	09:24		11:43 (32)	08:32	11:50 (32)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (27)	17:11 6	11:56 (32)	18:19	20:30	21:40	22:39
8	09:24		11:41 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	41	13:37 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23		11:40 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	47	13:39 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22		11:38 (32)	08:25	09:39 (19)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (27)	17:18 3	09:42 (19)	18:26	20:37	21:46	22:43
11	09:21		11:38 (32)	08:23	09:36 (19)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (27)	17:21 10	09:46 (19)	18:28	20:40	21:49	22:44
12	09:20		11:37 (32)	08:20	09:34 (19)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (28)	17:23 14	09:48 (19)	18:31	20:42	21:51	22:45
13	09:18		11:37 (32)	08:18	09:33 (19)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (28)	17:26 16	09:49 (19)	18:33	20:44	21:53	22:46
14	09:17		11:36 (32)	08:15	09:33 (19)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (28)	17:28 17	09:50 (19)	18:35	20:47	21:55	22:47
15	09:16		11:36 (32)	08:13	09:32 (19)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (28)	17:31 18	09:50 (19)	18:38	20:49	21:58	22:47
16	09:15		11:35 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (28)	17:33 19	09:50 (19)	18:40	20:51	22:00	22:48
17	09:13		11:36 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (28)	17:36 19	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:36 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (28)	17:38 19	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:36 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (28)	17:40 18	09:50 (19)	18:47	20:58	22:06	22:50
20	09:09		11:35 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (28)	17:43 17	09:49 (19)	18:49	21:00	22:08	22:50
21	09:07		11:35 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (28)	17:45 15	09:48 (19)	18:51	21:03	22:10	22:50
22	09:05		11:36 (32)	07:54	09:34 (19)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (28)	17:48 12	09:46 (19)	18:54	21:05	22:12	22:50
23	09:03		11:35 (32)	07:52	09:38 (19)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (28)	17:50 6	09:44 (19)	18:56	21:07	22:14	22:51
24	09:02		11:35 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	79	14:52 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:35 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	78	14:52 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:36 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	77	14:52 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:36 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	74	14:51 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:36 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	71	14:50 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:37 (32)			07:15	05:49	04:44	04:30
	16:49	66	14:49 (28)			20:10	21:21	22:25	22:50
30	08:50		11:37 (32)			07:13	05:46	04:42	04:31
	16:51	56	14:45 (28)			20:12	21:24	22:27	22:49
31	08:48		11:38 (32)			07:10		04:41	
	16:54	51	13:50 (27)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1881		406					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,68					
Total reduction		0,24		0,27					
Total, real		457		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (32)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (27)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (27)
4	04:35	05:31	06:40	07:46			07:59		11:18 (32)	09:05		11:25 (32)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (32)	15:48	42	13:22 (27)
5	04:36	05:33	06:42	07:48			08:01		11:15 (32)	09:07		11:28 (32)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (32)	15:47	34	13:21 (27)
6	04:37	05:35	06:44	07:51			08:03		11:14 (32)	09:09		11:56 (24)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (32)	15:46	26	13:19 (27)
7	04:38	05:37	06:46	07:53			08:06		11:12 (32)	09:10		11:56 (24)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (27)	15:45	21	12:17 (24)
8	04:40	05:39	06:49	07:55			08:08		11:11 (32)	09:12		11:57 (24)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (27)	15:45	21	12:18 (24)
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		11:58 (24)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (27)	15:44	20	12:18 (24)
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		11:58 (24)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (27)	15:43	20	12:18 (24)
11	04:44	05:46	06:55	08:02			08:15		11:09 (32)	09:16		11:58 (24)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (27)	15:43	21	12:19 (24)
12	04:46	05:48	06:57	08:04			08:18		11:09 (32)	09:18		11:58 (24)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (28)	15:43	21	12:19 (24)
13	04:47	05:51	07:00	08:07			08:20		11:09 (32)	09:19		12:00 (24)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (28)	15:42	20	12:20 (24)
14	04:49	05:53	07:02	08:09			08:23		11:08 (32)	09:20		12:00 (24)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (28)	15:42	20	12:20 (24)
15	04:51	05:55	07:04	08:11			08:25		11:08 (32)	09:21		12:00 (24)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (28)	15:42	20	12:20 (24)
16	04:52	05:57	07:06	08:13			08:27		11:09 (32)	09:22		12:01 (24)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (28)	15:42	19	12:20 (24)
17	04:54	06:00	07:08	08:16			08:30		11:09 (32)	09:23		12:01 (24)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (28)	15:42	20	12:21 (24)
18	04:56	06:02	07:11	08:18			08:32		11:09 (32)	09:24		12:02 (24)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (28)	15:42	19	12:21 (24)
19	04:58	06:04	07:13	08:20		10:07 (19)	08:34		11:10 (32)	09:25		12:02 (24)
	22:27	21:16	19:48	18:22	9	10:16 (19)	16:09	79	14:27 (28)	15:42	20	12:22 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:10 (32)	09:26		12:03 (24)
	22:25	21:13	19:45	18:20	13	10:18 (19)	16:08	79	14:27 (28)	15:43	19	12:22 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:10 (32)	09:26		12:03 (24)
	22:24	21:10	19:42	18:17	15	10:19 (19)	16:06	79	14:28 (28)	15:43	19	12:22 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:11 (32)	09:27		12:04 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	84	14:29 (28)	15:43	19	12:23 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:12 (32)	09:27		12:04 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:28 (28)	15:44	19	12:23 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:13 (32)	09:28		12:05 (24)
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	88	14:29 (28)	15:44	19	12:24 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:13 (32)	09:28		12:06 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	88	14:29 (28)	15:45	19	12:25 (24)
26	05:11	06:20	07:28	07:37		09:02 (19)	08:50		11:14 (32)	09:28		12:06 (24)
	22:14	20:57	19:27	17:04	19	09:21 (19)	15:58	87	14:29 (28)	15:46	19	12:25 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:15 (32)	09:28		12:06 (24)
	22:12	20:54	19:25	17:01	19	09:20 (19)	15:56	86	14:29 (28)	15:47	20	12:26 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:16 (32)	09:28		12:07 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	82	14:29 (28)	15:48	20	12:27 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:17 (32)	09:28		12:07 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	72	14:29 (28)	15:49	19	12:26 (24)
30	05:20	06:29	07:37	07:47		09:04 (19)	08:58		11:18 (32)	09:28		12:07 (24)
	22:05	20:45	19:16	16:54	13	09:17 (19)	15:52	60	14:28 (28)	15:50	20	12:27 (24)
31	05:22	06:31		07:49		09:06 (19)				09:28		12:07 (24)
	22:03	20:42		16:51	9	09:15 (19)				15:51	20	12:27 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:05 (24)	08:46	11:36 (32)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (24)	16:56	45 13:44 (27)	18:05	20:17	21:26	22:31
2	09:27	12:06 (24)	08:43	11:37 (32)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (24)	16:58	40 13:42 (27)	18:07	20:19	21:28	22:32
3	09:27	12:06 (24)	08:41	11:38 (32)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (24)	17:01	34 13:40 (27)	18:09	20:21	21:31	22:34
4	09:27	12:06 (24)	08:39	11:39 (32)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (24)	17:03	20 11:59 (32)	18:12	20:24	21:33	22:35
5	09:26	12:06 (24)	08:37	11:41 (32)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (27)	17:06	16 11:57 (32)	18:14	20:26	21:35	22:37
6	09:25	12:07 (24)	08:34	11:44 (32)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (27)	17:08	11 11:55 (32)	18:17	20:28	21:37	22:38
7	09:24	11:39 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (32)	08:25	09:37 (19)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (28)	17:18	6 09:43 (19)	18:26	20:37	21:46	22:43
11	09:21	11:34 (32)	08:23	09:35 (19)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (28)	17:21	11 09:46 (19)	18:28	20:40	21:49	22:44
12	09:20	11:33 (32)	08:20	09:33 (19)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (28)	17:23	15 09:48 (19)	18:31	20:42	21:51	22:45
13	09:18	11:34 (32)	08:18	09:32 (19)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (28)	17:26	16 09:48 (19)	18:33	20:44	21:53	22:46
14	09:17	11:33 (32)	08:15	09:32 (19)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (28)	17:28	18 09:50 (19)	18:35	20:47	21:55	22:47
15	09:16	11:32 (32)	08:13	09:31 (19)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (28)	17:31	19 09:50 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (28)	17:33	19 09:50 (19)	18:40	20:51	22:00	22:48
17	09:13	11:32 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (28)	17:36	19 09:50 (19)	18:42	20:53	22:02	22:49
18	09:12	11:32 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (28)	17:38	18 09:50 (19)	18:45	20:56	22:04	22:49
19	09:10	11:32 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (28)	17:40	17 09:49 (19)	18:47	20:58	22:06	22:50
20	09:09	11:32 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (28)	17:43	16 09:48 (19)	18:49	21:00	22:08	22:50
21	09:07	11:32 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (28)	17:45	14 09:47 (19)	18:51	21:03	22:10	22:50
22	09:05	11:32 (32)	07:54	09:35 (19)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (28)	17:48	10 09:45 (19)	18:54	21:05	22:12	22:50
23	09:03	11:31 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (32)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (28)			20:10	21:21	22:25	22:50
30	08:50	11:34 (32)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (27)			20:12	21:24	22:27	22:49
31	08:48	11:35 (32)			07:10		04:41	
	16:54	48 13:44 (27)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,69				
Total reduction		0,24		0,27				
Total, real		467		100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (19)	09:00		11:16 (32)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (19)	15:51	74	14:26 (28)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (28)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (27)
5	04:36	05:33	06:42	07:48			08:01		11:13 (32)	09:07		11:23 (32)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (32)	15:47	39	13:18 (27)
6	04:37	05:35	06:44	07:51			08:03		11:11 (32)	09:09		11:53 (24)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (32)	15:46	32	13:17 (27)
7	04:38	05:37	06:46	07:53			08:06		11:10 (32)	09:10		11:54 (24)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (27)	15:45	28	13:16 (27)
8	04:40	05:39	06:49	07:55			08:08		11:08 (32)	09:12		11:54 (24)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (27)	15:45	22	13:13 (27)
9	04:41	05:42	06:51	07:57			08:11		11:07 (32)	09:13		11:55 (24)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (27)	15:44	20	12:15 (24)
10	04:43	05:44	06:53	08:00			08:13		11:07 (32)	09:15		11:55 (24)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (27)	15:43	20	12:15 (24)
11	04:44	05:46	06:55	08:02			08:15		11:06 (32)	09:16		11:56 (24)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (27)	15:43	20	12:16 (24)
12	04:46	05:48	06:57	08:04			08:18		11:06 (32)	09:18		11:56 (24)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (27)	15:43	20	12:16 (24)
13	04:47	05:51	07:00	08:07			08:20		11:06 (32)	09:19		11:57 (24)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (28)	15:42	20	12:17 (24)
14	04:49	05:53	07:02	08:09			08:23		11:05 (32)	09:20		11:57 (24)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (28)	15:42	20	12:17 (24)
15	04:51	05:55	07:04	08:11			08:25		11:05 (32)	09:21		11:57 (24)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (28)	15:42	20	12:17 (24)
16	04:52	05:57	07:06	08:13			08:27		11:06 (32)	09:22		11:58 (24)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (28)	15:42	19	12:17 (24)
17	04:54	06:00	07:08	08:16			08:30		11:06 (32)	09:23		11:58 (24)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (28)	15:42	19	12:17 (24)
18	04:56	06:02	07:11	08:18			08:32		11:06 (32)	09:24		11:59 (24)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (28)	15:42	19	12:18 (24)
19	04:58	06:04	07:13	08:20		10:09 (19)	08:34		11:06 (32)	09:25		11:59 (24)
	22:27	21:16	19:48	18:22	5	10:14 (19)	16:09	78	14:23 (28)	15:42	20	12:19 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:06 (32)	09:26		12:00 (24)
	22:25	21:13	19:45	18:20	11	10:16 (19)	16:08	79	14:23 (28)	15:43	19	12:19 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:07 (32)	09:26		12:00 (24)
	22:24	21:10	19:42	18:17	14	10:18 (19)	16:06	77	14:23 (28)	15:43	19	12:19 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:08 (32)	09:27		12:01 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	77	14:24 (28)	15:43	19	12:20 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:08 (32)	09:27		12:01 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:24 (28)	15:44	19	12:20 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:09 (32)	09:28		12:02 (24)
	22:18	21:02	19:33	18:09	18	10:19 (19)	16:01	87	14:25 (28)	15:44	19	12:21 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:10 (32)	09:28		12:03 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	87	14:25 (28)	15:45	19	12:22 (24)
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		11:11 (32)	09:28		12:03 (24)
	22:14	20:57	19:27	17:04	19	09:20 (19)	15:58	87	14:25 (28)	15:46	19	12:22 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:11 (32)	09:28		12:03 (24)
	22:12	20:54	19:25	17:01	18	09:19 (19)	15:56	86	14:25 (28)	15:47	20	12:23 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:13 (32)	09:28		12:04 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	85	14:26 (28)	15:48	20	12:24 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:14 (32)	09:28		12:04 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	82	14:25 (28)	15:49	19	12:23 (24)
30	05:20	06:29	07:37	07:47		09:03 (19)	08:58		11:14 (32)	09:28		12:04 (24)
	22:05	20:45	19:16	16:54	14	09:17 (19)	15:52	80	14:25 (28)	15:50	20	12:24 (24)
31	05:22	06:31		07:49		09:05 (19)				09:28		12:04 (24)
	22:03	20:42		16:51	11	09:16 (19)				15:51	20	12:24 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	11:58 (24)	08:46	11:24 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00	11:44 (24)
	15:53 16	12:14 (24)	16:56 49	13:35 (27)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51 57	14:20 (28)
2	09:28	11:58 (24)	08:43	11:24 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02	11:44 (24)
	15:54 18	12:16 (24)	16:58 47	13:34 (27)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50 50	14:19 (28)
3	09:27	11:58 (24)	08:41	11:25 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (32)	09:03	11:44 (24)
	15:55 20	12:18 (24)	17:01 42	13:33 (27)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44 12	11:14 (32)	15:49 40	14:19 (28)
4	09:27	11:58 (24)	08:39	11:26 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (32)	09:05	11:44 (24)
	15:57 21	12:19 (24)	17:03 35	13:30 (27)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41 17	11:16 (32)	15:48 34	14:19 (28)
5	09:26	11:59 (24)	08:37	11:26 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (32)	09:07	11:45 (24)
	15:58 20	12:19 (24)	17:06 23	11:49 (32)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39 20	11:18 (32)	15:47 31	13:06 (27)
6	09:25	11:59 (24)	08:34	11:28 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (32)	09:09	11:45 (24)
	16:00 26	13:18 (27)	17:08 20	11:48 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 23	11:20 (32)	15:46 27	13:05 (27)
7	09:25	12:00 (24)	08:32	11:30 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (32)	09:10	11:46 (24)
	16:02 30	13:21 (27)	17:11 16	11:46 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34 37	13:01 (27)	15:45 20	12:06 (24)
8	09:24	12:00 (24)	08:30	11:33 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (32)	09:12	11:47 (24)
	16:03 34	14:35 (28)	17:13 11	11:44 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 43	13:03 (27)	15:45 20	12:07 (24)
9	09:23	12:01 (24)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (32)	09:13	11:47 (24)
	16:05 41	14:36 (28)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 48	13:05 (27)	15:44 20	12:07 (24)
10	09:22	12:01 (24)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (32)	09:15	11:47 (24)
	16:07 50	14:36 (28)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28 51	13:06 (27)	15:43 19	12:07 (24)
11	09:21	12:02 (24)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (32)	09:16	11:48 (24)
	16:09 57	14:37 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25 52	13:06 (27)	15:43 16	12:04 (24)
12	09:20	11:28 (32)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (32)	09:18	11:48 (24)
	16:11 68	14:38 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 55	13:08 (27)	15:43 11	11:59 (24)
13	09:18	11:26 (32)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (32)	09:19	11:49 (24)
	16:13 75	14:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 62	14:08 (28)	15:42 11	12:00 (24)
14	09:17	11:25 (32)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (32)	09:20	11:50 (24)
	16:15 78	14:39 (28)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 69	14:10 (28)	15:42 7	12:00 (24)
15	09:16	11:24 (32)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (32)	09:21	11:50 (24)
	16:17 82	14:40 (28)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 71	14:12 (28)	15:42 3	11:53 (24)
16	09:15	11:23 (32)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (32)	09:22	11:50 (24)
	16:19 85	14:40 (28)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 75	14:14 (28)	15:42 3	11:53 (24)
17	09:13	11:23 (32)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (32)	09:23	11:51 (24)
	16:21 86	14:41 (28)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 77	14:15 (28)	15:42 1	11:52 (24)
18	09:12	11:23 (32)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (32)	09:24	
	16:23 87	14:42 (28)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 76	14:15 (28)	15:42	
19	09:10	11:22 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (32)	09:25	
	16:25 88	14:42 (28)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09 77	14:16 (28)	15:42	
20	09:09	11:22 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (32)	09:26	
	16:28 86	14:42 (28)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08 77	14:16 (28)	15:43	
21	09:07	11:22 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (32)	09:26	
	16:30 83	14:42 (28)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 83	14:17 (28)	15:43	
22	09:05	11:22 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (32)	09:27	
	16:32 77	14:42 (28)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04 86	14:18 (28)	15:43	
23	09:03	11:21 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (32)	09:27	
	16:34 77	14:41 (28)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 88	14:18 (28)	15:44	
24	09:02	11:21 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (32)	09:28	
	16:37 76	14:41 (28)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 87	14:19 (28)	15:44	
25	09:00	11:21 (32)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (32)	09:28	
	16:39 77	14:41 (28)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59 86	14:18 (28)	15:45	
26	08:58	11:22 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (32)	09:28	
	16:41 74	14:41 (28)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58 85	14:19 (28)	15:46	
27	08:56	11:21 (32)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (32)	09:28	11:56 (24)
	16:44 71	14:39 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 83	14:19 (28)	15:47 3	11:59 (24)
28	08:54	11:21 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (32)	09:28	11:57 (24)
	16:46 69	14:38 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 79	14:19 (28)	15:48 3	12:00 (24)
29	08:52	11:22 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (32)	09:28	11:56 (24)
	16:49 61	14:36 (28)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54 73	14:19 (28)	15:49 5	12:07 (24)
30	08:50	11:22 (32)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (32)	09:28	11:57 (24)
	16:51 55	13:36 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 69	14:19 (28)	15:50 11	12:08 (24)
31	08:48	11:23 (32)			07:10		04:41		05:22	06:31		07:49			09:28	11:57 (24)
	16:54 53	13:36 (27)			20:14		22:29		22:03	20:42		16:51			15:51 11	12:08 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case	1841		243										1761		403	
Sun reduction	0,50		0,50										0,50		0,50	
Oper. time red.	0,80		0,80										0,80		0,80	
Wind dir. red.	0,62		0,65										0,62		0,62	
Total reduction	0,25		0,26										0,25		0,25	
Total, real	452		63										435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (37)	08:46		13:17 (32)	07:35		08:53 (21)	07:07	05:44	04:40
	15:53	17	12:09 (37)	16:56	36	13:53 (32)	18:05	19	09:12 (21)	20:17	21:26	22:30
2	09:27		11:51 (37)	08:43		13:18 (32)	07:32		08:53 (21)	07:04	05:41	04:38
	15:54	19	12:10 (37)	16:58	43	15:13 (27)	18:07	20	09:13 (21)	20:19	21:28	22:32
3	09:27		11:51 (37)	08:41		13:17 (32)	07:30		08:52 (21)	07:01	05:39	04:37
	15:55	19	12:10 (37)	17:01	52	15:18 (27)	18:09	21	09:13 (21)	20:21	21:30	22:34
4	09:26		11:51 (37)	08:39		13:18 (32)	07:27		08:52 (21)	06:58	05:36	04:36
	15:57	20	12:11 (37)	17:03	54	15:20 (27)	18:12	20	09:12 (21)	20:24	21:33	22:35
5	09:26		11:52 (37)	08:37		13:17 (32)	07:24		08:52 (21)	06:55	05:34	04:35
	15:58	20	12:12 (37)	17:06	58	15:21 (27)	18:14	20	09:12 (21)	20:26	21:35	22:37
6	09:25		11:52 (37)	08:34		13:18 (32)	07:21		08:52 (21)	06:52	05:31	04:34
	16:00	20	12:12 (37)	17:08	62	15:43 (28)	18:16	19	09:11 (21)	20:28	21:37	22:38
7	09:24		11:52 (37)	08:32		13:17 (32)	07:19		08:53 (21)	06:49	05:29	04:33
	16:02	21	12:13 (37)	17:11	68	15:46 (28)	18:19	17	09:10 (21)	20:30	21:40	22:39
8	09:24		11:53 (37)	08:30		13:18 (32)	07:16		08:54 (21)	06:47	05:26	04:32
	16:03	21	12:14 (37)	17:13	72	15:51 (28)	18:21	14	09:08 (21)	20:33	21:42	22:40
9	09:23		11:52 (37)	08:27		13:18 (32)	07:13		08:55 (21)	06:44	05:24	04:31
	16:05	22	12:14 (37)	17:16	78	15:59 (28)	18:24	10	09:05 (21)	20:35	21:44	22:42
10	09:22		11:53 (37)	08:25		13:18 (32)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (37)	17:18	82	16:00 (28)	18:26			20:37	21:46	22:43
11	09:21		11:54 (37)	08:23		10:11 (19)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (37)	17:21	84	16:00 (28)	18:28			20:40	21:49	22:44
12	09:20		11:53 (37)	08:20		10:06 (19)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (37)	17:23	89	15:59 (28)	18:31			20:42	21:51	22:45
13	09:18		11:53 (37)	08:18		10:04 (19)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (24)	17:26	90	15:58 (28)	18:33			20:44	21:53	22:46
14	09:17		11:54 (37)	08:15		10:03 (19)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (24)	17:28	87	15:57 (28)	18:35			20:47	21:55	22:46
15	09:16		11:55 (37)	08:13		10:02 (19)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (24)	17:31	81	15:54 (28)	18:38			20:49	21:57	22:47
16	09:15		11:55 (37)	08:10		10:01 (19)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (24)	17:33	72	15:24 (27)	18:40			20:51	22:00	22:48
17	09:13		11:55 (37)	08:07		10:00 (19)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (24)	17:35	67	15:23 (27)	18:42			20:53	22:02	22:49
18	09:12		11:57 (37)	08:05		10:00 (19)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (24)	17:38	61	15:23 (27)	18:45			20:56	22:04	22:49
19	09:10		11:57 (37)	08:02		10:00 (19)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (24)	17:40	43	15:21 (27)	18:47			20:58	22:06	22:50
20	09:08		11:58 (37)	08:00		09:59 (19)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (24)	17:43	41	15:19 (27)	18:49			21:00	22:08	22:50
21	09:07		11:59 (37)	07:57		09:59 (19)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (24)	17:45	32	15:15 (27)	18:51			21:03	22:10	22:50
22	09:05		11:59 (37)	07:54		09:59 (19)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (24)	17:48	25	10:24 (19)	18:54			21:05	22:12	22:50
23	09:03		12:01 (37)	07:52		10:00 (19)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (24)	17:50	24	10:24 (19)	18:56			21:07	22:14	22:50
24	09:02		12:03 (37)	07:49		10:01 (19)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (24)	17:53	22	10:23 (19)	18:58			21:10	22:16	22:51
25	09:00		12:05 (37)	07:46		09:00 (21)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (32)	17:55	27	10:22 (19)	19:01			21:12	22:18	22:50
26	08:58		13:21 (32)	07:43		08:57 (21)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (32)	17:57	30	10:20 (19)	19:03			21:14	22:20	22:50
27	08:56		13:20 (32)	07:41		08:55 (21)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (32)	18:00	28	10:17 (19)	19:05			21:17	22:22	22:50
28	08:54		13:19 (32)	07:38		08:54 (21)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (32)	18:02	22	10:13 (19)	19:07			21:19	22:24	22:50
29	08:52		13:19 (32)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (32)				20:10			21:21	22:25	22:50
30	08:50		13:18 (32)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (32)				20:12			21:24	22:27	22:49
31	08:48		13:18 (32)				07:10				04:41	
	16:53	34	13:52 (32)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		12:48 (32)	09:00		11:36 (37)
	22:49	22:01	20:40	19:13			16:49	83	15:30 (28)	15:51	22	11:58 (37)
2	04:33	05:26	06:35	07:42			07:54		12:48 (32)	09:02		11:36 (37)
	22:48	21:58	20:37	19:10			16:46	76	15:28 (28)	15:50	22	11:58 (37)
3	04:34	05:28	06:37	07:44			07:56		12:48 (32)	09:03		11:36 (37)
	22:47	21:56	20:34	19:07			16:44	71	15:20 (28)	15:49	22	11:58 (37)
4	04:35	05:31	06:40	07:46		09:34 (21)	07:59		12:47 (32)	09:05		11:37 (37)
	22:47	21:54	20:31	19:04	7	09:41 (21)	16:41	66	15:15 (28)	15:48	21	11:58 (37)
5	04:36	05:33	06:42	07:48		09:32 (21)	08:01		12:47 (32)	09:07		11:37 (37)
	22:46	21:51	20:28	19:01	12	09:44 (21)	16:39	62	15:13 (28)	15:47	21	11:58 (37)
6	04:37	05:35	06:44	07:51		09:30 (21)	08:03		12:48 (32)	09:09		11:38 (37)
	22:45	21:49	20:25	18:59	15	09:45 (21)	16:37	57	14:51 (27)	15:46	21	11:59 (37)
7	04:38	05:37	06:46	07:53		09:28 (21)	08:06		12:47 (32)	09:10		11:39 (37)
	22:44	21:47	20:22	18:56	18	09:46 (21)	16:34	55	14:50 (27)	15:45	20	11:59 (37)
8	04:40	05:39	06:48	07:55		09:28 (21)	08:08		12:48 (32)	09:12		11:40 (37)
	22:43	21:44	20:20	18:53	19	09:47 (21)	16:32	50	14:48 (27)	15:45	19	11:59 (37)
9	04:41	05:42	06:51	07:57		09:27 (21)	08:11		12:48 (32)	09:13		11:41 (37)
	22:42	21:42	20:17	18:50	20	09:47 (21)	16:30	42	14:43 (27)	15:44	19	12:00 (37)
10	04:43	05:44	06:53	08:00		09:27 (21)	08:13		12:49 (32)	09:15		11:41 (37)
	22:40	21:39	20:14	18:47	20	09:47 (21)	16:28	35	13:24 (32)	15:43	18	11:59 (37)
11	04:44	05:46	06:55	08:02		09:26 (21)	08:15		12:49 (32)	09:16		11:42 (37)
	22:39	21:37	20:11	18:45	20	09:46 (21)	16:25	34	13:23 (32)	15:43	18	12:00 (37)
12	04:46	05:48	06:57	08:04		09:26 (21)	08:18		12:50 (32)	09:18		11:42 (37)
	22:38	21:34	20:08	18:42	19	09:45 (21)	16:23	33	13:23 (32)	15:43	17	11:59 (37)
13	04:47	05:51	07:00	08:06		09:27 (21)	08:20		12:51 (32)	09:19		11:43 (37)
	22:37	21:31	20:05	18:39	18	09:45 (21)	16:21	32	13:23 (32)	15:42	17	12:00 (37)
14	04:49	05:53	07:02	08:09		09:27 (21)	08:22		12:51 (32)	09:20		11:44 (37)
	22:35	21:29	20:02	18:36	26	10:48 (19)	16:19	31	13:22 (32)	15:42	16	12:00 (37)
15	04:51	05:55	07:04	08:11		09:29 (21)	08:25		12:53 (32)	09:21		11:44 (37)
	22:34	21:26	19:59	18:33	29	10:51 (19)	16:17	28	13:21 (32)	15:42	16	12:00 (37)
16	04:52	05:57	07:06	08:13		09:30 (21)	08:27		12:54 (32)	09:22		11:45 (37)
	22:32	21:24	19:56	18:31	28	10:52 (19)	16:15	27	13:21 (32)	15:42	15	12:00 (37)
17	04:54	05:59	07:08	08:16		10:33 (19)	08:29		11:38 (37)	09:23		11:45 (37)
	22:30	21:21	19:54	18:28	21	10:54 (19)	16:13	32	13:19 (32)	15:42	15	12:00 (37)
18	04:56	06:02	07:10	08:18		10:31 (19)	08:32		11:36 (37)	09:24		11:46 (37)
	22:29	21:18	19:51	18:25	23	10:54 (19)	16:11	35	13:20 (24)	15:42	15	12:01 (37)
19	04:58	06:04	07:13	08:20		10:31 (19)	08:34		11:36 (37)	09:25		11:47 (37)
	22:27	21:16	19:48	18:22	24	10:55 (19)	16:09	36	13:21 (24)	15:42	14	12:01 (37)
20	05:00	06:06	07:15	08:23		10:30 (19)	08:36		11:34 (37)	09:26		11:48 (37)
	22:25	21:13	19:45	18:20	25	10:55 (19)	16:08	40	13:21 (24)	15:42	14	12:02 (37)
21	05:01	06:08	07:17	08:25		10:30 (19)	08:39		11:34 (37)	09:26		11:48 (37)
	22:24	21:10	19:42	18:17	37	15:48 (27)	16:06	40	13:21 (24)	15:43	14	12:02 (37)
22	05:03	06:11	07:19	08:27		10:29 (19)	08:41		11:34 (37)	09:27		11:49 (37)
	22:22	21:08	19:39	18:14	42	15:50 (27)	16:04	43	13:22 (24)	15:43	14	12:03 (37)
23	05:05	06:13	07:22	08:30		10:30 (19)	08:43		11:33 (37)	09:27		11:49 (37)
	22:20	21:05	19:36	18:12	50	15:52 (27)	16:02	44	13:22 (24)	15:44	14	12:03 (37)
24	05:07	06:15	07:24	08:32		10:29 (19)	08:45		11:34 (37)	09:28		11:50 (37)
	22:18	21:02	19:33	18:09	63	15:52 (27)	16:01	44	13:23 (24)	15:44	14	12:04 (37)
25	05:09	06:17	07:26	07:35		09:30 (19)	08:47		11:33 (37)	09:28		11:50 (37)
	22:16	20:59	19:30	17:06	69	14:54 (27)	15:59	44	13:22 (24)	15:45	14	12:04 (37)
26	05:11	06:20	07:28	07:37		09:30 (19)	08:50		11:34 (37)	09:28		11:50 (37)
	22:14	20:56	19:27	17:04	74	14:54 (27)	15:58	44	13:23 (24)	15:46	15	12:05 (37)
27	05:13	06:22	07:30	07:39		09:31 (19)	08:52		11:34 (37)	09:28		11:50 (37)
	22:12	20:54	19:24	17:01	82	15:24 (28)	15:56	44	13:23 (24)	15:47	16	12:06 (37)
28	05:16	06:24	07:33	07:42		09:33 (19)	08:54		11:35 (37)	09:28		11:50 (37)
	22:10	20:51	19:22	16:59	89	15:27 (28)	15:55	37	13:17 (24)	15:48	16	12:06 (37)
29	05:18	06:26	07:35	07:44		09:34 (19)	08:56		11:35 (37)	09:28		11:50 (37)
	22:07	20:48	19:19	16:56	90	15:28 (28)	15:54	29	13:09 (24)	15:49	16	12:06 (37)
30	05:20	06:29	07:37	07:47		09:36 (19)	08:58		11:35 (37)	09:28		11:51 (37)
	22:05	20:45	19:16	16:54	90	15:29 (28)	15:52	23	13:03 (24)	15:50	17	12:08 (37)
31	05:22	06:31		07:49		12:49 (32)				09:28		11:51 (37)
	22:03	20:42		16:51	81	15:30 (28)				15:51	17	12:08 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					1111			1317			529	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,64			0,59			0,64	
Total reduction					0,26			0,23			0,26	
Total, real					286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46	14:11 (37)	07:35	10:14 (21)	07:07	05:44	04:40
	15:53		16:56 18	15:31 (24)	18:05 73	16:49 (27)	20:17	21:26	22:30
2	09:27		08:43	15:15 (24)	07:32	10:15 (21)	07:04	05:41	04:38
	15:54		16:58 17	15:32 (24)	18:07 70	16:50 (27)	20:19	21:28	22:32
3	09:27		08:41	15:14 (24)	07:30	10:16 (21)	07:01	05:39	04:37
	15:55		17:01 19	15:33 (24)	18:09 63	16:48 (27)	20:21	21:30	22:34
4	09:26		08:39	12:33 (19)	07:27	10:16 (21)	06:58	05:36	04:36
	15:57		17:03 32	15:33 (24)	18:12 54	16:47 (27)	20:23	21:33	22:35
5	09:26		08:37	12:30 (19)	07:24	09:25 (16)	06:55	05:34	04:35
	15:58		17:06 37	15:33 (24)	18:14 37	16:44 (27)	20:26	21:35	22:36
6	09:25		08:34	12:29 (19)	07:21	09:21 (16)	06:52	05:31	04:34
	16:00		17:08 40	15:34 (24)	18:16 27	10:42 (21)	20:28	21:37	22:38
7	09:24		08:32	12:27 (19)	07:18	10:19 (21)	06:49	05:29	04:33
	16:02		17:11 43	15:33 (24)	18:19 20	10:39 (21)	20:30	21:40	22:39
8	09:24		08:30	12:26 (19)	07:16	10:21 (21)	06:47	05:26	04:32
	16:03		17:13 46	15:34 (24)	18:21 15	10:36 (21)	20:33	21:42	22:40
9	09:23		08:27	12:25 (19)	07:13	10:24 (21)	06:44	05:24	04:31
	16:05		17:16 46	15:33 (24)	18:24 8	10:32 (21)	20:35	21:44	22:42
10	09:22		08:25	12:24 (19)	07:10		06:41	05:22	04:30
	16:07		17:18 45	15:31 (24)	18:26		20:37	21:46	22:43
11	09:21		08:22	12:24 (19)	07:07		06:38	05:19	04:29
	16:09		17:21 43	15:30 (24)	18:28		20:40	21:49	22:44
12	09:20		08:20	12:23 (19)	07:04		06:35	05:17	04:29
	16:11		17:23 38	15:27 (24)	18:31		20:42	21:51	22:45
13	09:18		08:18	12:22 (19)	07:01		06:32	05:15	04:28
	16:13		17:26 35	12:57 (19)	18:33		20:44	21:53	22:46
14	09:17		08:15	12:23 (19)	06:59		06:30	05:12	04:28
	16:15		17:28 35	12:58 (19)	18:35		20:46	21:55	22:46
15	09:16		08:12	12:22 (19)	06:56		06:27	05:10	04:27
	16:17		17:30 35	12:57 (19)	18:38		20:49	21:57	22:47
16	09:14		08:10	12:22 (19)	06:53		06:24	05:08	04:27
	16:19		17:33 43	16:12 (32)	18:40		20:51	22:00	22:48
17	09:13		08:07	12:22 (19)	06:50		06:21	05:06	04:27
	16:21		17:35 49	16:15 (32)	18:42		20:53	22:02	22:48
18	09:12		08:05	12:23 (19)	06:47		06:18	05:04	04:27
	16:23		17:38 51	16:17 (32)	18:44		20:56	22:04	22:49
19	09:10		08:02	12:23 (19)	06:44		06:16	05:02	04:27
	16:25		17:40 54	16:18 (32)	18:47		20:58	22:06	22:49
20	09:08		08:00	12:23 (19)	06:41		06:13	05:00	04:27
	16:28		17:43 55	16:19 (32)	18:49		21:00	22:08	22:50
21	09:07		07:57	12:23 (19)	06:38		06:10	04:58	04:27
	16:30		17:45 56	16:20 (32)	18:51		21:03	22:10	22:50
22	09:05		07:54	12:24 (19)	06:36		06:07	04:56	04:27
	16:32		17:48 61	16:42 (27)	18:54		21:05	22:12	22:50
23	09:03		07:52	12:26 (19)	06:33		06:05	04:54	04:27
	16:34		17:50 66	16:48 (27)	18:56		21:07	22:14	22:50
24	09:01		07:49	10:20 (21)	06:30		06:02	04:52	04:27
	16:37		17:52 68	16:49 (27)	18:58		21:10	22:16	22:50
25	09:00		07:46	10:16 (21)	06:27		05:59	04:51	04:28
	16:39		17:55 89	16:50 (27)	19:01		21:12	22:18	22:50
26	08:58		07:43	10:15 (21)	06:24		05:57	04:49	04:28
	16:41		17:57 92	16:50 (27)	19:03		21:14	22:20	22:50
27	08:56		07:41	10:15 (21)	06:21		05:54	04:47	04:29
	16:44		18:00 77	16:50 (27)	19:05		21:17	22:22	22:50
28	08:54		07:38	10:15 (21)	06:18		05:51	04:45	04:29
	16:46		18:02 75	16:50 (27)	19:07		21:19	22:24	22:50
29	08:52				07:15		05:49	04:44	04:30
	16:49				20:10		21:21	22:25	22:49
30	08:50	14:16 (37)			07:12		05:46	04:42	04:31
	16:51 3	14:19 (37)			20:12		21:23	22:27	22:49
31	08:48	14:08 (37)			07:10			04:41	
	16:53 21	15:27 (24)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	24		1365		367				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,55		0,60		0,65				
Total reduction	0,22		0,24		0,26				
Total, real	5		328		96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (19)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (24)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (19)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (19)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (24)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (19)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (24)	15:48
5	04:36	05:33	06:42	07:48		10:59 (21)	08:01		11:58 (19)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (21)	16:39	41	15:03 (24)	15:47
6	04:37	05:35	06:44	07:50		10:56 (21)	08:03		12:01 (19)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (21)	16:37	36	15:04 (24)	15:46
7	04:38	05:37	06:46	07:53		09:54 (16)	08:06		12:03 (19)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (21)	16:34	31	15:03 (24)	15:45
8	04:40	05:39	06:48	07:55		09:58 (16)	08:08		14:45 (24)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (27)	16:32	18	15:03 (24)	15:45
9	04:41	05:42	06:51	07:57		10:01 (16)	08:10		14:46 (24)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (27)	16:30	17	15:03 (24)	15:44
10	04:43	05:44	06:53	08:00		10:49 (21)	08:13		13:42 (37)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (27)	16:28	20	15:03 (24)	15:43
11	04:44	05:46	06:55	08:02		10:49 (21)	08:15		13:39 (37)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (27)	16:25	20	14:58 (24)	15:43
12	04:46	05:48	06:57	08:04		10:48 (21)	08:18		13:48 (37)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (27)	16:23	3	13:51 (37)	15:43
13	04:47	05:50	06:59	08:06		10:48 (21)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (27)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (21)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (27)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (21)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (27)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (21)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (27)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (21)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (27)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (19)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (27)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (19)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (27)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (19)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (27)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (19)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (32)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (19)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (32)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (19)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (32)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (19)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (32)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (19)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (32)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (19)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (32)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (19)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (19)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (19)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (19)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (19)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (19)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (19)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (24)	15:52			15:50
31	05:22	06:31		07:49		11:53 (19)				09:28
	22:03	20:42		16:51	44	15:00 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	11:38 (21)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:44 (16)	09:00
	15:53	16:56 63	13:43 (19)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49 56	15:37 (32)	15:51
2	09:27	08:43	11:39 (21)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:56 (16)	09:01
	15:54	16:58 59	13:43 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46 51	15:37 (32)	15:50
3	09:27	08:41	11:38 (21)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	09:57 (16)	09:03
	15:55	17:01 51	13:42 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07	16:44 55	15:36 (32)	15:49
4	09:26	08:39	11:39 (21)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46	07:58	10:02 (16)	09:05
	15:57	17:03 51	15:59 (32)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41 56	15:35 (32)	15:48
5	09:26	08:37	11:39 (21)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:04 (16)	09:07
	15:58	17:06 56	16:02 (32)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39 58	15:34 (32)	15:47
6	09:25	08:34	10:34 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	11:10 (21)	09:09
	16:00	17:08 57	16:05 (32)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 55	15:33 (32)	15:46
7	09:24	08:32	10:32 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53	08:06	11:09 (21)	09:10
	16:02	17:11 55	16:05 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56	16:34 49	13:12 (19)	15:45
8	09:24	08:30	10:27 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55	08:08	11:09 (21)	09:12
	16:03	17:13 53	16:07 (32)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32 50	13:13 (19)	15:45
9	09:23	08:27	10:26 (16)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:10	11:09 (21)	09:13
	16:05	17:16 49	16:07 (32)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 60	13:14 (19)	15:44
10	09:22	08:25	10:15 (16)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	11:10 (21)	09:15
	16:07	17:18 58	16:07 (32)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:28 61	13:14 (19)	15:43
11	09:21	08:22	10:16 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	11:10 (21)	09:16
	16:09	17:21 55	16:08 (32)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44	16:25 63	13:14 (19)	15:43
12	09:20	08:20	10:17 (16)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	11:10 (21)	09:17
	16:11	17:23 48	16:08 (32)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 66	13:15 (19)	15:43
13	09:18	08:17	10:18 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	11:11 (21)	09:19
	16:13	17:26 33	16:07 (32)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 65	13:15 (19)	15:42
14	09:17 12:02 (13)	08:15	10:21 (16)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09	08:22	11:11 (21)	09:20
	16:15 8 12:10 (13)	17:28 28	16:08 (32)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 66	13:15 (19)	15:42
15	09:16 12:02 (13)	08:12	15:50 (32)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	11:13 (21)	09:21
	16:17 9 12:11 (13)	17:30 17	16:07 (32)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17 64	13:15 (19)	15:42
16	09:14 12:02 (13)	08:10	15:51 (32)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	11:14 (21)	09:22
	16:19 11 12:13 (13)	17:33 14	16:05 (32)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 62	13:15 (19)	15:42
17	09:13 12:02 (13)	08:07	15:52 (32)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	11:15 (21)	09:23
	16:21 20 13:30 (19)	17:35 12	16:04 (32)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 61	13:14 (19)	15:42
18	09:12 11:58 (13)	08:05	15:56 (32)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:32	11:16 (21)	09:24
	16:23 30 13:34 (19)	17:38 6	16:02 (32)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 60	13:14 (19)	15:42
19	09:10 11:58 (13)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20	08:34	11:19 (21)	09:25
	16:25 33 13:35 (19)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22	16:09 55	13:14 (19)	15:42
20	09:08 11:58 (13)	08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	11:21 (21)	09:25
	16:27 36 13:37 (19)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 47	13:13 (19)	15:42
21	09:07 11:58 (13)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	11:33 (13)	09:26
	16:30 39 13:38 (19)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 39	13:13 (19)	15:43
22	09:05 11:46 (21)	07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41	11:34 (13)	09:27
	16:32 47 13:38 (19)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 36	13:13 (19)	15:43
23	09:03 11:44 (21)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	11:34 (13)	09:27
	16:34 55 13:39 (19)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 33	13:12 (19)	15:44
24	09:01 11:42 (21)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32 16:24 (32)	08:45	11:35 (13)	09:28
	16:37 60 13:40 (19)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09 8 16:32 (32)	16:01 30	13:11 (19)	15:44
25	09:00 11:42 (21)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34 15:22 (32)	08:47	11:41 (13)	09:28
	16:39 61 13:41 (19)	17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06 12 15:34 (32)	15:59 20	13:09 (19)	15:45
26	08:58 11:41 (21)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37 15:20 (32)	08:49	11:41 (13)	09:28
	16:41 62 13:42 (19)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 15 15:35 (32)	15:58 11	11:52 (13)	15:46
27	08:56 11:40 (21)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39 15:19 (32)	08:52	11:41 (13)	09:28
	16:44 64 13:42 (19)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01 17 15:36 (32)	15:56 10	11:51 (13)	15:47
28	08:54 11:40 (21)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42 09:50 (16)	08:54	11:42 (13)	09:28
	16:46 65 13:43 (19)	18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59 28 15:37 (32)	15:55 8	11:50 (13)	15:48
29	08:52 11:39 (21)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44 09:47 (16)	08:56		09:28
	16:49 65 13:43 (19)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56 37 15:37 (32)	15:53		15:49
30	08:50 11:39 (21)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46 09:46 (16)	08:58		09:28
	16:51 65 13:43 (19)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54 49 15:37 (32)	15:52		15:50
31	08:48 11:39 (21)			07:09		04:41		05:22	06:31		07:49 09:46 (16)			09:28
	16:53 63 13:43 (19)			20:14		22:29		22:03	20:42		16:51 55 15:38 (32)			15:51
Potential sun hours	221	260	365	432	521	547	546	478	386	319	236			199
Total, worst case	793	765								221	1347			
Sun reduction	0,50	0,50								0,50	0,50			
Oper. time red.	0,80	0,80								0,80	0,80			
Wind dir. red.	0,62	0,61								0,60	0,62			
Total reduction	0,25	0,24								0,24	0,25			
Total, real	197	187								53	334			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (16)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (16)	09:00
	15:53		16:56	74	14:26 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (19)	15:51
2	09:27		08:43		10:51 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (16)	09:01
	15:54		16:58	73	14:27 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (19)	15:50
3	09:27		08:41		10:50 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (16)	09:03
	15:55		17:01	74	14:27 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (19)	15:49
4	09:26		08:39		10:51 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (16)	09:05
	15:57		17:03	71	14:27 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (19)	15:48
5	09:26		08:37		10:51 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (16)	09:07
	15:58		17:06	68	14:26 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (19)	15:47
6	09:25		08:34		10:53 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (16)	09:09
	16:00		17:08	64	14:26 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (19)	15:46
7	09:24		08:32		10:53 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (16)	09:10
	16:02		17:11	59	14:25 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (19)	15:45
8	09:24		08:30		10:55 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (16)	09:12
	16:03		17:13	52	14:24 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (19)	15:45
9	09:23		08:27		10:56 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (16)	09:13
	16:05		17:16	43	14:22 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (19)	15:44
10	09:22		08:25		10:58 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (16)	09:15
	16:07		17:18	26	14:18 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (19)	15:43
11	09:21		08:22		12:44 (21)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (16)	09:16
	16:09		17:21	5	12:49 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (19)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (16)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (19)	15:42
13	09:18	12:39 (13)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (16)	09:19
	16:13	5 12:44 (13)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (19)	15:42
14	09:17	12:39 (13)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (16)	09:20
	16:15	7 12:46 (13)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (19)	15:42
15	09:16	12:39 (13)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (16)	09:21
	16:17	15 12:54 (13)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (19)	15:42
16	09:14	12:38 (13)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (16)	09:22
	16:19	17 12:55 (13)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (19)	15:42
17	09:13	12:38 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (21)	09:23
	16:21	18 12:56 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (19)	15:42
18	09:12	12:37 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (21)	09:24
	16:23	19 12:56 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (19)	15:42
19	09:10	12:38 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (21)	09:25
	16:25	20 12:58 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (19)	15:42
20	09:08	12:37 (21)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (21)	09:25
	16:27	22 12:59 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (19)	15:42
21	09:07	12:35 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (21)	09:26
	16:30	23 12:58 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (13)	15:43
22	09:05	12:34 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (21)	09:27
	16:32	33 14:16 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (13)	15:43
23	09:03	12:33 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (13)	09:27
	16:34	39 14:19 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (13)	15:44
24	09:01	12:33 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (13)	09:28
	16:37	42 14:21 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (13)	15:44
25	09:00	12:32 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (13)	09:28
	16:39	45 14:22 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (13)	15:45
26	08:58	10:57 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (13)	09:28
	16:41	50 14:24 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (13)	15:46
27	08:56	10:51 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (13)	09:28
	16:44	64 14:24 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (13)	15:47
28	08:54	10:51 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (13)	09:28
	16:46	69 14:25 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (13)	15:48
29	08:52	10:51 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (13)	09:28
	16:49	70 14:26 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (13)	15:49
30	08:50	10:50 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (16)				07:09		04:41		05:22	06:31		07:49	12:13 (21)			09:28
	16:53	74 14:27 (19)				20:14		22:29		22:03	20:42		16:51	7 12:20 (21)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236			199
Total, worst case	704		609										7	1322			
Sun reduction	0,50		0,50										0,50	0,50			
Oper. time red.	0,80		0,80										0,80	0,80			
Wind dir. red.	0,62		0,63										0,63	0,62			
Total reduction	0,25		0,25										0,25	0,25			
Total, real	174		153										2	328			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (16)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (16)	09:00
	15:53		16:56	73	14:22 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (19)	15:51
2	09:27		08:43		10:46 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (16)	09:01
	15:54		16:58	74	14:23 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (19)	15:50
3	09:27		08:41		10:45 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (16)	09:03
	15:55		17:01	74	14:22 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (19)	15:49
4	09:26		08:39		10:46 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (16)	09:05
	15:57		17:03	73	14:23 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (19)	15:48
5	09:26		08:37		10:46 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (16)	09:07
	15:58		17:06	71	14:22 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (19)	15:47
6	09:25		08:34		10:47 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (16)	09:09
	16:00		17:08	68	14:22 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (19)	15:46
7	09:24		08:32		10:47 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (16)	09:10
	16:02		17:11	65	14:21 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (19)	15:45
8	09:24		08:30		10:48 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (16)	09:12
	16:03		17:13	58	14:20 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (19)	15:45
9	09:23		08:27		10:49 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (16)	09:13
	16:05		17:16	50	14:18 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (19)	15:44
10	09:22		08:25		10:50 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (16)	09:15
	16:07		17:18	40	14:16 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (19)	15:43
11	09:21		08:22		10:53 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (16)	09:16
	16:09		17:21	22	12:47 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (19)	15:43
12	09:20		08:20		12:38 (21)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (16)	09:17
	16:11		17:23	4	12:42 (21)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (19)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (16)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (19)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (21)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (19)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (21)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (19)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (21)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (19)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (21)	09:23
	16:21	5	12:50 (13)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (19)	15:42
18	09:12		12:33 (13)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (21)	09:24
	16:23	18	12:51 (13)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (19)	15:42
19	09:10		12:34 (13)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (21)	09:25
	16:25	19	12:53 (13)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (19)	15:42
20	09:08		12:34 (13)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (21)	09:25
	16:27	20	12:54 (13)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (19)	15:42
21	09:07		12:31 (21)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (21)	09:26
	16:30	22	12:53 (13)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (13)	15:43
22	09:05		12:29 (21)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (13)	09:27
	16:32	27	14:06 (19)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (13)	15:43
23	09:03		12:28 (21)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (13)	09:27
	16:34	38	14:14 (19)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (13)	15:44
24	09:01		12:27 (21)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (13)	09:28
	16:37	43	14:16 (19)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (13)	15:44
25	09:00		12:27 (21)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (13)	09:28
	16:39	45	14:17 (19)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (13)	15:45
26	08:58		12:26 (21)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (19)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (21)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (19)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (21)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (19)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (16)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (19)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (21)	08:58			09:28
	16:51	55	14:21 (19)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (21)	15:52			15:50
31	08:48		10:46 (16)			07:09		04:41		05:22	06:31		07:49	10:22 (16)				09:28
	16:53	69	14:22 (19)			20:14		22:29		22:03	20:42		16:51	25 12:17 (21)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (30)	08:45	14:59 (21)	07:35	07:07	05:44	04:39
	15:52	20 12:23 (30)	16:56	18 15:17 (21)	18:04	20:16	21:26	22:30
2	09:27	12:03 (30)	08:43	14:59 (21)	07:32	07:04	05:41	04:38
	15:54	20 12:23 (30)	16:58	19 15:18 (21)	18:07	20:19	21:28	22:32
3	09:27	12:03 (30)	08:41	14:58 (21)	07:30	07:01	05:38	04:37
	15:55	20 12:23 (30)	17:01	19 15:17 (21)	18:09	20:21	21:30	22:33
4	09:26	12:03 (30)	08:39	14:59 (21)	07:27	06:58	05:36	04:36
	15:57	21 12:24 (30)	17:03	19 15:18 (21)	18:12	20:23	21:33	22:35
5	09:26	12:04 (30)	08:37	14:59 (21)	07:24	06:55	05:33	04:34
	15:58	26 13:33 (16)	17:06	19 15:18 (21)	18:14	20:26	21:35	22:36
6	09:25	12:04 (30)	08:34	15:00 (21)	07:21	06:52	05:31	04:33
	16:00	29 13:35 (16)	17:08	18 15:18 (21)	18:16	20:28	21:37	22:38
7	09:24	12:05 (30)	08:32	15:00 (21)	07:18	06:49	05:29	04:32
	16:01	31 13:37 (16)	17:11	17 15:17 (21)	18:19	20:30	21:39	22:39
8	09:23	12:06 (30)	08:30	15:00 (21)	07:16	06:46	05:26	04:31
	16:03	33 13:39 (16)	17:13	16 15:16 (21)	18:21	20:33	21:42	22:40
9	09:23	12:06 (30)	08:27	15:02 (21)	07:13	06:44	05:24	04:31
	16:05	33 13:39 (16)	17:15	14 15:16 (21)	18:23	20:35	21:44	22:42
10	09:22	12:07 (30)	08:25	15:03 (21)	07:10	06:41	05:21	04:30
	16:07	35 13:41 (16)	17:18	11 15:14 (21)	18:26	20:37	21:46	22:43
11	09:21	12:07 (30)	08:22	15:07 (21)	07:07	06:38	05:19	04:29
	16:09	35 13:41 (16)	17:20	5 15:12 (21)	18:28	20:39	21:49	22:44
12	09:19	12:08 (30)	08:20		07:04	06:35	05:17	04:29
	16:11	35 13:42 (16)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (30)	08:17		07:01	06:32	05:15	04:28
	16:12	35 13:43 (16)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (30)	08:15		06:58	06:29	05:12	04:28
	16:14	35 13:44 (16)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (30)	08:12		06:56	06:27	05:10	04:27
	16:17	34 13:45 (16)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (30)	08:10		06:53	06:24	05:08	04:27
	16:19	32 13:45 (16)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (30)	08:07		06:50	06:21	05:06	04:27
	16:21	29 13:45 (16)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (30)	08:05		06:47	06:18	05:04	04:26
	16:23	26 13:46 (16)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (16)	08:02		06:44	06:16	05:02	04:26
	16:25	21 13:46 (16)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (16)	07:59		06:41	06:13	05:00	04:26
	16:27	22 13:47 (16)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (16)	07:57		06:38	06:10	04:58	04:26
	16:30	21 13:47 (16)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (16)	07:54		06:35	06:07	04:56	04:27
	16:32	21 13:47 (16)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (16)	07:51		06:33	06:05	04:54	04:27
	16:34	20 13:47 (16)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (16)	07:49		06:30	06:02	04:52	04:27
	16:37	19 13:47 (16)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (16)	07:46		06:27	05:59	04:50	04:28
	16:39	18 13:47 (16)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (16)	07:43		06:24	05:57	04:49	04:28
	16:41	17 13:47 (16)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (16)	07:41		06:21	05:54	04:47	04:29
	16:44	20 15:09 (21)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (16)	07:38		06:18	05:51	04:45	04:29
	16:46	23 15:12 (21)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (16)			07:15	05:49	04:44	04:30
	16:48	21 15:14 (21)			20:10	21:21	22:25	22:49
30	08:50	15:00 (21)			07:12	05:46	04:42	04:31
	16:51	15 15:15 (21)			20:12	21:23	22:27	22:49
31	08:48	15:00 (21)			07:09		04:41	
	16:53	16 15:16 (21)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (21)	08:59		11:49 (30)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (21)	15:51	35	13:23 (16)
2	04:33	05:26	06:35	07:41			07:54		14:31 (21)	09:01		11:50 (30)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (21)	15:50	35	13:24 (16)
3	04:34	05:28	06:37	07:44			07:56		14:31 (21)	09:03		11:50 (30)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (21)	15:49	33	13:23 (16)
4	04:35	05:30	06:39	07:46			07:58		14:29 (21)	09:05		11:50 (30)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (21)	15:48	33	13:23 (16)
5	04:36	05:33	06:42	07:48			08:01		14:29 (21)	09:07		11:50 (30)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (21)	15:47	31	13:22 (16)
6	04:37	05:35	06:44	07:50			08:03		14:29 (21)	09:08		11:50 (30)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (21)	15:46	30	13:22 (16)
7	04:38	05:37	06:46	07:53			08:06		14:29 (21)	09:10		11:51 (30)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (21)	15:45	27	13:21 (16)
8	04:40	05:39	06:48	07:55			08:08		14:29 (21)	09:12		11:51 (30)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (21)	15:44	21	12:12 (30)
9	04:41	05:41	06:51	07:57			08:10		14:30 (21)	09:13		11:51 (30)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (21)	15:44	21	12:12 (30)
10	04:42	05:44	06:53	07:59			08:13		14:29 (21)	09:15		11:52 (30)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (21)	15:43	20	12:12 (30)
11	04:44	05:46	06:55	08:02			08:15		14:30 (21)	09:16		11:53 (30)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (21)	15:43	20	12:13 (30)
12	04:45	05:48	06:57	08:04			08:18		14:32 (21)	09:17		11:53 (30)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (21)	15:42	20	12:13 (30)
13	04:47	05:50	06:59	08:06			08:20		13:07 (16)	09:19		11:54 (30)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (21)	15:42	20	12:14 (30)
14	04:49	05:53	07:02	08:09			08:22		13:04 (16)	09:20		11:54 (30)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (21)	15:42	20	12:14 (30)
15	04:50	05:55	07:04	08:11			08:25		13:03 (16)	09:21		11:54 (30)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (21)	15:42	20	12:14 (30)
16	04:52	05:57	07:06	08:13			08:27		13:03 (16)	09:22		11:55 (30)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (16)	15:42	20	12:15 (30)
17	04:54	05:59	07:08	08:16			08:29		13:02 (16)	09:23		11:55 (30)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (16)	15:42	20	12:15 (30)
18	04:56	06:02	07:10	08:18			08:32		13:02 (16)	09:24		11:56 (30)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (16)	15:42	19	12:15 (30)
19	04:57	06:04	07:13	08:20			08:34		13:02 (16)	09:25		11:56 (30)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (16)	15:42	20	12:16 (30)
20	04:59	06:06	07:15	08:23			08:36		13:01 (16)	09:25		11:57 (30)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (16)	15:42	20	12:17 (30)
21	05:01	06:08	07:17	08:25			08:38		13:02 (16)	09:26		11:57 (30)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (16)	15:43	20	12:17 (30)
22	05:03	06:10	07:19	08:27			08:41		13:02 (16)	09:27		11:58 (30)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (16)	15:43	20	12:18 (30)
23	05:05	06:13	07:21	08:30			08:43		13:02 (16)	09:27		11:58 (30)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (16)	15:44	20	12:18 (30)
24	05:07	06:15	07:24	08:32			08:45		11:55 (30)	09:27		11:58 (30)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (16)	15:44	20	12:18 (30)
25	05:09	06:17	07:26	07:34			08:47		11:52 (30)	09:28		11:59 (30)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (16)	15:45	20	12:19 (30)
26	05:11	06:19	07:28	07:37			08:49		11:51 (30)	09:28		12:00 (30)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (16)	15:46	20	12:20 (30)
27	05:13	06:22	07:30	07:39			08:51		11:50 (30)	09:28		12:00 (30)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (16)	15:47	20	12:20 (30)
28	05:15	06:24	07:32	07:42			08:54		11:49 (30)	09:28		12:00 (30)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (16)	15:48	20	12:20 (30)
29	05:17	06:26	07:35	07:44			08:56		11:50 (30)	09:28		12:01 (30)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (16)	15:49	20	12:21 (30)
30	05:20	06:28	07:37	07:46			08:58		11:49 (30)	09:28		12:01 (30)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (16)	15:50	21	12:22 (30)
31	05:22	06:31		07:49		14:35 (21)				09:28		12:01 (30)
	22:03	20:42		16:51	6	14:41 (21)				15:51	21	12:22 (30)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (30)	08:45	14:09 (16)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (30)
	15:52 20	12:55 (30)	16:56 5	14:14 (16)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (30)
2	09:27	12:36 (30)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (30)
	15:54 21	12:57 (30)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (30)
3	09:27	12:36 (30)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (30)
	15:55 21	12:57 (30)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (30)
4	09:26	12:37 (30)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (30)
	15:57 20	12:57 (30)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (30)
5	09:26	12:37 (30)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (30)
	15:58 20	12:57 (30)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (30)
6	09:25	12:38 (30)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (30)
	16:00 20	12:58 (30)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (30)
7	09:24	12:38 (30)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (30)
	16:01 20	12:58 (30)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (30)
8	09:23	12:39 (30)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (30)
	16:03 20	12:59 (30)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (30)
9	09:23	12:39 (30)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (30)
	16:05 19	12:58 (30)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (30)
10	09:22	12:40 (30)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (16)	09:15		12:25 (30)
	16:07 19	12:59 (30)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (16)	15:43	21	12:46 (30)
11	09:21	12:40 (30)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (16)	09:16		12:26 (30)
	16:09 19	12:59 (30)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (16)	15:43	21	12:47 (30)
12	09:19	12:42 (30)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (16)	09:17		12:26 (30)
	16:10 24	14:10 (16)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (16)	15:42	20	12:46 (30)
13	09:18	12:42 (30)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (16)	09:19		12:27 (30)
	16:12 27	14:11 (16)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (16)	15:42	20	12:47 (30)
14	09:17	12:44 (30)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (16)	09:20		12:27 (30)
	16:14 27	14:13 (16)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (16)	15:42	21	12:48 (30)
15	09:16	12:45 (30)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (16)	09:21		12:27 (30)
	16:17 27	14:14 (16)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (16)	15:42	21	12:48 (30)
16	09:14	12:46 (30)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (16)	09:22		12:28 (30)
	16:19 27	14:15 (16)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (16)	15:42	20	12:48 (30)
17	09:13	12:48 (30)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (16)	09:23		12:28 (30)
	16:21 25	14:16 (16)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (16)	15:42	20	12:48 (30)
18	09:11	13:59 (16)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (16)	09:24		12:29 (30)
	16:23 18	14:17 (16)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (16)	15:42	20	12:49 (30)
19	09:10	13:59 (16)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (16)	09:25		12:30 (30)
	16:25 19	14:18 (16)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (16)	15:42	20	12:50 (30)
20	09:08	13:59 (16)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (16)	09:25		12:30 (30)
	16:27 19	14:18 (16)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (16)	15:42	20	12:50 (30)
21	09:07	13:59 (16)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (16)	09:26		12:30 (30)
	16:30 20	14:19 (16)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (16)	15:43	20	12:50 (30)
22	09:05	13:59 (16)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (16)	09:27		12:31 (30)
	16:32 20	14:19 (16)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (16)	15:43	20	12:51 (30)
23	09:03	13:59 (16)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (16)	09:27		12:31 (30)
	16:34 21	14:20 (16)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (16)	15:44	20	12:51 (30)
24	09:01	14:00 (16)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (16)	09:27		12:31 (30)
	16:36 20	14:20 (16)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (16)	15:44	21	12:52 (30)
25	09:00	14:00 (16)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (30)	09:28		12:33 (30)
	16:39 21	14:21 (16)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (16)	15:45	20	12:53 (30)
26	08:58	14:01 (16)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (30)	09:28		12:33 (30)
	16:41 20	14:21 (16)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (16)	15:46	20	12:53 (30)
27	08:56	14:01 (16)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (30)	09:28		12:34 (30)
	16:44 19	14:20 (16)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (16)	15:47	20	12:54 (30)
28	08:54	14:02 (16)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (30)	09:28		12:33 (30)
	16:46 18	14:20 (16)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (16)	15:47	21	12:54 (30)
29	08:52	14:04 (16)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (30)	09:28		12:34 (30)
	16:48 16	14:20 (16)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (16)	15:49	20	12:54 (30)
30	08:50	14:04 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (30)	09:28		12:35 (30)
	16:51 14	14:18 (16)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (16)	15:50	20	12:55 (30)
31	08:48	14:07 (16)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (30)
	16:53 10	14:17 (16)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (30)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (30)	08:45		15:12 (16)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (30)	16:56	14	15:26 (16)	18:04	20:16	21:26	22:30
2	09:27		13:54 (30)	08:43		15:12 (16)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (30)	16:58	16	15:28 (16)	18:07	20:19	21:28	22:32
3	09:27		13:54 (30)	08:41		15:11 (16)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (30)	17:01	17	15:28 (16)	18:09	20:21	21:30	22:33
4	09:26		13:54 (30)	08:39		15:11 (16)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (30)	17:03	18	15:29 (16)	18:12	20:23	21:33	22:35
5	09:26		13:53 (30)	08:37		15:11 (16)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (30)	17:06	18	15:29 (16)	18:14	20:26	21:35	22:36
6	09:25		13:53 (30)	08:34		15:11 (16)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (30)	17:08	19	15:30 (16)	18:16	20:28	21:37	22:38
7	09:24		13:54 (30)	08:32		15:11 (16)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (30)	17:10	19	15:30 (16)	18:19	20:30	21:39	22:39
8	09:23		13:54 (30)	08:30		15:11 (16)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (30)	17:13	18	15:29 (16)	18:21	20:32	21:42	22:40
9	09:23		13:53 (30)	08:27		15:12 (16)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (30)	17:15	18	15:30 (16)	18:23	20:35	21:44	22:41
10	09:22		13:53 (30)	08:25		15:12 (16)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (30)	17:18	17	15:29 (16)	18:26	20:37	21:46	22:43
11	09:20		13:53 (30)	08:22		15:13 (16)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (30)	17:20	14	15:27 (16)	18:28	20:39	21:48	22:44
12	09:19		13:54 (30)	08:20		15:16 (16)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (30)	17:23	11	15:27 (16)	18:30	20:42	21:51	22:45
13	09:18		13:53 (30)	08:17		15:18 (16)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (30)	17:25	5	15:23 (16)	18:33	20:44	21:53	22:45
14	09:17		13:54 (30)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (30)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (30)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (30)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (30)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (30)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (30)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (30)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (30)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (30)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (30)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (30)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (30)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (30)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (30)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (30)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (30)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (30)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (30)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (30)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (30)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (30)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (30)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (30)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (30)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (16)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (16)				20:12	21:23	22:27	22:49
31	08:48		15:14 (16)				07:09		04:41	
	16:53	11	15:25 (16)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		14:42 (16)	08:59		13:35 (30)
	22:48		22:01		20:39		19:13			16:48	16	14:58 (16)	15:51	19	13:54 (30)
2	04:33		05:26		06:35		07:41			07:53		14:41 (16)	09:01		13:37 (30)
	22:48		21:58		20:37		19:10			16:46	18	14:59 (16)	15:50	18	13:55 (30)
3	04:34		05:28		06:37		07:44			07:56		14:40 (16)	09:03		13:37 (30)
	22:47		21:56		20:34		19:07			16:44	19	14:59 (16)	15:49	18	13:55 (30)
4	04:35		05:30		06:39		07:46			07:58		14:40 (16)	09:05		13:38 (30)
	22:46		21:54		20:31		19:04			16:41	20	15:00 (16)	15:48	17	13:55 (30)
5	04:36		05:32		06:42		07:48			08:01		14:41 (16)	09:07		13:39 (30)
	22:45		21:51		20:28		19:01			16:39	19	15:00 (16)	15:47	16	13:55 (30)
6	04:37		05:35		06:44		07:50			08:03		14:41 (16)	09:08		13:40 (30)
	22:45		21:49		20:25		18:58			16:36	19	15:00 (16)	15:46	15	13:55 (30)
7	04:38		05:37		06:46		07:53			08:06		14:41 (16)	09:10		13:41 (30)
	22:44		21:46		20:22		18:56			16:34	18	14:59 (16)	15:45	14	13:55 (30)
8	04:40		05:39		06:48		07:55			08:08		14:42 (16)	09:12		13:42 (30)
	22:43		21:44		20:19		18:53			16:32	17	14:59 (16)	15:44	13	13:55 (30)
9	04:41		05:41		06:50		07:57			08:10		14:43 (16)	09:13		13:42 (30)
	22:41		21:41		20:16		18:50			16:30	16	14:59 (16)	15:44	12	13:54 (30)
10	04:42		05:44		06:53		07:59			08:13		14:43 (16)	09:15		13:43 (30)
	22:40		21:39		20:14		18:47			16:27	14	14:57 (16)	15:43	11	13:54 (30)
11	04:44		05:46		06:55		08:02			08:15		14:45 (16)	09:16		13:45 (30)
	22:39		21:36		20:11		18:44			16:25	11	14:56 (16)	15:43	9	13:54 (30)
12	04:45		05:48		06:57		08:04			08:18		14:47 (16)	09:17		13:46 (30)
	22:38		21:34		20:08		18:41			16:23	7	14:54 (16)	15:42	7	13:53 (30)
13	04:47		05:50		06:59		08:06			08:20			09:19		13:48 (30)
	22:36		21:31		20:05		18:39			16:21			15:42	5	13:53 (30)
14	04:49		05:53		07:01		08:09			08:22			09:20		13:49 (30)
	22:35		21:29		20:02		18:36			16:19			15:42	3	13:52 (30)
15	04:50		05:55		07:04		08:11			08:25		13:37 (30)	09:21		
	22:33		21:26		19:59		18:33			16:17	7	13:44 (30)	15:42		
16	04:52		05:57		07:06		08:13			08:27		13:36 (30)	09:22		
	22:32		21:23		19:56		18:30			16:15	11	13:47 (30)	15:42		
17	04:54		05:59		07:08		08:16			08:29		13:34 (30)	09:23		
	22:30		21:21		19:53		18:28			16:13	14	13:48 (30)	15:42		
18	04:56		06:01		07:10		08:18			08:32		13:33 (30)	09:24		
	22:29		21:18		19:50		18:25			16:11	17	13:50 (30)	15:42		
19	04:57		06:04		07:12		08:20			08:34		13:33 (30)	09:25		
	22:27		21:15		19:47		18:22			16:09	18	13:51 (30)	15:42		
20	04:59		06:06		07:15		08:23			08:36		13:32 (30)	09:25		
	22:25		21:13		19:45		18:19			16:07	19	13:51 (30)	15:42		
21	05:01		06:08		07:17		08:25			08:38		13:32 (30)	09:26		
	22:23		21:10		19:42		18:17			16:06	20	13:52 (30)	15:43		
22	05:03		06:10		07:19		08:27			08:41		13:32 (30)	09:27		
	22:21		21:07		19:39		18:14			16:04	20	13:52 (30)	15:43		
23	05:05		06:13		07:21		08:30			08:43		13:32 (30)	09:27		
	22:20		21:05		19:36		18:11			16:02	21	13:53 (30)	15:44		
24	05:07		06:15		07:23		08:32			08:45		13:33 (30)	09:27		
	22:18		21:02		19:33		18:09			16:00	21	13:54 (30)	15:44		
25	05:09		06:17		07:26		07:34			08:47		13:33 (30)	09:28		
	22:16		20:59		19:30		17:06			15:59	21	13:54 (30)	15:45		
26	05:11		06:19		07:28		07:37			08:49		13:33 (30)	09:28		
	22:14		20:56		19:27		17:04			15:57	21	13:54 (30)	15:46		
27	05:13		06:22		07:30		07:39			08:51		13:33 (30)	09:28		
	22:11		20:53		19:24		17:01			15:56	21	13:54 (30)	15:47		
28	05:15		06:24		07:32		07:41			08:53		13:33 (30)	09:28		
	22:09		20:51		19:21		16:58			15:55	21	13:54 (30)	15:47		
29	05:17		06:26		07:35		07:44		14:47 (16)	08:55		13:35 (30)	09:28		
	22:07		20:48		19:18		16:56	7	14:54 (16)	15:53	20	13:55 (30)	15:48		
30	05:19		06:28		07:37		07:46		14:45 (16)	08:57		13:35 (30)	09:28		13:56 (30)
	22:05		20:45		19:16		16:53	11	14:56 (16)	15:52	20	13:55 (30)	15:50	4	14:00 (30)
31	05:22		06:31				07:49		14:42 (16)				09:28		13:55 (30)
	22:03		20:42				16:51	15	14:57 (16)				15:51	6	14:01 (30)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								33			486			187	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,55			0,55			0,55	
Total reduction								0,22			0,22			0,22	
Total, real								7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:45		10:57 (41)	07:35		16:28 (21)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (30)	18:04	11	16:39 (21)	20:16	21:26	22:30
2	09:27			08:43		10:59 (41)	07:32		16:27 (21)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (30)	18:07	13	16:40 (21)	20:19	21:28	22:32
3	09:27			08:41		11:02 (41)	07:30		16:27 (21)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (30)	18:09	14	16:41 (21)	20:21	21:30	22:33
4	09:26			08:39		13:29 (30)	07:27		16:27 (21)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (30)	18:12	17	16:44 (21)	20:23	21:33	22:35
5	09:26			08:37		13:30 (30)	07:24		16:27 (21)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (30)	18:14	19	16:46 (21)	20:26	21:35	22:36
6	09:25			08:34		13:33 (30)	07:21		16:28 (21)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (30)	18:16	17	16:45 (21)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (21)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (21)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (21)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (21)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (21)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (21)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (11)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (11)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (11)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (11)	18:33			20:44	21:53	22:45
14	09:17		11:05 (41)	08:15		15:02 (11)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (41)	17:28	12	15:14 (16)	18:35			20:46	21:55	22:46
15	09:16		10:59 (41)	08:12		15:06 (16)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (41)	17:30	12	15:18 (16)	18:37			20:49	21:57	22:47
16	09:14		10:52 (41)	08:10		15:06 (16)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (41)	17:33	15	15:21 (16)	18:40			20:51	21:59	22:48
17	09:13		10:51 (41)	08:07		15:05 (16)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (41)	17:35	16	15:21 (16)	18:42			20:53	22:02	22:48
18	09:11		10:51 (41)	08:05		15:05 (16)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (41)	17:38	15	15:20 (16)	18:44			20:56	22:04	22:49
19	09:10		10:51 (41)	08:02		15:06 (16)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (41)	17:40	16	15:22 (16)	18:47			20:58	22:06	22:49
20	09:08		10:51 (41)	07:59		15:07 (16)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (41)	17:43	17	15:24 (16)	18:49			21:00	22:08	22:50
21	09:07		10:51 (41)	07:57		15:07 (16)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (41)	17:45	20	15:27 (16)	18:51			21:02	22:10	22:50
22	09:05		10:51 (41)	07:54		15:08 (16)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (36)	17:47	20	15:28 (16)	18:53			21:05	22:12	22:50
23	09:03		10:51 (41)	07:51		15:09 (16)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (36)	17:50	18	15:27 (16)	18:56			21:07	22:14	22:50
24	09:01		10:52 (41)	07:49		15:12 (16)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (36)	17:52	13	15:25 (16)	18:58			21:09	22:16	22:50
25	08:59		10:52 (41)	07:46		15:16 (16)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (36)	17:55	5	15:21 (16)	19:00			21:12	22:18	22:50
26	08:58		10:52 (41)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (30)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (41)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (30)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (41)	07:38		16:32 (21)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (30)	18:02	4	16:36 (21)	19:07			21:19	22:23	22:50
29	08:52		10:54 (41)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (30)				20:10			21:21	22:25	22:49
30	08:50		10:55 (41)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (30)				20:12			21:23	22:27	22:49
31	08:48		10:56 (41)				07:09				04:41	
	16:53	42	13:49 (30)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,67			0,57			0,57				
Total reduction		0,27			0,23			0,23				
Total, real		139			81			28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (30)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (30)	15:48
5	04:36	05:33	06:42	07:48		17:09 (21)	08:01		13:02 (30)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (21)	16:39	13	13:15 (30)	15:47
6	04:37	05:35	06:44	07:50		17:06 (21)	08:03		13:01 (30)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (21)	16:36	17	13:18 (30)	15:46
7	04:38	05:37	06:46	07:53		17:04 (21)	08:06		12:58 (30)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (21)	16:34	21	13:19 (30)	15:45
8	04:40	05:39	06:48	07:55		17:03 (21)	08:08		10:32 (41)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (21)	16:32	29	13:20 (30)	15:44
9	04:41	05:41	06:50	07:57		17:02 (21)	08:10		10:30 (41)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (21)	16:30	37	13:22 (30)	15:44
10	04:42	05:44	06:53	07:59		17:01 (21)	08:13		10:28 (41)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (21)	16:27	40	13:21 (30)	15:43
11	04:44	05:46	06:55	08:02		17:01 (21)	08:15		10:27 (41)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (21)	16:25	41	13:19 (30)	15:43
12	04:45	05:48	06:57	08:04		17:01 (21)	08:18		10:27 (41)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (21)	16:23	42	13:19 (30)	15:42
13	04:47	05:50	06:59	08:06		17:02 (21)	08:20		10:25 (41)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (21)	16:21	41	13:15 (30)	15:42
14	04:49	05:53	07:01	08:09		17:06 (21)	08:22		10:25 (41)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (21)	16:19	41	13:07 (30)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (41)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (30)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (41)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (30)	15:42
17	04:54	05:59	07:08	08:16		15:45 (16)	08:29		10:25 (41)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (16)	16:13	39	12:37 (36)	15:42
18	04:56	06:02	07:10	08:18		15:42 (16)	08:32		10:26 (41)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (16)	16:11	40	12:38 (36)	15:42
19	04:57	06:04	07:12	08:20		15:40 (16)	08:34		10:26 (41)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (16)	16:09	39	12:37 (36)	15:42
20	04:59	06:06	07:15	08:23		15:39 (16)	08:36		10:26 (41)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (16)	16:07	28	12:25 (36)	15:42
21	05:01	06:08	07:17	08:25		15:37 (16)	08:38		10:27 (41)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (16)	16:06	22	10:49 (41)	15:43
22	05:03	06:10	07:19	08:27		15:37 (16)	08:41		10:27 (41)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (16)	16:04	22	10:49 (41)	15:43
23	05:05	06:13	07:21	08:30		15:36 (16)	08:43		10:28 (41)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (16)	16:02	21	10:49 (41)	15:44
24	05:07	06:15	07:24	08:32		15:35 (16)	08:45		10:29 (41)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (16)	16:01	20	10:49 (41)	15:44
25	05:09	06:17	07:26	07:34		14:36 (16)	08:47		10:29 (41)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (16)	15:59	19	10:48 (41)	15:45
26	05:11	06:19	07:28	07:37		14:35 (16)	08:49		10:31 (41)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (16)	15:57	18	10:49 (41)	15:46
27	05:13	06:22	07:30	07:39		14:35 (16)	08:51		10:38 (41)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (16)	15:56	10	10:48 (41)	15:47
28	05:15	06:24	07:32	07:41		14:30 (11)	08:53		10:44 (41)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (16)	15:55	3	10:47 (41)	15:48
29	05:17	06:26	07:35	07:44		14:27 (11)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (11)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (11)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (11)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June
1	09:27			08:45		15:29 (12)	07:35		15:43 (17)	07:06			05:43		18:54 (41)	04:39
	15:52			16:56	22	15:51 (12)	18:04	38	16:21 (17)	20:16			21:25	25	19:19 (41)	22:30
2	09:27			08:43		15:29 (12)	07:32		15:44 (17)	07:04			05:41		18:56 (41)	04:38
	15:54			16:58	23	15:52 (12)	18:07	36	16:20 (17)	20:19			21:28	20	19:16 (41)	22:32
3	09:27			08:41		15:29 (12)	07:29		15:44 (17)	07:01		19:08 (41)	05:38		18:59 (41)	04:37
	15:55			17:01	23	15:52 (12)	18:09	35	16:19 (17)	20:21	9	19:17 (41)	21:30	15	19:14 (41)	22:33
4	09:26			08:39		15:29 (12)	07:27		15:45 (17)	06:58		19:03 (41)	05:36		19:04 (41)	04:36
	15:57			17:03	24	15:53 (12)	18:11	33	16:18 (17)	20:23	18	19:21 (41)	21:32	5	19:09 (41)	22:35
5	09:25			08:36		15:29 (12)	07:24		15:46 (17)	06:55		18:59 (41)	05:33			04:35
	15:58			17:06	23	15:52 (12)	18:14	32	16:18 (17)	20:25	24	19:23 (41)	21:35			22:36
6	09:25			08:34		15:28 (12)	07:21		15:48 (17)	06:52		18:57 (41)	05:31			04:33
	16:00			17:08	24	15:52 (12)	18:16	28	16:16 (17)	20:28	28	19:25 (41)	21:37			22:37
7	09:24			08:32		15:29 (12)	07:18		15:49 (17)	06:49		18:55 (41)	05:29			04:32
	16:01			17:10	24	15:53 (12)	18:19	25	16:14 (17)	20:30	31	19:26 (41)	21:39			22:39
8	09:23			08:29		15:29 (12)	07:15		15:51 (17)	06:46		18:53 (41)	05:26			04:32
	16:03			17:13	23	15:52 (12)	18:21	21	16:12 (17)	20:32	35	19:42 (30)	21:42			22:40
9	09:22			08:27		15:31 (12)	07:13		15:54 (17)	06:43		18:52 (41)	05:24			04:31
	16:05			17:15	21	15:52 (12)	18:23	15	16:09 (17)	20:35	54	19:59 (30)	21:44			22:41
10	09:21			08:25		15:31 (12)	07:10			06:41		18:51 (41)	05:21			04:30
	16:07			17:18	20	15:51 (12)	18:26			20:37	57	19:59 (30)	21:46			22:42
11	09:20			08:22		15:32 (12)	07:07			06:38		18:49 (41)	05:19			04:29
	16:09			17:20	18	15:50 (12)	18:28			20:39	60	19:59 (30)	21:48			22:43
12	09:19			08:20		15:34 (12)	07:04			06:35		18:48 (41)	05:17			04:29
	16:11			17:23	15	15:49 (12)	18:30			20:42	62	19:58 (30)	21:50			22:44
13	09:18			08:17		15:36 (12)	07:01			06:32		18:48 (41)	05:15			04:28
	16:12			17:25	22	16:09 (17)	18:33			20:44	64	19:59 (30)	21:53			22:45
14	09:17			08:15		15:54 (17)	06:58			06:29		18:47 (41)	05:12			04:28
	16:14			17:28	18	16:12 (17)	18:35			20:46	63	19:58 (30)	21:55			22:46
15	09:15			08:12		15:52 (17)	06:55			06:27		18:46 (41)	05:10			04:27
	16:17			17:30	22	16:14 (17)	18:37			20:48	63	19:57 (30)	21:57			22:47
16	09:14			08:10		15:51 (17)	06:53		17:30 (36)	06:24		18:47 (41)	05:08			04:27
	16:19			17:33	26	16:17 (17)	18:40	8	17:38 (36)	20:51	62	19:57 (30)	21:59			22:47
17	09:13			08:07		15:49 (17)	06:50		17:27 (36)	06:21		18:46 (41)	05:06			04:27
	16:21			17:35	29	16:18 (17)	18:42	13	17:40 (36)	20:53	60	19:55 (30)	22:01			22:48
18	09:11			08:04		15:47 (17)	06:47		17:25 (36)	06:18		18:45 (41)	05:04			04:26
	16:23			17:38	32	16:19 (17)	18:44	17	17:42 (36)	20:55	58	19:53 (30)	22:04			22:49
19	09:10			08:02		15:46 (17)	06:44		17:23 (36)	06:15		18:46 (41)	05:02			04:26
	16:25			17:40	33	16:19 (17)	18:46	19	17:42 (36)	20:58	53	19:52 (30)	22:06			22:49
20	09:08			07:59		15:46 (17)	06:41		17:22 (36)	06:13		18:45 (41)	05:00			04:26
	16:27			17:43	35	16:21 (17)	18:49	21	17:43 (36)	21:00	44	19:29 (41)	22:08			22:49
21	09:06			07:57		15:45 (17)	06:38		17:21 (36)	06:10		18:45 (41)	04:58			04:26
	16:30			17:45	36	16:21 (17)	18:51	22	17:43 (36)	21:02	43	19:28 (41)	22:10			22:50
22	09:05			07:54		15:44 (17)	06:35		17:21 (36)	06:07		18:46 (41)	04:56			04:27
	16:32			17:47	37	16:21 (17)	18:53	22	17:43 (36)	21:05	43	19:29 (41)	22:12			22:50
23	09:03			07:51		15:44 (17)	06:32		17:20 (36)	06:05		18:46 (41)	04:54			04:27
	16:34			17:50	38	16:22 (17)	18:56	22	17:42 (36)	21:07	41	19:27 (41)	22:14			22:50
24	09:01			07:49		15:43 (17)	06:29		17:20 (36)	06:02		18:47 (41)	04:52			04:27
	16:36			17:52	39	16:22 (17)	18:58	22	17:42 (36)	21:09	40	19:27 (41)	22:16			22:50
25	08:59			07:46		15:44 (17)	06:27		17:20 (36)	05:59		18:47 (41)	04:50			04:28
	16:39			17:55	38	16:22 (17)	19:00	21	17:41 (36)	21:12	39	19:26 (41)	22:18			22:50
26	08:57			07:43		15:43 (17)	06:24		17:20 (36)	05:57		18:48 (41)	04:49			04:28
	16:41			17:57	39	16:22 (17)	19:03	20	17:40 (36)	21:14	37	19:25 (41)	22:20			22:50
27	08:55		15:34 (12)	07:40		15:43 (17)	06:21		17:22 (36)	05:54		18:48 (41)	04:47			04:29
	16:44	10	15:44 (12)	18:00	39	16:22 (17)	19:05	17	17:39 (36)	21:16	36	19:24 (41)	22:21			22:50
28	08:54		15:33 (12)	07:38		15:43 (17)	06:18		17:24 (36)	05:51		18:50 (41)	04:45			04:29
	16:46	13	15:46 (12)	18:02	38	16:21 (17)	19:07	13	17:37 (36)	21:19	33	19:23 (41)	22:23			22:49
29	08:51		15:31 (12)				07:15		18:26 (36)	05:49		18:50 (41)	04:44			04:30
	16:48	16	15:47 (12)				20:09	8	18:34 (36)	21:21	31	19:21 (41)	22:25			22:49
30	08:49		15:31 (12)				07:12			05:46		18:52 (41)	04:42			04:31
	16:51	18	15:49 (12)				20:12			21:23	28	19:20 (41)	22:27			22:49
31	08:47		15:29 (12)				07:09						04:41			
	16:53	20	15:49 (12)				20:14						22:28			
Potential sun hours	221			260			365			432			521			547
Total, worst case		77			781			508			1216			65		
Sun reduction		0,50			0,50			0,50			0,50			0,50		
Oper. time red.		0,80			0,80			0,80			0,80			0,80		
Wind dir. red.		0,53			0,54			0,58			0,68			0,68		
Total reduction		0,21			0,22			0,23			0,27			0,27		
Total, real		16			169			118			331			18		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (41)	07:39			07:51		15:00 (12)	08:59
	22:48	22:00			20:39	60	19:58 (30)	19:13			16:48	21	15:21 (12)	15:51
2	04:33	05:26			06:35		18:49 (41)	07:41			07:53		15:00 (12)	09:01
	22:47	21:58			20:36	57	19:57 (30)	19:10			16:46	22	15:22 (12)	15:50
3	04:34	05:28			06:37		18:49 (41)	07:43			07:56		14:59 (12)	09:03
	22:47	21:56			20:34	54	19:56 (30)	19:07			16:44	23	15:22 (12)	15:49
4	04:35	05:30			06:39		18:51 (41)	07:46		16:33 (17)	07:58		14:59 (12)	09:05
	22:46	21:53			20:31	35	19:40 (30)	19:04	11	16:44 (17)	16:41	23	15:22 (12)	15:48
5	04:36	05:33			06:42		18:52 (41)	07:48		16:29 (17)	08:01		14:59 (12)	09:07
	22:45	21:51			20:28	31	19:23 (41)	19:01	18	16:47 (17)	16:39	24	15:23 (12)	15:47
6	04:37	05:35			06:44		18:53 (41)	07:50		16:26 (17)	08:03		14:58 (12)	09:08
	22:44	21:49			20:25	28	19:21 (41)	18:58	24	16:50 (17)	16:36	24	15:22 (12)	15:46
7	04:38	05:37			06:46		18:54 (41)	07:52		16:24 (17)	08:05		14:59 (12)	09:10
	22:43	21:46			20:22	25	19:19 (41)	18:55	27	16:51 (17)	16:34	23	15:22 (12)	15:45
8	04:40	05:39			06:48		18:57 (41)	07:55		16:21 (17)	08:08		14:59 (12)	09:11
	22:42	21:44			20:19	18	19:15 (41)	18:53	30	16:51 (17)	16:32	23	15:22 (12)	15:44
9	04:41	05:41		19:10 (41)	06:50		19:00 (41)	07:57		16:21 (17)	08:10		14:59 (12)	09:13
	22:41	21:41	10	19:20 (41)	20:16	11	19:11 (41)	18:50	32	16:53 (17)	16:30	23	15:22 (12)	15:44
10	04:42	05:44		19:07 (41)	06:53			07:59		16:19 (17)	08:13		15:00 (12)	09:14
	22:40	21:39	17	19:24 (41)	20:13			18:47	34	16:53 (17)	16:27	21	15:21 (12)	15:43
11	04:44	05:46		19:04 (41)	06:55			08:02		16:18 (17)	08:15		15:01 (12)	09:16
	22:39	21:36	22	19:26 (41)	20:11			18:44	36	16:54 (17)	16:25	20	15:21 (12)	15:43
12	04:45	05:48		19:02 (41)	06:57			08:04		16:17 (17)	08:17		15:02 (12)	09:17
	22:37	21:34	26	19:28 (41)	20:08			18:41	37	16:54 (17)	16:23	19	15:21 (12)	15:42
13	04:47	05:50		19:00 (41)	06:59			08:06		16:16 (17)	08:20		15:03 (12)	09:18
	22:36	21:31	29	19:29 (41)	20:05			18:39	38	16:54 (17)	16:21	16	15:19 (12)	15:42
14	04:49	05:53		18:58 (41)	07:01		18:17 (36)	08:08		16:16 (17)	08:22		15:05 (12)	09:20
	22:35	21:28	32	19:30 (41)	20:02	7	18:24 (36)	18:36	38	16:54 (17)	16:19	13	15:18 (12)	15:42
15	04:50	05:55		18:57 (41)	07:04		18:13 (36)	08:11		16:15 (17)	08:24		15:07 (12)	09:21
	22:33	21:26	34	19:31 (41)	19:59	13	18:26 (36)	18:33	39	16:54 (17)	16:17	10	15:17 (12)	15:42
16	04:52	05:57		18:56 (41)	07:06		18:11 (36)	08:13		16:15 (17)	08:27			09:22
	22:32	21:23	36	19:32 (41)	19:56	16	18:27 (36)	18:30	39	16:54 (17)	16:15			15:42
17	04:54	05:59		18:54 (41)	07:08		18:09 (36)	08:15		16:15 (17)	08:29			09:23
	22:30	21:21	38	19:32 (41)	19:53	19	18:28 (36)	18:28	38	16:53 (17)	16:13			15:42
18	04:56	06:01		18:53 (41)	07:10		18:08 (36)	08:18		16:15 (17)	08:31			09:24
	22:28	21:18	40	19:33 (41)	19:50	20	18:28 (36)	18:25	39	16:54 (17)	16:11			15:42
19	04:57	06:04		18:52 (41)	07:12		18:08 (36)	08:20		16:15 (17)	08:34			09:24
	22:27	21:15	41	19:33 (41)	19:47	21	18:29 (36)	18:22	38	16:53 (17)	16:09			15:42
20	04:59	06:06		18:51 (41)	07:15		18:07 (36)	08:22		16:16 (17)	08:36			09:25
	22:25	21:13	42	19:33 (41)	19:44	22	18:29 (36)	18:19	36	16:52 (17)	16:07			15:42
21	05:01	06:08		18:50 (41)	07:17		18:06 (36)	08:25		16:16 (17)	08:38			09:26
	22:23	21:10	43	19:33 (41)	19:42	22	18:28 (36)	18:17	35	16:51 (17)	16:06			15:43
22	05:03	06:10		18:50 (41)	07:19		18:06 (36)	08:27		16:17 (17)	08:40			09:26
	22:21	21:07	43	19:33 (41)	19:39	22	18:28 (36)	18:14	34	16:51 (17)	16:04			15:43
23	05:05	06:13		18:49 (41)	07:21		18:06 (36)	08:29		16:17 (17)	08:43			09:27
	22:19	21:04	44	19:33 (41)	19:36	21	18:27 (36)	18:11	32	16:49 (17)	16:02			15:44
24	05:07	06:15		18:49 (41)	07:23		18:07 (36)	08:32		16:18 (17)	08:45			09:27
	22:17	21:02	54	19:55 (30)	19:33	19	18:26 (36)	18:09	31	16:49 (17)	16:01			15:44
25	05:09	06:17		18:49 (41)	07:26		18:07 (36)	07:34		15:18 (17)	08:47			09:28
	22:15	20:59	58	19:57 (30)	19:30	18	18:25 (36)	17:06	29	15:47 (17)	15:59			15:45
26	05:11	06:19		18:49 (41)	07:28		18:08 (36)	07:37		15:20 (17)	08:49			09:28
	22:13	20:56	60	19:58 (30)	19:27	15	18:23 (36)	17:04	25	15:45 (17)	15:57			15:46
27	05:13	06:22		18:48 (41)	07:30		18:09 (36)	07:39		15:22 (17)	08:51			09:28
	22:11	20:53	63	19:59 (30)	19:24	11	18:20 (36)	17:01	22	15:44 (17)	15:56			15:47
28	05:15	06:24		18:48 (41)	07:32			07:41		15:08 (12)	08:53			09:28
	22:09	20:51	63	19:59 (30)	19:21			16:58	22	15:41 (17)	15:55			15:48
29	05:17	06:26		18:48 (41)	07:34			07:44		15:05 (12)	08:55			09:28
	22:07	20:48	63	19:59 (30)	19:18			16:56	21	15:37 (17)	15:53			15:49
30	05:20	06:28		18:48 (41)	07:37			07:46		15:03 (12)	08:57			09:28
	22:05	20:45	63	19:59 (30)	19:16			16:53	16	15:19 (12)	15:52			15:50
31	05:22	06:30		18:48 (41)				07:49		15:01 (12)				09:28
	22:03	20:42	62	19:58 (30)				16:51	18	15:19 (12)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (27)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (27)
	15:53	39	13:36 (28)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (28)
2	09:28		12:01 (27)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (27)
	15:54	41	13:36 (28)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (28)
3	09:27		12:01 (27)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (27)
	15:55	41	13:36 (28)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (28)
4	09:27		12:01 (27)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (27)
	15:57	41	13:36 (28)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (28)
5	09:26		12:01 (27)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (27)
	15:58	43	13:37 (28)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (28)
6	09:25		12:02 (27)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (27)
	16:00	41	13:37 (28)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (28)
7	09:25		12:02 (27)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (27)
	16:02	41	13:37 (28)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (28)
8	09:24		12:02 (27)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (27)
	16:03	42	13:38 (28)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (28)
9	09:23		12:03 (27)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (27)
	16:05	41	13:38 (28)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (28)
10	09:22		12:03 (27)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (27)
	16:07	40	13:37 (28)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (28)
11	09:21		12:03 (27)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (27)
	16:09	41	13:38 (28)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (28)
12	09:20		12:03 (27)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (27)
	16:11	39	13:37 (28)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (28)
13	09:19		12:04 (27)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (27)
	16:13	37	13:37 (28)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (28)
14	09:17		12:04 (27)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (27)
	16:15	35	13:36 (28)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (28)
15	09:16		12:04 (27)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (27)	09:21		11:54 (27)
	16:17	32	13:35 (28)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (27)	15:42	38	13:27 (28)
16	09:15		12:04 (27)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (27)	09:22		11:55 (27)
	16:19	24	12:28 (27)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (27)	15:42	37	13:28 (28)
17	09:13		12:06 (27)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (27)	09:23		11:55 (27)
	16:21	24	12:30 (27)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (27)	15:42	37	13:28 (28)
18	09:12		12:06 (27)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (27)	09:24		11:56 (27)
	16:23	24	12:30 (27)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (27)	15:42	36	13:29 (28)
19	09:10		12:06 (27)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (27)	09:25		11:57 (27)
	16:25	24	12:30 (27)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (27)	15:42	36	13:29 (28)
20	09:09		12:07 (27)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (27)	09:26		11:58 (27)
	16:28	23	12:30 (27)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (27)	15:43	36	13:30 (28)
21	09:07		12:08 (27)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (27)	09:26		11:59 (27)
	16:30	21	12:29 (27)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (27)	15:43	35	13:31 (28)
22	09:05		12:09 (27)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (27)	09:27		11:58 (27)
	16:32	20	12:29 (27)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (27)	15:43	36	13:31 (28)
23	09:03		12:09 (27)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (27)	09:27		11:59 (27)
	16:34	19	12:28 (27)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (27)	15:44	36	13:31 (28)
24	09:02		12:10 (27)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (27)	09:28		12:00 (27)
	16:37	17	12:27 (27)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (27)	15:44	36	13:32 (28)
25	09:00		12:12 (27)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (27)	09:28		12:00 (27)
	16:39	15	12:27 (27)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (27)	15:45	37	13:33 (28)
26	08:58		12:14 (27)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (27)	09:28		12:00 (27)
	16:41	11	12:25 (27)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (27)	15:46	37	13:33 (28)
27	08:56		12:17 (27)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (27)	09:28		12:00 (27)
	16:44	4	12:21 (27)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (28)	15:47	38	13:33 (28)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (27)	09:29		12:01 (27)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (28)	15:48	37	13:34 (28)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (27)	09:28		12:00 (27)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (28)	15:49	38	13:34 (28)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (27)	09:28		12:01 (27)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (28)	15:50	39	13:35 (28)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (27)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (28)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (27)	08:46	10:11 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (27)
	15:53 31	12:43 (28)	16:56 18	10:29 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (27)
2	09:28	11:14 (27)	08:44	10:11 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (27)
	15:54 30	12:43 (28)	16:58 17	10:28 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (27)
3	09:27	11:13 (27)	08:41	10:13 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (27)
	15:55 31	12:43 (28)	17:01 14	10:27 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (27)
4	09:27	11:13 (27)	08:39	10:14 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (27)
	15:57 30	12:43 (28)	17:03 11	10:25 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (27)
5	09:26	11:14 (27)	08:37	10:17 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (27)
	15:58 28	12:42 (28)	17:06 7	10:24 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (28)
6	09:25	11:14 (27)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (32)	09:09		11:00 (27)
	16:00 28	12:42 (28)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (32)	15:46	28	12:28 (28)
7	09:25	11:14 (27)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (32)	09:10		11:01 (27)
	16:02 26	12:41 (28)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (32)	15:45	29	12:30 (28)
8	09:24	11:14 (27)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (32)	09:12		11:02 (27)
	16:03 21	11:35 (27)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (32)	15:45	30	12:31 (28)
9	09:23	11:15 (27)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (32)	09:14		11:03 (27)
	16:05 21	11:36 (27)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (32)	15:44	30	12:32 (28)
10	09:22	11:15 (27)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (32)	09:15		11:03 (27)
	16:07 21	11:36 (27)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (32)	15:44	30	12:32 (28)
11	09:21	11:15 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (32)	09:16		11:04 (27)
	16:09 22	11:37 (27)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (32)	15:43	30	12:33 (28)
12	09:20	11:15 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (32)	09:18		11:04 (27)
	16:11 22	11:37 (27)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (32)	15:43	31	12:34 (28)
13	09:19	11:16 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (32)	09:19		11:05 (27)
	16:13 22	11:38 (27)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (32)	15:42	31	12:35 (28)
14	09:17	11:16 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (32)	09:20		11:06 (27)
	16:15 22	11:38 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (32)	15:42	30	12:35 (28)
15	09:16	11:16 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (32)	09:21		11:06 (27)
	16:17 22	11:38 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (32)	15:42	31	12:36 (28)
16	09:15	11:16 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (32)	09:22		11:08 (27)
	16:19 22	11:38 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (32)	15:42	30	12:37 (28)
17	09:13	11:18 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (32)	09:23		11:09 (27)
	16:21 21	11:39 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (27)	15:42	30	12:38 (28)
18	09:12	11:18 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (32)	09:24		11:08 (27)
	16:23 21	11:39 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (27)	15:42	30	12:37 (28)
19	09:10	10:13 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (32)	09:25		11:09 (27)
	16:25 27	11:39 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (27)	15:42	29	12:38 (28)
20	09:09	10:12 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (32)	09:26		11:10 (27)
	16:28 30	11:39 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (27)	15:43	30	12:39 (28)
21	09:07	10:11 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (32)	09:26		11:11 (27)
	16:30 32	11:39 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (27)	15:43	29	12:40 (28)
22	09:05	10:10 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (32)	09:27		11:11 (27)
	16:32 32	11:38 (27)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (27)	15:43	29	12:40 (28)
23	09:03	10:09 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (32)	09:27		11:11 (27)
	16:34 31	11:37 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (27)	15:44	30	12:40 (28)
24	09:02	10:09 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (27)	09:28		11:12 (27)
	16:37 29	11:36 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (27)	15:45	30	12:41 (28)
25	09:00	10:09 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (27)	09:28		11:12 (27)
	16:39 26	11:34 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (27)	15:45	29	12:41 (28)
26	08:58	10:09 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (27)	09:28		11:13 (27)
	16:41 19	10:28 (32)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (27)	15:46	30	12:42 (28)
27	08:56	10:09 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (27)	09:28		11:13 (27)
	16:44 20	10:29 (32)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (27)	15:47	30	12:42 (28)
28	08:54	10:09 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (27)	09:29		11:13 (27)
	16:46 19	10:28 (32)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (27)	15:48	31	12:43 (28)
29	08:52	10:09 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (27)	09:29		11:13 (27)
	16:49 20	10:29 (32)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (27)	15:49	30	12:42 (28)
30	08:50	10:09 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (27)	09:28		11:13 (27)
	16:51 19	10:28 (32)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (27)	15:50	31	12:43 (28)
31	08:48	10:10 (32)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (27)
	16:54 19	10:29 (32)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (28)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (16)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (16)
	15:52	16	13:11 (16)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (16)
2	09:27		12:55 (16)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (16)
	15:54	16	13:11 (16)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (16)
3	09:27		12:55 (16)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (16)
	15:55	17	13:12 (16)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (16)
4	09:26		12:55 (16)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (16)
	15:57	17	13:12 (16)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (16)
5	09:26		12:55 (16)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (16)
	15:58	18	13:13 (16)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (16)
6	09:25		12:55 (16)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (16)
	16:00	19	13:14 (16)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (16)
7	09:24		12:55 (16)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (16)
	16:01	20	13:15 (16)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (16)
8	09:24		12:56 (16)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (16)
	16:03	19	13:15 (16)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (16)
9	09:23		12:55 (16)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (16)
	16:05	20	13:15 (16)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (16)
10	09:22		12:56 (16)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (16)
	16:07	20	13:16 (16)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (16)
11	09:21		12:57 (16)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (16)
	16:09	20	13:17 (16)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (16)
12	09:19		12:57 (16)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (16)
	16:11	20	13:17 (16)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (16)
13	09:18		12:57 (16)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (16)
	16:12	20	13:17 (16)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (16)
14	09:17		12:58 (16)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (16)
	16:14	20	13:18 (16)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (16)
15	09:16		12:58 (16)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (16)
	16:17	20	13:18 (16)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (16)
16	09:14		12:58 (16)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (16)
	16:19	20	13:18 (16)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (16)
17	09:13		12:59 (16)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (16)
	16:21	19	13:18 (16)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (16)
18	09:11		12:59 (16)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (16)
	16:23	19	13:18 (16)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (16)
19	09:10		13:01 (16)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (16)	09:25		12:50 (16)
	16:25	18	13:19 (16)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (16)	15:42	13	13:03 (16)
20	09:08		13:02 (16)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (16)	09:25		12:51 (16)
	16:27	16	13:18 (16)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (16)	15:42	12	13:03 (16)
21	09:07		13:02 (16)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (16)	09:26		12:51 (16)
	16:30	15	13:17 (16)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (16)	15:43	12	13:03 (16)
22	09:05		13:04 (16)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (16)	09:27		12:52 (16)
	16:32	12	13:16 (16)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (16)	15:43	12	13:04 (16)
23	09:03		13:06 (16)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (16)	09:27		12:52 (16)
	16:34	9	13:15 (16)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (16)	15:44	12	13:04 (16)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (16)	09:28		12:52 (16)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (16)	15:44	12	13:04 (16)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (16)	09:28		12:53 (16)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (16)	15:45	13	13:06 (16)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (16)	09:28		12:53 (16)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (16)	15:46	13	13:06 (16)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (16)	09:28		12:54 (16)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (16)	15:47	13	13:07 (16)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (16)	09:28		12:53 (16)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (16)	15:48	14	13:07 (16)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (16)	09:28		12:53 (16)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (16)	15:49	15	13:08 (16)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (16)	09:28		12:54 (16)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (16)	15:50	15	13:09 (16)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (16)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (16)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (30)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (16)	08:59
	15:52		16:56 19	14:13 (30)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (16)	15:51
2	09:27		08:43	13:56 (30)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (16)	09:01
	15:54		16:58 16	14:12 (30)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (16)	15:50
3	09:27		08:41	13:58 (30)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (16)	09:03
	15:55		17:01 12	14:10 (30)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (16)	15:49
4	09:26		08:39	14:02 (30)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (16)	09:05
	15:57		17:03 5	14:07 (30)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (16)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (16)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (16)	15:47
6	09:25		08:34	15:25 (16)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (16)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (16)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (30)	09:10
	16:01		17:11 11	15:33 (16)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (30)	15:45
8	09:23		08:30	15:20 (16)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (30)	09:12
	16:03		17:13 15	15:35 (16)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (30)	15:44
9	09:23		08:27	15:19 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (30)	09:13
	16:05		17:15 18	15:37 (16)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (30)	15:44
10	09:22		08:25	15:18 (16)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (30)	09:15
	16:07		17:18 19	15:37 (16)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (30)	15:43
11	09:20		08:22	15:17 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (30)	09:16
	16:09		17:20 21	15:38 (16)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (30)	15:43
12	09:19		08:20	15:17 (16)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (30)	09:17
	16:10		17:23 22	15:39 (16)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (30)	15:42
13	09:18	13:53 (30)	08:17	15:17 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (30)	09:19
	16:12 5	13:58 (30)	17:25 22	15:39 (16)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (30)	15:42
14	09:17	13:51 (30)	08:15	15:16 (16)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (30)	09:20
	16:14 9	14:00 (30)	17:28 23	15:39 (16)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (30)	15:42
15	09:16	13:50 (30)	08:12	15:17 (16)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (41)	09:21
	16:17 11	14:01 (30)	17:30 22	15:39 (16)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (30)	15:42
16	09:14	13:50 (30)	08:10	15:17 (16)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (41)	09:22
	16:19 17	14:07 (30)	17:33 22	15:39 (16)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (30)	15:42
17	09:13	13:49 (30)	08:07	15:17 (16)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (41)	09:23
	16:21 21	14:10 (30)	17:35 21	15:38 (16)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (30)	15:42
18	09:11	11:38 (41)	08:05	15:18 (16)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (41)	09:24
	16:23 27	14:11 (30)	17:38 19	15:37 (16)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (30)	15:42
19	09:10	11:35 (41)	08:02	15:20 (16)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (41)	09:25
	16:25 32	14:12 (30)	17:40 17	15:37 (16)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (30)	15:42
20	09:08	11:32 (41)	07:59	15:21 (16)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (41)	09:25
	16:27 36	14:12 (30)	17:43 14	15:35 (16)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (30)	15:42
21	09:07	11:29 (41)	07:57	15:24 (16)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (16)	08:38	11:05 (41)	09:26
	16:30 42	14:13 (30)	17:45 8	15:32 (16)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (16)	16:06 42	13:49 (30)	15:43
22	09:05	11:27 (41)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (16)	08:41	11:08 (41)	09:27
	16:32 45	14:14 (30)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (16)	16:04 36	13:48 (30)	15:43
23	09:03	11:28 (41)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (16)	08:43	11:12 (41)	09:27
	16:34 44	14:14 (30)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (16)	16:02 32	13:49 (30)	15:44
24	09:01	11:29 (41)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (16)	08:45	11:16 (41)	09:27
	16:36 42	14:15 (30)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (16)	16:01 28	13:49 (30)	15:44
25	08:59	11:31 (41)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (16)	08:47	13:27 (30)	09:28
	16:39 40	14:15 (30)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (16)	15:59 21	13:48 (30)	15:45
26	08:58	11:32 (41)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (16)	08:49	13:29 (30)	09:28
	16:41 37	14:15 (30)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (16)	15:57 17	13:46 (30)	15:46
27	08:56	11:34 (41)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (16)	08:51	13:29 (30)	09:28
	16:44 33	14:15 (30)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (16)	15:56 12	13:41 (30)	15:47
28	08:54	13:51 (30)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (16)	08:53	13:30 (30)	09:28
	16:46 24	14:15 (30)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (16)	15:55 9	13:39 (30)	15:47
29	08:52	13:51 (30)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (16)	08:55	13:35 (30)	09:28
	16:48 23	14:14 (30)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (16)	15:53 5	13:40 (30)	15:49
30	08:50	13:52 (30)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (16)	08:57		09:28
	16:51 22	14:14 (30)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (16)	15:52		15:50
31	08:48	13:54 (30)			07:09		04:41		05:22	06:31		07:49	14:47 (16)			09:28
	16:53 20	14:14 (30)			20:14		22:29		22:03	20:42		16:51 20	15:07 (16)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (36)	08:45		10:15 (17)	07:35		13:26 (30)	07:07		18:42 (21)	05:44	04:39
	15:52	47	14:26 (18)	16:56	119	15:37 (39)	18:04	35	17:05 (13)	20:16	19	19:01 (21)	21:26	22:30
2	09:27		12:11 (36)	08:43		12:16 (36)	07:32		15:45 (11)	07:04		18:43 (21)	05:41	04:38
	15:54	53	14:28 (18)	16:58	114	15:38 (39)	18:07	27	17:09 (13)	20:19	16	18:59 (21)	21:28	22:32
3	09:27		12:10 (36)	08:41		12:17 (36)	07:30		16:34 (16)	07:01		18:46 (21)	05:38	04:37
	15:55	58	14:29 (18)	17:01	113	15:38 (39)	18:09	33	17:12 (13)	20:21	11	18:57 (21)	21:30	22:33
4	09:26		12:10 (36)	08:39		09:39 (41)	07:27		16:31 (16)	06:58			05:36	04:36
	15:57	61	14:29 (18)	17:03	109	15:39 (39)	18:12	43	17:15 (13)	20:23			21:33	22:35
5	09:26		12:10 (36)	08:36		09:39 (41)	07:24		16:29 (16)	06:55			05:34	04:35
	15:58	64	14:30 (18)	17:06	105	15:39 (39)	18:14	46	17:15 (13)	20:26			21:35	22:36
6	09:25		12:09 (36)	08:34		09:40 (41)	07:21		16:26 (16)	06:52			05:31	04:34
	16:00	70	14:31 (18)	17:08	95	15:39 (39)	18:16	49	17:15 (13)	20:28			21:37	22:38
7	09:24		10:10 (17)	08:32		09:40 (41)	07:18		16:25 (16)	06:49			05:29	04:33
	16:01	78	14:32 (18)	17:11	96	15:39 (39)	18:19	50	17:15 (13)	20:30			21:39	22:39
8	09:23		10:10 (17)	08:30		09:38 (41)	07:15		16:23 (16)	06:46			05:26	04:32
	16:03	84	14:33 (18)	17:13	96	15:38 (39)	18:21	52	17:15 (13)	20:32			21:42	22:40
9	09:22		10:10 (17)	08:27		09:36 (41)	07:13		16:22 (16)	06:44			05:24	04:31
	16:05	86	14:33 (18)	17:16	98	15:38 (39)	18:23	53	17:15 (13)	20:35			21:44	22:41
10	09:21		10:11 (17)	08:25		09:33 (41)	07:10		16:20 (16)	06:41			05:21	04:30
	16:07	91	14:34 (18)	17:18	107	15:57 (11)	18:26	54	17:14 (13)	20:37			21:46	22:42
11	09:20		10:10 (17)	08:22		09:29 (41)	07:07		16:19 (16)	06:38			05:19	04:29
	16:09	97	14:34 (18)	17:20	114	16:00 (11)	18:28	54	17:13 (13)	20:39			21:48	22:44
12	09:19		10:09 (17)	08:20		09:27 (41)	07:04		16:18 (16)	06:35			05:17	04:29
	16:11	102	14:35 (18)	17:23	118	16:03 (11)	18:30	54	17:12 (13)	20:42			21:51	22:44
13	09:18		10:09 (17)	08:17		09:24 (41)	07:01		16:18 (16)	06:32			05:15	04:28
	16:13	105	14:35 (18)	17:25	118	16:04 (11)	18:33	52	17:10 (13)	20:44			21:53	22:45
14	09:17		10:10 (17)	08:15		09:21 (41)	06:58		16:17 (16)	06:29			05:12	04:28
	16:15	107	14:36 (18)	17:28	114	16:05 (11)	18:35	51	17:08 (13)	20:46			21:55	22:46
15	09:16		10:10 (17)	08:12		09:18 (41)	06:56		16:17 (16)	06:27			05:10	04:27
	16:17	112	14:37 (18)	17:30	120	16:07 (11)	18:37	47	17:04 (13)	20:49			21:57	22:47
16	09:14		10:02 (17)	08:10		09:13 (41)	06:53		16:17 (16)	06:24			05:08	04:27
	16:19	119	14:37 (18)	17:33	125	16:08 (11)	18:40	46	17:03 (16)	20:51			21:59	22:48
17	09:13		10:02 (17)	08:07		09:13 (41)	06:50		16:17 (16)	06:21			05:06	04:27
	16:21	126	14:37 (18)	17:35	123	16:08 (11)	18:42	46	17:03 (16)	20:53			22:02	22:48
18	09:11		10:02 (17)	08:05		09:13 (41)	06:47		16:16 (16)	06:18			05:04	04:27
	16:23	127	14:37 (18)	17:38	121	16:08 (11)	18:44	46	17:02 (16)	20:56			22:04	22:49
19	09:10		10:02 (17)	08:02		09:15 (41)	06:44		16:16 (16)	06:16			05:02	04:26
	16:25	129	14:37 (18)	17:40	118	16:09 (11)	18:47	56	18:01 (21)	20:58			22:06	22:49
20	09:08		10:02 (17)	07:59		09:16 (41)	06:41		16:16 (16)	06:13			05:00	04:26
	16:27	130	14:37 (18)	17:43	114	16:09 (11)	18:49	60	18:03 (21)	21:00			22:08	22:50
21	09:07		10:03 (17)	07:57		09:17 (41)	06:38		16:16 (16)	06:10			04:58	04:27
	16:30	131	14:37 (18)	17:45	110	16:09 (11)	18:51	64	18:05 (21)	21:02			22:10	22:50
22	09:05		10:03 (17)	07:54		09:18 (41)	06:35		16:17 (16)	06:07			04:56	04:27
	16:32	129	14:36 (18)	17:48	104	16:08 (11)	18:54	63	18:05 (21)	21:05			22:12	22:50
23	09:03		10:04 (17)	07:51		09:20 (41)	06:32		16:17 (16)	06:05			04:54	04:27
	16:34	131	14:36 (18)	17:50	95	16:08 (11)	18:56	64	18:06 (21)	21:07			22:14	22:50
24	09:01		10:04 (17)	07:49		13:09 (30)	06:30		16:18 (16)	06:02			04:52	04:27
	16:37	128	14:35 (18)	17:52	77	16:08 (11)	18:58	64	18:06 (21)	21:09			22:16	22:50
25	08:59		10:05 (17)	07:46		13:11 (30)	06:27		16:18 (16)	05:59			04:50	04:28
	16:39	125	14:34 (18)	17:55	71	16:07 (11)	19:00	62	18:06 (21)	21:12			22:18	22:50
26	08:58		10:05 (17)	07:43		13:13 (30)	06:24		16:20 (16)	05:57			04:49	04:28
	16:41	124	15:28 (39)	17:57	66	16:06 (11)	19:03	61	18:07 (21)	21:14			22:20	22:50
27	08:56		10:06 (17)	07:41		13:16 (30)	06:21		16:22 (16)	05:54			04:47	04:29
	16:44	127	15:30 (39)	18:00	58	16:05 (11)	19:05	57	18:07 (21)	21:16			22:22	22:50
28	08:54		10:07 (17)	07:38		13:19 (30)	06:18		16:23 (16)	05:51			04:45	04:29
	16:46	130	15:33 (39)	18:02	49	16:04 (11)	19:07	54	18:06 (21)	21:19			22:23	22:50
29	08:52		10:08 (17)				07:15		17:26 (16)	05:49			04:44	04:30
	16:48	131	15:35 (39)				20:10	47	19:05 (21)	21:21			22:25	22:49
30	08:50		10:09 (17)				07:12		17:29 (16)	05:46			04:42	04:31
	16:51	129	15:36 (39)				20:12	38	19:04 (21)	21:23			22:27	22:49
31	08:47		10:12 (17)				07:09		18:41 (21)				04:41	
	16:53	126	15:37 (39)				20:14	22	19:03 (21)				22:29	
Potential sun hours	221			260			365			432			521	547
Total, worst case		3257			2867			1550			46			
Sun reduction		0,50			0,50			0,50			0,50			
Oper. time red.		0,80			0,80			0,80			0,80			
Wind dir. red.		0,60			0,59			0,58			0,62			
Total reduction		0,24			0,24			0,23			0,25			
Total, real		786			675			361			11			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December		
1	04:32	05:24	06:33		07:39		16:57 (16)	07:51	09:03 (41)	08:59	09:52 (17)
	22:48	22:01	20:39		19:13	53	17:50 (13)	16:49 107	15:26 (11)	15:51 96	14:16 (18)
2	04:33	05:26	06:35		07:41		16:58 (16)	07:53	09:06 (41)	09:01	09:53 (17)
	22:48	21:58	20:37		19:10	54	17:52 (13)	16:46 98	15:08 (39)	15:50 91	14:16 (18)
3	04:34	05:28	06:37		07:44		16:58 (16)	07:56	09:08 (41)	09:03	09:54 (17)
	22:47	21:56	20:34		19:07	54	17:52 (13)	16:44 96	15:08 (39)	15:49 88	14:17 (18)
4	04:35	05:30	06:39		07:46		16:58 (16)	07:58	09:10 (41)	09:05	09:54 (17)
	22:46	21:54	20:31		19:04	54	17:52 (13)	16:41 94	15:08 (39)	15:48 83	14:17 (18)
5	04:36	05:33	06:42		07:48		17:00 (16)	08:01	09:10 (41)	09:07	09:55 (17)
	22:45	21:51	20:28		19:01	52	17:52 (13)	16:39 95	15:09 (39)	15:47 77	14:17 (18)
6	04:37	05:35	06:44		07:50		17:00 (16)	08:03	09:10 (41)	09:08	09:57 (17)
	22:45	21:49	20:25		18:58	52	17:52 (13)	16:37 105	15:09 (39)	15:46 71	14:17 (18)
7	04:38	05:37	06:46		07:53		17:01 (16)	08:06	09:08 (41)	09:10	11:57 (36)
	22:44	21:46	20:22		18:56	50	17:51 (13)	16:34 111	15:09 (39)	15:45 64	14:17 (18)
8	04:40	05:39	06:48		07:55		17:03 (16)	08:08	11:48 (36)	09:12	11:57 (36)
	22:43	21:44	20:19		18:53	48	17:51 (13)	16:32 112	15:09 (39)	15:44 62	14:17 (18)
9	04:41	05:41	06:51	18:40 (21)	07:57		17:04 (16)	08:10	11:47 (36)	09:13	11:59 (36)
	22:41	21:41	20:16 10	18:50 (21)	18:50	46	17:50 (13)	16:30 113	15:09 (39)	15:44 57	14:17 (18)
10	04:42	05:44	06:53	18:37 (21)	07:59		17:06 (16)	08:13	09:45 (17)	09:15	12:00 (36)
	22:40	21:39	20:14 15	18:52 (21)	18:47	40	17:48 (13)	16:27 121	15:08 (39)	15:43 53	14:17 (18)
11	04:44	05:46	06:55	18:35 (21)	08:02		16:22 (11)	08:15	09:42 (17)	09:16	12:01 (36)
	22:39	21:36	20:11 19	18:54 (21)	18:44	36	17:45 (13)	16:25 127	15:08 (39)	15:43 47	14:16 (18)
12	04:45	05:48	06:57	18:34 (21)	08:04		16:18 (11)	08:17	09:41 (17)	09:17	12:03 (36)
	22:38	21:34	20:08 21	18:55 (21)	18:42	25	17:41 (13)	16:23 130	15:08 (39)	15:42 44	14:17 (18)
13	04:47	05:50	06:59	17:21 (16)	08:06		13:56 (30)	08:20	09:39 (17)	09:19	12:04 (36)
	22:36	21:31	20:05 37	18:55 (21)	18:39	42	17:38 (13)	16:21 131	15:06 (39)	15:42 39	14:17 (18)
14	04:49	05:53	07:02	17:17 (16)	08:09		13:50 (30)	08:22	09:39 (17)	09:20	12:07 (36)
	22:35	21:29	20:02 45	18:55 (21)	18:36	53	16:37 (11)	16:19 131	15:05 (39)	15:42 34	14:17 (18)
15	04:50	05:55	07:04	17:13 (16)	08:11		13:46 (30)	08:25	09:39 (17)	09:21	13:06 (30)
	22:33	21:26	19:59 52	18:55 (21)	18:33	62	16:37 (11)	16:17 128	15:03 (39)	15:42 26	14:16 (18)
16	04:52	05:57	07:06	17:11 (16)	08:13		13:44 (30)	08:27	09:39 (17)	09:22	13:08 (30)
	22:32	21:23	19:56 56	18:55 (21)	18:30	69	16:39 (11)	16:15 124	15:02 (39)	15:42 22	14:15 (18)
17	04:54	05:59	07:08	17:08 (16)	08:16		13:41 (30)	08:29	09:38 (17)	09:23	13:10 (30)
	22:30	21:21	19:53 59	18:54 (21)	18:28	75	16:39 (11)	16:13 125	14:07 (18)	15:42 18	14:15 (18)
18	04:56	06:02	07:10	17:07 (16)	08:18		09:55 (41)	08:32	09:38 (17)	09:24	13:12 (30)
	22:29	21:18	19:50 63	18:55 (21)	18:25	86	16:39 (11)	16:11 129	14:09 (18)	15:42 16	14:15 (18)
19	04:58	06:04	07:12	17:06 (16)	08:20		09:51 (41)	08:34	09:39 (17)	09:25	13:16 (7)
	22:27	21:15	19:47 63	18:54 (21)	18:22	98	16:39 (11)	16:09 131	14:11 (18)	15:42 11	14:15 (18)
20	04:59	06:06	07:15	17:04 (16)	08:23		09:49 (41)	08:36	09:38 (17)	09:25	13:16 (7)
	22:25	21:13	19:45 65	18:53 (21)	18:20	106	16:40 (11)	16:07 129	14:11 (18)	15:42 9	14:14 (18)
21	05:01	06:08	07:17	17:03 (16)	08:25		09:46 (41)	08:38	09:39 (17)	09:26	13:17 (7)
	22:23	21:10	19:42 64	18:51 (21)	18:17	113	16:39 (11)	16:06 131	14:13 (18)	15:43 9	14:15 (18)
22	05:03	06:11	07:19	17:01 (16)	08:27		09:45 (41)	08:41	09:38 (17)	09:26	13:18 (7)
	22:21	21:07	19:39 64	18:50 (21)	18:14	116	16:39 (11)	16:04 131	14:13 (18)	15:43 9	14:16 (18)
23	05:05	06:13	07:21	17:00 (16)	08:30		09:44 (41)	08:43	09:39 (17)	09:27	13:18 (7)
	22:19	21:05	19:36 62	18:48 (21)	18:12	119	16:38 (11)	16:02 128	14:14 (18)	15:44 9	14:16 (18)
24	05:07	06:15	07:24	17:00 (16)	08:32		09:43 (41)	08:45	09:39 (17)	09:27	13:18 (7)
	22:18	21:02	19:33 58	18:46 (21)	18:09	122	16:38 (11)	16:01 127	14:14 (18)	15:44 11	14:17 (18)
25	05:09	06:17	07:26	16:59 (16)	07:34		08:43 (41)	08:47	09:40 (17)	09:28	13:15 (30)
	22:16	20:59	19:30 46	17:45 (16)	17:06	123	15:38 (11)	15:59 124	14:15 (18)	15:45 14	14:17 (18)
26	05:11	06:19	07:28	16:58 (16)	07:37		08:44 (41)	08:49	09:40 (17)	09:28	13:14 (30)
	22:14	20:56	19:27 47	17:45 (16)	17:04	122	15:37 (11)	15:58 119	14:15 (18)	15:46 17	14:18 (18)
27	05:13	06:22	07:30	16:58 (16)	07:39		08:48 (41)	08:51	09:49 (17)	09:28	13:13 (30)
	22:11	20:53	19:24 46	17:44 (16)	17:01	118	15:36 (11)	15:56 112	14:16 (18)	15:47 20	14:19 (18)
28	05:15	06:24	07:32	16:58 (16)	07:41		08:51 (41)	08:53	09:49 (17)	09:28	13:12 (30)
	22:09	20:51	19:21 46	17:44 (16)	16:59	115	15:35 (11)	15:55 109	14:16 (18)	15:48 24	14:21 (18)
29	05:17	06:26	07:35	16:58 (16)	07:44		08:54 (41)	08:55	09:50 (17)	09:28	12:14 (36)
	22:07	20:48	19:19 50	17:48 (13)	16:56	119	15:34 (11)	15:53 106	14:16 (18)	15:49 31	14:23 (18)
30	05:20	06:28	07:37	16:57 (16)	07:46		08:57 (41)	08:57	09:50 (17)	09:28	12:13 (36)
	22:05	20:45	19:16 52	17:49 (13)	16:53	117	15:32 (11)	15:52 103	14:16 (18)	15:50 37	14:25 (18)
31	05:22	06:31			07:49		08:59 (41)			09:28	12:12 (36)
	22:03	20:42			16:51	115	15:29 (11)			15:51 41	14:25 (18)
Potential sun hours	546	478	386		319			236		199	
Total, worst case				1040		2454			3527		1230
Sun reduction				0,50		0,50			0,50		0,50
Oper. time red.				0,80		0,80			0,80		0,80
Wind dir. red.				0,59		0,59			0,60		0,59
Total reduction				0,24		0,24			0,24		0,24
Total, real				245		577			846		289

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (5)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43 1	20:40 (5)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (5)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44 1	20:41 (5)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (5)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45 1	20:40 (5)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (5)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46 1	20:41 (5)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47 2	20:42 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47 2	20:42 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48 2	20:42 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48 2	20:43 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (5)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49 2	20:43 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49 2	20:43 (5)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49 2	20:43 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50 2	20:43 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50 2	20:44 (5)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50 2	20:44 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50 2	20:44 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50 2	20:44 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49 2	20:44 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49 1	20:44 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49 2	20:45 (5)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48 1	20:44 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (5) 04:32	20:33 (5) 05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (5) 22:48	15 20:48 (5) 22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (5) 04:33	20:33 (5) 05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (5) 22:47	15 20:48 (5) 21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (5) 04:34	20:33 (5) 05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (5) 22:47	15 20:48 (5) 21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (5) 04:35	20:33 (5) 05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (5) 22:46	14 20:47 (5) 21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (5) 04:36	20:33 (5) 05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (5) 22:45	14 20:47 (5) 21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (5) 04:37	20:34 (5) 05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (5) 22:44	13 20:47 (5) 21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (5) 04:39	20:34 (5) 05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (5) 22:43	12 20:46 (5) 21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (5) 04:40	20:34 (5) 05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (5) 22:42	12 20:46 (5) 21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (5) 04:41	20:35 (5) 05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (5) 22:41	11 20:46 (5) 21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (5) 04:43	20:35 (5) 05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (5) 22:40	11 20:46 (5) 21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (5) 04:44	20:35 (5) 05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (5) 22:39	9 20:44 (5) 21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (5) 04:46	20:35 (5) 05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (5) 22:37	4 20:39 (5) 21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (5) 04:47	20:35 (5) 05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (5) 22:36	3 20:38 (5) 21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (5) 04:49	20:35 (5) 05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (5) 22:34	2 20:37 (5) 21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (5) 04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (5) 22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (5) 04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (5) 22:31	21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (5) 04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (5) 22:30	21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (5) 04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (5) 22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (5) 04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (5) 22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (5) 05:00	06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (5) 22:25	21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (5) 05:01	06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (5) 22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (5) 05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (5) 22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (5) 05:05	06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (5) 22:19	21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (5) 05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (5) 22:17	21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (5) 05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (5) 22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (5) 05:11	06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (5) 22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (5) 05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (5) 22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (5) 05:15	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (5) 22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (5) 05:18	06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (5) 22:07	20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (5) 04:31	20:32 (5) 05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (5) 22:48	17 20:49 (5) 22:05	20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (5)	05:22	06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (5)	22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					5	469	150					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,73	0,73	0,73					
Total reduction					0,29	0,29	0,29					
Total, real					1	138	44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (86)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13 22	09:01 (89)	16:49	15:52
2	09:27	08:43		07:33	08:13 (89)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (86)	07:54	09:01
	15:54	16:59		18:07 6	08:19 (89)	20:19	21:28	22:32	22:48	21:58	20:37		19:10 25	09:01 (89)	16:47	15:50
3	09:27	08:41		07:30	08:10 (89)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (86)	07:56	09:03
	15:56	17:01		18:10 12	08:22 (89)	20:21	21:30	22:33	22:47	21:56	20:34		19:07 26	09:01 (89)	16:44	15:49
4	09:26	08:39		07:27	08:07 (89)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (86)	07:59	09:05
	15:57	17:04		18:12 16	08:23 (89)	20:24	21:33	22:35	22:46	21:54	20:31		19:05 28	09:02 (89)	16:42	15:48
5	09:26	08:37		07:24	08:00 (86)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (86)	08:01	09:07
	15:59	17:06		18:14 24	08:24 (89)	20:26	21:35	22:36	22:45	21:51	20:28		19:02 28	09:02 (89)	16:39	15:47
6	09:25	08:34		07:21	07:58 (86)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (86)	08:03	09:08
	16:00	17:09		18:17 26	08:24 (89)	20:28	21:37	22:38	22:45	21:49	20:25		18:59 28	09:01 (89)	16:37	15:47
7	09:24	08:32		07:19	07:57 (86)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (86)	08:06	09:10
	16:02	17:11		18:19 28	08:25 (89)	20:30	21:40	22:39	22:44	21:47	20:23		18:56 27	09:01 (89)	16:35	15:46
8	09:23	08:30		07:16	07:56 (86)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (86)	08:08	09:12
	16:04	17:14		18:21 28	08:24 (89)	20:33	21:42	22:40	22:43	21:44	20:20		18:53 25	09:00 (89)	16:32	15:45
9	09:23	08:27		07:13	07:56 (86)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (86)	08:11	09:13
	16:06	17:16		18:24 28	08:24 (89)	20:35	21:44	22:41	22:41	21:42	20:17		18:50 22	08:58 (89)	16:30	15:44
10	09:22	08:25		07:10	07:56 (86)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (89)	08:13	09:15
	16:07	17:18		18:26 27	08:23 (89)	20:37	21:46	22:43	22:40	21:39	20:14		18:48 14	08:57 (89)	16:28	15:44
11	09:21	08:23		07:07	07:58 (86)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (89)	08:15	09:16
	16:09	17:21		18:28 26	08:24 (89)	20:40	21:49	22:44	22:39	21:37	20:11		18:45 10	08:54 (89)	16:26	15:43
12	09:19	08:20		07:04	07:59 (86)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31 23	08:22 (89)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (85)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (88)	08:07		08:20	09:19
	16:13	17:26		18:33 20	08:21 (89)	20:44	21:53	22:45	22:36	21:31	20:05 8	08:21 (88)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (85)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (88)	08:09		08:22	09:20
	16:15	17:28		18:35 20	08:18 (89)	20:47	21:55	22:46	22:35	21:29	20:02 13	08:23 (88)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (85)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (88)	08:11		08:25	09:21
	16:17	17:31		18:38 14	08:14 (89)	20:49	21:57	22:47	22:33	21:26	19:59 16	08:24 (88)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (85)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (88)	08:13	09:01 (87)	08:27	09:22
	16:19	17:33		18:40 12	07:44 (85)	20:51	22:00	22:48	22:32	21:24	19:57 17	08:25 (88)	18:31 9	09:10 (87)	16:15	15:42
17	09:13	08:07		06:50	07:32 (85)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (88)	08:16	09:00 (87)	08:29	09:23
	16:21	17:36		18:42 12	07:44 (85)	20:53	22:02	22:48	22:30	21:21	19:54 18	08:25 (88)	18:28 12	09:12 (87)	16:13	15:42
18	09:12	08:05	08:36 (87)	06:47	07:32 (85)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (88)	08:18	08:59 (87)	08:32	09:24
	16:24	17:38 3	08:39 (87)	18:45 11	07:43 (85)	20:56	22:04	22:49	22:29	21:18	19:51 19	08:25 (88)	18:25 13	09:12 (87)	16:12	15:42
19	09:10	08:02	08:33 (87)	06:44	07:26 (88)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (88)	08:20	08:59 (87)	08:34	09:25
	16:26	17:41 7	08:40 (87)	18:47 16	07:42 (85)	20:58	22:06	22:49	22:27	21:16	19:48 19	08:24 (88)	18:23 14	09:13 (87)	16:10	15:43
20	09:08	08:00	08:30 (87)	06:42	07:23 (88)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (88)	08:23	08:58 (87)	08:36	09:25
	16:28	17:43 11	08:41 (87)	18:49 17	07:40 (85)	21:00	22:08	22:50	22:25	21:13	19:45 19	08:24 (88)	18:20 14	09:12 (87)	16:08	15:43
21	09:07	07:57	08:27 (87)	06:39	07:21 (88)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (88)	08:25	08:58 (87)	08:39	09:26
	16:30	17:46 14	08:41 (87)	18:52 15	07:36 (88)	21:03	22:10	22:50	22:23	21:10	19:42 17	08:22 (88)	18:17 14	09:12 (87)	16:06	15:43
22	09:05	07:54	08:27 (87)	06:36	07:20 (88)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (88)	08:27	09:01 (87)	08:41	09:27
	16:32	17:48 14	08:41 (87)	18:54 18	07:38 (88)	21:05	22:12	22:50	22:22	21:08	19:39 16	08:22 (88)	18:15 10	09:11 (87)	16:04	15:44
23	09:03	07:52	08:28 (87)	06:33	07:19 (88)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (88)	08:30	09:04 (87)	08:43	09:27
	16:35	17:50 13	08:41 (87)	18:56 19	07:38 (88)	21:07	22:14	22:50	22:20	21:05	19:36 17	08:24 (85)	18:12 6	09:10 (87)	16:03	15:44
24	09:01	07:49	08:28 (87)	06:30	07:19 (88)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (88)	08:32	09:06 (87)	08:45	09:27
	16:37	17:53 13	08:41 (87)	18:58 19	07:38 (88)	21:10	22:16	22:50	22:18	21:02	19:33 16	08:25 (85)	18:09 2	09:08 (87)	16:01	15:45
25	09:00	07:46	08:29 (87)	06:27	07:18 (88)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (85)	07:35		08:47	09:28
	16:39	17:55 10	08:39 (87)	19:01 19	07:37 (88)	21:12	22:18	22:50	22:16	20:59	19:30 11	08:26 (85)	17:07		16:00	15:46
26	08:58	07:44	08:30 (87)	06:24	07:18 (88)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (85)	07:37		08:49	09:28
	16:42	17:58 7	08:37 (87)	19:03 19	07:37 (88)	21:14	22:20	22:50	22:14	20:57	19:28 12	08:26 (85)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (88)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (85)	07:39		08:52	09:28
	16:44	18:00		19:05 18	07:36 (88)	21:17	22:22	22:50	22:12	20:54	19:25 12	08:26 (85)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (88)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (85)	07:42		08:54	09:28
	16:47	18:02		19:08 16	07:34 (88)	21:19	22:23	22:50	22:09	20:51	19:22 12	08:26 (85)	16:59		15:55	15:48
29	08:52			07:16	08:19 (88)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (85)	07:44		08:56	09:28
	16:49			20:10 14	08:33 (88)	21:21	22:25	22:49	22:07	20:48	19:19 19	08:57 (89)	16:56		15:54	15:49
30	08:50			07:13	08:21 (88)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (85)	07:47		08:58	09:28
	16:51			20:12 9	08:30 (88)	21:24	22:27	22:49	22:05	20:45	19:16 21	08:59 (89)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		
Sun reduction			0,50		0,50							0,50		0,50		
Oper. time red.			0,80		0,80							0,80		0,80		
Wind dir. red.			0,73		0,70							0,69		0,72		
Total reduction			0,29		0,28							0,28		0,29		
Total, real			27		149							78		100		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April		May			June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (42)	04:40		06:17 (40)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (42)	22:30	23	06:40 (40)
2	09:27	08:43		07:33	07:04		05:42		07:32 (42)	04:39		06:16 (40)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (42)	22:32	24	06:40 (40)
3	09:27	08:41		07:30	07:01		05:39		07:32 (42)	04:37		06:16 (40)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (42)	22:34	25	06:41 (40)
4	09:26	08:39		07:27	06:58		05:36		07:34 (42)	04:36		06:16 (40)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (42)	22:35	26	06:42 (40)
5	09:26	08:37		07:24	06:55		05:34		07:36 (42)	04:35		06:16 (40)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (42)	22:36	27	06:43 (40)
6	09:25	08:34		07:21	06:53		05:32		07:38 (42)	04:34		06:16 (40)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (42)	22:38	27	06:43 (40)
7	09:24	08:32		07:19	06:50		05:29		07:40 (42)	04:33		06:16 (40)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (42)	22:39	27	06:43 (40)
8	09:24	08:30	09:03 (89)	07:16	06:47		05:27			04:32		06:15 (40)
	16:04	17:14	2 09:05 (89)	18:21	20:33		21:42			22:40	29	06:44 (40)
9	09:23	08:27	09:00 (89)	07:13	06:44		05:24			04:31		06:16 (40)
	16:06	17:16	7 09:07 (89)	18:24	20:35		21:44			22:42	29	06:45 (40)
10	09:22	08:25	08:58 (89)	07:10	06:41		07:48 (42)	05:22		04:31		06:15 (40)
	16:07	17:18	10 09:08 (89)	18:26	20:37	10	07:58 (42)	21:46		22:43	30	06:45 (40)
11	09:21	08:23	08:56 (89)	07:07	06:38		07:45 (42)	05:20		04:30		06:16 (40)
	16:09	17:21	13 09:09 (89)	18:28	20:40	17	08:02 (42)	21:49		22:44	29	06:45 (40)
12	09:20	08:20	08:55 (89)	07:04	06:36		07:41 (42)	05:17		04:29		06:15 (40)
	16:11	17:23	14 09:09 (89)	18:31	20:42	22	08:03 (42)	21:51		22:45	30	06:45 (40)
13	09:18	08:18	08:55 (89)	07:02	06:33		07:37 (42)	05:15		04:29		06:16 (40)
	16:13	17:26	14 09:09 (89)	18:33	20:44	27	08:04 (42)	21:53		22:46	30	06:46 (40)
14	09:17	08:15	08:56 (89)	06:59	06:30		07:35 (42)	05:13		04:28		06:16 (40)
	16:15	17:28	13 09:09 (89)	18:35	20:47	30	08:05 (42)	21:55		22:46	30	06:46 (40)
15	09:16	08:13	08:56 (89)	06:56	06:27		07:34 (42)	05:11		04:28		06:15 (40)
	16:17	17:31	13 09:09 (89)	18:38	20:49	33	08:07 (42)	21:57		22:47	31	06:46 (40)
16	09:14	08:10	08:56 (89)	06:53	06:24		07:33 (42)	05:09		04:28		06:16 (40)
	16:19	17:33	11 09:07 (89)	18:40	20:51	34	08:07 (42)	22:00		22:48	30	06:46 (40)
17	09:13	08:07	08:58 (89)	06:50	06:22		07:32 (42)	05:06		04:27		06:16 (40)
	16:21	17:36	7 09:05 (89)	18:42	20:54	35	08:07 (42)	22:02		22:48	31	06:47 (40)
18	09:12	08:05		06:47	06:19		07:31 (42)	05:04		04:27		06:16 (40)
	16:24	17:38		18:45	20:56	37	08:08 (42)	22:04		22:49	31	06:47 (40)
19	09:10	08:02		06:44	06:16		07:30 (42)	05:02		04:27		06:16 (40)
	16:26	17:41		18:47	20:58	38	08:08 (42)	22:06		22:49	31	06:47 (40)
20	09:08	08:00		06:42	06:13		07:30 (42)	05:00		04:27		06:16 (40)
	16:28	17:43		18:49	21:00	39	08:09 (42)	22:08		22:50	31	06:47 (40)
21	09:07	07:57		06:39	06:11		07:30 (42)	04:58		04:27		06:16 (40)
	16:30	17:46		18:52	21:03	38	08:08 (42)	22:10		22:50	31	06:47 (40)
22	09:05	07:54		06:36	06:08		07:29 (42)	04:56		04:27		06:17 (40)
	16:32	17:48		18:54	21:05	39	08:08 (42)	22:12		22:50	31	06:48 (40)
23	09:03	07:52		06:33	06:05		07:29 (42)	04:55		04:28		06:17 (40)
	16:35	17:50		18:56	21:07	39	08:08 (42)	22:14		22:50	31	06:48 (40)
24	09:02	07:49		06:30	06:02		07:29 (42)	04:53		04:28		06:17 (40)
	16:37	17:53		18:58	21:10	38	08:07 (42)	22:16		22:50	31	06:48 (40)
25	09:00	07:46		06:27	06:00		07:29 (42)	04:51		04:28		06:18 (40)
	16:39	17:55		19:01	21:12	38	08:07 (42)	22:18		22:50	31	06:49 (40)
26	08:58	07:44		06:24	05:57		07:29 (42)	04:49	06:24 (40)	04:29		06:18 (40)
	16:42	17:58		19:03	21:14	37	08:06 (42)	22:20	8 06:32 (40)	22:50	31	06:49 (40)
27	08:56	07:41		06:21	05:54		07:29 (42)	04:48	06:21 (40)	04:29		06:19 (40)
	16:44	18:00		19:05	21:17	37	08:06 (42)	22:22	13 06:34 (40)	22:50	30	06:49 (40)
28	08:54	07:38		06:18	05:52		07:29 (42)	04:46	06:20 (40)	04:30		06:18 (40)
	16:47	18:02		19:08	21:19	36	08:05 (42)	22:24	16 06:36 (40)	22:50	31	06:49 (40)
29	08:52			07:16	05:49		07:30 (42)	04:44	06:19 (40)	04:31		06:19 (40)
	16:49			20:10	21:21	34	08:04 (42)	22:25	18 06:37 (40)	22:49	30	06:49 (40)
30	08:50			07:13	05:47		07:30 (42)	04:43	06:19 (40)	04:31		06:19 (40)
	16:51			20:12	21:24	33	08:03 (42)	22:27	20 06:39 (40)	22:49	30	06:49 (40)
31	08:48			07:10				04:41	06:17 (40)			
	16:54			20:14				22:29	22 06:39 (40)			
Potential sun hours	221	260		365	432			521		547		
Total, worst case			104			691			254		878	
Sun reduction			0,50			0,50			0,50		0,50	
Oper. time red.			0,80			0,80			0,80		0,80	
Wind dir. red.			0,74			0,65			0,62		0,58	
Total reduction			0,29			0,26			0,25		0,23	
Total, real			31			178			63		204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October		November		December
1	04:32	06:20 (40)	05:24		06:33	07:44 (42)	07:39		07:51	08:28 (89)	09:00
	22:48 30	06:50 (40)	22:01		20:40 17	08:01 (42)	19:13		16:49 9	08:37 (89)	15:51
2	04:33	06:20 (40)	05:27		06:35	07:47 (42)	07:42		07:54	08:30 (89)	09:01
	22:48 30	06:50 (40)	21:58		20:37 10	07:57 (42)	19:10		16:47 6	08:36 (89)	15:50
3	04:34	06:20 (40)	05:29		06:38		07:44		07:56	08:33 (89)	09:03
	22:47 29	06:49 (40)	21:56		20:34		19:07		16:44 1	08:34 (89)	15:49
4	04:35	06:20 (40)	05:31		06:40		07:46		07:59		09:05
	22:46 29	06:49 (40)	21:54		20:31		19:05		16:42		15:48
5	04:36	06:21 (40)	05:33		06:42		07:48		08:01		09:07
	22:46 28	06:49 (40)	21:51		20:28		19:02		16:39		15:47
6	04:38	06:21 (40)	05:35	07:49 (42)	06:44		07:51		08:03		09:09
	22:45 28	06:49 (40)	21:49 13	08:02 (42)	20:25		18:59		16:37		15:47
7	04:39	06:23 (40)	05:38	07:46 (42)	06:47		07:53		08:06		09:10
	22:44 27	06:50 (40)	21:47 18	08:04 (42)	20:23		18:56		16:35		15:46
8	04:40	06:23 (40)	05:40	07:44 (42)	06:49		07:55		08:08		09:12
	22:43 26	06:49 (40)	21:44 22	08:06 (42)	20:20		18:53		16:32		15:45
9	04:42	06:23 (40)	05:42	07:43 (42)	06:51		07:57		08:11		09:13
	22:42 26	06:49 (40)	21:42 25	08:08 (42)	20:17		18:50		16:30		15:44
10	04:43	06:24 (40)	05:44	07:41 (42)	06:53		08:00		08:13		09:15
	22:40 24	06:48 (40)	21:39 28	08:09 (42)	20:14		18:48		16:28		15:44
11	04:45	06:25 (40)	05:46	07:40 (42)	06:55		08:02		08:15		09:16
	22:39 23	06:48 (40)	21:37 30	08:10 (42)	20:11		18:45		16:26		15:43
12	04:46	06:25 (40)	05:49	07:39 (42)	06:58		08:04		08:18		09:17
	22:38 23	06:48 (40)	21:34 32	08:11 (42)	20:08		18:42		16:24		15:43
13	04:48	06:26 (40)	05:51	07:38 (42)	07:00		08:07		08:20		09:19
	22:36 21	06:47 (40)	21:32 33	08:11 (42)	20:05		18:39		16:22		15:43
14	04:49	06:28 (40)	05:53	07:37 (42)	07:02		08:09		08:22		09:20
	22:35 18	06:46 (40)	21:29 35	08:12 (42)	20:02		18:36		16:19		15:43
15	04:51	06:28 (40)	05:55	07:36 (42)	07:04		08:11		08:25		09:21
	22:34 17	06:45 (40)	21:26 36	08:12 (42)	19:59		18:34		16:17		15:42
16	04:53	06:30 (40)	05:58	07:36 (42)	07:06		08:14		08:27		09:22
	22:32 14	06:44 (40)	21:24 37	08:13 (42)	19:57		18:31		16:15		15:42
17	04:54	06:31 (40)	06:00	07:35 (42)	07:09		08:16		08:29		09:23
	22:30 11	06:42 (40)	21:21 38	08:13 (42)	19:54		18:28		16:13		15:42
18	04:56	06:35 (40)	06:02	07:36 (42)	07:11		08:18		08:32		09:24
	22:29 5	06:40 (40)	21:18 38	08:14 (42)	19:51		18:25		16:12		15:42
19	04:58		06:04	07:35 (42)	07:13		08:21		08:34		09:25
	22:27		21:16 39	08:14 (42)	19:48		18:23		16:10		15:43
20	05:00		06:07	07:35 (42)	07:15		08:23		08:36		09:25
	22:25		21:13 38	08:13 (42)	19:45		18:20		16:08		15:43
21	05:02		06:09	07:34 (42)	07:17		08:25		08:39		09:26
	22:23		21:10 39	08:13 (42)	19:42		18:17		16:06		15:43
22	05:04		06:11	07:34 (42)	07:20		08:28		08:41		09:27
	22:22		21:08 39	08:13 (42)	19:39		18:15		16:04		15:44
23	05:06		06:13	07:34 (42)	07:22		08:30		08:43		09:27
	22:20		21:05 38	08:12 (42)	19:36		18:12		16:03		15:44
24	05:08		06:15	07:34 (42)	07:24		08:32	09:30 (89)	08:45		09:28
	22:18		21:02 37	08:11 (42)	19:33		18:09 3	09:33 (89)	16:01		15:45
25	05:10		06:18	07:34 (42)	07:26		07:35	08:28 (89)	08:47		09:28
	22:16		20:59 37	08:11 (42)	19:30		17:07 8	08:36 (89)	16:00		15:46
26	05:12		06:20	07:34 (42)	07:28		07:37	08:27 (89)	08:50		09:28
	22:14		20:57 36	08:10 (42)	19:28		17:04 11	08:38 (89)	15:58		15:46
27	05:14		06:22	07:35 (42)	07:31		07:39	08:25 (89)	08:52		09:28
	22:12		20:54 34	08:09 (42)	19:25		17:02 13	08:38 (89)	15:57		15:47
28	05:16		06:24	07:35 (42)	07:33		07:42	08:25 (89)	08:54		09:28
	22:10		20:51 32	08:07 (42)	19:22		16:59 14	08:39 (89)	15:55		15:48
29	05:18		06:27	07:36 (42)	07:35		07:44	08:24 (89)	08:56		09:28
	22:07		20:48 30	08:06 (42)	19:19		16:56 14	08:38 (89)	15:54		15:49
30	05:20		06:29	07:38 (42)	07:37		07:47	08:25 (89)	08:58		09:28
	22:05		20:45 27	08:05 (42)	19:16		16:54 13	08:38 (89)	15:53		15:50
31	05:22		06:31	07:41 (42)			07:49	08:26 (89)			09:28
	22:03		20:43 22	08:03 (42)			16:51 12	08:38 (89)			15:51
Potential sun hours	545		478		386		319		236		200
Total, worst case	409		833		27		88		16		
Sun reduction	0,50		0,50		0,50		0,50		0,50		
Oper. time red.	0,80		0,80		0,80		0,80		0,80		
Wind dir. red.	0,58		0,65		0,65		0,74		0,74		
Total reduction	0,23		0,26		0,26		0,29		0,29		
Total, real	95		215		7		26		5		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April			May			June		
1	09:28		08:46			07:35		08:16 (89)	07:07			05:44			04:40		06:01 (42)
	15:53		16:56			18:05	15	08:31 (89)	20:17			21:26			22:30	34	06:35 (42)
2	09:27		08:43			07:33		08:17 (89)	07:04			05:42			04:39		06:01 (42)
	15:54		16:59			18:07	13	08:30 (89)	20:19			21:28			22:32	35	06:36 (42)
3	09:27		08:41			07:30		08:18 (89)	07:01			05:39			04:38		06:01 (42)
	15:56		17:01			18:10	10	08:28 (89)	20:21			21:30			22:33	35	06:36 (42)
4	09:26		08:39			07:27		08:20 (89)	06:58			05:37			04:36		06:00 (42)
	15:57		17:04			18:12	5	08:25 (89)	20:24			21:33			22:35	36	06:36 (42)
5	09:26		08:37			07:24			06:55			05:34			04:35		06:01 (42)
	15:59		17:06			18:14			20:26			21:35			22:36	36	06:37 (42)
6	09:25		08:34			07:21			06:53			05:32			04:34		06:01 (42)
	16:00		17:09			18:17			20:28			21:37			22:38	36	06:37 (42)
7	09:24		08:32			07:19			06:50			05:29			04:33		06:01 (42)
	16:02		17:11			18:19			20:31			21:40			22:39	36	06:37 (42)
8	09:24		08:30			07:16		07:46 (88)	06:47			05:27			04:32		06:01 (42)
	16:04		17:14			18:21	7	07:53 (88)	20:33			21:42			22:40	36	06:37 (42)
9	09:23		08:27			07:13		07:44 (88)	06:44			05:24			04:31		06:02 (42)
	16:06		17:16			18:24	10	07:54 (88)	20:35			21:44			22:41	36	06:38 (42)
10	09:22		08:25			07:10		07:43 (88)	06:41			05:22			04:31		06:01 (42)
	16:07		17:19			18:26	13	07:56 (88)	20:37			21:46			22:43	37	06:38 (42)
11	09:21		08:23			07:07		07:42 (88)	06:38			05:20			04:30		06:02 (42)
	16:09		17:21			18:28	14	07:56 (88)	20:40			21:49			22:44	37	06:39 (42)
12	09:20		08:20			07:04		07:42 (88)	06:36			05:17			04:29		06:02 (42)
	16:11		17:23			18:31	14	07:56 (88)	20:42			21:51			22:45	36	06:38 (42)
13	09:18		08:18			07:02		07:41 (88)	06:33			05:15			04:29		06:02 (42)
	16:13		17:26			18:33	15	07:56 (88)	20:44			21:53			22:46	37	06:39 (42)
14	09:17		08:15			06:59		07:42 (88)	06:30			05:13			04:28		06:03 (42)
	16:15		17:28			18:35	13	07:55 (88)	20:47			21:55			22:46	36	06:39 (42)
15	09:16		08:13			06:56		07:42 (88)	06:27			05:11			04:28		06:02 (42)
	16:17		17:31			18:38	11	07:53 (88)	20:49			21:57			22:47	37	06:39 (42)
16	09:14		08:10			06:53		07:44 (88)	06:24			05:09			04:28		06:02 (42)
	16:19		17:33			18:40	7	07:51 (88)	20:51			22:00			22:48	37	06:39 (42)
17	09:13		08:07			06:50			06:22			05:06		06:12 (42)	04:27		06:03 (42)
	16:21		17:36			18:42			20:54			22:02	10	06:22 (42)	22:48	37	06:40 (42)
18	09:12		08:05			06:47			06:19			05:04		06:11 (42)	04:27		06:03 (42)
	16:24		17:38			18:45			20:56			22:04	14	06:25 (42)	22:49	37	06:40 (42)
19	09:10		08:02			06:44			06:16			05:02		06:09 (42)	04:27		06:03 (42)
	16:26		17:41			18:47			20:58			22:06	18	06:27 (42)	22:49	37	06:40 (42)
20	09:08		08:00			06:42			06:13			05:00		06:08 (42)	04:27		06:03 (42)
	16:28		17:43			18:49			21:00			22:08	20	06:28 (42)	22:50	37	06:40 (42)
21	09:07		07:57			06:39			06:11			04:58		06:06 (42)	04:27		06:03 (42)
	16:30		17:46			18:52			21:03			22:10	23	06:29 (42)	22:50	37	06:40 (42)
22	09:05		07:54			06:36			06:08			04:56		06:05 (42)	04:27		06:04 (42)
	16:32		17:48			18:54			21:05			22:12	25	06:30 (42)	22:50	37	06:41 (42)
23	09:03		07:52		08:21 (89)	06:33			06:05			04:55		06:03 (42)	04:28		06:04 (42)
	16:35		17:50	8	08:29 (89)	18:56			21:07			22:14	28	06:31 (42)	22:50	37	06:41 (42)
24	09:02		07:49		08:18 (89)	06:30			06:02			04:53		06:03 (42)	04:28		06:04 (42)
	16:37		17:53	12	08:30 (89)	18:58			21:10			22:16	29	06:32 (42)	22:50	37	06:41 (42)
25	09:00		07:46		08:17 (89)	06:27			06:00			04:51		06:02 (42)	04:28		06:05 (42)
	16:39		17:55	14	08:31 (89)	19:01			21:12			22:18	30	06:32 (42)	22:50	37	06:42 (42)
26	08:58		07:44		08:16 (89)	06:24			05:57			04:49		06:02 (42)	04:29		06:05 (42)
	16:42		17:58	15	08:31 (89)	19:03			21:14			22:20	31	06:33 (42)	22:50	36	06:41 (42)
27	08:56		07:41		08:15 (89)	06:21			05:54			04:48		06:01 (42)	04:29		06:05 (42)
	16:44		18:00	16	08:31 (89)	19:05			21:17			22:22	32	06:33 (42)	22:50	37	06:42 (42)
28	08:54		07:38		08:15 (89)	06:18			05:52			04:46		06:01 (42)	04:30		06:05 (42)
	16:47		18:02	15	08:30 (89)	19:08			21:19			22:24	33	06:34 (42)	22:50	37	06:42 (42)
29	08:52					07:16			05:49			04:44		06:01 (42)	04:31		06:05 (42)
	16:49					20:10			21:21			22:25	34	06:35 (42)	22:49	37	06:42 (42)
30	08:50					07:13			05:47			04:43		06:01 (42)	04:32		06:06 (42)
	16:51					20:12			21:24			22:27	34	06:35 (42)	22:49	37	06:43 (42)
31	08:48					07:10						04:41		06:01 (42)			
	16:54					20:14						22:29	34	06:35 (42)			
Potential sun hours	221		260			365			432			521			547		
Total, worst case				80			147						395			1094	
Sun reduction				0,50			0,50						0,50			0,50	
Oper. time red.				0,80			0,80						0,80			0,80	
Wind dir. red.				0,72			0,71						0,58			0,58	
Total reduction				0,29			0,28						0,23			0,23	
Total, real				23			42						91			252	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August	September			October			November	December
1	04:32		06:06 (42)	05:24	06:33			07:39		08:21 (88)	07:51	09:00
	22:48	37	06:43 (42)	22:01	20:40			19:13	14	08:35 (88)	16:49	15:52
2	04:33		06:07 (42)	05:27	06:35			07:42		08:20 (88)	07:54	09:01
	22:48	36	06:43 (42)	21:58	20:37			19:10	15	08:35 (88)	16:47	15:50
3	04:34		06:06 (42)	05:29	06:38			07:44		08:20 (88)	07:56	09:03
	22:47	37	06:43 (42)	21:56	20:34			19:07	13	08:33 (88)	16:44	15:49
4	04:35		06:06 (42)	05:31	06:40			07:46		08:21 (88)	07:59	09:05
	22:46	37	06:43 (42)	21:54	20:31			19:05	12	08:33 (88)	16:42	15:48
5	04:37		06:06 (42)	05:33	06:42			07:48		08:22 (88)	08:01	09:07
	22:46	37	06:43 (42)	21:51	20:28			19:02	9	08:31 (88)	16:39	15:47
6	04:38		06:08 (42)	05:35	06:44			07:51			08:03	09:09
	22:45	36	06:44 (42)	21:49	20:25			18:59			16:37	15:47
7	04:39		06:08 (42)	05:38	06:47			07:53			08:06	09:10
	22:44	36	06:44 (42)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:08 (42)	05:40	06:49			07:55			08:08	09:12
	22:43	36	06:44 (42)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:08 (42)	05:42	06:51			07:57			08:11	09:13
	22:42	36	06:44 (42)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:08 (42)	05:44	06:53			08:00		08:54 (89)	08:13	09:15
	22:40	35	06:43 (42)	21:39	20:14			18:48	7	09:01 (89)	16:28	15:44
11	04:45		06:09 (42)	05:46	06:55			08:02		08:51 (89)	08:15	09:16
	22:39	35	06:44 (42)	21:37	20:11			18:45	11	09:02 (89)	16:26	15:43
12	04:46		06:09 (42)	05:49	06:58			08:04		08:49 (89)	08:18	09:17
	22:38	35	06:44 (42)	21:34	20:08			18:42	14	09:03 (89)	16:24	15:43
13	04:48		06:09 (42)	05:51	07:00			08:07		08:49 (89)	08:20	09:19
	22:36	34	06:43 (42)	21:31	20:05			18:39	15	09:04 (89)	16:22	15:43
14	04:49		06:10 (42)	05:53	07:02			08:09		08:48 (89)	08:22	09:20
	22:35	33	06:43 (42)	21:29	20:02			18:36	15	09:03 (89)	16:19	15:43
15	04:51		06:10 (42)	05:55	07:04			08:11		08:48 (89)	08:25	09:21
	22:34	33	06:43 (42)	21:26	19:59			18:34	16	09:04 (89)	16:17	15:42
16	04:53		06:11 (42)	05:58	07:06			08:14		08:48 (89)	08:27	09:22
	22:32	32	06:43 (42)	21:24	19:57			18:31	15	09:03 (89)	16:15	15:42
17	04:54		06:11 (42)	06:00	07:09			08:16		08:49 (89)	08:29	09:23
	22:30	31	06:42 (42)	21:21	19:54			18:28	13	09:02 (89)	16:14	15:42
18	04:56		06:12 (42)	06:02	07:11			08:18		08:50 (89)	08:32	09:24
	22:29	30	06:42 (42)	21:18	19:51			18:25	11	09:01 (89)	16:12	15:42
19	04:58		06:13 (42)	06:04	07:13			08:20		08:53 (89)	08:34	09:25
	22:27	29	06:42 (42)	21:16	19:48			18:23	6	08:59 (89)	16:10	15:43
20	05:00		06:13 (42)	06:07	07:15			08:23			08:36	09:25
	22:25	28	06:41 (42)	21:13	19:45			18:20			16:08	15:43
21	05:02		06:14 (42)	06:09	07:17			08:25			08:39	09:26
	22:23	27	06:41 (42)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:16 (42)	06:11	07:20			08:28			08:41	09:27
	22:22	24	06:40 (42)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:17 (42)	06:13	07:22			08:30			08:43	09:27
	22:20	21	06:38 (42)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:18 (42)	06:15	07:24			08:32			08:45	09:28
	22:18	19	06:37 (42)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:20 (42)	06:18	07:26			07:35			08:47	09:28
	22:16	16	06:36 (42)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:22 (42)	06:20	07:28			07:37			08:49	09:28
	22:14	12	06:34 (42)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:25 (42)	06:22	07:31		08:27 (88)	07:39			08:52	09:28
	22:12	6	06:31 (42)	20:54	19:25	5	08:32 (88)	17:02			15:57	15:47
28	05:16			06:24	07:33		08:24 (88)	07:42			08:54	09:28
	22:10			20:51	19:22	10	08:34 (88)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:22 (88)	07:44			08:56	09:28
	22:07			20:48	19:19	12	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:21 (88)	07:47			08:58	09:28
	22:05			20:45	19:16	14	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		808				41			186			
Sun reduction		0,50				0,50			0,50			
Oper. time red.		0,80				0,80			0,80			
Wind dir. red.		0,58				0,70			0,72			
Total reduction		0,23				0,28			0,29			
Total, real		186				11			53			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February			March			April	May			June		
1	09:28	08:46			07:35		08:18 (89)	07:07	05:44			04:40		06:18 (42)
	15:53	16:56			18:05	13	08:31 (89)	20:17	21:26			22:30	28	06:46 (42)
2	09:27	08:43			07:33		08:19 (89)	07:04	05:42			04:39		06:18 (42)
	15:54	16:59			18:07	10	08:29 (89)	20:19	21:28			22:32	28	06:46 (42)
3	09:27	08:41			07:30		08:21 (89)	07:01	05:39			04:38		06:17 (42)
	15:56	17:01			18:10	5	08:26 (89)	20:21	21:31			22:33	29	06:46 (42)
4	09:26	08:39			07:27			06:58	05:37			04:36		06:16 (42)
	15:57	17:04			18:12			20:24	21:33			22:35	30	06:46 (42)
5	09:26	08:37			07:24			06:55	05:34			04:35		06:16 (42)
	15:59	17:06			18:14			20:26	21:35			22:36	31	06:47 (42)
6	09:25	08:34			07:21			06:53	05:32			04:34		06:15 (42)
	16:00	17:09			18:17			20:28	21:37			22:38	32	06:47 (42)
7	09:24	08:32			07:19		07:48 (88)	06:50	05:29			04:33		06:14 (42)
	16:02	17:11			18:19	6	07:54 (88)	20:31	21:40			22:39	32	06:46 (42)
8	09:24	08:30			07:16		07:46 (88)	06:47	05:27			04:32		06:13 (42)
	16:04	17:14			18:21	10	07:56 (88)	20:33	21:42			22:40	33	06:46 (42)
9	09:23	08:27			07:13		07:44 (88)	06:44	05:24			04:31		06:14 (42)
	16:06	17:16			18:24	13	07:57 (88)	20:35	21:44			22:41	33	06:47 (42)
10	09:22	08:25			07:10		07:44 (88)	06:41	05:22			04:31		06:13 (42)
	16:07	17:19			18:26	14	07:58 (88)	20:37	21:46			22:43	33	06:46 (42)
11	09:21	08:23			07:07		07:44 (88)	06:38	05:20			04:30		06:14 (42)
	16:09	17:21			18:28	14	07:58 (88)	20:40	21:49			22:44	33	06:47 (42)
12	09:20	08:20			07:04		07:44 (88)	06:36	05:17			04:29		06:14 (42)
	16:11	17:23			18:31	13	07:57 (88)	20:42	21:51			22:45	32	06:46 (42)
13	09:18	08:18			07:02		07:44 (88)	06:33	05:15			04:29		06:14 (42)
	16:13	17:26			18:33	12	07:56 (88)	20:44	21:53			22:46	33	06:47 (42)
14	09:17	08:15			06:59		07:45 (88)	06:30	05:13			04:28		06:15 (42)
	16:15	17:28			18:35	10	07:55 (88)	20:47	21:55			22:46	32	06:47 (42)
15	09:16	08:13			06:56		07:46 (88)	06:27	05:11			04:28		06:15 (42)
	16:17	17:31			18:38	6	07:52 (88)	20:49	21:57			22:47	32	06:47 (42)
16	09:14	08:10			06:53			06:24	05:09		06:39 (42)	04:28		06:15 (42)
	16:19	17:33			18:40			20:51	22:00	2	06:41 (42)	22:48	32	06:47 (42)
17	09:13	08:07			06:50			06:22	05:06		06:37 (42)	04:27		06:15 (42)
	16:21	17:36			18:42			20:54	22:02	4	06:41 (42)	22:48	32	06:47 (42)
18	09:12	08:05			06:47			06:19	05:04		06:36 (42)	04:27		06:16 (42)
	16:24	17:38			18:45			20:56	22:04	7	06:43 (42)	22:49	31	06:47 (42)
19	09:10	08:02			06:44			06:16	05:02		06:35 (42)	04:27		06:16 (42)
	16:26	17:41			18:47			20:58	22:06	8	06:43 (42)	22:49	31	06:47 (42)
20	09:08	08:00			06:42			06:13	05:00		06:33 (42)	04:27		06:16 (42)
	16:28	17:43			18:49			21:00	22:08	10	06:43 (42)	22:50	31	06:47 (42)
21	09:07	07:57			06:39			06:11	04:58		06:31 (42)	04:27		06:16 (42)
	16:30	17:46			18:52			21:03	22:10	12	06:43 (42)	22:50	31	06:47 (42)
22	09:05	07:54		08:23 (89)	06:36			06:08	04:56		06:30 (42)	04:27		06:17 (42)
	16:32	17:48	5	08:28 (89)	18:54			21:05	22:12	14	06:44 (42)	22:50	31	06:48 (42)
23	09:03	07:52		08:21 (89)	06:33			06:05	04:55		06:29 (42)	04:28		06:17 (42)
	16:35	17:50	10	08:31 (89)	18:56			21:07	22:14	15	06:44 (42)	22:50	31	06:48 (42)
24	09:02	07:49		08:18 (89)	06:30			06:02	04:53		06:28 (42)	04:28		06:17 (42)
	16:37	17:53	13	08:31 (89)	18:58			21:10	22:16	17	06:45 (42)	22:50	31	06:48 (42)
25	09:00	07:46		08:17 (89)	06:27			06:00	04:51		06:26 (42)	04:28		06:18 (42)
	16:39	17:55	15	08:32 (89)	19:01			21:12	22:18	19	06:45 (42)	22:50	31	06:49 (42)
26	08:58	07:44		08:17 (89)	06:24			05:57	04:49		06:25 (42)	04:29		06:17 (42)
	16:42	17:58	15	08:32 (89)	19:03			21:14	22:20	20	06:45 (42)	22:50	32	06:49 (42)
27	08:56	07:41		08:17 (89)	06:21			05:54	04:48		06:23 (42)	04:29		06:18 (42)
	16:44	18:00	14	08:31 (89)	19:05			21:17	22:22	22	06:45 (42)	22:50	32	06:50 (42)
28	08:54	07:38		08:17 (89)	06:18			05:52	04:46		06:23 (42)	04:30		06:17 (42)
	16:47	18:02	14	08:31 (89)	19:08			21:19	22:24	22	06:45 (42)	22:50	32	06:49 (42)
29	08:52				07:16			05:49	04:44		06:22 (42)	04:31		06:18 (42)
	16:49				20:10			21:21	22:25	24	06:46 (42)	22:49	32	06:50 (42)
30	08:50				07:13			05:47	04:43		06:21 (42)	04:32		06:18 (42)
	16:51				20:12			21:24	22:27	25	06:46 (42)	22:49	33	06:51 (42)
31	08:48				07:10				04:41		06:19 (42)			
	16:54				20:14				22:29	26	06:45 (42)			
Potential sun hours	221	260			365			432	521			547		
Total, worst case			86			126				247			944	
Sun reduction			0,50			0,50				0,50			0,50	
Oper. time red.			0,80			0,80				0,80			0,80	
Wind dir. red.			0,73			0,71				0,58			0,58	
Total reduction			0,29			0,28				0,23			0,23	
Total, real			25			36				58			220	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August		September			October			November	December
1	04:32		06:18 (42)	05:24		06:33			07:39		08:23 (88)	07:51	09:00
	22:48	33	06:51 (42)	22:01		20:40			19:13	13	08:36 (88)	16:49	15:52
2	04:33		06:19 (42)	05:27		06:35			07:42		08:22 (88)	07:54	09:01
	22:48	33	06:52 (42)	21:58		20:37			19:10	14	08:36 (88)	16:47	15:50
3	04:34		06:18 (42)	05:29		06:38			07:44		08:21 (88)	07:56	09:03
	22:47	33	06:51 (42)	21:56		20:34			19:07	14	08:35 (88)	16:44	15:49
4	04:35		06:18 (42)	05:31		06:40			07:46		08:22 (88)	07:59	09:05
	22:46	33	06:51 (42)	21:54		20:31			19:05	13	08:35 (88)	16:42	15:48
5	04:37		06:19 (42)	05:33		06:42			07:48		08:22 (88)	08:01	09:07
	22:46	33	06:52 (42)	21:51		20:28			19:02	12	08:34 (88)	16:39	15:47
6	04:38		06:21 (42)	05:35		06:44			07:51		08:23 (88)	08:03	09:09
	22:45	32	06:53 (42)	21:49		20:25			18:59	9	08:32 (88)	16:37	15:47
7	04:39		06:22 (42)	05:38		06:47			07:53			08:06	09:10
	22:44	31	06:53 (42)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:23 (42)	05:40		06:49			07:55			08:08	09:12
	22:43	30	06:53 (42)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:24 (42)	05:42		06:51			07:57			08:11	09:13
	22:42	29	06:53 (42)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:25 (42)	05:44		06:53			08:00			08:13	09:15
	22:40	28	06:53 (42)	21:39		20:14			18:48			16:28	15:44
11	04:45		06:26 (42)	05:46		06:55			08:02		08:54 (89)	08:15	09:16
	22:39	28	06:54 (42)	21:37		20:11			18:45	7	09:01 (89)	16:26	15:43
12	04:46		06:27 (42)	05:49		06:58			08:04		08:51 (89)	08:18	09:17
	22:38	27	06:54 (42)	21:34		20:08			18:42	12	09:03 (89)	16:24	15:43
13	04:48		06:28 (42)	05:51		07:00			08:07		08:51 (89)	08:20	09:19
	22:36	26	06:54 (42)	21:32		20:05			18:39	13	09:04 (89)	16:22	15:43
14	04:49		06:30 (42)	05:53		07:02			08:09		08:49 (89)	08:22	09:20
	22:35	24	06:54 (42)	21:29		20:02			18:36	15	09:04 (89)	16:19	15:43
15	04:51		06:31 (42)	05:55		07:04			08:11		08:49 (89)	08:25	09:21
	22:34	23	06:54 (42)	21:26		19:59			18:34	15	09:04 (89)	16:17	15:42
16	04:53		06:33 (42)	05:58		07:06			08:14		08:49 (89)	08:27	09:22
	22:32	22	06:55 (42)	21:24		19:57			18:31	15	09:04 (89)	16:15	15:42
17	04:54		06:33 (42)	06:00		07:09			08:16		08:50 (89)	08:29	09:23
	22:30	21	06:54 (42)	21:21		19:54			18:28	14	09:04 (89)	16:14	15:42
18	04:56		06:35 (42)	06:02		07:11			08:18		08:50 (89)	08:32	09:24
	22:29	20	06:55 (42)	21:18		19:51			18:25	12	09:02 (89)	16:12	15:42
19	04:58		06:37 (42)	06:04		07:13			08:21		08:53 (89)	08:34	09:25
	22:27	18	06:55 (42)	21:16		19:48			18:23	8	09:01 (89)	16:10	15:43
20	05:00		06:38 (42)	06:07		07:15			08:23		08:55 (89)	08:36	09:25
	22:25	16	06:54 (42)	21:13		19:45			18:20	3	08:58 (89)	16:08	15:43
21	05:02		06:39 (42)	06:09		07:17			08:25			08:39	09:26
	22:23	15	06:54 (42)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:41 (42)	06:11		07:20			08:28			08:41	09:27
	22:22	13	06:54 (42)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:42 (42)	06:13		07:22			08:30			08:43	09:27
	22:20	11	06:53 (42)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:44 (42)	06:15		07:24			08:32			08:45	09:28
	22:18	9	06:53 (42)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:45 (42)	06:18		07:26			07:35			08:47	09:28
	22:16	8	06:53 (42)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:47 (42)	06:20		07:28			07:37			08:49	09:28
	22:14	6	06:53 (42)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:49 (42)	06:22		07:31			07:39			08:52	09:28
	22:12	3	06:52 (42)	20:54		19:25			17:02			15:57	15:47
28	05:16		06:51 (42)	06:24		07:33		08:29 (88)	07:42			08:54	09:28
	22:10	1	06:52 (42)	20:51		19:22	3	08:32 (88)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:25 (88)	07:44			08:56	09:28
	22:07			20:48		19:19	9	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:23 (88)	07:47			08:58	09:28
	22:05			20:45		19:16	12	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		606					24			189			
Sun reduction		0,50					0,50			0,50			
Oper. time red.		0,80					0,80			0,80			
Wind dir. red.		0,58					0,70			0,72			
Total reduction		0,23					0,28			0,29			
Total, real		141					7			54			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April		May			June		
1	09:28	08:46			07:35		08:11 (88)	07:07		05:44		07:08 (42)	04:40		06:45 (42)
	15:53	16:56			18:05	6	08:17 (88)	20:17		21:26	1	07:09 (42)	22:30	32	07:17 (42)
2	09:27	08:43			07:33		08:08 (88)	07:04		05:42		07:06 (42)	04:39		06:46 (42)
	15:54	16:59			18:07	11	08:19 (88)	20:19		21:28	6	07:12 (42)	22:32	31	07:17 (42)
3	09:27	08:41			07:30		08:06 (88)	07:01		05:39		07:04 (42)	04:38		06:46 (42)
	15:56	17:01			18:10	13	08:19 (88)	20:21		21:31	9	07:13 (42)	22:33	31	07:17 (42)
4	09:26	08:39			07:27		08:05 (88)	06:58		05:37		07:02 (42)	04:36		06:47 (42)
	15:57	17:04			18:12	14	08:19 (88)	20:24		21:33	13	07:15 (42)	22:35	29	07:16 (42)
5	09:26	08:37			07:24		08:05 (88)	06:55		05:34		07:00 (42)	04:35		06:48 (42)
	15:59	17:06			18:14	14	08:19 (88)	20:26		21:35	16	07:16 (42)	22:36	29	07:17 (42)
6	09:25	08:34			07:21		08:05 (88)	06:53		05:32		06:58 (42)	04:34		06:49 (42)
	16:00	17:09			18:17	13	08:18 (88)	20:28		21:37	19	07:17 (42)	22:38	27	07:16 (42)
7	09:24	08:32			07:19		08:05 (88)	06:50		05:29		06:55 (42)	04:33		06:49 (42)
	16:02	17:11			18:19	12	08:17 (88)	20:31		21:40	22	07:17 (42)	22:39	27	07:16 (42)
8	09:24	08:30			07:16		08:06 (88)	06:47		05:27		06:54 (42)	04:32		06:49 (42)
	16:04	17:14			18:21	10	08:16 (88)	20:33		21:42	24	07:18 (42)	22:40	26	07:15 (42)
9	09:23	08:27			07:13		08:08 (88)	06:44		05:24		06:52 (42)	04:31		06:50 (42)
	16:06	17:16			18:24	5	08:13 (88)	20:35		21:44	27	07:19 (42)	22:42	26	07:16 (42)
10	09:22	08:25			07:10			06:41		05:22		06:50 (42)	04:31		06:51 (42)
	16:07	17:18			18:26			20:37		21:46	29	07:19 (42)	22:43	24	07:15 (42)
11	09:21	08:23			07:07			06:38		05:20		06:48 (42)	04:30		06:52 (42)
	16:09	17:21			18:28			20:40		21:49	32	07:20 (42)	22:44	23	07:15 (42)
12	09:20	08:20			07:04			06:36		05:17		06:46 (42)	04:29		06:52 (42)
	16:11	17:23			18:31			20:42		21:51	34	07:20 (42)	22:45	22	07:14 (42)
13	09:18	08:18			07:02			06:33		05:15		06:45 (42)	04:29		06:53 (42)
	16:13	17:26			18:33			20:44		21:53	35	07:20 (42)	22:46	21	07:14 (42)
14	09:17	08:15			06:59			06:30		05:13		06:43 (42)	04:28		06:53 (42)
	16:15	17:28			18:35			20:47		21:55	37	07:20 (42)	22:46	22	07:15 (42)
15	09:16	08:13		08:44 (89)	06:56			06:27		05:11		06:41 (42)	04:28		06:53 (42)
	16:17	17:31	6	08:50 (89)	18:38			20:49		21:57	39	07:20 (42)	22:47	21	07:14 (42)
16	09:14	08:10		08:42 (89)	06:53			06:24		05:09		06:41 (42)	04:28		06:54 (42)
	16:19	17:33	10	08:52 (89)	18:40			20:51		22:00	39	07:20 (42)	22:48	20	07:14 (42)
17	09:13	08:07		08:40 (89)	06:50			06:22		05:06		06:40 (42)	04:27		06:54 (42)
	16:21	17:36	13	08:53 (89)	18:42			20:54		22:02	40	07:20 (42)	22:48	20	07:14 (42)
18	09:12	08:05		08:40 (89)	06:47			06:19		05:04		06:41 (42)	04:27		06:55 (42)
	16:24	17:38	14	08:54 (89)	18:45			20:56		22:04	40	07:21 (42)	22:49	19	07:14 (42)
19	09:10	08:02		08:39 (89)	06:44			06:16		05:02		06:41 (42)	04:27		06:55 (42)
	16:26	17:41	15	08:54 (89)	18:47			20:58		22:06	40	07:21 (42)	22:49	19	07:14 (42)
20	09:08	08:00		08:39 (89)	06:42			06:13		05:00		06:41 (42)	04:27		06:55 (42)
	16:28	17:43	15	08:54 (89)	18:49			21:00		22:08	39	07:20 (42)	22:50	19	07:14 (42)
21	09:07	07:57		08:39 (89)	06:39			06:11		04:58		06:41 (42)	04:27		06:55 (42)
	16:30	17:46	14	08:53 (89)	18:52			21:03		22:10	39	07:20 (42)	22:50	19	07:14 (42)
22	09:05	07:54		08:39 (89)	06:36			06:08		04:56		06:41 (42)	04:27		06:56 (42)
	16:32	17:48	13	08:52 (89)	18:54			21:05		22:12	39	07:20 (42)	22:50	19	07:15 (42)
23	09:03	07:52		08:41 (89)	06:33			06:05		04:55		06:41 (42)	04:28		06:56 (42)
	16:35	17:50	11	08:52 (89)	18:56			21:07		22:14	39	07:20 (42)	22:50	19	07:15 (42)
24	09:02	07:49		08:42 (89)	06:30			06:02		04:53		06:42 (42)	04:28		06:56 (42)
	16:37	17:53	8	08:50 (89)	18:58			21:10		22:16	38	07:20 (42)	22:50	19	07:15 (42)
25	09:00	07:46			06:27			06:00		04:51		06:42 (42)	04:28		06:57 (42)
	16:39	17:55			19:01			21:12		22:18	37	07:19 (42)	22:50	19	07:16 (42)
26	08:58	07:44			06:24			05:57		04:49		06:43 (42)	04:29		06:56 (42)
	16:42	17:58			19:03			21:14		22:20	37	07:20 (42)	22:50	20	07:16 (42)
27	08:56	07:41			06:21			05:54		04:48		06:43 (42)	04:29		06:56 (42)
	16:44	18:00			19:05			21:17		22:22	36	07:19 (42)	22:50	21	07:17 (42)
28	08:54	07:38			06:18			05:52		04:46		06:43 (42)	04:30		06:56 (42)
	16:47	18:02			19:08			21:19		22:24	36	07:19 (42)	22:50	21	07:17 (42)
29	08:52				07:16			05:49		04:44		06:44 (42)	04:31		06:56 (42)
	16:49				20:10			21:21		22:25	35	07:19 (42)	22:49	21	07:17 (42)
30	08:50				07:13			05:47		04:43		06:45 (42)	04:32		06:56 (42)
	16:51				20:12			21:24		22:27	34	07:19 (42)	22:49	22	07:18 (42)
31	08:48				07:10					04:41		06:44 (42)			
	16:54				20:14					22:29	34	07:18 (42)			
Potential sun hours	221	260			365			432		521			547		
Total, worst case			119			98				945			688		
Sun reduction			0,50			0,50				0,50			0,50		
Oper. time red.			0,80			0,80				0,80			0,80		
Wind dir. red.			0,74			0,72				0,59			0,59		
Total reduction			0,29			0,29				0,24			0,24		
Total, real			35			28				224			163		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September	October		November	December
1	04:32	06:56 (42)	05:24	06:57 (42)	06:33	07:39		07:51	09:00
	22:48	23 07:19 (42)	22:01	33 07:30 (42)	20:40	19:13		16:49	15:52
2	04:33	06:56 (42)	05:27	06:59 (42)	06:35	07:42		07:54	09:01
	22:48	24 07:20 (42)	21:58	31 07:30 (42)	20:37	19:10		16:47	15:50
3	04:34	06:55 (42)	05:29	07:01 (42)	06:38	07:44		07:56	09:03
	22:47	25 07:20 (42)	21:56	28 07:29 (42)	20:34	19:07		16:44	15:49
4	04:35	06:55 (42)	05:31	07:03 (42)	06:40	07:46		07:59	09:05
	22:46	25 07:20 (42)	21:54	26 07:29 (42)	20:31	19:05		16:42	15:48
5	04:37	06:54 (42)	05:33	07:05 (42)	06:42	07:48	08:44 (88)	08:01	09:07
	22:46	27 07:21 (42)	21:51	23 07:28 (42)	20:28	19:02	8 08:52 (88)	16:39	15:47
6	04:38	06:55 (42)	05:35	07:06 (42)	06:44	07:51	08:42 (88)	08:03	09:09
	22:45	28 07:23 (42)	21:49	21 07:27 (42)	20:25	18:59	11 08:53 (88)	16:37	15:47
7	04:39	06:55 (42)	05:38	07:08 (42)	06:47	07:53	08:41 (88)	08:06	09:10
	22:44	28 07:23 (42)	21:47	18 07:26 (42)	20:23	18:56	13 08:54 (88)	16:35	15:46
8	04:40	06:54 (42)	05:40	07:10 (42)	06:49	07:55	08:40 (88)	08:08	09:12
	22:43	30 07:24 (42)	21:44	15 07:25 (42)	20:20	18:53	14 08:54 (88)	16:32	15:45
9	04:42	06:54 (42)	05:42	07:12 (42)	06:51	07:57	08:39 (88)	08:11	09:13
	22:42	30 07:24 (42)	21:42	12 07:24 (42)	20:17	18:50	15 08:54 (88)	16:30	15:44
10	04:43	06:53 (42)	05:44	07:13 (42)	06:53	08:00	08:40 (88)	08:13	09:15
	22:40	31 07:24 (42)	21:39	9 07:22 (42)	20:14	18:48	14 08:54 (88)	16:28	15:44
11	04:45	06:54 (42)	05:46	07:15 (42)	06:55	08:02	08:40 (88)	08:15	09:16
	22:39	32 07:26 (42)	21:37	5 07:20 (42)	20:11	18:45	13 08:53 (88)	16:26	15:43
12	04:46	06:53 (42)	05:49		06:58	08:04	08:42 (88)	08:18	09:17
	22:38	33 07:26 (42)	21:34		20:08	18:42	9 08:51 (88)	16:24	15:43
13	04:48	06:53 (42)	05:51		07:00	08:07	08:45 (88)	08:20	09:19
	22:36	33 07:26 (42)	21:32		20:05	18:39	4 08:49 (88)	16:22	15:43
14	04:49	06:53 (42)	05:53		07:02	08:09		08:22	09:20
	22:35	34 07:27 (42)	21:29		20:02	18:36		16:19	15:43
15	04:51	06:52 (42)	05:55		07:04	08:11		08:25	09:21
	22:34	35 07:27 (42)	21:26		19:59	18:34		16:17	15:42
16	04:53	06:52 (42)	05:58		07:06	08:14		08:27	09:22
	22:32	36 07:28 (42)	21:24		19:57	18:31		16:15	15:42
17	04:54	06:52 (42)	06:00		07:09	08:16	09:17 (89)	08:29	09:23
	22:30	36 07:28 (42)	21:21		19:54	18:28	2 09:19 (89)	16:13	15:42
18	04:56	06:52 (42)	06:02		07:11	08:18	09:13 (89)	08:32	09:24
	22:29	37 07:29 (42)	21:18		19:51	18:25	9 09:22 (89)	16:12	15:42
19	04:58	06:52 (42)	06:04		07:13	08:21	09:12 (89)	08:34	09:25
	22:27	38 07:30 (42)	21:16		19:48	18:23	12 09:24 (89)	16:10	15:43
20	05:00	06:51 (42)	06:07		07:15	08:23	09:10 (89)	08:36	09:25
	22:25	38 07:29 (42)	21:13		19:45	18:20	14 09:24 (89)	16:08	15:43
21	05:02	06:51 (42)	06:09		07:17	08:25	09:10 (89)	08:39	09:26
	22:23	39 07:30 (42)	21:10		19:42	18:17	15 09:25 (89)	16:06	15:43
22	05:04	06:52 (42)	06:11		07:19	08:28	09:09 (89)	08:41	09:27
	22:22	39 07:31 (42)	21:08		19:39	18:15	15 09:24 (89)	16:04	15:44
23	05:06	06:51 (42)	06:13		07:22	08:30	09:09 (89)	08:43	09:27
	22:20	39 07:30 (42)	21:05		19:36	18:12	15 09:24 (89)	16:03	15:44
24	05:08	06:51 (42)	06:15		07:24	08:32	09:09 (89)	08:45	09:28
	22:18	40 07:31 (42)	21:02		19:33	18:09	14 09:23 (89)	16:01	15:45
25	05:10	06:51 (42)	06:18		07:26	07:35	08:10 (89)	08:47	09:28
	22:16	40 07:31 (42)	20:59		19:30	17:07	13 08:23 (89)	16:00	15:46
26	05:12	06:51 (42)	06:20		07:28	07:37	08:13 (89)	08:49	09:28
	22:14	40 07:31 (42)	20:57		19:28	17:04	9 08:22 (89)	15:58	15:46
27	05:14	06:52 (42)	06:22		07:31	07:39	08:14 (89)	08:52	09:28
	22:12	39 07:31 (42)	20:54		19:25	17:02	5 08:19 (89)	15:57	15:47
28	05:16	06:52 (42)	06:24		07:33	07:42		08:54	09:28
	22:10	39 07:31 (42)	20:51		19:22	16:59		15:55	15:48
29	05:18	06:52 (42)	06:27		07:35	07:44		08:56	09:28
	22:07	38 07:30 (42)	20:48		19:19	16:56		15:54	15:49
30	05:20	06:54 (42)	06:29		07:37	07:47		08:58	09:28
	22:05	36 07:30 (42)	20:45		19:16	16:54		15:53	15:50
31	05:22	06:55 (42)	06:31			07:49			09:28
	22:03	35 07:30 (42)	20:43			16:51			15:51
Potential sun hours	545		478		386	319		236	200
Total, worst case		1047		221			224		
Sun reduction		0,50		0,50			0,50		
Oper. time red.		0,80		0,80			0,80		
Wind dir. red.		0,59		0,59			0,73		
Total reduction		0,24		0,24			0,29		
Total, real		248		52			65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:24 (2)	08:46	10:12 (1)	07:35	08:22 (26)	07:07	05:44	04:40
	15:53	50 12:55 (4)	16:56	65 13:08 (4)	18:05	42 09:51 (3)	20:17	21:26	22:31
2	09:28	11:22 (2)	08:44	10:12 (1)	07:33	08:21 (26)	07:04	05:41	04:39
	15:54	54 12:56 (4)	16:59	63 13:07 (4)	18:07	37 09:47 (3)	20:19	21:28	22:32
3	09:27	11:20 (2)	08:41	10:13 (1)	07:30	08:21 (26)	07:01	05:39	04:37
	15:56	57 12:56 (4)	17:01	61 13:07 (4)	18:10	24 08:45 (26)	20:21	21:31	22:34
4	09:27	11:20 (2)	08:39	10:13 (1)	07:27	08:20 (26)	06:58	05:36	04:36
	15:57	58 12:57 (4)	17:04	57 13:05 (4)	18:12	25 08:45 (26)	20:24	21:33	22:35
5	09:26	11:20 (2)	08:37	10:14 (1)	07:24	08:20 (26)	06:55	05:34	04:35
	15:59	60 12:58 (4)	17:06	54 13:05 (4)	18:14	24 08:44 (26)	20:26	21:35	22:37
6	09:25	11:20 (2)	08:35	10:15 (1)	07:22	08:20 (26)	06:53	05:31	04:34
	16:00	61 12:58 (4)	17:09	49 13:03 (4)	18:17	24 08:44 (26)	20:28	21:38	22:38
7	09:25	11:20 (2)	08:32	09:40 (3)	07:19	08:20 (26)	06:50	05:29	04:33
	16:02	62 12:59 (4)	17:11	47 13:01 (4)	18:19	23 08:43 (26)	20:31	21:40	22:39
8	09:24	11:21 (2)	08:30	09:36 (3)	07:16	08:21 (26)	06:47	05:27	04:32
	16:04	63 13:00 (4)	17:13	49 12:59 (4)	18:21	20 08:41 (26)	20:33	21:42	22:41
9	09:23	11:21 (2)	08:28	09:21 (6)	07:13	08:22 (26)	06:44	05:24	04:31
	16:05	65 13:01 (4)	17:16	44 12:56 (4)	18:24	19 08:41 (26)	20:35	21:44	22:42
10	09:22	11:21 (2)	08:25	09:18 (6)	07:10	08:24 (26)	06:41	05:22	04:30
	16:07	65 13:01 (4)	17:18	32 09:54 (3)	18:26	15 08:39 (26)	20:38	21:47	22:43
11	09:21	11:21 (2)	08:23	09:16 (6)	07:07	08:26 (26)	06:38	05:20	04:30
	16:09	68 13:03 (4)	17:21	39 09:56 (3)	18:28	10 08:36 (26)	20:40	21:49	22:44
12	09:20	11:21 (2)	08:20	09:14 (6)	07:05		06:36	05:17	04:29
	16:11	68 13:03 (4)	17:23	42 09:56 (3)	18:31		20:42	21:51	22:45
13	09:19	11:22 (2)	08:18	09:13 (6)	07:02		06:33	05:15	04:29
	16:13	68 13:04 (4)	17:26	44 09:57 (3)	18:33		20:44	21:53	22:46
14	09:17	11:22 (2)	08:15	09:13 (6)	06:59	07:37 (28)	06:30	05:13	04:28
	16:15	68 13:04 (4)	17:28	46 09:59 (3)	18:35	4 07:41 (28)	20:47	21:55	22:47
15	09:16	11:22 (2)	08:13	09:13 (6)	06:56	07:33 (28)	06:27	05:11	04:28
	16:17	70 13:05 (4)	17:31	46 09:59 (3)	18:38	11 07:44 (28)	20:49	21:58	22:47
16	09:15	11:22 (2)	08:10	09:12 (6)	06:53	07:31 (28)	06:24	05:08	04:27
	16:19	71 13:05 (4)	17:33	47 09:59 (3)	18:40	15 07:46 (28)	20:51	22:00	22:48
17	09:13	11:23 (2)	08:08	09:13 (6)	06:50	07:30 (28)	06:22	05:06	04:27
	16:21	71 13:06 (4)	17:36	47 10:00 (3)	18:42	16 07:46 (28)	20:54	22:02	22:49
18	09:12	11:23 (2)	08:05	09:13 (6)	06:47	07:29 (28)	06:19	05:04	04:27
	16:23	72 13:07 (4)	17:38	47 10:00 (3)	18:45	18 07:47 (28)	20:56	22:04	22:49
19	09:10	11:24 (2)	08:02	09:14 (6)	06:44	07:28 (28)	06:16	05:02	04:27
	16:26	70 13:07 (4)	17:41	46 10:00 (3)	18:47	19 07:47 (28)	20:58	22:06	22:50
20	09:09	11:24 (2)	08:00	09:14 (6)	06:42	07:27 (28)	06:13	05:00	04:27
	16:28	71 13:08 (4)	17:43	46 10:00 (3)	18:49	19 07:46 (28)	21:01	22:08	22:50
21	09:07	11:25 (2)	07:57	09:15 (6)	06:39	07:28 (28)	06:11	04:58	04:27
	16:30	70 13:08 (4)	17:46	44 09:59 (3)	18:52	19 07:47 (28)	21:03	22:10	22:50
22	09:05	11:25 (2)	07:54	09:19 (6)	06:36	07:28 (28)	06:08	04:56	04:27
	16:32	70 13:08 (4)	17:48	40 10:00 (3)	18:54	18 07:46 (28)	21:05	22:12	22:50
23	09:04	11:25 (2)	07:52	09:26 (3)	06:33	07:28 (28)	06:05	04:54	04:27
	16:35	69 13:08 (4)	17:50	33 09:59 (3)	18:56	17 07:45 (28)	21:08	22:14	22:51
24	09:02	11:26 (2)	07:49	08:32 (26)	06:30	07:29 (28)	06:02	04:53	04:28
	16:37	68 13:08 (4)	17:53	35 09:58 (3)	18:59	14 07:43 (28)	21:10	22:16	22:51
25	09:00	10:27 (1)	07:46	08:28 (26)	06:27	07:31 (28)	06:00	04:51	04:28
	16:39	72 13:09 (4)	17:55	42 09:57 (3)	19:01	10 07:41 (28)	21:12	22:18	22:51
26	08:58	10:23 (1)	07:44	08:25 (26)	06:24		05:57	04:49	04:29
	16:42	74 13:09 (4)	17:58	45 09:56 (3)	19:03		21:14	22:20	22:50
27	08:56	10:20 (1)	07:41	08:23 (26)	06:21		05:54	04:47	04:29
	16:44	75 13:09 (4)	18:00	45 09:54 (3)	19:05		21:17	22:22	22:50
28	08:54	10:15 (1)	07:38	08:23 (26)	06:18		05:52	04:46	04:30
	16:46	76 13:08 (4)	18:02	44 09:53 (3)	19:08		21:19	22:24	22:50
29	08:52	10:11 (1)			07:16		05:49	04:44	04:31
	16:49	73 13:09 (4)			20:10		21:21	22:26	22:50
30	08:50	10:11 (1)			07:13		05:47	04:43	04:31
	16:51	67 13:08 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54	67 13:08 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case		2073		1299		443			
Sun reduction		0,50		0,50		0,50			
Oper. time red.		0,80		0,80		0,80			
Wind dir. red.		0,64		0,71		0,71			
Total reduction		0,26		0,28		0,29			
Total, real		532		366		126			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:40		07:52	08:47 (6)	09:00	11:03 (2)
	22:49	22:01	20:40		19:13		16:49 36	12:20 (4)	15:51 67	12:45 (4)
2	04:33	05:26	06:35		07:42	09:06 (26)	07:54	09:03 (3)	09:02	11:04 (2)
	22:48	21:59	20:37		19:10 6	09:12 (26)	16:46 43	12:26 (4)	15:50 66	12:45 (4)
3	04:34	05:29	06:38		07:44	09:02 (26)	07:56	09:06 (3)	09:04	11:04 (2)
	22:47	21:56	20:34		19:07 13	09:15 (26)	16:44 50	12:29 (4)	15:49 64	12:44 (4)
4	04:35	05:31	06:40		07:46	09:00 (26)	07:59	09:46 (1)	09:05	11:05 (2)
	22:47	21:54	20:31		19:05 17	09:17 (26)	16:42 44	12:32 (4)	15:48 63	12:44 (4)
5	04:36	05:33	06:42		07:48	08:58 (26)	08:01	09:44 (1)	09:07	11:05 (2)
	22:46	21:52	20:28		19:02 20	09:18 (26)	16:39 51	12:33 (4)	15:47 62	12:44 (4)
6	04:38	05:35	06:44		07:51	08:57 (26)	08:04	09:44 (1)	09:09	11:06 (2)
	22:45	21:49	20:26		18:59 22	09:19 (26)	16:37 55	12:35 (4)	15:46 61	12:45 (4)
7	04:39	05:37	06:47		07:53	08:57 (26)	08:06	09:44 (1)	09:10	11:07 (2)
	22:44	21:47	20:23		18:56 23	09:20 (26)	16:35 58	12:36 (4)	15:46 60	12:45 (4)
8	04:40	05:40	06:49		07:55	08:55 (26)	08:08	09:43 (1)	09:12	11:08 (2)
	22:43	21:44	20:20		18:53 24	09:19 (26)	16:32 60	12:36 (4)	15:45 58	12:45 (4)
9	04:41	05:42	06:51		07:58	08:55 (26)	08:11	09:43 (1)	09:14	11:09 (2)
	22:42	21:42	20:17		18:50 24	09:19 (26)	16:30 64	12:38 (4)	15:44 57	12:45 (4)
10	04:43	05:44	06:53		08:00	08:55 (26)	08:13	09:43 (1)	09:15	11:11 (2)
	22:41	21:39	20:14		18:48 24	09:19 (26)	16:28 65	12:39 (4)	15:44 54	12:45 (4)
11	04:44	05:46	06:55		08:02	08:54 (26)	08:16	09:42 (1)	09:16	11:14 (2)
	22:39	21:37	20:11		18:45 32	10:18 (3)	16:26 67	12:39 (4)	15:43 51	12:45 (4)
12	04:46	05:49	06:58		08:04	08:55 (26)	08:18	09:43 (1)	09:18	11:15 (2)
	22:38	21:34	20:08		18:42 39	10:23 (3)	16:24 67	12:40 (4)	15:43 48	12:45 (4)
13	04:48	05:51	07:00		08:07	08:55 (26)	08:20	09:43 (1)	09:19	11:18 (2)
	22:37	21:32	20:05		18:39 43	10:25 (3)	16:21 73	12:41 (4)	15:43 46	12:46 (4)
14	04:49	05:53	07:02		08:09	08:55 (26)	08:23	09:48 (1)	09:20	11:20 (2)
	22:35	21:29	20:02		18:36 46	10:26 (3)	16:19 75	12:41 (4)	15:42 44	12:46 (4)
15	04:51	05:55	07:04		08:11	08:57 (26)	08:25	09:52 (1)	09:21	11:21 (2)
	22:34	21:26	20:00		18:34 46	10:28 (3)	16:17 75	12:41 (4)	15:42 42	12:46 (4)
16	04:53	05:58	07:06		08:14	08:58 (26)	08:27	09:56 (1)	09:22	11:22 (2)
	22:32	21:24	19:57		18:31 44	10:28 (3)	16:15 74	12:42 (4)	15:42 41	12:46 (4)
17	04:54	06:00	07:09		08:16	09:01 (26)	08:30	10:01 (1)	09:23	11:24 (2)
	22:31	21:21	19:54		18:28 41	10:29 (3)	16:13 71	12:42 (4)	15:42 38	12:46 (4)
18	04:56	06:02	07:11	08:19 (28)	08:18	09:57 (3)	08:32	11:00 (2)	09:24	11:25 (2)
	22:29	21:19	19:51 9	08:28 (28)	18:25 32	10:29 (3)	16:11 68	12:42 (4)	15:42 37	12:47 (4)
19	04:58	06:04	07:13	08:16 (28)	08:21	09:57 (3)	08:34	11:00 (2)	09:25	11:27 (2)
	22:27	21:16	19:48 13	08:29 (28)	18:23 33	10:30 (3)	16:10 69	12:43 (4)	15:43 36	12:47 (4)
20	05:00	06:06	07:15	08:14 (28)	08:23	09:48 (6)	08:37	11:00 (2)	09:26	11:28 (2)
	22:25	21:13	19:45 16	08:30 (28)	18:20 42	10:30 (3)	16:08 70	12:43 (4)	15:43 35	12:48 (4)
21	05:02	06:09	07:17	08:14 (28)	08:25	09:46 (6)	08:39	11:00 (2)	09:26	11:28 (2)
	22:24	21:10	19:42 17	08:31 (28)	18:17 45	10:31 (3)	16:06 70	12:43 (4)	15:43 35	12:48 (4)
22	05:04	06:11	07:20	08:13 (28)	08:28	09:44 (6)	08:41	11:00 (2)	09:27	11:29 (2)
	22:22	21:08	19:39 18	08:31 (28)	18:15 46	10:30 (3)	16:04 71	12:44 (4)	15:44 35	12:49 (4)
23	05:06	06:13	07:22	08:12 (28)	08:30	09:44 (6)	08:43	11:00 (2)	09:27	11:29 (2)
	22:20	21:05	19:36 19	08:31 (28)	18:12 46	10:30 (3)	16:03 70	12:43 (4)	15:44 35	12:49 (4)
24	05:08	06:15	07:24	08:12 (28)	08:32	09:42 (6)	08:45	11:00 (2)	09:28	11:30 (2)
	22:18	21:02	19:33 19	08:31 (28)	18:09 47	10:29 (3)	16:01 72	12:44 (4)	15:45 35	12:50 (4)
25	05:10	06:18	07:26	08:11 (28)	07:35	08:42 (6)	08:48	11:00 (2)	09:28	11:29 (2)
	22:16	20:59	19:31 19	08:30 (28)	17:07 47	09:29 (3)	15:59 71	12:43 (4)	15:45 36	12:50 (4)
26	05:12	06:20	07:28	08:12 (28)	07:37	08:43 (6)	08:50	11:01 (2)	09:28	11:29 (2)
	22:14	20:57	19:28 17	08:29 (28)	17:04 46	09:29 (3)	15:58 71	12:44 (4)	15:46 37	12:51 (4)
27	05:14	06:22	07:31	08:13 (28)	07:40	08:42 (6)	08:52	11:01 (2)	09:28	11:29 (2)
	22:12	20:54	19:25 15	08:28 (28)	17:02 46	09:28 (3)	15:57 71	12:44 (4)	15:47 39	12:52 (4)
28	05:16	06:24	07:33	08:14 (28)	07:42	08:43 (6)	08:54	11:02 (2)	09:29	11:28 (2)
	22:10	20:51	19:22 12	08:26 (28)	16:59 45	09:28 (3)	15:55 68	12:44 (4)	15:48 40	12:52 (4)
29	05:18	06:27	07:35	08:15 (28)	07:44	08:44 (6)	08:56	11:02 (2)	09:29	11:27 (2)
	22:08	20:48	19:19 8	08:23 (28)	16:56 43	09:27 (3)	15:54 68	12:44 (4)	15:49 42	12:52 (4)
30	05:20	06:29	07:37		07:47	08:44 (6)	08:58	11:02 (2)	09:28	11:26 (2)
	22:05	20:45	19:16		16:54 42	09:26 (3)	15:53 68	12:44 (4)	15:50 44	12:53 (4)
31	05:22	06:31			07:49	08:45 (6)			09:28	11:25 (2)
	22:03	20:43			16:51 38	09:25 (3)			15:51 48	12:54 (4)
Potential sun hours	545	478	386		319		236		200	
Total, worst case			182		1062		1935		1456	
Sun reduction			0,50		0,50		0,50		0,50	
Oper. time red.			0,80		0,80		0,80		0,80	
Wind dir. red.			0,70		0,73		0,65		0,63	
Total reduction			0,28		0,29		0,26		0,25	
Total, real			51		310		503		369	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:34 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	5	07:39 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:30 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	12	07:42 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:28 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	15	07:43 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:26 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:44 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50		07:25 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	19	07:44 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:24 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:16 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:44 (4)	20:56	22:04	22:49	22:29	21:19	19:51	8 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:24 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:13 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	20	07:44 (4)	20:58	22:06	22:50	22:27	21:16	19:48	13 08:26 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:25 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:11 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:45 (4)	21:01	22:08	22:50	22:26	21:13	19:45	16 08:27 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:25 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:11 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19	07:44 (4)	21:03	22:10	22:50	22:24	21:11	19:42	17 08:28 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:25 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18	07:43 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:29 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:25 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:08 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:42 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:28 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:26 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	14	07:40 (4)	21:10	22:16	22:51	22:18	21:02	19:34	20 08:28 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:28 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:07 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	9	07:37 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:27 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:29	08:08 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	19 08:27 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:08 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	18 08:26 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:08 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	17 08:25 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:09 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	14 08:23 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	8 08:21 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				206							210			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				57							58			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:25 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38 10	07:35 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:18	15:42
16	09:15	08:10	06:53	07:23 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40 13	07:36 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50	07:21 (4)	06:22	05:06	04:27	04:54	06:00	07:09	08:13 (4)	08:16	08:30	09:23
	16:21	17:36	18:43 16	07:37 (4)	20:54	22:02	22:49	22:31	21:21	19:54 4	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47	07:20 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:09 (4)	08:18	08:32	09:24
	16:24	17:38	18:45 18	07:38 (4)	20:56	22:04	22:49	22:29	21:19	19:51 11	08:20 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:19 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:07 (4)	08:21	08:34	09:25
	16:26	17:41	18:47 19	07:38 (4)	20:58	22:06	22:50	22:27	21:16	19:48 14	08:21 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:19 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (4)	08:23	08:37	09:26
	16:28	17:43	18:49 20	07:39 (4)	21:01	22:08	22:50	22:26	21:13	19:45 17	08:22 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (4)	08:25	08:39	09:26
	16:30	17:46	18:52 19	07:38 (4)	21:03	22:10	22:50	22:24	21:11	19:42 18	08:23 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:19 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:04 (4)	08:28	08:41	09:27
	16:33	17:48	18:54 18	07:37 (4)	21:05	22:12	22:51	22:22	21:08	19:39 19	08:23 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:19 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:03 (4)	08:30	08:43	09:27
	16:35	17:51	18:56 17	07:36 (4)	21:08	22:14	22:51	22:20	21:05	19:36 19	08:22 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:20 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:03 (4)	08:32	08:46	09:28
	16:37	17:53	18:59 15	07:35 (4)	21:10	22:16	22:51	22:18	21:02	19:34 19	08:22 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:21 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:02 (4)	07:35	08:48	09:28
	16:40	17:55	19:01 12	07:33 (4)	21:12	22:18	22:51	22:16	21:00	19:31 19	08:21 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24	07:23 (4)	05:57	04:49	04:29	05:12	06:20	07:29	08:04 (4)	07:37	08:50	09:28
	16:42	17:58	19:03 7	07:30 (4)	21:15	22:20	22:51	22:14	20:57	19:28 16	08:20 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:04 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25 15	08:19 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:25	07:33	08:05 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22 11	08:16 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:08 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19 4	08:12 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37		07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:06	20:46	19:16		16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49		09:28
	16:54		20:15			22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				184							186			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,28							0,28			
Total, real				51							51			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:17 (2)	08:46	10:11 (1)	07:35	08:24 (26)	07:07	05:44	04:40
	15:53 54	12:46 (4)	16:56 61	12:57 (4)	18:05 32	09:46 (3)	20:17	21:26	22:31
2	09:28	11:17 (2)	08:44	10:11 (1)	07:33	08:23 (26)	07:04	05:41	04:39
	15:54 54	12:46 (4)	16:59 58	12:56 (4)	18:07 24	08:47 (26)	20:19	21:28	22:32
3	09:27	11:17 (2)	08:41	10:12 (1)	07:30	08:23 (26)	07:01	05:39	04:37
	15:56 56	12:47 (4)	17:01 55	12:55 (4)	18:10 24	08:47 (26)	20:21	21:31	22:34
4	09:27	11:17 (2)	08:39	10:12 (1)	07:27	08:23 (26)	06:58	05:36	04:36
	15:57 57	12:48 (4)	17:04 52	12:54 (4)	18:12 23	08:46 (26)	20:24	21:33	22:35
5	09:26	11:17 (2)	08:37	10:14 (1)	07:24	08:23 (26)	06:55	05:34	04:35
	15:59 58	12:48 (4)	17:06 46	12:53 (4)	18:14 22	08:45 (26)	20:26	21:35	22:37
6	09:25	11:17 (2)	08:35	10:14 (1)	07:22	08:23 (26)	06:53	05:31	04:34
	16:00 59	12:49 (4)	17:09 41	12:50 (4)	18:17 22	08:45 (26)	20:28	21:38	22:38
7	09:25	11:17 (2)	08:32	09:37 (3)	07:19	08:24 (26)	06:50	05:29	04:33
	16:02 61	12:50 (4)	17:11 43	12:47 (4)	18:19 19	08:43 (26)	20:31	21:40	22:39
8	09:24	11:17 (2)	08:30	09:35 (3)	07:16	08:24 (26)	06:47	05:27	04:32
	16:04 63	12:51 (4)	17:13 36	12:44 (4)	18:21 18	08:42 (26)	20:33	21:42	22:41
9	09:23	11:18 (2)	08:28	09:32 (3)	07:13	08:27 (26)	06:44	05:24	04:31
	16:05 63	12:52 (4)	17:16 21	09:53 (3)	18:24 13	08:40 (26)	20:35	21:44	22:42
10	09:22	11:17 (2)	08:25	09:31 (3)	07:10	08:30 (26)	06:41	05:22	04:30
	16:07 65	12:52 (4)	17:18 24	09:55 (3)	18:26 7	08:37 (26)	20:38	21:47	22:43
11	09:21	11:18 (2)	08:23	09:30 (3)	07:07		06:38	05:20	04:30
	16:09 65	12:53 (4)	17:21 26	09:56 (3)	18:28		20:40	21:49	22:44
12	09:20	11:18 (2)	08:20	09:29 (3)	07:05		06:36	05:17	04:29
	16:11 66	12:53 (4)	17:23 28	09:57 (3)	18:31		20:42	21:51	22:45
13	09:19	11:18 (2)	08:18	09:28 (3)	07:02	07:40 (28)	06:33	05:15	04:29
	16:13 67	12:54 (4)	17:26 29	09:57 (3)	18:33 5	07:45 (28)	20:44	21:53	22:46
14	09:17	11:18 (2)	08:15	09:28 (3)	06:59	07:36 (28)	06:30	05:13	04:28
	16:15 68	12:55 (4)	17:28 31	09:59 (3)	18:35 11	07:47 (28)	20:47	21:55	22:47
15	09:16	11:18 (2)	08:13	09:27 (3)	06:56	07:34 (28)	06:27	05:11	04:28
	16:17 69	12:55 (4)	17:31 32	09:59 (3)	18:38 15	07:49 (28)	20:49	21:58	22:47
16	09:15	11:19 (2)	08:10	09:26 (3)	06:53	07:33 (28)	06:24	05:08	04:27
	16:19 68	12:55 (4)	17:33 33	09:59 (3)	18:40 16	07:49 (28)	20:51	22:00	22:48
17	09:13	11:20 (2)	08:08	09:27 (3)	06:50	07:32 (28)	06:22	05:06	04:27
	16:21 69	12:57 (4)	17:36 33	10:00 (3)	18:42 18	07:50 (28)	20:54	22:02	22:49
18	09:12	11:20 (2)	08:05	09:26 (3)	06:47	07:31 (28)	06:19	05:04	04:27
	16:23 69	12:57 (4)	17:38 34	10:00 (3)	18:45 19	07:50 (28)	20:56	22:04	22:49
19	09:10	11:20 (2)	08:02	09:26 (3)	06:44	07:31 (28)	06:16	05:02	04:27
	16:26 69	12:57 (4)	17:41 33	09:59 (3)	18:47 18	07:49 (28)	20:58	22:06	22:50
20	09:09	11:21 (2)	08:00	09:26 (3)	06:42	07:30 (28)	06:13	05:00	04:27
	16:28 69	12:58 (4)	17:43 33	09:59 (3)	18:49 19	07:49 (28)	21:01	22:08	22:50
21	09:07	11:22 (2)	07:57	09:26 (3)	06:39	07:32 (28)	06:11	04:58	04:27
	16:30 67	12:58 (4)	17:46 32	09:58 (3)	18:52 17	07:49 (28)	21:03	22:10	22:50
22	09:05	11:22 (2)	07:54	09:27 (3)	06:36	07:32 (28)	06:08	04:56	04:27
	16:32 67	12:58 (4)	17:48 32	09:59 (3)	18:54 15	07:47 (28)	21:05	22:12	22:50
23	09:04	11:22 (2)	07:52	09:27 (3)	06:33	07:33 (28)	06:05	04:54	04:27
	16:35 66	12:58 (4)	17:50 31	09:58 (3)	18:56 13	07:46 (28)	21:08	22:14	22:51
24	09:02	10:25 (1)	07:49	08:30 (26)	06:30	07:35 (28)	06:02	04:53	04:28
	16:37 70	12:58 (4)	17:53 41	09:57 (3)	18:59 8	07:43 (28)	21:10	22:16	22:51
25	09:00	10:21 (1)	07:46	08:28 (26)	06:27		06:00	04:51	04:28
	16:39 72	12:58 (4)	17:55 42	09:55 (3)	19:01		21:12	22:18	22:51
26	08:58	10:18 (1)	07:44	08:26 (26)	06:24		05:57	04:49	04:29
	16:42 74	12:59 (4)	17:58 44	09:54 (3)	19:03		21:14	22:20	22:50
27	08:56	10:14 (1)	07:41	08:25 (26)	06:21		05:54	04:47	04:29
	16:44 76	12:59 (4)	18:00 41	09:52 (3)	19:05		21:17	22:22	22:50
28	08:54	10:10 (1)	07:38	08:25 (26)	06:18		05:52	04:46	04:30
	16:46 74	12:58 (4)	18:02 38	09:50 (3)	19:08		21:19	22:24	22:50
29	08:52	10:10 (1)			07:16		05:49	04:44	04:31
	16:49 65	12:58 (4)			20:10		21:21	22:26	22:50
30	08:50	10:10 (1)			07:13		05:47	04:43	04:31
	16:51 63	12:57 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54 61	12:57 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	2024		1050		378				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,65		0,71		0,71				
Total reduction	0,26		0,28		0,29				
Total, real	524		297		108				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:40		07:52		09:00 (3)	09:00		11:00 (2)
	22:49	22:01	20:40		19:13		16:49	23	09:23 (3)	15:51	65	12:35 (4)
2	04:33	05:26	06:35		07:42		07:54		09:02 (3)	09:02		11:00 (2)
	22:48	21:59	20:37		19:10		16:46	23	09:54 (1)	15:50	65	12:35 (4)
3	04:34	05:29	06:38		07:44		07:56		09:05 (3)	09:04		11:01 (2)
	22:47	21:56	20:34		19:07		16:44	38	12:14 (4)	15:49	63	12:35 (4)
4	04:35	05:31	06:40		07:46		09:05 (26)	07:59		09:08 (3)	09:05		11:01 (2)
	22:47	21:54	20:31		19:05	11	09:16 (26)	16:42	44	12:19 (4)	15:48	63	12:35 (4)
5	04:36	05:33	06:42		07:48		09:02 (26)	08:01		09:44 (1)	09:07		11:02 (2)
	22:46	21:52	20:28		19:02	16	09:18 (26)	16:39	42	12:20 (4)	15:47	61	12:35 (4)
6	04:38	05:35	06:44		07:51		09:00 (26)	08:04		09:43 (1)	09:09		11:03 (2)
	22:45	21:49	20:26		18:59	19	09:19 (26)	16:37	48	12:23 (4)	15:46	59	12:35 (4)
7	04:39	05:37	06:47		07:53		09:00 (26)	08:06		09:43 (1)	09:10		11:04 (2)
	22:44	21:47	20:23		18:56	20	09:20 (26)	16:35	51	12:24 (4)	15:46	58	12:35 (4)
8	04:40	05:40	06:49		07:55		08:58 (26)	08:08		09:42 (1)	09:12		11:05 (2)
	22:43	21:44	20:20		18:53	23	09:21 (26)	16:32	55	12:25 (4)	15:45	58	12:36 (4)
9	04:41	05:42	06:51		07:58		08:57 (26)	08:11		09:42 (1)	09:14		11:06 (2)
	22:42	21:42	20:17		18:50	23	09:20 (26)	16:30	59	12:27 (4)	15:44	56	12:36 (4)
10	04:43	05:44	06:53		08:00		08:57 (26)	08:13		09:42 (1)	09:15		11:06 (2)
	22:41	21:39	20:14		18:48	24	09:21 (26)	16:28	60	12:28 (4)	15:44	55	12:36 (4)
11	04:44	05:46	06:55		08:02		08:57 (26)	08:16		09:41 (1)	09:16		11:07 (2)
	22:39	21:37	20:11		18:45	23	09:20 (26)	16:26	62	12:28 (4)	15:43	54	12:36 (4)
12	04:46	05:49	06:58		08:04		08:57 (26)	08:18		09:42 (1)	09:18		11:07 (2)
	22:38	21:34	20:08		18:42	24	09:21 (26)	16:24	63	12:29 (4)	15:43	52	12:36 (4)
13	04:48	05:51	07:00		08:07		08:57 (26)	08:20		09:42 (1)	09:19		11:10 (2)
	22:37	21:32	20:05		18:39	35	10:20 (3)	16:21	65	12:30 (4)	15:43	50	12:37 (4)
14	04:49	05:53	07:02		08:09		08:57 (26)	08:23		09:43 (1)	09:20		11:11 (2)
	22:35	21:29	20:02		18:36	39	10:23 (3)	16:19	74	12:31 (4)	15:42	49	12:37 (4)
15	04:51	05:55	07:04		08:11		08:58 (26)	08:25		09:46 (1)	09:21		11:13 (2)
	22:34	21:26	20:00		18:34	42	10:25 (3)	16:17	76	12:31 (4)	15:42	46	12:37 (4)
16	04:53	05:58	07:06		08:14		08:58 (26)	08:27		09:51 (1)	09:22		11:14 (2)
	22:32	21:24	19:57		18:31	43	10:26 (3)	16:15	74	12:32 (4)	15:42	45	12:37 (4)
17	04:54	06:00	07:09		08:16		09:00 (26)	08:30		09:55 (1)	09:23		11:15 (2)
	22:31	21:21	19:54		18:28	43	10:28 (3)	16:13	72	12:32 (4)	15:42	43	12:37 (4)
18	04:56	06:02	07:11		08:18		09:02 (26)	08:32		09:59 (1)	09:24		11:17 (2)
	22:29	21:19	19:51		18:25	39	10:28 (3)	16:11	70	12:32 (4)	15:42	40	12:37 (4)
19	04:58	06:04	07:13	08:22 (28)	08:21		09:58 (3)	08:34		10:57 (2)	09:25		11:18 (2)
	22:27	21:16	19:48	7 08:29 (28)	18:23	31	10:29 (3)	16:10	66	12:33 (4)	15:43	41	12:38 (4)
20	05:00	06:06	07:15	08:19 (28)	08:23		09:57 (3)	08:37		10:57 (2)	09:26		11:19 (2)
	22:25	21:13	19:45	12 08:31 (28)	18:20	32	10:29 (3)	16:08	67	12:33 (4)	15:43	40	12:39 (4)
21	05:02	06:09	07:17	08:18 (28)	08:25		09:57 (3)	08:39		10:57 (2)	09:26		11:19 (2)
	22:24	21:10	19:42	15 08:33 (28)	18:17	33	10:30 (3)	16:06	67	12:33 (4)	15:43	39	12:38 (4)
22	05:04	06:11	07:20	08:16 (28)	08:28		09:56 (3)	08:41		10:57 (2)	09:27		11:20 (2)
	22:22	21:08	19:39	17 08:33 (28)	18:15	33	10:29 (3)	16:04	68	12:34 (4)	15:44	39	12:39 (4)
23	05:06	06:13	07:22	08:15 (28)	08:30		09:56 (3)	08:43		10:57 (2)	09:27		11:20 (2)
	22:20	21:05	19:36	18 08:33 (28)	18:12	34	10:30 (3)	16:03	68	12:33 (4)	15:44	40	12:40 (4)
24	05:08	06:15	07:24	08:14 (28)	08:32		09:56 (3)	08:45		10:57 (2)	09:28		11:21 (2)
	22:18	21:02	19:33	19 08:33 (28)	18:09	33	10:29 (3)	16:01	69	12:34 (4)	15:45	41	12:41 (4)
25	05:10	06:18	07:26	08:14 (28)	07:35		08:56 (3)	08:48		10:57 (2)	09:28		11:21 (2)
	22:16	20:59	19:31	18 08:32 (28)	17:07	33	09:29 (3)	15:59	69	12:34 (4)	15:45	41	12:41 (4)
26	05:12	06:20	07:28	08:14 (28)	07:37		08:57 (3)	08:50		10:58 (2)	09:28		11:21 (2)
	22:14	20:57	19:28	19 08:33 (28)	17:04	32	09:29 (3)	15:58	68	12:34 (4)	15:46	42	12:42 (4)
27	05:14	06:22	07:31	08:14 (28)	07:40		08:56 (3)	08:52		10:57 (2)	09:28		11:20 (2)
	22:12	20:54	19:25	18 08:32 (28)	17:02	32	09:28 (3)	15:57	69	12:34 (4)	15:47	43	12:42 (4)
28	05:16	06:24	07:33	08:15 (28)	07:42		08:57 (3)	08:54		10:58 (2)	09:29		11:20 (2)
	22:10	20:51	19:22	15 08:30 (28)	16:59	31	09:28 (3)	15:55	68	12:35 (4)	15:48	44	12:43 (4)
29	05:18	06:27	07:35	08:15 (28)	07:44		08:58 (3)	08:56		10:59 (2)	09:29		11:18 (2)
	22:08	20:48	19:19	13 08:28 (28)	16:56	29	09:27 (3)	15:54	67	12:35 (4)	15:49	47	12:43 (4)
30	05:20	06:29	07:37	08:18 (28)	07:47		08:58 (3)	08:58		10:59 (2)	09:28		11:18 (2)
	22:05	20:45	19:16	8 08:26 (28)	16:54	28	09:26 (3)	15:53	65	12:34 (4)	15:50	49	12:44 (4)
31	05:22	06:31			07:49		09:00 (3)				09:28		11:16 (2)
	22:03	20:43			16:51	25	09:25 (3)				15:51	52	12:44 (4)
Potential sun hours	545	478	386		319		236		200			
Total, worst case				179		830		1810		1540		
Sun reduction				0,50		0,50		0,50		0,50		
Oper. time red.				0,80		0,80		0,80		0,80		
Wind dir. red.				0,70		0,73		0,66		0,64		
Total reduction				0,28		0,29		0,26		0,26		
Total, real				50		242		475		394		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:05 (4)	08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03	10	08:15 (4)	18:37	16:20	15:43
15	09:16	08:13	06:56		06:27	05:11	04:28	04:51	05:55	07:04		08:02 (4)	08:11	08:25	09:21
	16:17	17:31	18:38		20:49	21:58	22:47	22:34	21:27	20:00	14	08:16 (4)	18:34	16:18	15:42
16	09:15	08:10	06:53		06:24	05:09	04:28	04:53	05:58	07:06		08:00 (4)	08:14	08:27	09:22
	16:19	17:33	18:40		20:51	22:00	22:48	22:32	21:24	19:57	17	08:17 (4)	18:31	16:16	15:42
17	09:13	08:08	06:50		06:22	05:06	04:27	04:54	06:00	07:09		07:59 (4)	08:16	08:30	09:23
	16:21	17:36	18:43		20:54	22:02	22:49	22:31	21:21	19:54	18	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11		07:58 (4)	08:18	08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	19	08:17 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13		07:57 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	3 07:28 (4)	20:58	22:06	22:50	22:27	21:16	19:48	20	08:17 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:22 (4)	06:13	05:00	04:27	05:00	06:07	07:15		07:57 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	8 07:30 (4)	21:01	22:08	22:50	22:26	21:13	19:45	19	08:16 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:00 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	11 07:30 (4)	21:03	22:10	22:50	22:24	21:11	19:42	16	08:16 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:15 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:02 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	16 07:31 (4)	21:05	22:12	22:51	22:22	21:08	19:39	13	08:15 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:11 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:05 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	20 07:31 (4)	21:08	22:14	22:51	22:20	21:05	19:36	9	08:14 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:11 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	19 07:30 (4)	21:10	22:16	22:51	22:18	21:02	19:34	4	08:12 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:10 (4)	06:00	04:51	04:28	05:10	06:18	07:26			07:35	08:48	09:28
	16:40	17:55	19:01	20 07:30 (4)	21:12	22:18	22:51	22:16	21:00	19:31			17:07	16:00	15:46
26	08:58	07:44	06:24	07:10 (4)	05:57	04:49	04:29	05:12	06:20	07:29			07:37	08:50	09:28
	16:42	17:58	19:03	19 07:29 (4)	21:15	22:20	22:51	22:14	20:57	19:28			17:04	15:58	15:46
27	08:56	07:41	06:21	07:11 (4)	05:55	04:48	04:29	05:14	06:22	07:31			07:40	08:52	09:29
	16:44	18:00	19:06	17 07:28 (4)	21:17	22:22	22:50	22:12	20:54	19:25			17:02	15:57	15:47
28	08:54	07:38	06:19	07:12 (4)	05:52	04:46	04:30	05:16	06:25	07:33			07:42	08:54	09:29
	16:47	18:03	19:08	14 07:26 (4)	21:19	22:24	22:50	22:10	20:51	19:22			16:59	15:55	15:48
29	08:52		07:16	08:13 (4)	05:49	04:44	04:31	05:18	06:27	07:35			07:44	08:56	09:29
	16:49		20:10	11 08:24 (4)	21:22	22:26	22:50	22:08	20:48	19:19			16:57	15:54	15:49
30	08:50		07:13	08:18 (4)	05:47	04:43	04:32	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12	2 08:20 (4)	21:24	22:27	22:49	22:05	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:52
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				160							159			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,27							0,27			
Total, real				44							44			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02	07:35 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	8 07:43 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59	07:32 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13 07:45 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:30 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16 07:46 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53	07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	19 07:47 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:15	15:42
17	09:13	08:08	06:50	07:27 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20 07:47 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47	07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:18 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	21 07:47 (4)	20:56	22:04	22:49	22:29	21:19	19:51	9	08:27 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:26 (4)	06:16	05:02	04:27	04:58	06:04	07:13		08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21 07:47 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14	08:29 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:27 (4)	06:13	05:00	04:27	05:00	06:07	07:15		08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	21 07:48 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17	08:30 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:13 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	21 07:47 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18	08:31 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:27 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19 07:46 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20	08:31 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17 07:44 (4)	21:08	22:14	22:51	22:20	21:05	19:36	21	08:31 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:10 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15 07:43 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21	08:31 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26		08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	10 07:40 (4)	21:12	22:18	22:51	22:16	21:00	19:31	21	08:30 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28		08:10 (4)	07:37	08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28	20	08:30 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31		08:10 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25	19	08:29 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:24	07:33		08:10 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	18	08:28 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35		08:11 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	15	08:26 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37		08:13 (4)	07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16	11	08:24 (4)	16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				221							224			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				61							62			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March			April	May	June	July	August	September			October			November	December
1	09:28	08:46	07:36			07:07	05:44	04:40	04:32	05:24	06:33			07:40		08:36 (4)	07:52	09:00
	15:53	16:56	18:05			20:17	21:26	22:31	22:49	22:01	20:40			19:13	24	09:00 (4)	16:49	15:51
2	09:28	08:44	07:33			07:04	05:42	04:39	04:33	05:27	06:36			07:42		08:35 (4)	07:54	09:02
	15:54	16:59	18:07			20:19	21:28	22:32	22:48	21:59	20:37			19:10	25	09:00 (4)	16:47	15:50
3	09:27	08:41	07:30		08:05 (4)	07:01	05:39	04:37	04:34	05:29	06:38			07:44		08:34 (4)	07:56	09:04
	15:56	17:01	18:10	12	08:17 (4)	20:22	21:31	22:34	22:47	21:56	20:34			19:08	25	08:59 (4)	16:44	15:49
4	09:27	08:39	07:27		08:02 (4)	06:58	05:37	04:36	04:35	05:31	06:40			07:46		08:34 (4)	07:59	09:05
	15:57	17:04	18:12	17	08:19 (4)	20:24	21:33	22:35	22:47	21:54	20:31			19:05	26	09:00 (4)	16:42	15:48
5	09:26	08:37	07:24		08:01 (4)	06:56	05:34	04:35	04:36	05:33	06:42			07:49		08:34 (4)	08:01	09:07
	15:59	17:06	18:14	19	08:20 (4)	20:26	21:35	22:37	22:46	21:52	20:28			19:02	25	08:59 (4)	16:39	15:47
6	09:25	08:35	07:22		07:59 (4)	06:53	05:32	04:34	04:38	05:35	06:44			07:51		08:34 (4)	08:04	09:09
	16:00	17:09	18:17	22	08:21 (4)	20:28	21:38	22:38	22:45	21:49	20:26			18:59	24	08:58 (4)	16:37	15:47
7	09:25	08:32	07:19		07:58 (4)	06:50	05:29	04:33	04:39	05:38	06:47			07:53		08:35 (4)	08:06	09:10
	16:02	17:11	18:19	23	08:21 (4)	20:31	21:40	22:39	22:44	21:47	20:23			18:56	22	08:57 (4)	16:35	15:46
8	09:24	08:30	07:16		07:58 (4)	06:47	05:27	04:32	04:40	05:40	06:49			07:55		08:35 (4)	08:08	09:12
	16:04	17:14	18:22	24	08:22 (4)	20:33	21:42	22:41	22:43	21:44	20:20			18:53	21	08:56 (4)	16:32	15:45
9	09:23	08:28	07:13		07:57 (4)	06:44	05:24	04:31	04:42	05:42	06:51			07:58		08:36 (4)	08:11	09:14
	16:06	17:16	18:24	25	08:22 (4)	20:35	21:44	22:42	22:42	21:42	20:17			18:50	18	08:54 (4)	16:30	15:44
10	09:22	08:25	07:10		07:57 (4)	06:41	05:22	04:31	04:43	05:44	06:53			08:00		08:38 (4)	08:13	09:15
	16:07	17:19	18:26	25	08:22 (4)	20:38	21:47	22:43	22:41	21:39	20:14			18:48	15	08:53 (4)	16:28	15:44
11	09:21	08:23	07:07		07:57 (4)	06:38	05:20	04:30	04:45	05:46	06:55			08:02		08:41 (4)	08:16	09:16
	16:09	17:21	18:29	25	08:22 (4)	20:40	21:49	22:44	22:39	21:37	20:11			18:45	8	08:49 (4)	16:26	15:43
12	09:20	08:20	07:05		07:57 (4)	06:36	05:17	04:29	04:46	05:49	06:58			08:04			08:18	09:18
	16:11	17:24	18:31	24	08:21 (4)	20:42	21:51	22:45	22:38	21:34	20:08			18:42			16:24	15:43
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14	09:17	08:15	06:59		07:57 (4)	06:30	05:13	04:28	04:49	05:53	07:02			08:09			08:23	09:20
	16:15	17:28	18:36	22	08:19 (4)	20:47	21:56	22:47	22:35	21:29	20:03			18:36			16:19	15:42
15	09:16	08:13	06:56		07:58 (4)	06:27	05:11	04:28	04:51	05:55	07:04			08:11			08:25	09:21
	16:17	17:31	18:38	20	08:18 (4)	20:49	21:58	22:47	22:34	21:27	20:00			18:34			16:17	15:42
16	09:15	08:10	06:53		07:59 (4)	06:24	05:09	04:27	04:53	05:58	07:06			08:14			08:27	09:22
	16:19	17:33	18:40	17	08:16 (4)	20:51	22:00	22:48	22:32	21:24	19:57			18:31			16:15	15:42
17	09:13	08:08	06:50		08:00 (4)	06:22	05:06	04:27	04:54	06:00	07:09			08:16			08:30	09:23
	16:21	17:36	18:43	14	08:14 (4)	20:54	22:02	22:49	22:31	21:21	19:54			18:28			16:14	15:42
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	16:24	17:38	18:45	5	08:09 (4)	20:56	22:04	22:49	22:29	21:19	19:51			18:25			16:12	15:42
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20	09:09	08:00	06:42			06:13	05:00	04:27	05:00	06:07	07:15			08:23			08:37	09:26
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21	09:07	07:57	06:39			06:11	04:58	04:27	05:02	06:09	07:17			08:25			08:39	09:26
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25	09:00	07:47	06:27			06:00	04:51	04:28	05:10	06:18	07:26			07:35			08:48	09:28
	16:39	17:55	19:01			21:12	22:18	22:51	22:16	21:00	19:31			17:07			16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28		08:44 (4)	07:37			08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	11	08:55 (4)	17:04			15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31		08:41 (4)	07:40			08:52	09:29
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28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33		08:39 (4)	07:42			08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	19	08:58 (4)	16:59			15:55	15:48
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30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37		08:37 (4)	07:47			08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	23	09:00 (4)	16:54			15:53	15:50
31	08:48		07:10				04:41		05:22	06:31				07:49				09:28
	16:54		20:15				22:29		22:03	20:43				16:52				15:51
Potential sun hours	221	260	365			432	521	547	545	478	386			319			236	200
Total, worst case				317								91			233			
Sun reduction				0,50								0,50			0,50			
Oper. time red.				0,80								0,80			0,80			
Wind dir. red.				0,71								0,71			0,71			
Total reduction				0,28								0,28			0,28			
Total, real				90								26			66			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:36		09:02 (2)	07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:45 (4)	07:52	09:00
	15:53	16:56		18:05	4	09:06 (2)	20:17	21:26	22:31	22:49	22:01	20:40		19:13	28	09:13 (4)	16:49	15:51
2	09:28	08:44		07:33			07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:44 (4)	07:54	09:02
	15:54	16:59		18:07			20:19	21:28	22:32	22:48	21:59	20:37		19:10	29	09:13 (4)	16:47	15:50
3	09:27	08:41		07:30		08:17 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:43 (4)	07:56	09:04
	15:56	17:01		18:10	10	08:27 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	29	09:12 (4)	16:44	15:49
4	09:27	08:39		07:27		08:13 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:44 (4)	07:59	09:05
	15:57	17:04		18:12	17	08:30 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	28	09:12 (4)	16:42	15:48
5	09:26	08:37		07:24		08:11 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:44 (4)	08:01	09:07
	15:59	17:06		18:14	20	08:31 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	27	09:11 (4)	16:39	15:47
6	09:25	08:35		07:22		08:09 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:44 (4)	08:04	09:09
	16:00	17:09		18:17	24	08:33 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	26	09:10 (4)	16:37	15:47
7	09:25	08:32		07:19		08:08 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:45 (4)	08:06	09:10
	16:02	17:11		18:19	25	08:33 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	24	09:09 (4)	16:35	15:46
8	09:24	08:30		07:16		08:07 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:46 (4)	08:08	09:12
	16:04	17:14		18:22	27	08:34 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	22	09:08 (4)	16:32	15:45
9	09:23	08:28		07:13		08:07 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:47 (4)	08:11	09:14
	16:06	17:16		18:24	28	08:35 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	09:05 (4)	16:30	15:44
10	09:22	08:25		07:10		08:06 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:49 (4)	08:13	09:15
	16:07	17:19		18:26	29	08:35 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	09:04 (4)	16:28	15:44
11	09:21	08:23		07:07		08:06 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:53 (4)	08:16	09:16
	16:09	17:21		18:29	29	08:35 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	6	08:59 (4)	16:26	15:43
12	09:20	08:20		07:05		08:05 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:23		18:31	29	08:34 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18		07:02		08:05 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07		09:33 (2)	08:20	09:19
	16:13	17:26		18:33	29	08:34 (4)	20:44	21:53	22:46	22:37	21:32	20:05		18:39	7	09:40 (2)	16:22	15:43
14	09:17	08:15		06:59		08:05 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09		09:30 (2)	08:23	09:20
	16:15	17:28		18:36	28	08:33 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36	12	09:42 (2)	16:19	15:42
15	09:16	08:13		06:56		07:33 (3)	06:27	05:11	04:28	04:51	05:55	07:04		08:11		09:29 (2)	08:25	09:21
	16:17	17:31		18:38	32	08:32 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	15	09:44 (2)	16:17	15:42
16	09:15	08:10		06:53		07:30 (3)	06:24	05:09	04:27	04:53	05:58	07:06		08:14		09:27 (2)	08:27	09:22
	16:19	17:33		18:40	36	08:31 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	17	09:44 (2)	16:15	15:42
17	09:13	08:08	09:01 (2)	06:50		07:28 (3)	06:22	05:06	04:27	04:54	06:00	07:09	08:18 (3)	08:16		09:27 (2)	08:30	09:23
	16:21	17:36	9 09:10 (2)	18:43	38	08:30 (4)	20:54	22:02	22:49	22:31	21:21	19:54	5 08:23 (3)	18:28	18	09:45 (2)	16:14	15:42
18	09:12	08:05	08:58 (2)	06:47		07:27 (3)	06:19	05:04	04:27	04:56	06:02	07:11	08:14 (3)	08:18		09:26 (2)	08:32	09:24
	16:24	17:38	14 09:12 (2)	18:45	36	08:28 (4)	20:56	22:04	22:49	22:29	21:19	19:51	11 08:25 (3)	18:25	19	09:45 (2)	16:12	15:42
19	09:10	08:02	08:57 (2)	06:45		07:25 (3)	06:16	05:02	04:27	04:58	06:04	07:13	08:12 (3)	08:21		09:26 (2)	08:34	09:25
	16:26	17:41	16 09:13 (2)	18:47	34	08:25 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:26 (3)	18:23	19	09:45 (2)	16:10	15:43
20	09:09	08:00	08:56 (2)	06:42		07:25 (3)	06:13	05:00	04:27	05:00	06:07	07:15	08:10 (3)	08:23		09:25 (2)	08:37	09:26
	16:28	17:43	17 09:13 (2)	18:49	30	08:23 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:27 (3)	18:20	19	09:44 (2)	16:08	15:43
21	09:07	07:57	08:55 (2)	06:39		07:25 (3)	06:11	04:58	04:27	05:02	06:09	07:17	08:10 (3)	08:25		09:26 (2)	08:39	09:26
	16:30	17:46	18 09:13 (2)	18:52	18	07:43 (3)	21:03	22:10	22:50	22:24	21:10	19:42	18 08:28 (3)	18:17	18	09:44 (2)	16:06	15:43
22	09:05	07:55	08:55 (2)	06:36		07:24 (3)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (3)	08:28		09:26 (2)	08:41	09:27
	16:32	17:48	19 09:14 (2)	18:54	18	07:42 (3)	21:05	22:12	22:51	22:22	21:08	19:39	19 08:28 (3)	18:15	17	09:43 (2)	16:04	15:44
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	16:35	17:50	19 09:14 (2)	18:56	16	07:41 (3)	21:08	22:14	22:51	22:20	21:05	19:36	27 09:06 (4)	18:12	15	09:42 (2)	16:03	15:44
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	16:37	17:53	19 09:14 (2)	18:59	15	07:40 (3)	21:10	22:16	22:51	22:18	21:02	19:33	35 09:09 (4)	18:09	12	09:41 (2)	16:01	15:45
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	16:39	17:55	18 09:13 (2)	19:01	12	07:38 (3)	21:12	22:18	22:51	22:16	21:00	19:31	35 09:10 (4)	17:07	7	08:38 (2)	16:00	15:46
26	08:58	07:44	08:55 (2)	06:24		07:28 (3)	05:57	04:49	04:29	05:12	06:20	07:28	08:11 (3)	07:37			08:50	09:28
	16:42	17:58	17 09:12 (2)	19:03	7	07:35 (3)	21:15	22:20	22:51	22:14	20:57	19:28	36 09:12 (4)	17:04			15:58	15:46
27	08:56	07:41	08:56 (2)	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:11 (3)	07:40			08:52	09:29
	16:44	18:00	15 09:11 (2)	19:05			21:17	22:22	22:50	22:12	20:54	19:25	37 09:13 (4)	17:02			15:57	15:47
28	08:54	07:38	08:58 (2)	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:13 (3)	07:42			08:54	09:29
	16:47	18:03	11 09:09 (2)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	34 09:13 (4)	16:59			15:55	15:48
29	08:52			07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:45 (4)	07:44			08:56	09:29
	16:49			20:10			21:21	22:26	22:50	22:08	20:48	19:19	28 09:13 (4)	16:57			15:54	15:49
30	08:50			07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:45 (4)	07:47			08:58	09:28
	16:51			20:12			21:24	22:27	22:49	22:05	20:46	19:16	29 09:14 (4)	16:54			15:53	15:50
31	08:48			07:10				04:41		05:22	06:31			07:49				09:28
	16:54			20:15				22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			192		591							345		447				
Sun reduction			0,50		0,50							0,50		0,50				
Oper. time red.			0,80		0,80							0,80		0,80				
Wind dir. red.			0,74		0,71							0,71		0,73				
Total reduction			0,29		0,28							0,28		0,29				
Total, real			57		168							97		130				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:18 (2)	08:46	10:00 (3)	07:35	07:07	05:44	04:40
	15:53	49	12:27 (4)	16:56	25	10:25 (3)	18:05	20:17	21:26	22:31
2	09:28		11:18 (2)	08:44	09:59 (3)	07:33	07:04	05:41	04:39
	15:54	50	12:28 (4)	16:59	25	10:24 (3)	18:07	20:19	21:28	22:32
3	09:27		11:18 (2)	08:41	10:00 (3)	07:30	07:01	05:39	04:37
	15:56	51	12:28 (4)	17:01	25	10:25 (3)	18:10	20:21	21:31	22:34
4	09:27		11:18 (2)	08:39	09:59 (3)	07:27	06:58	05:36	04:36
	15:57	51	12:28 (4)	17:04	26	10:25 (3)	18:12	20:24	21:33	22:35
5	09:26		11:19 (2)	08:37	10:00 (3)	07:24	06:55	05:34	04:35
	15:59	51	12:29 (4)	17:06	26	10:26 (3)	18:14	20:26	21:35	22:37
6	09:25		11:19 (2)	08:35	10:00 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:29 (4)	17:09	25	10:25 (3)	18:17	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32	10:00 (3)	07:19	06:50	05:29	04:33
	16:02	51	12:30 (4)	17:11	25	10:25 (3)	18:19	20:31	21:40	22:39
8	09:24		11:20 (2)	08:30	10:01 (3)	07:16	06:47	05:27	04:32
	16:04	51	12:30 (4)	17:13	24	10:25 (3)	18:21	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28	10:01 (3)	07:13	06:44	05:24	04:31
	16:05	51	12:31 (4)	17:16	23	10:24 (3)	18:24	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25	10:03 (3)	07:10	06:41	05:22	04:30
	16:07	51	12:31 (4)	17:18	21	10:24 (3)	18:26	20:38	21:47	22:43
11	09:21		11:22 (2)	08:23	09:07 (26)	07:07	06:38	05:20	04:30
	16:09	50	12:31 (4)	17:21	25	10:22 (3)	18:28	20:40	21:49	22:44
12	09:20		11:22 (2)	08:20	09:04 (26)	07:05	06:36	05:17	04:29
	16:11	49	12:31 (4)	17:23	27	10:20 (3)	18:31	20:42	21:51	22:45
13	09:19		11:23 (2)	08:18	09:03 (26)	07:02	06:33	05:15	04:28
	16:13	49	12:32 (4)	17:26	26	10:18 (3)	18:33	20:44	21:53	22:46
14	09:17		11:24 (2)	08:15	09:02 (26)	06:59	06:30	05:13	04:28
	16:15	47	12:32 (4)	17:28	17	09:19 (26)	18:35	20:47	21:56	22:47
15	09:16		11:24 (2)	08:13	09:01 (26)	06:56	06:27	05:11	04:28
	16:17	47	12:32 (4)	17:31	19	09:20 (26)	18:38	20:49	21:58	22:47
16	09:15		11:25 (2)	08:10	09:00 (26)	06:53	06:24	05:08	04:27
	16:19	44	12:31 (4)	17:33	20	09:20 (26)	18:40	20:51	22:00	22:48
17	09:13		11:27 (2)	08:08	09:01 (26)	06:50	06:22	05:06	04:27
	16:21	42	12:32 (4)	17:36	20	09:21 (26)	18:42	20:54	22:02	22:49
18	09:12		11:28 (2)	08:05	09:00 (26)	06:47	06:19	05:04	04:27
	16:23	39	12:32 (4)	17:38	21	09:21 (26)	18:45	20:56	22:04	22:49
19	09:10		11:29 (2)	08:02	09:00 (26)	06:44	06:16	05:02	04:27
	16:26	35	12:31 (4)	17:41	20	09:20 (26)	18:47	20:58	22:06	22:50
20	09:09		11:31 (2)	08:00	09:00 (26)	06:42	06:13	05:00	04:27
	16:28	30	12:31 (4)	17:43	19	09:19 (26)	18:49	21:01	22:08	22:50
21	09:07		12:09 (4)	07:57	09:01 (26)	06:39	06:11	04:58	04:27
	16:30	21	12:30 (4)	17:46	17	09:18 (26)	18:52	21:03	22:10	22:50
22	09:05		12:11 (4)	07:55	09:02 (26)	06:36	06:08	04:56	04:27
	16:32	19	12:30 (4)	17:48	16	09:18 (26)	18:54	21:05	22:12	22:51
23	09:04		12:12 (4)	07:52	09:04 (26)	06:33	06:05	04:54	04:27
	16:35	17	12:29 (4)	17:50	12	09:16 (26)	18:56	21:08	22:14	22:51
24	09:02		10:08 (3)	07:49	09:06 (26)	06:30	06:02	04:53	04:28
	16:37	16	12:26 (4)	17:53	7	09:13 (26)	18:59	21:10	22:16	22:51
25	09:00		10:05 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	14	12:22 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:03 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	15	10:18 (3)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:03 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	17	10:20 (3)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:01 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	20	10:21 (3)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:01 (3)			07:16	05:49	04:44	04:31
	16:49	21	10:22 (3)			20:10	21:21	22:26	22:50
30	08:50		10:01 (3)			07:13	05:47	04:43	04:31
	16:51	22	10:23 (3)			20:12	21:24	22:27	22:49
31	08:48		10:00 (3)			07:10		04:41	
	16:54	24	10:24 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1145			511				
Sun reduction		0,50			0,50				
Oper. time red.		0,80			0,80				
Wind dir. red.		0,66			0,73				
Total reduction		0,26			0,29				
Total, real		300			149				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:40			07:52		09:32 (3)	09:00		11:04 (2)
	22:49	22:01	20:40	19:13			16:49	21	09:53 (3)	15:51	51	12:14 (4)
2	04:33	05:26	06:35	07:42			07:54		09:31 (3)	09:02		11:04 (2)
	22:48	21:59	20:37	19:10			16:46	22	09:53 (3)	15:50	51	12:14 (4)
3	04:34	05:29	06:38	07:44			07:56		09:31 (3)	09:04		11:04 (2)
	22:47	21:56	20:34	19:07			16:44	23	09:54 (3)	15:49	51	12:14 (4)
4	04:35	05:31	06:40	07:46			07:59		09:30 (3)	09:05		11:04 (2)
	22:47	21:54	20:31	19:05			16:42	25	09:55 (3)	15:48	51	12:14 (4)
5	04:36	05:33	06:42	07:49			08:01		09:29 (3)	09:07		11:05 (2)
	22:46	21:52	20:28	19:02			16:39	26	09:55 (3)	15:47	51	12:15 (4)
6	04:38	05:35	06:44	07:51			08:04		09:30 (3)	09:09		11:05 (2)
	22:45	21:49	20:26	18:59			16:37	25	09:55 (3)	15:46	51	12:15 (4)
7	04:39	05:37	06:47	07:53			08:06		09:30 (3)	09:10		11:06 (2)
	22:44	21:47	20:23	18:56			16:35	26	09:56 (3)	15:46	51	12:16 (4)
8	04:40	05:40	06:49	07:55			08:08		09:29 (3)	09:12		11:06 (2)
	22:43	21:44	20:20	18:53			16:32	26	09:55 (3)	15:45	51	12:16 (4)
9	04:41	05:42	06:51	07:58			08:11		09:30 (3)	09:14		11:07 (2)
	22:42	21:42	20:17	18:50			16:30	25	09:55 (3)	15:44	51	12:17 (4)
10	04:43	05:44	06:53	08:00			08:13		09:31 (3)	09:15		11:07 (2)
	22:41	21:39	20:14	18:48			16:28	24	09:55 (3)	15:44	51	12:17 (4)
11	04:44	05:46	06:55	08:02			08:16		09:31 (3)	09:16		11:08 (2)
	22:39	21:37	20:11	18:45			16:26	23	09:54 (3)	15:43	49	12:17 (4)
12	04:46	05:49	06:58	08:04			08:18		09:32 (3)	09:18		11:08 (2)
	22:38	21:34	20:08	18:42			16:24	22	09:54 (3)	15:43	49	12:17 (4)
13	04:48	05:51	07:00	08:07			08:20		09:33 (3)	09:19		11:09 (2)
	22:37	21:32	20:05	18:39			16:21	21	09:54 (3)	15:43	49	12:18 (4)
14	04:49	05:53	07:02	08:09			08:23		09:34 (3)	09:20		11:09 (2)
	22:35	21:29	20:02	18:36			16:19	20	09:54 (3)	15:42	49	12:18 (4)
15	04:51	05:55	07:04	08:11			08:25		09:35 (3)	09:21		11:10 (2)
	22:34	21:26	20:00	18:34			16:17	17	09:52 (3)	15:42	49	12:19 (4)
16	04:53	05:58	07:06	08:14			08:27		09:36 (3)	09:22		11:11 (2)
	22:32	21:24	19:57	18:31			16:15	15	09:51 (3)	15:42	48	12:20 (4)
17	04:54	06:00	07:09	08:16			08:30		09:39 (3)	09:23		11:12 (2)
	22:31	21:21	19:54	18:28			16:13	15	11:56 (4)	15:42	48	12:20 (4)
18	04:56	06:02	07:11	08:18		09:36 (26)	08:32		09:42 (3)	09:24		11:11 (2)
	22:29	21:19	19:51	18:25	10	09:46 (26)	16:11	16	12:00 (4)	15:42	48	12:20 (4)
19	04:58	06:04	07:13	08:21		09:34 (26)	08:34		11:46 (4)	09:25		11:12 (2)
	22:27	21:16	19:48	18:23	14	09:48 (26)	16:10	17	12:03 (4)	15:42	47	12:20 (4)
20	05:00	06:06	07:15	08:23		09:32 (26)	08:37		11:46 (4)	09:26		11:13 (2)
	22:26	21:13	19:45	18:20	17	09:49 (26)	16:08	19	12:05 (4)	15:43	48	12:21 (4)
21	05:02	06:09	07:17	08:25		09:32 (26)	08:39		11:44 (4)	09:26		11:14 (2)
	22:24	21:10	19:42	18:17	18	09:50 (26)	16:06	21	12:05 (4)	15:43	47	12:22 (4)
22	05:04	06:11	07:20	08:28		09:30 (26)	08:41		11:07 (2)	09:27		11:14 (2)
	22:22	21:08	19:39	18:15	20	09:50 (26)	16:04	30	12:07 (4)	15:44	47	12:22 (4)
23	05:06	06:13	07:22	08:30		09:30 (26)	08:43		11:05 (2)	09:27		11:14 (2)
	22:20	21:05	19:36	18:12	20	09:50 (26)	16:03	36	12:08 (4)	15:44	48	12:22 (4)
24	05:08	06:15	07:24	08:32		09:31 (26)	08:45		11:05 (2)	09:28		11:15 (2)
	22:18	21:02	19:33	18:09	20	09:51 (26)	16:01	39	12:09 (4)	15:45	48	12:23 (4)
25	05:10	06:18	07:26	07:35		08:30 (26)	08:48		11:04 (2)	09:28		11:15 (2)
	22:16	20:59	19:31	17:07	20	08:50 (26)	15:59	42	12:09 (4)	15:45	48	12:24 (4)
26	05:12	06:20	07:28	07:37		08:31 (26)	08:50		11:04 (2)	09:28		11:16 (2)
	22:14	20:57	19:28	17:04	19	08:50 (26)	15:58	43	12:10 (4)	15:46	48	12:24 (4)
27	05:14	06:22	07:31	07:40		08:30 (26)	08:52		11:03 (2)	09:29		11:16 (2)
	22:12	20:54	19:25	17:02	19	08:49 (26)	15:57	47	12:11 (4)	15:47	48	12:25 (4)
28	05:16	06:24	07:33	07:42		08:31 (26)	08:54		11:04 (2)	09:29		11:17 (2)
	22:10	20:51	19:22	16:59	17	08:48 (26)	15:55	47	12:12 (4)	15:48	48	12:25 (4)
29	05:18	06:27	07:35	07:44		08:33 (26)	08:56		11:03 (2)	09:29		11:16 (2)
	22:08	20:48	19:19	16:56	26	09:48 (3)	15:54	49	12:12 (4)	15:49	49	12:25 (4)
30	05:20	06:29	07:37	07:47		08:34 (26)	08:58		11:03 (2)	09:28		11:17 (2)
	22:05	20:45	19:16	16:54	27	09:50 (3)	15:53	50	12:12 (4)	15:50	49	12:26 (4)
31	05:22	06:31		07:49		08:37 (26)				09:28		11:18 (2)
	22:03	20:43		16:51	25	09:52 (3)				15:51	49	12:27 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					272			832			1523	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,68			0,65	
Total reduction					0,29			0,27			0,26	
Total, real					80			226			394	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:00 (1)	08:46		09:41 (26)	07:35	08:28 (28)	07:07	05:44	04:40
	15:53	67 13:34 (4)	16:56	27	11:17 (3)	18:05	19 08:47 (28)	20:17	21:26	22:31
2	09:28	11:00 (1)	08:44		09:37 (26)	07:33	08:27 (28)	07:04	05:41	04:39
	15:54	68 13:34 (4)	16:59	32	11:16 (3)	18:07	20 08:47 (28)	20:19	21:28	22:32
3	09:27	11:00 (1)	08:41		09:35 (26)	07:30	08:27 (28)	07:01	05:39	04:37
	15:56	69 13:34 (4)	17:01	35	11:15 (3)	18:10	20 08:47 (28)	20:21	21:31	22:34
4	09:27	11:00 (1)	08:39		09:34 (26)	07:27	08:27 (28)	06:58	05:36	04:36
	15:57	69 13:35 (4)	17:04	33	11:13 (3)	18:12	19 08:46 (28)	20:24	21:33	22:35
5	09:26	11:00 (1)	08:37		09:33 (26)	07:24	08:28 (28)	06:55	05:34	04:35
	15:59	69 13:35 (4)	17:06	33	11:12 (3)	18:14	17 08:45 (28)	20:26	21:35	22:37
6	09:25	11:00 (1)	08:35		09:32 (26)	07:22	08:28 (28)	06:53	05:31	04:34
	16:00	69 13:35 (4)	17:08	23	11:06 (3)	18:17	16 08:44 (28)	20:28	21:38	22:38
7	09:25	10:54 (3)	08:32		09:31 (26)	07:19	08:29 (28)	06:50	05:29	04:33
	16:02	75 13:36 (4)	17:11	22	09:53 (26)	18:19	13 08:42 (28)	20:31	21:40	22:39
8	09:24	10:53 (3)	08:30		09:32 (26)	07:16	08:31 (28)	06:47	05:27	04:32
	16:04	77 13:37 (4)	17:13	22	09:54 (26)	18:21	8 08:39 (28)	20:33	21:42	22:41
9	09:23	10:52 (3)	08:28		09:31 (26)	07:13		06:44	05:24	04:31
	16:05	76 13:37 (4)	17:16	23	09:54 (26)	18:24		20:35	21:44	22:42
10	09:22	10:51 (3)	08:25		09:32 (26)	07:10		06:41	05:22	04:30
	16:07	78 13:37 (4)	17:18	23	09:55 (26)	18:26		20:38	21:47	22:43
11	09:21	10:50 (3)	08:23		09:31 (26)	07:07		06:38	05:20	04:30
	16:09	78 13:38 (4)	17:21	24	09:55 (26)	18:28		20:40	21:49	22:44
12	09:20	10:49 (3)	08:20		09:31 (26)	07:05		06:36	05:17	04:29
	16:11	76 13:37 (4)	17:23	23	09:54 (26)	18:31		20:42	21:51	22:45
13	09:19	10:50 (3)	08:18		09:31 (26)	07:02		06:33	05:15	04:28
	16:13	74 13:38 (4)	17:26	23	09:54 (26)	18:33		20:44	21:53	22:46
14	09:17	10:49 (3)	08:15		09:33 (26)	06:59		06:30	05:13	04:28
	16:15	73 13:38 (4)	17:28	21	09:54 (26)	18:35		20:47	21:55	22:47
15	09:16	10:48 (3)	08:13		09:33 (26)	06:56		06:27	05:11	04:28
	16:17	69 13:38 (4)	17:31	20	09:53 (26)	18:38		20:49	21:58	22:47
16	09:15	10:48 (3)	08:10		09:34 (26)	06:53		06:24	05:08	04:27
	16:19	62 13:37 (4)	17:33	17	09:51 (26)	18:40		20:51	22:00	22:48
17	09:13	10:49 (3)	08:08		09:36 (26)	06:50		06:22	05:06	04:27
	16:21	61 13:38 (4)	17:36	14	09:50 (26)	18:42		20:54	22:02	22:49
18	09:12	10:48 (3)	08:05		09:39 (26)	06:47		06:19	05:04	04:27
	16:23	61 13:38 (4)	17:38	8	09:47 (26)	18:45		20:56	22:04	22:49
19	09:10	10:48 (3)	08:02			06:44		06:16	05:02	04:27
	16:26	58 13:37 (4)	17:41			18:47		20:58	22:06	22:50
20	09:09	10:48 (3)	08:00			06:42		06:13	05:00	04:27
	16:28	57 13:37 (4)	17:43			18:49		21:01	22:08	22:50
21	09:07	10:48 (3)	07:57			06:39		06:10	04:58	04:27
	16:30	53 13:36 (4)	17:45			18:52		21:03	22:10	22:50
22	09:05	10:49 (3)	07:54			06:36		06:08	04:56	04:27
	16:32	49 13:35 (4)	17:48			18:54		21:05	22:12	22:51
23	09:04	10:49 (3)	07:52			06:33		06:05	04:54	04:27
	16:35	43 13:33 (4)	17:50			18:56		21:08	22:14	22:51
24	09:02	10:48 (3)	07:49		08:36 (28)	06:30		06:02	04:53	04:28
	16:37	29 11:17 (3)	17:53	5	08:41 (28)	18:59		21:10	22:16	22:51
25	09:00	10:49 (3)	07:46		08:32 (28)	06:27		06:00	04:51	04:28
	16:39	29 11:18 (3)	17:55	12	08:44 (28)	19:01		21:12	22:18	22:51
26	08:58	10:49 (3)	07:44		08:30 (28)	06:24		05:57	04:49	04:29
	16:42	29 11:18 (3)	17:58	15	08:45 (28)	19:03		21:14	22:20	22:51
27	08:56	10:50 (3)	07:41		08:29 (28)	06:21		05:54	04:47	04:29
	16:44	29 11:19 (3)	18:00	17	08:46 (28)	19:05		21:17	22:22	22:50
28	08:54	10:50 (3)	07:38		08:29 (28)	06:18		05:52	04:46	04:30
	16:46	28 11:18 (3)	18:02	18	08:47 (28)	19:08		21:19	22:24	22:50
29	08:52	10:51 (3)				07:16		05:49	04:44	04:30
	16:49	27 11:18 (3)				20:10		21:21	22:26	22:50
30	08:50	10:51 (3)				07:13		05:47	04:43	04:31
	16:51	26 11:17 (3)				20:12		21:24	22:27	22:49
31	08:48	10:52 (3)				07:10			04:41	
	16:54	25 11:17 (3)				20:15			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1753		490			132			
Sun reduction		0,50		0,50			0,50			
Oper. time red.		0,80		0,80			0,80			
Wind dir. red.		0,65		0,72			0,73			
Total reduction		0,26		0,29			0,29			
Total, real		456		141			38			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:52		09:00 (26)	09:00		10:33 (3)
	22:49		22:01		20:40		19:13			16:49	24	09:24 (26)	15:51	76	13:20 (4)
2	04:33		05:26		06:35		07:42			07:54		09:01 (26)	09:02		10:34 (3)
	22:48		21:59		20:37		19:10			16:46	23	09:24 (26)	15:50	78	13:20 (4)
3	04:34		05:29		06:38		07:44			07:56		09:01 (26)	09:04		10:35 (3)
	22:47		21:56		20:34		19:07			16:44	23	09:24 (26)	15:49	78	13:20 (4)
4	04:35		05:31		06:40		07:46			07:59		09:02 (26)	09:05		10:37 (3)
	22:47		21:54		20:31		19:05			16:42	22	09:24 (26)	15:48	77	13:21 (4)
5	04:36		05:33		06:42		07:48		09:11 (28)	08:01		09:02 (26)	09:07		10:39 (3)
	22:46		21:52		20:28		19:02	3	09:14 (28)	16:39	26	10:37 (3)	15:47	76	13:21 (4)
6	04:37		05:35		06:44		07:51		09:06 (28)	08:04		09:03 (26)	09:09		10:46 (1)
	22:45		21:49		20:26		18:59	11	09:17 (28)	16:37	32	10:42 (3)	15:46	70	13:22 (4)
7	04:39		05:37		06:47		07:53		09:05 (28)	08:06		09:05 (26)	09:10		10:47 (1)
	22:44		21:47		20:23		18:56	15	09:20 (28)	16:35	34	10:44 (3)	15:46	69	13:22 (4)
8	04:40		05:40		06:49		07:55		09:03 (28)	08:08		09:05 (26)	09:12		10:48 (1)
	22:43		21:44		20:20		18:53	17	09:20 (28)	16:32	35	10:45 (3)	15:45	69	13:23 (4)
9	04:41		05:42		06:51		07:58		09:02 (28)	08:11		09:08 (26)	09:14		10:49 (1)
	22:42		21:42		20:17		18:50	18	09:20 (28)	16:30	33	10:47 (3)	15:44	68	13:23 (4)
10	04:43		05:44		06:53		08:00		09:02 (28)	08:13		09:13 (26)	09:15		10:49 (1)
	22:41		21:39		20:14		18:48	19	09:21 (28)	16:28	25	10:48 (3)	15:44	69	13:23 (4)
11	04:44		05:46		06:55		08:02		09:01 (28)	08:16		10:22 (3)	09:16		10:50 (1)
	22:39		21:37		20:11		18:45	20	09:21 (28)	16:26	26	10:48 (3)	15:43	69	13:24 (4)
12	04:46		05:49		06:58		08:04		09:01 (28)	08:18		10:22 (3)	09:18		10:50 (1)
	22:38		21:34		20:08		18:42	20	09:21 (28)	16:24	27	10:49 (3)	15:43	67	13:24 (4)
13	04:47		05:51		07:00		08:07		09:01 (28)	08:20		10:22 (3)	09:19		10:51 (1)
	22:37		21:32		20:05		18:39	19	09:20 (28)	16:21	28	10:50 (3)	15:43	68	13:25 (4)
14	04:49		05:53		07:02		08:09		09:01 (28)	08:23		10:23 (3)	09:20		10:52 (1)
	22:35		21:29		20:02		18:36	18	09:19 (28)	16:19	28	10:51 (3)	15:42	67	13:25 (4)
15	04:51		05:55		07:04		08:11		09:02 (28)	08:25		10:22 (3)	09:21		10:52 (1)
	22:34		21:26		20:00		18:34	16	09:18 (28)	16:17	29	10:51 (3)	15:42	66	13:25 (4)
16	04:53		05:57		07:06		08:14		09:03 (28)	08:27		10:22 (3)	09:22		10:53 (1)
	22:32		21:24		19:57		18:31	13	09:16 (28)	16:15	29	10:51 (3)	15:42	64	13:25 (4)
17	04:54		06:00		07:09		08:16		09:05 (28)	08:30		10:23 (3)	09:23		10:54 (1)
	22:31		21:21		19:54		18:28	10	09:15 (28)	16:13	29	10:52 (3)	15:42	67	13:27 (4)
18	04:56		06:02		07:11		08:18			08:32		10:22 (3)	09:24		10:54 (1)
	22:29		21:19		19:51		18:25			16:11	29	10:51 (3)	15:42	64	13:26 (4)
19	04:58		06:04		07:13		08:21			08:34		10:23 (3)	09:25		10:55 (1)
	22:27		21:16		19:48		18:23			16:10	43	13:07 (4)	15:42	65	13:27 (4)
20	05:00		06:06		07:15		08:23			08:37		10:24 (3)	09:26		10:55 (1)
	22:25		21:13		19:45		18:20			16:08	49	13:10 (4)	15:43	66	13:28 (4)
21	05:02		06:09		07:17		08:25			08:39		10:23 (3)	09:26		10:56 (1)
	22:24		21:10		19:42		18:17			16:06	53	13:11 (4)	15:43	66	13:29 (4)
22	05:04		06:11		07:20		08:28			08:41		10:24 (3)	09:27		10:56 (1)
	22:22		21:08		19:39		18:15			16:04	57	13:13 (4)	15:44	65	13:28 (4)
23	05:06		06:13		07:22		08:30			08:43		10:24 (3)	09:27		10:56 (1)
	22:20		21:05		19:36		18:12			16:03	58	13:13 (4)	15:44	66	13:29 (4)
24	05:08		06:15		07:24		08:32		10:07 (26)	08:45		10:26 (3)	09:28		10:58 (1)
	22:18		21:02		19:33		18:09	10	10:17 (26)	16:01	60	13:15 (4)	15:45	64	13:30 (4)
25	05:10		06:18		07:26		07:35		09:05 (26)	08:48		10:26 (3)	09:28		10:58 (1)
	22:16		20:59		19:30		17:07	15	09:20 (26)	15:59	61	13:15 (4)	15:45	65	13:30 (4)
26	05:12		06:20		07:28		07:37		09:04 (26)	08:50		10:27 (3)	09:28		10:58 (1)
	22:14		20:57		19:28		17:04	18	09:22 (26)	15:58	62	13:16 (4)	15:46	66	13:31 (4)
27	05:14		06:22		07:31		07:40		09:02 (26)	08:52		10:28 (3)	09:28		10:58 (1)
	22:12		20:54		19:25		17:02	20	09:22 (26)	15:56	67	13:17 (4)	15:47	66	13:31 (4)
28	05:16		06:24		07:33		07:42		09:02 (26)	08:54		10:29 (3)	09:29		10:59 (1)
	22:10		20:51		19:22		16:59	21	09:23 (26)	15:55	72	13:18 (4)	15:48	67	13:32 (4)
29	05:18		06:27		07:35		07:44		09:02 (26)	08:56		10:30 (3)	09:29		10:58 (1)
	22:08		20:48		19:19		16:56	22	09:24 (26)	15:54	74	13:18 (4)	15:49	67	13:32 (4)
30	05:20		06:29		07:37		07:47		09:01 (26)	08:58		10:31 (3)	09:28		10:59 (1)
	22:05		20:45		19:16		16:54	23	09:24 (26)	15:53	75	13:18 (4)	15:50	66	13:32 (4)
31	05:22		06:31				07:49		09:01 (26)				09:28		11:00 (1)
	22:03		20:43				16:51	23	09:24 (26)				15:51	66	13:33 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								351			1233			2117	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,68			0,63	
Total reduction								0,29			0,27			0,25	
Total, real								102			333			533	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:05 (1)	08:46	09:41 (26)	07:35	08:31 (28)	07:07	05:44	04:40
	15:53 69	13:41 (4)	16:56 36	11:24 (3)	18:05 20	08:51 (28)	20:17	21:26	22:31
2	09:28	11:05 (1)	08:44	09:40 (26)	07:33	08:31 (28)	07:04	05:41	04:39
	15:54 68	13:41 (4)	16:59 35	11:22 (3)	18:07 20	08:51 (28)	20:19	21:28	22:32
3	09:27	11:05 (1)	08:41	09:39 (26)	07:30	08:31 (28)	07:01	05:39	04:37
	15:56 69	13:41 (4)	17:01 35	11:21 (3)	18:10 19	08:50 (28)	20:21	21:31	22:34
4	09:27	11:00 (3)	08:39	09:38 (26)	07:27	08:31 (28)	06:58	05:36	04:36
	15:57 74	13:42 (4)	17:04 32	11:19 (3)	18:12 19	08:50 (28)	20:24	21:33	22:35
5	09:26	10:59 (3)	08:37	09:38 (26)	07:24	08:32 (28)	06:55	05:34	04:35
	15:59 76	13:42 (4)	17:06 22	10:00 (26)	18:14 16	08:48 (28)	20:26	21:35	22:37
6	09:25	10:58 (3)	08:35	09:37 (26)	07:22	08:33 (28)	06:53	05:31	04:34
	16:00 77	13:43 (4)	17:08 23	10:00 (26)	18:17 14	08:47 (28)	20:28	21:38	22:38
7	09:25	10:58 (3)	08:32	09:36 (26)	07:19	08:35 (28)	06:50	05:29	04:33
	16:02 76	13:43 (4)	17:11 24	10:00 (26)	18:19 9	08:44 (28)	20:31	21:40	22:39
8	09:24	10:57 (3)	08:30	09:37 (26)	07:16		06:47	05:27	04:32
	16:04 78	13:44 (4)	17:13 24	10:01 (26)	18:21		20:33	21:42	22:41
9	09:23	10:57 (3)	08:28	09:36 (26)	07:13		06:44	05:24	04:31
	16:05 77	13:44 (4)	17:16 24	10:00 (26)	18:24		20:35	21:44	22:42
10	09:22	10:56 (3)	08:25	09:37 (26)	07:10		06:41	05:22	04:30
	16:07 77	13:44 (4)	17:18 24	10:01 (26)	18:26		20:38	21:47	22:43
11	09:21	10:56 (3)	08:23	09:37 (26)	07:07		06:38	05:20	04:30
	16:09 76	13:45 (4)	17:21 23	10:00 (26)	18:28		20:40	21:49	22:44
12	09:20	10:56 (3)	08:20	09:37 (26)	07:05		06:36	05:17	04:29
	16:11 74	13:44 (4)	17:23 23	10:00 (26)	18:31		20:42	21:51	22:45
13	09:19	10:56 (3)	08:18	09:38 (26)	07:02		06:33	05:15	04:28
	16:13 73	13:45 (4)	17:26 21	09:59 (26)	18:33		20:44	21:53	22:46
14	09:17	10:56 (3)	08:15	09:39 (26)	06:59		06:30	05:13	04:28
	16:15 69	13:45 (4)	17:28 20	09:59 (26)	18:35		20:47	21:55	22:47
15	09:16	10:55 (3)	08:13	09:40 (26)	06:56		06:27	05:11	04:28
	16:17 61	13:45 (4)	17:31 17	09:57 (26)	18:38		20:49	21:58	22:47
16	09:15	10:55 (3)	08:10	09:42 (26)	06:53		06:24	05:08	04:27
	16:19 59	13:44 (4)	17:33 13	09:55 (26)	18:40		20:51	22:00	22:48
17	09:13	10:56 (3)	08:08	09:45 (26)	06:50		06:21	05:06	04:27
	16:21 59	13:45 (4)	17:36 8	09:53 (26)	18:42		20:54	22:02	22:49
18	09:12	10:56 (3)	08:05		06:47		06:19	05:04	04:27
	16:23 58	13:45 (4)	17:38		18:45		20:56	22:04	22:49
19	09:10	10:56 (3)	08:02		06:44		06:16	05:02	04:27
	16:26 55	13:44 (4)	17:41		18:47		20:58	22:06	22:50
20	09:09	10:56 (3)	08:00		06:42		06:13	05:00	04:27
	16:28 54	13:44 (4)	17:43		18:49		21:01	22:08	22:50
21	09:07	10:56 (3)	07:57		06:39		06:10	04:58	04:27
	16:30 50	13:43 (4)	17:45		18:52		21:03	22:10	22:50
22	09:05	10:56 (3)	07:54		06:36		06:08	04:56	04:27
	16:32 45	13:42 (4)	17:48		18:54		21:05	22:12	22:51
23	09:04	10:57 (3)	07:52	08:40 (28)	06:33		06:05	04:54	04:27
	16:35 40	13:40 (4)	17:50 5	08:45 (28)	18:56		21:08	22:14	22:51
24	09:02	10:56 (3)	07:49	08:36 (28)	06:30		06:02	04:53	04:28
	16:37 32	13:36 (4)	17:53 12	08:48 (28)	18:59		21:10	22:16	22:51
25	09:00	10:57 (3)	07:46	08:34 (28)	06:27		06:00	04:51	04:28
	16:39 29	11:26 (3)	17:55 15	08:49 (28)	19:01		21:12	22:18	22:51
26	08:58	10:57 (3)	07:44	08:33 (28)	06:24		05:57	04:49	04:29
	16:42 29	11:26 (3)	17:58 17	08:50 (28)	19:03		21:14	22:20	22:51
27	08:56	10:58 (3)	07:41	08:32 (28)	06:21		05:54	04:47	04:29
	16:44 28	11:26 (3)	18:00 18	08:50 (28)	19:05		21:17	22:22	22:50
28	08:54	10:58 (3)	07:38	08:32 (28)	06:18		05:52	04:46	04:30
	16:46 28	11:26 (3)	18:02 19	08:51 (28)	19:08		21:19	22:24	22:50
29	08:52	10:59 (3)			07:16		05:49	04:44	04:30
	16:49 27	11:26 (3)			20:10		21:21	22:26	22:50
30	08:50	10:59 (3)			07:13		05:47	04:43	04:31
	16:51 26	11:25 (3)			20:12		21:24	22:27	22:49
31	08:48	09:43 (26)			07:10			04:41	
	16:54 32	11:24 (3)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	1745		490		117				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,65		0,72		0,73				
Total reduction	0,26		0,29		0,29				
Total, real	452		141		34				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:06 (26)	09:00		10:39 (3)
	22:49	22:01	20:40	19:13			16:49	24	09:30 (26)	15:51	75	13:27 (4)
2	04:33	05:26	06:35	07:42			07:54		09:06 (26)	09:02		10:39 (3)
	22:48	21:59	20:37	19:10			16:46	24	09:30 (26)	15:50	77	13:27 (4)
3	04:34	05:29	06:38	07:44			07:56		09:06 (26)	09:04		10:40 (3)
	22:47	21:56	20:34	19:07			16:44	24	09:30 (26)	15:49	78	13:27 (4)
4	04:35	05:31	06:40	07:46			07:59		09:07 (26)	09:05		10:41 (3)
	22:47	21:54	20:31	19:05			16:42	23	09:30 (26)	15:48	79	13:28 (4)
5	04:36	05:33	06:42	07:48			08:01		09:07 (26)	09:07		10:43 (3)
	22:46	21:52	20:28	19:02			16:39	22	09:29 (26)	15:47	76	13:28 (4)
6	04:37	05:35	06:44	07:51		09:12 (28)	08:04		09:08 (26)	09:09		10:44 (3)
	22:45	21:49	20:26	18:59	7	09:19 (28)	16:37	21	09:29 (26)	15:46	77	13:29 (4)
7	04:39	05:37	06:47	07:53		09:10 (28)	08:06		09:09 (26)	09:10		10:46 (3)
	22:44	21:47	20:23	18:56	12	09:22 (28)	16:35	32	10:50 (3)	15:46	76	13:29 (4)
8	04:40	05:40	06:49	07:55		09:08 (28)	08:08		09:09 (26)	09:12		10:48 (3)
	22:43	21:44	20:20	18:53	15	09:23 (28)	16:32	34	10:51 (3)	15:45	74	13:30 (4)
9	04:41	05:42	06:51	07:58		09:06 (28)	08:11		09:10 (26)	09:14		10:51 (3)
	22:42	21:42	20:17	18:50	18	09:24 (28)	16:30	36	10:53 (3)	15:44	72	13:30 (4)
10	04:43	05:44	06:53	08:00		09:06 (28)	08:13		09:12 (26)	09:15		10:54 (1)
	22:41	21:39	20:14	18:48	19	09:25 (28)	16:28	35	10:55 (3)	15:44	68	13:30 (4)
11	04:44	05:46	06:55	08:02		09:05 (28)	08:16		09:14 (26)	09:16		10:55 (1)
	22:39	21:37	20:11	18:45	19	09:24 (28)	16:26	33	10:55 (3)	15:43	68	13:31 (4)
12	04:46	05:49	06:58	08:04		09:05 (28)	08:18		10:31 (3)	09:18		10:55 (1)
	22:38	21:34	20:08	18:42	20	09:25 (28)	16:24	26	10:57 (3)	15:43	68	13:31 (4)
13	04:47	05:51	07:00	08:07		09:04 (28)	08:20		10:31 (3)	09:19		10:56 (1)
	22:37	21:32	20:05	18:39	20	09:24 (28)	16:21	27	10:58 (3)	15:43	68	13:32 (4)
14	04:49	05:53	07:02	08:09		09:04 (28)	08:23		10:31 (3)	09:20		10:57 (1)
	22:35	21:29	20:02	18:36	19	09:23 (28)	16:19	28	10:59 (3)	15:42	67	13:32 (4)
15	04:51	05:55	07:04	08:11		09:05 (28)	08:25		10:30 (3)	09:21		10:57 (1)
	22:34	21:26	20:00	18:34	18	09:23 (28)	16:17	28	10:58 (3)	15:42	68	13:32 (4)
16	04:53	05:57	07:06	08:14		09:05 (28)	08:27		10:30 (3)	09:22		10:57 (1)
	22:32	21:24	19:57	18:31	16	09:21 (28)	16:15	29	10:59 (3)	15:42	68	13:32 (4)
17	04:54	06:00	07:09	08:16		09:07 (28)	08:30		10:31 (3)	09:23		10:59 (1)
	22:31	21:21	19:54	18:28	14	09:21 (28)	16:13	29	11:00 (3)	15:42	66	13:34 (4)
18	04:56	06:02	07:11	08:18		09:08 (28)	08:32		10:30 (3)	09:24		10:59 (1)
	22:29	21:19	19:51	18:25	10	09:18 (28)	16:11	32	13:10 (4)	15:42	66	13:33 (4)
19	04:58	06:04	07:13	08:21			08:34		10:31 (3)	09:25		10:59 (1)
	22:27	21:16	19:48	18:23			16:10	40	13:14 (4)	15:42	67	13:34 (4)
20	05:00	06:06	07:15	08:23			08:37		10:31 (3)	09:26		11:00 (1)
	22:25	21:13	19:45	18:20			16:08	45	13:17 (4)	15:43	66	13:35 (4)
21	05:02	06:09	07:17	08:25			08:39		10:31 (3)	09:26		11:01 (1)
	22:24	21:10	19:42	18:17			16:06	50	13:18 (4)	15:43	66	13:35 (4)
22	05:04	06:11	07:20	08:28			08:41		10:32 (3)	09:27		11:01 (1)
	22:22	21:08	19:39	18:15			16:04	54	13:20 (4)	15:44	66	13:35 (4)
23	05:06	06:13	07:22	08:30			08:43		10:32 (3)	09:27		11:01 (1)
	22:20	21:05	19:36	18:12			16:03	55	13:20 (4)	15:44	66	13:36 (4)
24	05:08	06:15	07:24	08:32			08:45		10:33 (3)	09:28		11:02 (1)
	22:18	21:02	19:33	18:09			16:01	58	13:22 (4)	15:45	66	13:37 (4)
25	05:10	06:18	07:26	07:35		09:13 (26)	08:48		10:33 (3)	09:28		11:03 (1)
	22:16	20:59	19:30	17:07	10	09:23 (26)	15:59	59	13:22 (4)	15:45	66	13:37 (4)
26	05:12	06:20	07:28	07:37		09:11 (26)	08:50		10:34 (3)	09:28		11:03 (1)
	22:14	20:57	19:28	17:04	15	09:26 (26)	15:58	60	13:24 (4)	15:46	67	13:38 (4)
27	05:14	06:22	07:31	07:40		09:09 (26)	08:52		10:34 (3)	09:28		11:03 (1)
	22:12	20:54	19:25	17:01	18	09:27 (26)	15:56	62	13:24 (4)	15:47	68	13:38 (4)
28	05:16	06:24	07:33	07:42		09:08 (26)	08:54		10:36 (3)	09:29		11:04 (1)
	22:10	20:51	19:22	16:59	20	09:28 (26)	15:55	69	13:25 (4)	15:48	66	13:39 (4)
29	05:18	06:27	07:35	07:44		09:08 (26)	08:56		10:36 (3)	09:29		11:03 (1)
	22:08	20:48	19:19	16:56	21	09:29 (26)	15:54	72	13:25 (4)	15:49	68	13:39 (4)
30	05:20	06:29	07:37	07:47		09:07 (26)	08:58		10:37 (3)	09:28		11:04 (1)
	22:05	20:45	19:16	16:54	22	09:29 (26)	15:53	74	13:26 (4)	15:50	68	13:39 (4)
31	05:22	06:31		07:49		09:07 (26)				09:28		11:05 (1)
	22:03	20:43		16:51	23	09:30 (26)				15:51	68	13:40 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					336			1205			2159	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,67			0,63	
Total reduction					0,29			0,27			0,25	
Total, real					98			324			541	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	3	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08		16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46		07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05		16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02		16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59		16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56		16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53		16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51		16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48		16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45		16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05		08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:19	08:18	07:02		07:33 (4)	06:33	05:15	04:29	04:48	05:51		07:00		08:07	08:20	09:19
	16:13	17:26	18:33	9	07:42 (4)	20:45	21:53	22:46	22:37	21:32		20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:31 (4)	06:30	05:13	04:28	04:49	05:53		07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13	07:44 (4)	20:47	21:56	22:47	22:35	21:29		20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:29 (4)	06:27	05:11	04:28	04:51	05:55		07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16	07:45 (4)	20:49	21:58	22:47	22:34	21:27		20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58		07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:46 (4)	20:51	22:00	22:48	22:32	21:24		19:57		18:31	16:15	15:42
17	09:13	08:08	06:50		07:26 (4)	06:22	05:06	04:27	04:54	06:00		07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20	07:46 (4)	20:54	22:02	22:49	22:31	21:21		19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02		07:11	08:19 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:46 (4)	20:56	22:04	22:49	22:29	21:19		19:51	5 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:25 (4)	06:16	05:02	04:27	04:58	06:04		07:13	08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21	07:46 (4)	20:58	22:06	22:50	22:27	21:16		19:48	12 08:27 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:26 (4)	06:13	05:00	04:27	05:00	06:07		07:15	08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:46 (4)	21:01	22:08	22:50	22:26	21:13		19:45	15 08:28 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09		07:17	08:12 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	20	07:46 (4)	21:03	22:10	22:50	22:24	21:11		19:42	18 08:30 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:26 (4)	06:08	04:56	04:27	05:04	06:11		07:20	08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19	07:45 (4)	21:05	22:12	22:51	22:22	21:08		19:39	19 08:30 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13		07:22	08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	16	07:43 (4)	21:08	22:14	22:51	22:20	21:05		19:36	20 08:30 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16		07:24	08:09 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	13	07:41 (4)	21:10	22:16	22:51	22:18	21:02		19:34	21 08:30 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18		07:26	08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	8	07:38 (4)	21:12	22:18	22:51	22:16	21:00		19:31	20 08:29 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20		07:28	08:09 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57		19:28	20 08:29 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22		07:31	08:09 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54		19:25	19 08:28 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24		07:33	08:09 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51		19:22	18 08:27 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27		07:35	08:10 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48		19:19	15 08:25 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29		07:37	08:12 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46		19:16	12 08:24 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31				07:49		09:28
	16:54		20:15				22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200
Total, worst case				213							214		3		
Sun reduction				0,50							0,50		0,50		
Oper. time red.				0,80							0,80		0,80		
Wind dir. red.				0,70							0,70		0,70		
Total reduction				0,28							0,28		0,28		
Total, real				59							59		1		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		11:26 (2)	08:46		10:08 (3)	07:35	07:07	05:44	04:40
	15:53	51	12:42 (4)	16:56	26	10:34 (3)	18:05	20:17	21:26	22:31
2	09:28		11:26 (2)	08:44		10:07 (3)	07:33	07:04	05:41	04:39
	15:54	51	12:42 (4)	16:59	27	10:34 (3)	18:07	20:19	21:28	22:32
3	09:27		11:26 (2)	08:41		10:08 (3)	07:30	07:01	05:39	04:37
	15:56	52	12:42 (4)	17:01	26	10:34 (3)	18:10	20:21	21:31	22:34
4	09:27		11:27 (2)	08:39		10:07 (3)	07:27	06:58	05:36	04:36
	15:57	52	12:43 (4)	17:04	27	10:34 (3)	18:12	20:24	21:33	22:35
5	09:26		11:27 (2)	08:37		10:08 (3)	07:24	06:55	05:34	04:35
	15:59	52	12:43 (4)	17:06	26	10:34 (3)	18:14	20:26	21:35	22:37
6	09:25		11:28 (2)	08:35		10:08 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:43 (4)	17:09	26	10:34 (3)	18:17	20:28	21:38	22:38
7	09:25		11:28 (2)	08:32		10:08 (3)	07:19	06:50	05:29	04:33
	16:02	52	12:44 (4)	17:11	25	10:33 (3)	18:19	20:31	21:40	22:39
8	09:24		10:35 (1)	08:30		10:10 (3)	07:16	06:47	05:27	04:32
	16:04	58	12:45 (4)	17:13	23	10:33 (3)	18:21	20:33	21:42	22:41
9	09:23		10:34 (1)	08:28		10:10 (3)	07:13	06:44	05:24	04:31
	16:05	60	12:45 (4)	17:16	22	10:32 (3)	18:24	20:35	21:44	22:42
10	09:22		10:33 (1)	08:25		09:11 (26)	07:10	06:41	05:22	04:30
	16:07	62	12:45 (4)	17:18	27	10:31 (3)	18:26	20:38	21:47	22:43
11	09:21		10:33 (1)	08:23		09:09 (26)	07:07	06:38	05:20	04:30
	16:09	63	12:46 (4)	17:21	28	10:29 (3)	18:28	20:40	21:49	22:44
12	09:20		10:32 (1)	08:20		09:07 (26)	07:05	06:36	05:17	04:29
	16:11	64	12:46 (4)	17:23	27	10:27 (3)	18:31	20:42	21:51	22:45
13	09:19		10:33 (1)	08:18		09:06 (26)	07:02	06:33	05:15	04:28
	16:13	64	12:46 (4)	17:26	18	09:24 (26)	18:33	20:44	21:53	22:46
14	09:17		10:32 (1)	08:15		09:05 (26)	06:59	06:30	05:13	04:28
	16:15	64	12:46 (4)	17:28	20	09:25 (26)	18:35	20:47	21:56	22:47
15	09:16		10:32 (1)	08:13		09:05 (26)	06:56	06:27	05:11	04:28
	16:17	63	12:46 (4)	17:31	20	09:25 (26)	18:38	20:49	21:58	22:47
16	09:15		10:31 (1)	08:10		09:04 (26)	06:53	06:24	05:08	04:27
	16:19	63	12:46 (4)	17:33	21	09:25 (26)	18:40	20:51	22:00	22:48
17	09:13		10:32 (1)	08:08		09:05 (26)	06:50	06:22	05:06	04:27
	16:21	60	12:46 (4)	17:36	21	09:26 (26)	18:42	20:54	22:02	22:49
18	09:12		10:32 (1)	08:05		09:05 (26)	06:47	06:19	05:04	04:27
	16:23	58	12:46 (4)	17:38	20	09:25 (26)	18:45	20:56	22:04	22:49
19	09:10		10:32 (1)	08:02		09:05 (26)	06:44	06:16	05:02	04:27
	16:26	53	12:46 (4)	17:41	20	09:25 (26)	18:47	20:58	22:06	22:50
20	09:09		10:33 (1)	08:00		09:05 (26)	06:42	06:13	05:00	04:27
	16:28	42	12:45 (4)	17:43	19	09:24 (26)	18:49	21:01	22:08	22:50
21	09:07		10:33 (1)	07:57		09:05 (26)	06:39	06:11	04:58	04:27
	16:30	42	12:45 (4)	17:46	18	09:23 (26)	18:52	21:03	22:10	22:50
22	09:05		10:16 (3)	07:54		09:07 (26)	06:36	06:08	04:56	04:27
	16:32	44	12:44 (4)	17:48	15	09:22 (26)	18:54	21:05	22:12	22:51
23	09:04		10:13 (3)	07:52		09:09 (26)	06:33	06:05	04:54	04:27
	16:35	48	12:43 (4)	17:50	11	09:20 (26)	18:56	21:08	22:14	22:51
24	09:02		10:11 (3)	07:49		09:13 (26)	06:30	06:02	04:53	04:28
	16:37	45	12:40 (4)	17:53	3	09:16 (26)	18:59	21:10	22:16	22:51
25	09:00		10:10 (3)	07:46			06:27	06:00	04:51	04:28
	16:39	40	12:37 (4)	17:55			19:01	21:12	22:18	22:51
26	08:58		10:09 (3)	07:44			06:24	05:57	04:49	04:29
	16:42	36	10:52 (1)	17:58			19:03	21:15	22:20	22:51
27	08:56		10:09 (3)	07:41			06:21	05:54	04:47	04:29
	16:44	37	10:52 (1)	18:00			19:05	21:17	22:22	22:50
28	08:54		10:08 (3)	07:38			06:18	05:52	04:46	04:30
	16:46	35	10:50 (1)	18:02			19:08	21:19	22:24	22:50
29	08:52		10:08 (3)				07:16	05:49	04:44	04:30
	16:49	33	10:49 (1)				20:10	21:21	22:26	22:50
30	08:50		10:08 (3)				07:13	05:47	04:43	04:31
	16:51	25	10:33 (3)				20:12	21:24	22:27	22:49
31	08:48		10:07 (3)				07:10		04:41	
	16:54	26	10:33 (3)				20:15		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1546			516					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,67			0,73					
Total reduction		0,27			0,29					
Total, real		411			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:40			07:52		08:41 (26)	09:00		10:15 (1)
	22:49		22:01		20:40		19:13			16:49	27	10:01 (3)	15:51	63	12:28 (4)
2	04:33		05:26		06:35		07:42			07:54		09:40 (3)	09:02		10:16 (1)
	22:48		21:59		20:37		19:10			16:46	22	10:02 (3)	15:50	62	12:28 (4)
3	04:34		05:29		06:38		07:44			07:56		09:39 (3)	09:04		10:17 (1)
	22:47		21:56		20:34		19:07			16:44	24	10:03 (3)	15:49	60	12:28 (4)
4	04:35		05:31		06:40		07:46			07:59		09:39 (3)	09:05		10:19 (1)
	22:47		21:54		20:31		19:05			16:42	25	10:04 (3)	15:48	57	12:29 (4)
5	04:36		05:33		06:42		07:48			08:01		09:38 (3)	09:07		11:13 (2)
	22:46		21:52		20:28		19:02			16:39	26	10:04 (3)	15:47	52	12:29 (4)
6	04:37		05:35		06:44		07:51			08:04		09:38 (3)	09:09		11:14 (2)
	22:45		21:49		20:26		18:59			16:37	26	10:04 (3)	15:46	52	12:30 (4)
7	04:39		05:37		06:47		07:53			08:06		09:38 (3)	09:10		11:14 (2)
	22:44		21:47		20:23		18:56			16:35	27	10:05 (3)	15:46	52	12:30 (4)
8	04:40		05:40		06:49		07:55			08:08		09:37 (3)	09:12		11:15 (2)
	22:43		21:44		20:20		18:53			16:32	27	10:04 (3)	15:45	52	12:31 (4)
9	04:41		05:42		06:51		07:58			08:11		09:38 (3)	09:14		11:16 (2)
	22:42		21:42		20:17		18:50			16:30	26	10:04 (3)	15:44	51	12:31 (4)
10	04:43		05:44		06:53		08:00			08:13		09:38 (3)	09:15		11:15 (2)
	22:41		21:39		20:14		18:48			16:28	27	10:05 (3)	15:44	52	12:31 (4)
11	04:44		05:46		06:55		08:02			08:16		09:38 (3)	09:16		11:16 (2)
	22:39		21:37		20:11		18:45			16:26	26	10:04 (3)	15:43	51	12:32 (4)
12	04:46		05:49		06:58		08:04			08:18		09:39 (3)	09:18		11:16 (2)
	22:38		21:34		20:08		18:42			16:24	25	10:04 (3)	15:43	51	12:32 (4)
13	04:48		05:51		07:00		08:07			08:20		09:40 (3)	09:19		11:17 (2)
	22:37		21:32		20:05		18:39			16:21	33	10:21 (1)	15:43	51	12:33 (4)
14	04:49		05:53		07:02		08:09			08:23		09:41 (3)	09:20		11:18 (2)
	22:35		21:29		20:02		18:36			16:19	35	10:23 (1)	15:42	50	12:33 (4)
15	04:51		05:55		07:04		08:11			08:25		09:41 (3)	09:21		11:18 (2)
	22:34		21:26		20:00		18:34			16:17	37	10:24 (1)	15:42	50	12:33 (4)
16	04:53		05:58		07:06		08:14			08:27		09:42 (3)	09:22		11:19 (2)
	22:32		21:24		19:57		18:31			16:15	36	10:25 (1)	15:42	50	12:34 (4)
17	04:54		06:00		07:09		08:16			08:30		09:44 (3)	09:23		11:20 (2)
	22:31		21:21		19:54		18:28			16:13	40	12:11 (4)	15:42	50	12:35 (4)
18	04:56		06:02		07:11		08:18		09:42 (26)	08:32		09:45 (3)	09:24		11:19 (2)
	22:29		21:19		19:51		18:25	7	09:49 (26)	16:11	45	12:14 (4)	15:42	49	12:34 (4)
19	04:58		06:04		07:13		08:21		09:39 (26)	08:34		09:47 (3)	09:25		11:20 (2)
	22:27		21:16		19:48		18:23	13	09:52 (26)	16:10	48	12:17 (4)	15:42	50	12:35 (4)
20	05:00		06:06		07:15		08:23		09:37 (26)	08:37		09:51 (3)	09:26		11:21 (2)
	22:26		21:13		19:45		18:20	16	09:53 (26)	16:08	44	12:19 (4)	15:43	50	12:36 (4)
21	05:02		06:09		07:17		08:25		09:36 (26)	08:39		10:08 (1)	09:26		11:22 (2)
	22:24		21:10		19:42		18:17	18	09:54 (26)	16:06	42	12:20 (4)	15:43	49	12:36 (4)
22	05:04		06:11		07:20		08:28		09:35 (26)	08:41		10:09 (1)	09:27		11:22 (2)
	22:22		21:08		19:39		18:15	19	09:54 (26)	16:04	42	12:21 (4)	15:44	49	12:36 (4)
23	05:06		06:13		07:22		08:30		09:35 (26)	08:43		10:08 (1)	09:27		11:22 (2)
	22:20		21:05		19:36		18:12	20	09:55 (26)	16:03	54	12:22 (4)	15:44	49	12:36 (4)
24	05:08		06:15		07:24		08:32		09:34 (26)	08:45		10:09 (1)	09:28		11:23 (2)
	22:18		21:02		19:33		18:09	21	09:55 (26)	16:01	58	12:23 (4)	15:45	50	12:38 (4)
25	05:10		06:18		07:26		07:35		08:34 (26)	08:48		10:09 (1)	09:28		11:23 (2)
	22:16		20:59		19:31		17:07	21	08:55 (26)	15:59	61	12:24 (4)	15:45	49	12:38 (4)
26	05:12		06:20		07:28		07:37		08:34 (26)	08:50		10:10 (1)	09:28		11:24 (2)
	22:14		20:57		19:28		17:04	21	08:55 (26)	15:58	62	12:25 (4)	15:46	49	12:38 (4)
27	05:14		06:22		07:31		07:40		08:34 (26)	08:52		10:11 (1)	09:29		11:24 (2)
	22:12		20:54		19:25		17:02	20	08:54 (26)	15:57	63	12:25 (4)	15:47	50	12:39 (4)
28	05:16		06:24		07:33		07:42		08:35 (26)	08:54		10:12 (1)	09:29		11:25 (2)
	22:10		20:51		19:22		16:59	19	08:54 (26)	15:55	63	12:26 (4)	15:48	50	12:40 (4)
29	05:18		06:27		07:35		07:44		08:36 (26)	08:56		10:13 (1)	09:29		11:24 (2)
	22:08		20:48		19:19		16:56	21	09:53 (3)	15:54	64	12:26 (4)	15:49	50	12:39 (4)
30	05:20		06:29		07:37		07:47		08:36 (26)	08:58		10:13 (1)	09:28		11:25 (2)
	22:05		20:45		19:16		16:54	29	09:57 (3)	15:53	65	12:27 (4)	15:50	50	12:40 (4)
31	05:22		06:31				07:49		08:38 (26)				09:28		11:26 (2)
	22:03		20:43				16:51	29	09:59 (3)				15:51	51	12:41 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								274			1200			1601	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,69			0,64	
Total reduction								0,29			0,27			0,26	
Total, real								80			329			411	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	08:20 (4)	07:07	05:44	04:40	04:32	05:24	06:33	07:40	08:51 (4)	07:52	09:00
	15:53	16:56	18:05 13	08:33 (4)	20:17	21:26	22:31	22:49	22:01	20:40	19:13 25	09:16 (4)	16:49	15:51
2	09:28	08:44	07:33	08:18 (4)	07:04	05:42	04:39	04:33	05:27	06:36	07:42	08:49 (4)	07:54	09:02
	15:54	16:59	18:07 17	08:35 (4)	20:19	21:28	22:32	22:48	21:59	20:37	19:10 27	09:16 (4)	16:47	15:50
3	09:27	08:41	07:30	08:16 (4)	07:01	05:39	04:37	04:34	05:29	06:38	07:44	08:48 (4)	07:56	09:04
	15:56	17:01	18:10 20	08:36 (4)	20:22	21:31	22:34	22:47	21:56	20:34	19:08 28	09:16 (4)	16:44	15:49
4	09:27	08:39	07:27	08:14 (4)	06:58	05:37	04:36	04:35	05:31	06:40	07:46	08:49 (4)	07:59	09:05
	15:57	17:04	18:12 23	08:37 (4)	20:24	21:33	22:35	22:47	21:54	20:31	19:05 27	09:16 (4)	16:42	15:48
5	09:26	08:37	07:24	08:13 (4)	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:48 (4)	08:01	09:07
	15:59	17:06	18:14 25	08:38 (4)	20:26	21:35	22:37	22:46	21:52	20:28	19:02 28	09:16 (4)	16:39	15:47
6	09:25	08:35	07:22	08:12 (4)	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:47 (4)	08:04	09:09
	16:00	17:09	18:17 26	08:38 (4)	20:28	21:38	22:38	22:45	21:49	20:26	18:59 28	09:15 (4)	16:37	15:47
7	09:25	08:32	07:19	08:11 (4)	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:48 (4)	08:06	09:10
	16:02	17:11	18:19 27	08:38 (4)	20:31	21:40	22:39	22:44	21:47	20:23	18:56 27	09:15 (4)	16:35	15:46
8	09:24	08:30	07:16	08:11 (4)	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:48 (4)	08:08	09:12
	16:04	17:14	18:22 27	08:38 (4)	20:33	21:42	22:41	22:43	21:44	20:20	18:53 26	09:14 (4)	16:32	15:45
9	09:23	08:28	07:13	08:11 (4)	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:48 (4)	08:11	09:14
	16:06	17:16	18:24 28	08:39 (4)	20:35	21:44	22:42	22:42	21:42	20:17	18:50 24	09:12 (4)	16:30	15:44
10	09:22	08:25	07:10	08:11 (4)	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:50 (4)	08:13	09:15
	16:07	17:19	18:26 28	08:39 (4)	20:38	21:47	22:43	22:41	21:39	20:14	18:48 22	09:12 (4)	16:28	15:44
11	09:21	08:23	07:07	08:11 (4)	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:50 (4)	08:16	09:16
	16:09	17:21	18:29 27	08:38 (4)	20:40	21:49	22:44	22:39	21:37	20:11	18:45 20	09:10 (4)	16:26	15:43
12	09:20	08:20	07:05	08:11 (4)	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:53 (4)	08:18	09:18
	16:11	17:23	18:31 26	08:37 (4)	20:42	21:51	22:45	22:38	21:34	20:08	18:42 15	09:08 (4)	16:24	15:43
13	09:19	08:18	07:02	08:12 (4)	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:55 (4)	08:20	09:19
	16:13	17:26	18:33 24	08:36 (4)	20:45	21:53	22:46	22:37	21:32	20:05	18:39 10	09:05 (4)	16:22	15:43
14	09:17	08:15	06:59	08:12 (4)	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	18:36 23	08:35 (4)	20:47	21:56	22:47	22:35	21:29	20:03	18:36		16:19	15:42
15	09:16	08:13	06:56	08:13 (4)	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	18:38 20	08:33 (4)	20:49	21:58	22:47	22:34	21:27	20:00	18:34		16:17	15:42
16	09:15	08:10	06:53	08:15 (4)	06:24	05:09	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	18:40 15	08:30 (4)	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	06:50	08:17 (4)	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	18:43 10	08:27 (4)	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11	08:18		08:32	09:24
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20	09:09	08:00	06:42		06:13	05:00	04:27	05:00	06:07	07:15	08:23		08:37	09:26
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21	09:07	07:57	06:39		06:11	04:58	04:27	05:02	06:09	07:17	08:25		08:39	09:26
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25	09:00	07:46	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		08:48	09:28
	16:39	17:55	19:01		21:12	22:18	22:51	22:16	21:00	19:31	17:07		16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28 09:02 (4)	07:37		08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28 6 09:08 (4)	17:04		15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31 08:57 (4)	07:40		08:52	09:29
	16:44	18:00	19:05		21:17	22:22	22:50	22:12	20:54	19:25 14 09:11 (4)	17:02		15:57	15:47
28	08:54	07:38 08:26 (4)	06:19		05:52	04:46	04:30	05:16	06:24	07:33 08:55 (4)	07:42		08:54	09:29
	16:47	18:03 2 08:28 (4)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 18 09:13 (4)	16:59		15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35 08:53 (4)	07:44		08:56	09:29
	16:49		20:10		21:21	22:26	22:50	22:08	20:48	19:19 21 09:14 (4)	16:57		15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37 08:52 (4)	07:47		08:58	09:28
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16 24 09:16 (4)	16:54		15:53	15:50
31	08:48		07:10			04:41		05:22	06:31		07:49			09:28
	16:54		20:15			22:29		22:03	20:43		16:52			15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case		2	379						83	307		
Sun reduction		0,50	0,50						0,50	0,50		
Oper. time red.		0,80	0,80						0,80	0,80		
Wind dir. red.		0,72	0,72						0,72	0,72		
Total reduction		0,29	0,29						0,29	0,29		
Total, real		1	109						24	88		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (28)	08:46	10:00 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (32)	09:00	10:51 (27)	
	15:53	20 12:41 (28)	16:56	20 10:20 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (32)	15:51	28 12:23 (28)	
2	09:28	12:22 (28)	08:44	09:59 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (32)	09:02	10:51 (27)	
	15:54	19 12:41 (28)	16:58	21 10:20 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (32)	15:50	30 12:24 (28)	
3	09:27	12:22 (28)	08:41	10:00 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (32)	09:04	10:52 (27)	
	15:55	19 12:41 (28)	17:01	20 10:20 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (32)	15:49	29 12:25 (28)	
4	09:27	11:12 (27)	08:39	10:00 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (32)	09:05	10:53 (27)	
	15:57	22 12:41 (28)	17:03	20 10:20 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (32)	15:48	30 12:26 (28)	
5	09:26	11:11 (27)	08:37	10:01 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (32)	09:07	10:54 (27)	
	15:58	26 12:42 (28)	17:06	19 10:20 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (32)	15:47	29 12:27 (28)	
6	09:25	11:10 (27)	08:35	10:01 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (32)	09:09	10:56 (27)	
	16:00	28 12:42 (28)	17:08	18 10:19 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (32)	15:46	28 12:28 (28)	
7	09:25	11:09 (27)	08:32	10:01 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (32)	09:10	10:58 (27)	
	16:02	29 12:42 (28)	17:11	17 10:18 (32)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (32)	15:45	26 12:29 (28)	
8	09:24	11:09 (27)	08:30	10:03 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (32)	09:12	11:00 (27)	
	16:03	30 12:42 (28)	17:13	15 10:18 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (32)	15:45	23 12:30 (28)	
9	09:23	11:09 (27)	08:27	10:04 (32)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (32)	09:13	12:11 (28)	
	16:05	30 12:42 (28)	17:16	12 10:16 (32)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (32)	15:44	19 12:30 (28)	
10	09:22	11:08 (27)	08:25	10:07 (32)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (32)	09:15	12:11 (28)	
	16:07	30 12:41 (28)	17:18	5 10:12 (32)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (32)	15:44	19 12:30 (28)	
11	09:21	11:09 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (32)	09:16	12:11 (28)	
	16:09	28 12:41 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (32)	15:43	20 12:31 (28)	
12	09:20	11:08 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (32)	09:18	12:11 (28)	
	16:11	27 12:40 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (27)	15:43	20 12:31 (28)	
13	09:19	11:08 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (32)	09:19	12:12 (28)	
	16:13	25 12:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (27)	15:42	21 12:33 (28)	
14	09:17	11:08 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (32)	09:20	12:12 (28)	
	16:15	20 11:28 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (27)	15:42	21 12:33 (28)	
15	09:16	11:08 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (32)	09:21	12:12 (28)	
	16:17	21 11:29 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (27)	15:42	21 12:33 (28)	
16	09:15	11:08 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (32)	09:22	12:13 (28)	
	16:19	21 11:29 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (27)	15:42	20 12:33 (28)	
17	09:13	11:09 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (32)	09:23	12:14 (28)	
	16:21	22 11:31 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (27)	15:42	21 12:35 (28)	
18	09:12	11:09 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (27)	09:24	12:14 (28)	
	16:23	22 11:31 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (27)	15:42	21 12:35 (28)	
19	09:10	11:09 (27)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (27)	09:25	12:14 (28)	
	16:25	22 11:31 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (27)	15:42	21 12:35 (28)	
20	09:09	11:09 (27)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (27)	09:26	12:15 (28)	
	16:28	23 11:32 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (27)	15:43	21 12:36 (28)	
21	09:07	11:09 (27)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (27)	09:26	12:16 (28)	
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	16:37	22 11:32 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (27)	15:45	21 12:38 (28)	
25	09:00	10:04 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (27)	09:28	12:17 (28)	
	16:39	28 11:32 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (27)	15:45	21 12:38 (28)	
26	08:58	10:03 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (27)	09:28	12:18 (28)	
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27	08:56	10:02 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (27)	09:28	12:18 (28)	
	16:44	31 11:31 (27)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (27)	15:47	21 12:39 (28)	
28	08:54	10:00 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (27)	09:29	12:19 (28)	
	16:46	32 11:30 (27)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (27)	15:48	21 12:40 (28)	
29	08:52	10:00 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (27)	09:29	12:19 (28)	
	16:49	31 11:29 (27)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (28)	15:49	21 12:40 (28)	
30	08:50	09:59 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (27)	09:28	12:20 (28)	
	16:51	27 11:26 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (28)	15:50	20 12:40 (28)	
31	08:48	09:59 (32)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (28)	
	16:54	20 10:19 (32)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (28)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06		05:44	04:40
	15:53	16:56		18:04		20:16		21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58	19:38 (67)	05:36	04:36
	15:57	17:03		18:12		20:23	2 19:40 (67)	21:32	22:34
5	09:25	08:36		07:24		06:55	19:34 (67)	05:34	04:35
	15:58	17:06		18:14		20:25	8 19:42 (67)	21:35	22:36
6	09:25	08:34		07:21		06:52	19:32 (67)	05:31	04:34
	16:00	17:08		18:16		20:28	11 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:31 (67)	05:29	04:33
	16:02	17:11		18:19		20:30	12 19:43 (67)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:31 (67)	05:26	04:32
	16:03	17:13		18:21		20:32	13 19:44 (67)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:31 (67)	05:24	04:31
	16:05	17:16		18:23		20:35	12 19:43 (67)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:31 (67)	05:22	04:30
	16:07	17:18		18:26		20:37	11 19:42 (67)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:32 (67)	05:19	04:30
	16:09	17:21		18:28		20:39	8 19:40 (67)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:34 (67)	05:17	04:29
	16:11	17:23		18:30		20:42	4 19:38 (67)	21:50	22:44
13	09:18	08:17		07:01		06:32		05:15	04:28
	16:13	17:25		18:33		20:44		21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27	19:48 (66)	05:10	04:27
	16:17	17:30		18:37		20:48	9 19:57 (66)	21:57	22:47
16	09:14	08:10	16:48 (70)	06:53		06:24	19:47 (66)	05:08	04:27
	16:19	17:33	1 16:49 (70)	18:40		20:51	13 20:00 (66)	21:59	22:47
17	09:13	08:07	16:44 (70)	06:50		06:21	19:45 (66)	05:06	04:27
	16:21	17:35	8 16:52 (70)	18:42		20:53	15 20:00 (66)	22:01	22:48
18	09:11	08:04	16:42 (70)	06:47		06:18	19:44 (66)	05:04	04:27
	16:23	17:38	12 16:54 (70)	18:44		20:55	16 20:00 (66)	22:03	22:48
19	09:09	08:02	16:41 (70)	06:44		06:16	19:44 (66)	05:02	04:27
	16:25	17:40	13 16:54 (70)	18:47		20:58	17 20:01 (66)	22:05	22:49
20	09:08	07:59	16:42 (70)	06:41		06:13	19:43 (66)	05:00	04:27
	16:28	17:43	13 16:55 (70)	18:49		21:00	18 20:01 (66)	22:08	22:49
21	09:06	07:57	16:41 (70)	06:38	18:02 (69)	06:10	19:42 (66)	04:58	04:27
	16:30	17:45	14 16:55 (70)	18:51	2 18:04 (69)	21:02	18 20:00 (66)	22:10	22:49
22	09:05	07:54	16:41 (70)	06:35	17:58 (69)	06:07	19:43 (66)	04:56	04:27
	16:32	17:48	13 16:54 (70)	18:53	9 18:07 (69)	21:05	17 20:00 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32	17:56 (69)	06:05	19:43 (66)	04:54	04:27
	16:34	17:50	11 16:53 (70)	18:56	12 18:08 (69)	21:07	16 19:59 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30	17:55 (69)	06:02	19:44 (66)	04:52	04:28
	16:37	17:52	9 16:52 (70)	18:58	14 18:09 (69)	21:09	15 19:59 (66)	22:16	22:50
25	08:59	07:46	16:45 (70)	06:27	17:54 (69)	05:59	19:45 (66)	04:51	04:28
	16:39	17:55	4 16:49 (70)	19:00	15 18:09 (69)	21:12	12 19:57 (66)	22:17	22:50
26	08:57	07:43		06:24	17:53 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57		19:03	15 18:08 (69)	21:14	8 19:55 (66)	22:19	22:50
27	08:55	07:40		06:21	17:54 (69)	05:54		04:47	04:29
	16:44	18:00		19:05	15 18:09 (69)	21:16		22:21	22:49
28	08:53	07:38		06:18	17:55 (69)	05:51		04:46	04:30
	16:46	18:02		19:07	13 18:08 (69)	21:18		22:23	22:49
29	08:51			07:15	18:55 (69)	05:49		04:44	04:30
	16:49			20:09	11 19:06 (69)	21:21		22:25	22:49
30	08:49			07:12	18:57 (69)	05:46		04:43	04:31
	16:51			20:12	6 19:03 (69)	21:23		22:26	22:48
31	08:47			07:09				04:41	
	16:53			20:14				22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			98		112		255		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,62		0,69		
Total reduction			0,23		0,25		0,27		
Total, real			22		28		70		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August		September		October		November	December
1	04:32	05:24		06:33	19:31 (67)	07:39		07:51	08:59
	22:48	22:00		20:39	8 19:39 (67)	19:13		16:49	15:51
2	04:33	05:26		06:35	19:29 (67)	07:41		07:53	09:01
	22:47	21:58		20:36	11 19:40 (67)	19:10		16:46	15:50
3	04:34	05:28		06:37	19:29 (67)	07:43		07:56	09:03
	22:47	21:56		20:34	12 19:41 (67)	19:07		16:44	15:49
4	04:35	05:31		06:39	19:28 (67)	07:46		07:58	09:05
	22:46	21:53		20:31	13 19:41 (67)	19:04		16:41	15:48
5	04:36	05:33		06:42	19:28 (67)	07:48		08:00	09:06
	22:45	21:51		20:28	12 19:40 (67)	19:01		16:39	15:47
6	04:37	05:35		06:44	19:28 (67)	07:50		08:03	09:08
	22:44	21:48		20:25	11 19:39 (67)	18:58		16:37	15:46
7	04:39	05:37		06:46	19:29 (67)	07:52		08:05	09:10
	22:43	21:46		20:22	8 19:37 (67)	18:56		16:34	15:45
8	04:40	05:39		06:48	19:31 (67)	07:55		08:08	09:11
	22:42	21:44		20:19	3 19:34 (67)	18:53		16:32	15:45
9	04:41	05:42		06:50		07:57		08:10	09:13
	22:41	21:41		20:16		18:50		16:30	15:44
10	04:43	05:44		06:53		07:59		08:12	09:14
	22:40	21:39		20:13		18:47		16:28	15:44
11	04:44	05:46		06:55		08:02		08:15	09:16
	22:39	21:36		20:11		18:44		16:25	15:43
12	04:46	05:48		06:57		08:04		08:17	09:17
	22:37	21:34		20:08		18:42		16:23	15:43
13	04:47	05:50		06:59	18:49 (69)	08:06		08:20	09:18
	22:36	21:31		20:05	5 18:54 (69)	18:39		16:21	15:42
14	04:49	05:53		07:01	18:46 (69)	08:08		08:22	09:19
	22:34	21:28		20:02	10 18:56 (69)	18:36		16:19	15:42
15	04:51	05:55		07:04	18:44 (69)	08:11		08:24	09:20
	22:33	21:26		19:59	13 18:57 (69)	18:33		16:17	15:42
16	04:52	05:57	19:56 (66)	07:06	18:43 (69)	08:13		08:27	09:21
	22:31	21:23	4 20:00 (66)	19:56	14 18:57 (69)	18:30		16:15	15:42
17	04:54	05:59	19:53 (66)	07:08	18:42 (69)	08:15	17:16 (70)	08:29	09:22
	22:30	21:21	9 20:02 (66)	19:53	15 18:57 (69)	18:28	6 17:22 (70)	16:13	15:42
18	04:56	06:02	19:51 (66)	07:10	18:41 (69)	08:18	17:14 (70)	08:31	09:23
	22:28	21:18	13 20:04 (66)	19:50	15 18:56 (69)	18:25	10 17:24 (70)	16:11	15:42
19	04:58	06:04	19:49 (66)	07:12	18:42 (69)	08:20	17:13 (70)	08:34	09:24
	22:26	21:15	15 20:04 (66)	19:47	14 18:56 (69)	18:22	12 17:25 (70)	16:09	15:42
20	05:00	06:06	19:48 (66)	07:15	18:42 (69)	08:22	17:12 (70)	08:36	09:25
	22:25	21:12	17 20:05 (66)	19:44	13 18:55 (69)	18:20	14 17:26 (70)	16:08	15:43
21	05:01	06:08	19:48 (66)	07:17	18:43 (69)	08:25	17:12 (70)	08:38	09:26
	22:23	21:10	17 20:05 (66)	19:42	10 18:53 (69)	18:17	13 17:25 (70)	16:06	15:43
22	05:03	06:11	19:47 (66)	07:19	18:45 (69)	08:27	17:12 (70)	08:40	09:26
	22:21	21:07	18 20:05 (66)	19:39	5 18:50 (69)	18:14	13 17:25 (70)	16:04	15:43
23	05:05	06:13	19:48 (66)	07:21		08:29	17:12 (70)	08:43	09:27
	22:19	21:04	18 20:06 (66)	19:36		18:12	12 17:24 (70)	16:02	15:44
24	05:07	06:15	19:48 (66)	07:23		08:32	17:13 (70)	08:45	09:27
	22:17	21:02	17 20:05 (66)	19:33		18:09	10 17:23 (70)	16:01	15:45
25	05:09	06:17	19:48 (66)	07:26		07:34	16:14 (70)	08:47	09:27
	22:15	20:59	16 20:04 (66)	19:30		17:06	7 16:21 (70)	15:59	15:45
26	05:11	06:20	19:48 (66)	07:28		07:37		08:49	09:28
	22:13	20:56	15 20:03 (66)	19:27		17:04		15:58	15:46
27	05:13	06:22	19:49 (66)	07:30		07:39		08:51	09:28
	22:11	20:53	12 20:01 (66)	19:24		17:01		15:56	15:47
28	05:16	06:24	19:50 (66)	07:32		07:41		08:53	09:28
	22:09	20:50	9 19:59 (66)	19:21		16:59		15:55	15:48
29	05:18	06:26		07:35		07:44		08:55	09:28
	22:07	20:48		19:18		16:56		15:54	15:49
30	05:20	06:28		07:37		07:46		08:57	09:28
	22:05	20:45		19:16		16:54		15:52	15:50
31	05:22	06:31	19:33 (67)			07:48			09:27
	22:02	20:42	5 19:38 (67)			16:51			15:51
Potential sun hours	545	478		386		319		236	200
Total, worst case			185		192		97		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,69		0,65		0,57		
Total reduction			0,28		0,26		0,23		
Total, real			51		49		22		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06	19:00 (69)	05:44	04:40
	15:53	16:56		18:04		20:16	4 19:04 (69)	21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58		05:36	04:36
	15:57	17:03		18:12		20:23		21:32	22:34
5	09:25	08:36		07:24		06:55		05:34	04:35
	15:58	17:06		18:14		20:25		21:35	22:36
6	09:25	08:34		07:21		06:52	19:37 (67)	05:31	04:34
	16:00	17:08		18:16		20:28	6 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:35 (67)	05:29	04:33
	16:02	17:11		18:19		20:30	10 19:45 (67)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:34 (67)	05:26	04:32
	16:03	17:13		18:21		20:32	12 19:46 (67)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:33 (67)	05:24	04:31
	16:05	17:16		18:23		20:35	13 19:46 (67)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:33 (67)	05:22	04:30
	16:07	17:18		18:26		20:37	12 19:45 (67)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:33 (67)	05:19	04:30
	16:09	17:21		18:28		20:39	11 19:44 (67)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:33 (67)	05:17	04:29
	16:11	17:23		18:30		20:42	10 19:43 (67)	21:50	22:44
13	09:18	08:17		07:01		06:32	19:35 (67)	05:15	04:28
	16:13	17:25		18:33		20:44	7 19:42 (67)	21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27		05:10	04:27
	16:17	17:30		18:37		20:48		21:57	22:47
16	09:14	08:10		06:53		06:24		05:08	04:27
	16:19	17:33		18:40		20:51		21:59	22:47
17	09:13	08:07		06:50		06:21	19:53 (66)	05:06	04:27
	16:21	17:35		18:42		20:53	8 20:01 (66)	22:01	22:48
18	09:11	08:04	16:45 (70)	06:47		06:18	19:50 (66)	05:04	04:27
	16:23	17:38	8 16:53 (70)	18:44		20:55	12 20:02 (66)	22:03	22:48
19	09:09	08:02	16:43 (70)	06:44		06:16	19:49 (66)	05:02	04:27
	16:25	17:40	12 16:55 (70)	18:47		20:58	15 20:04 (66)	22:05	22:49
20	09:08	07:59	16:43 (70)	06:41		06:13	19:48 (66)	05:00	04:27
	16:28	17:43	13 16:56 (70)	18:49		21:00	16 20:04 (66)	22:08	22:49
21	09:06	07:57	16:43 (70)	06:38		06:10	19:46 (66)	04:58	04:27
	16:30	17:45	13 16:56 (70)	18:51		21:02	18 20:04 (66)	22:10	22:49
22	09:05	07:54	16:42 (70)	06:35		06:07	19:47 (66)	04:56	04:27
	16:32	17:48	14 16:56 (70)	18:53		21:05	17 20:04 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32	18:01 (69)	06:05	19:46 (66)	04:54	04:27
	16:34	17:50	13 16:55 (70)	18:56	7 18:08 (69)	21:07	18 20:04 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30	17:59 (69)	06:02	19:46 (66)	04:52	04:28
	16:37	17:52	11 16:54 (70)	18:58	11 18:10 (69)	21:09	18 20:04 (66)	22:16	22:50
25	08:59	07:46	16:44 (70)	06:27	17:57 (69)	05:59	19:46 (66)	04:51	04:28
	16:39	17:55	9 16:53 (70)	19:00	14 18:11 (69)	21:12	17 20:03 (66)	22:17	22:50
26	08:57	07:43	16:47 (70)	06:24	17:56 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57	4 16:51 (70)	19:03	15 18:11 (69)	21:14	16 20:03 (66)	22:19	22:50
27	08:55	07:40		06:21	17:56 (69)	05:54	19:47 (66)	04:47	04:29
	16:44	18:00		19:05	16 18:12 (69)	21:16	14 20:01 (66)	22:21	22:49
28	08:53	07:38		06:18	17:56 (69)	05:51	19:49 (66)	04:46	04:30
	16:46	18:02		19:07	15 18:11 (69)	21:18	11 20:00 (66)	22:23	22:49
29	08:51			07:15	18:56 (69)	05:49	19:50 (66)	04:44	04:30
	16:49			20:09	14 19:10 (69)	21:21	7 19:57 (66)	22:25	22:49
30	08:49			07:12	18:56 (69)	05:46		04:43	04:31
	16:51			20:12	13 19:09 (69)	21:23		22:26	22:48
31	08:47			07:09	18:57 (69)			04:41	
	16:53			20:14	10 19:07 (69)			22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			97		115		272		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,63		0,69		
Total reduction			0,23		0,25		0,28		
Total, real			22		29		75		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:32 (67)	07:39			07:51	08:59
	22:48	22:00			20:39	11	19:43 (67)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:31 (67)	07:41			07:53	09:01
	22:47	21:58			20:36	12	19:43 (67)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:31 (67)	07:43			07:56	09:03
	22:47	21:56			20:34	13	19:44 (67)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:31 (67)	07:46			07:58	09:05
	22:46	21:53			20:31	12	19:43 (67)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:32 (67)	07:48			08:00	09:06
	22:45	21:51			20:28	10	19:42 (67)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:33 (67)	07:50			08:03	09:08
	22:44	21:48			20:25	7	19:40 (67)	18:58			16:37	15:46
7	04:39	05:37			06:46			07:52			08:05	09:10
	22:43	21:46			20:22			18:56			16:34	15:45
8	04:40	05:39			06:48			07:55			08:08	09:11
	22:42	21:44			20:19			18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55		18:54 (69)	08:02			08:15	09:16
	22:39	21:36			20:11	1	18:55 (69)	18:44			16:25	15:43
12	04:46	05:48			06:57		18:50 (69)	08:04			08:17	09:17
	22:37	21:34			20:08	9	18:59 (69)	18:42			16:23	15:43
13	04:47	05:50			06:59		18:48 (69)	08:06			08:20	09:18
	22:36	21:31			20:05	12	19:00 (69)	18:39			16:21	15:42
14	04:49	05:53		19:58 (66)	07:01		18:47 (69)	08:08			08:22	09:19
	22:34	21:28	8	20:06 (66)	20:02	14	19:01 (69)	18:36			16:19	15:42
15	04:51	05:55		19:56 (66)	07:04		18:46 (69)	08:11			08:24	09:20
	22:33	21:26	12	20:08 (66)	19:59	15	19:01 (69)	18:33			16:17	15:42
16	04:52	05:57		19:54 (66)	07:06		18:45 (69)	08:13		17:18 (70)	08:27	09:21
	22:31	21:23	15	20:09 (66)	19:56	15	19:00 (69)	18:30	7	17:25 (70)	16:15	15:42
17	04:54	05:59		19:53 (66)	07:08		18:45 (69)	08:15		17:15 (70)	08:29	09:22
	22:30	21:21	16	20:09 (66)	19:53	14	18:59 (69)	18:28	11	17:26 (70)	16:13	15:42
18	04:56	06:02		19:52 (66)	07:10		18:45 (69)	08:18		17:14 (70)	08:31	09:23
	22:28	21:18	18	20:10 (66)	19:50	13	18:58 (69)	18:25	13	17:27 (70)	16:11	15:42
19	04:58	06:04		19:52 (66)	07:12		18:46 (69)	08:20		17:13 (70)	08:34	09:24
	22:26	21:15	18	20:10 (66)	19:47	12	18:58 (69)	18:22	14	17:27 (70)	16:09	15:42
20	05:00	06:06		19:51 (66)	07:15		18:47 (69)	08:22		17:13 (70)	08:36	09:25
	22:25	21:12	18	20:09 (66)	19:44	8	18:55 (69)	18:20	14	17:27 (70)	16:08	15:43
21	05:01	06:08		19:51 (66)	07:17			08:25		17:13 (70)	08:38	09:26
	22:23	21:10	18	20:09 (66)	19:42			18:17	13	17:26 (70)	16:06	15:43
22	05:03	06:11		19:51 (66)	07:19			08:27		17:14 (70)	08:40	09:26
	22:21	21:07	17	20:08 (66)	19:39			18:14	12	17:26 (70)	16:04	15:43
23	05:05	06:13		19:52 (66)	07:21			08:29		17:14 (70)	08:43	09:27
	22:19	21:04	17	20:09 (66)	19:36			18:12	10	17:24 (70)	16:02	15:44
24	05:07	06:15		19:53 (66)	07:23			08:32		17:16 (70)	08:45	09:27
	22:17	21:02	14	20:07 (66)	19:33			18:09	7	17:23 (70)	16:01	15:45
25	05:09	06:17		19:54 (66)	07:26			07:34			08:47	09:27
	22:15	20:59	12	20:06 (66)	19:30			17:06			15:59	15:45
26	05:11	06:20		19:56 (66)	07:28			07:37			08:49	09:28
	22:13	20:56	7	20:03 (66)	19:27			17:04			15:58	15:46
27	05:13	06:22			07:30			07:39			08:51	09:28
	22:11	20:53			19:24			17:01			15:56	15:47
28	05:16	06:24			07:32			07:41			08:53	09:28
	22:09	20:50			19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28		19:35 (67)	07:37			07:46			08:57	09:28
	22:05	20:45	7	19:42 (67)	19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (67)				07:48				09:27
	22:02	20:42	10	19:43 (67)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			207			178			101			
Sun reduction			0,50			0,50			0,50			
Oper. time red.			0,80			0,80			0,80			
Wind dir. red.			0,69			0,65			0,57			
Total reduction			0,28			0,26			0,23			
Total, real			57			46			23			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 4.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

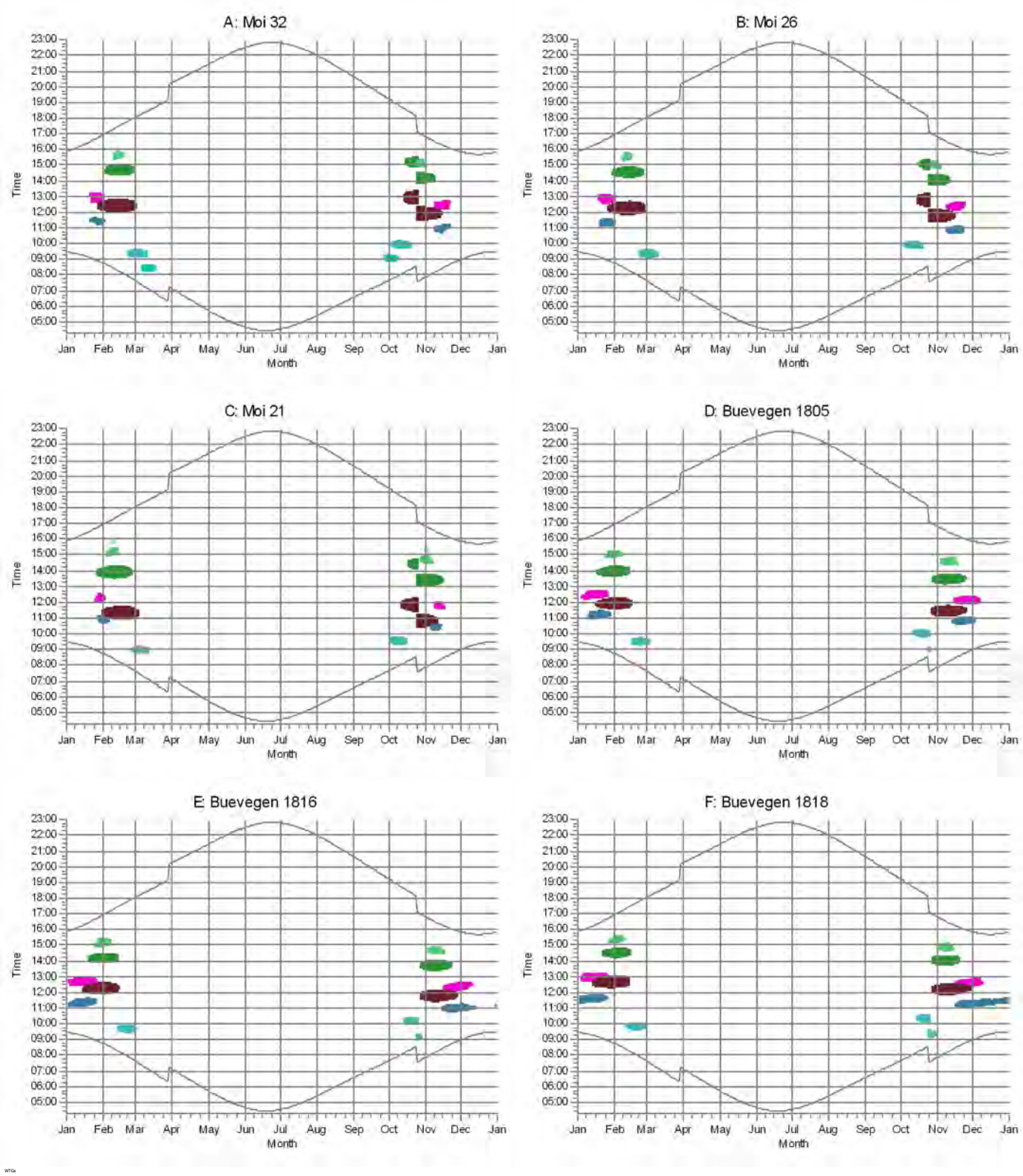
Med nærliggende – realistic case

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

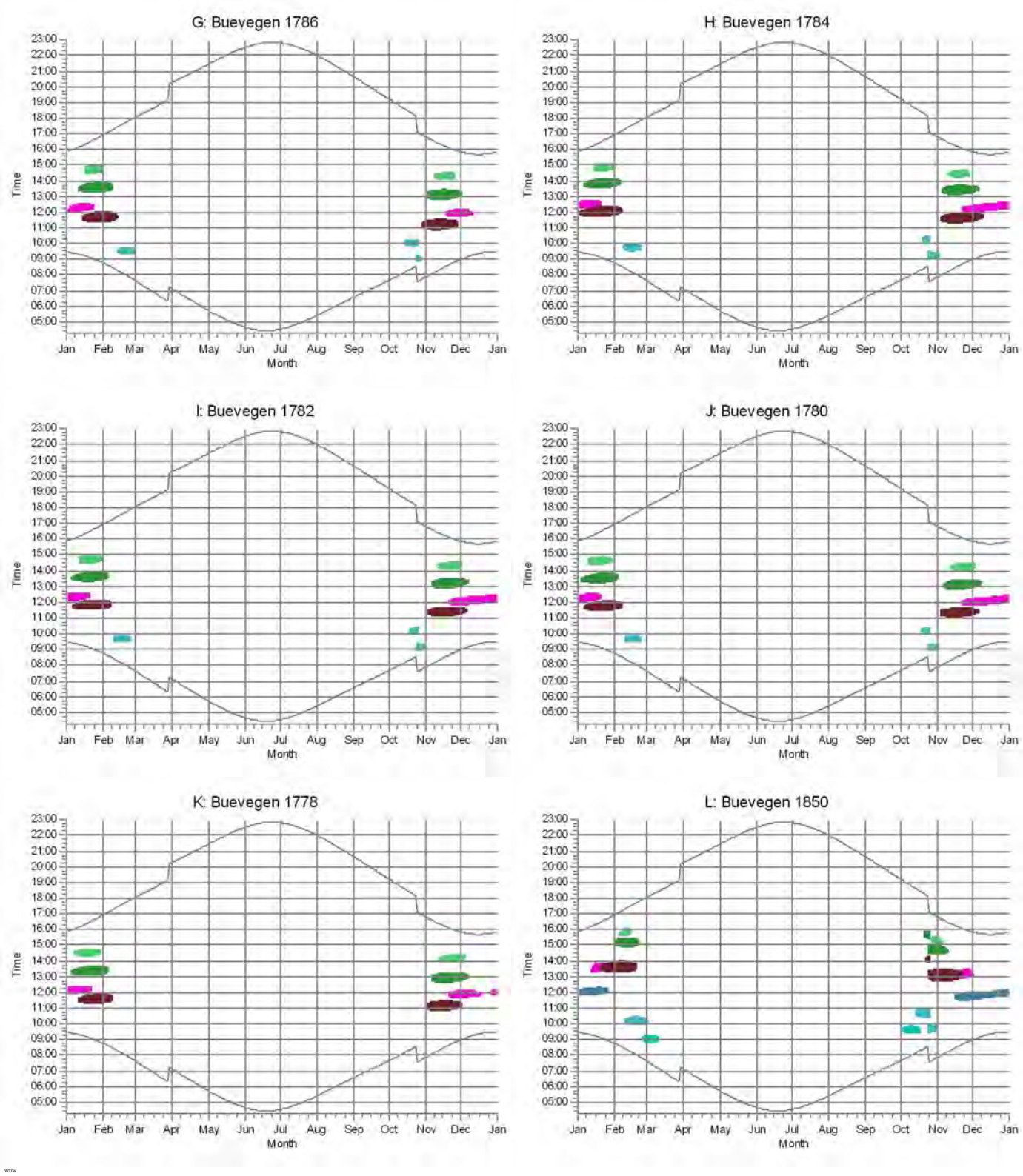


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

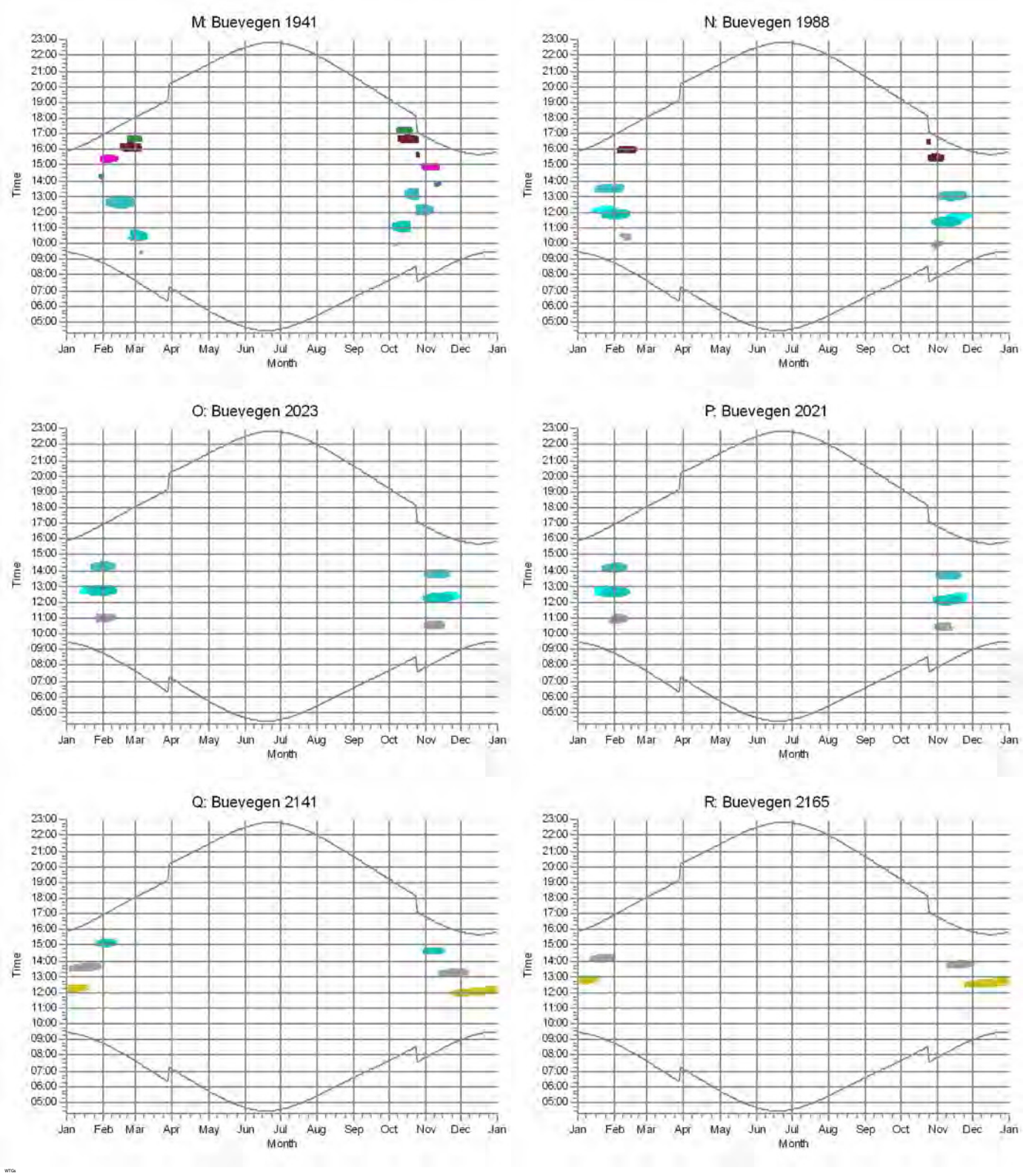


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

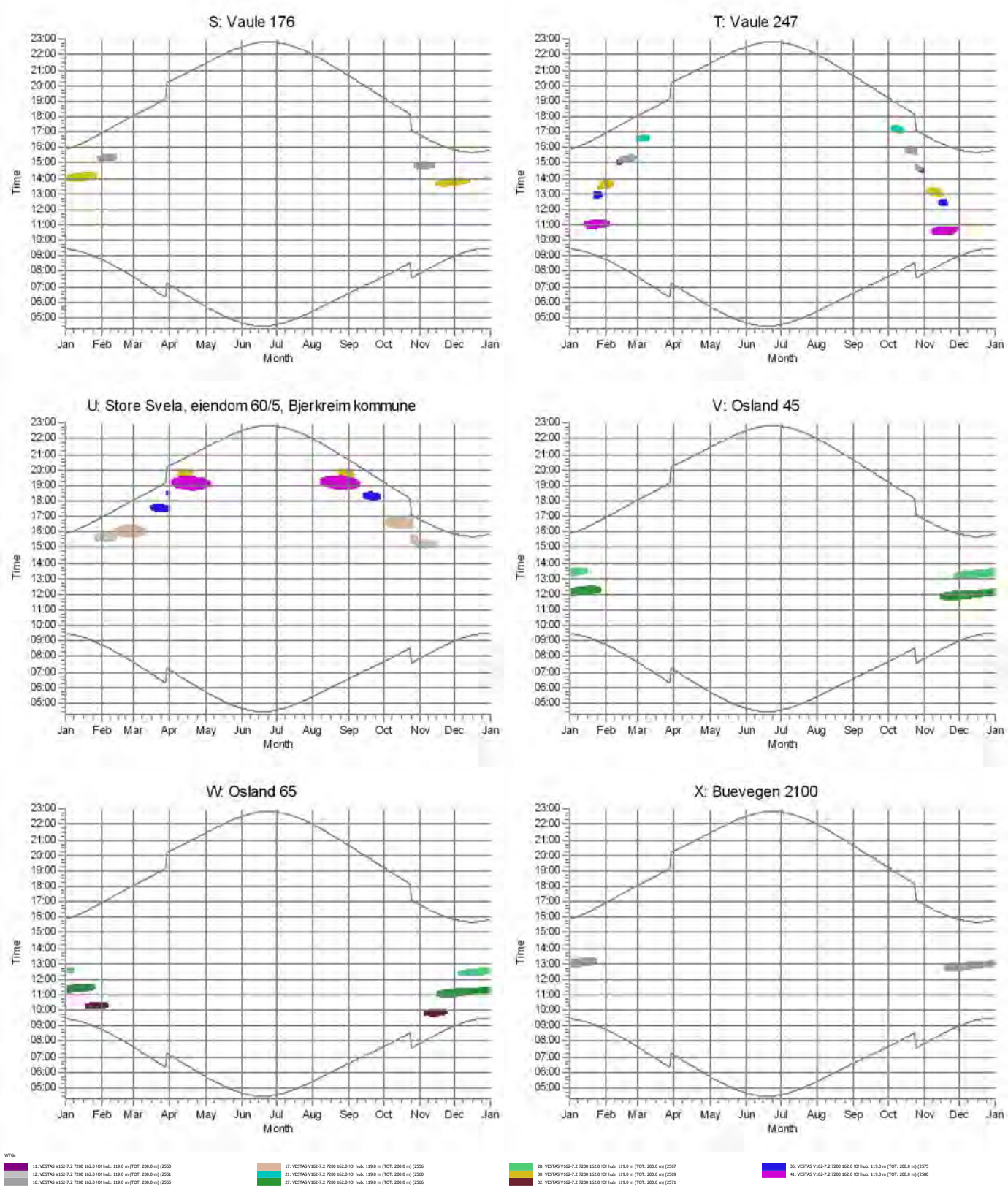


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

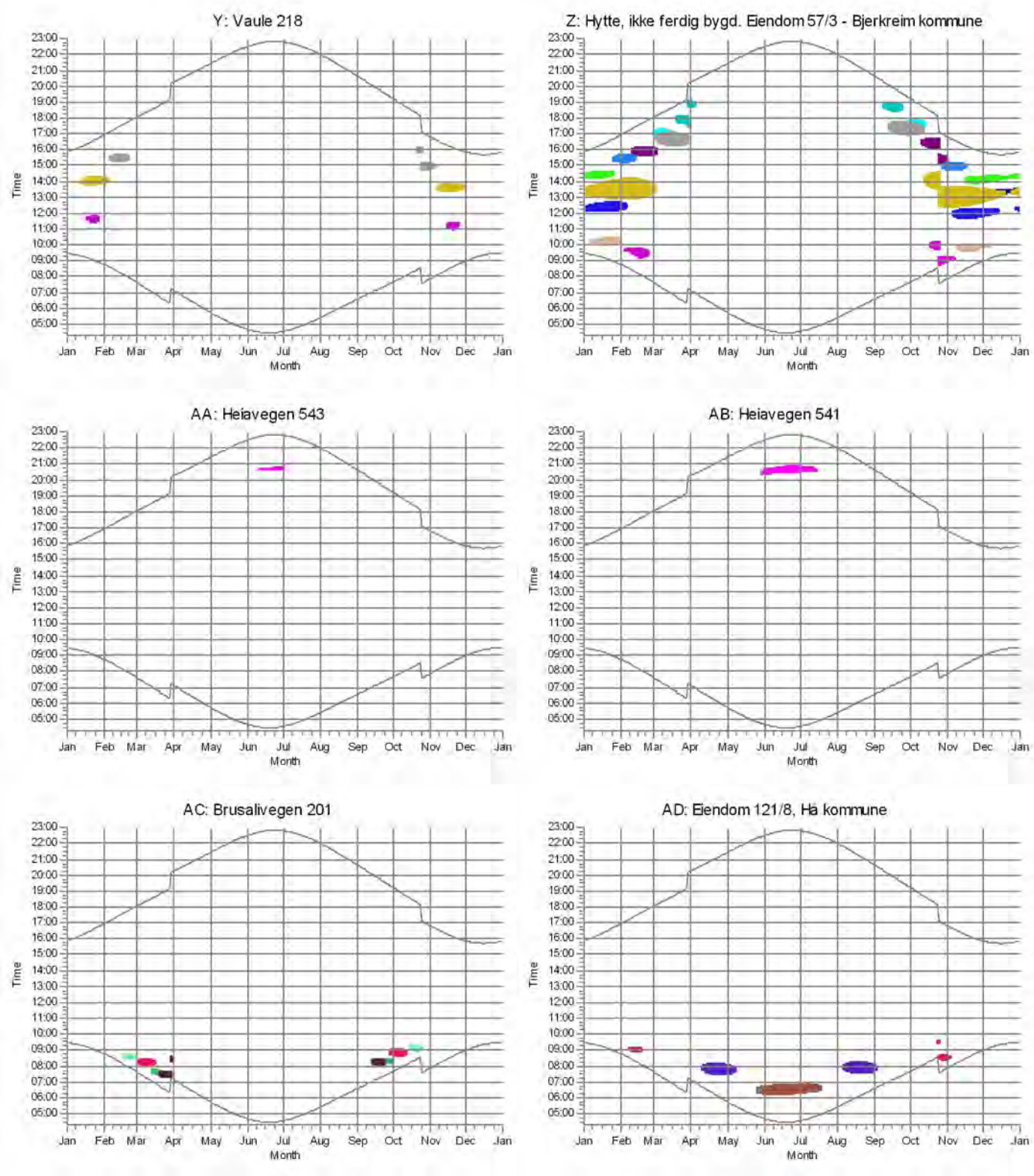


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

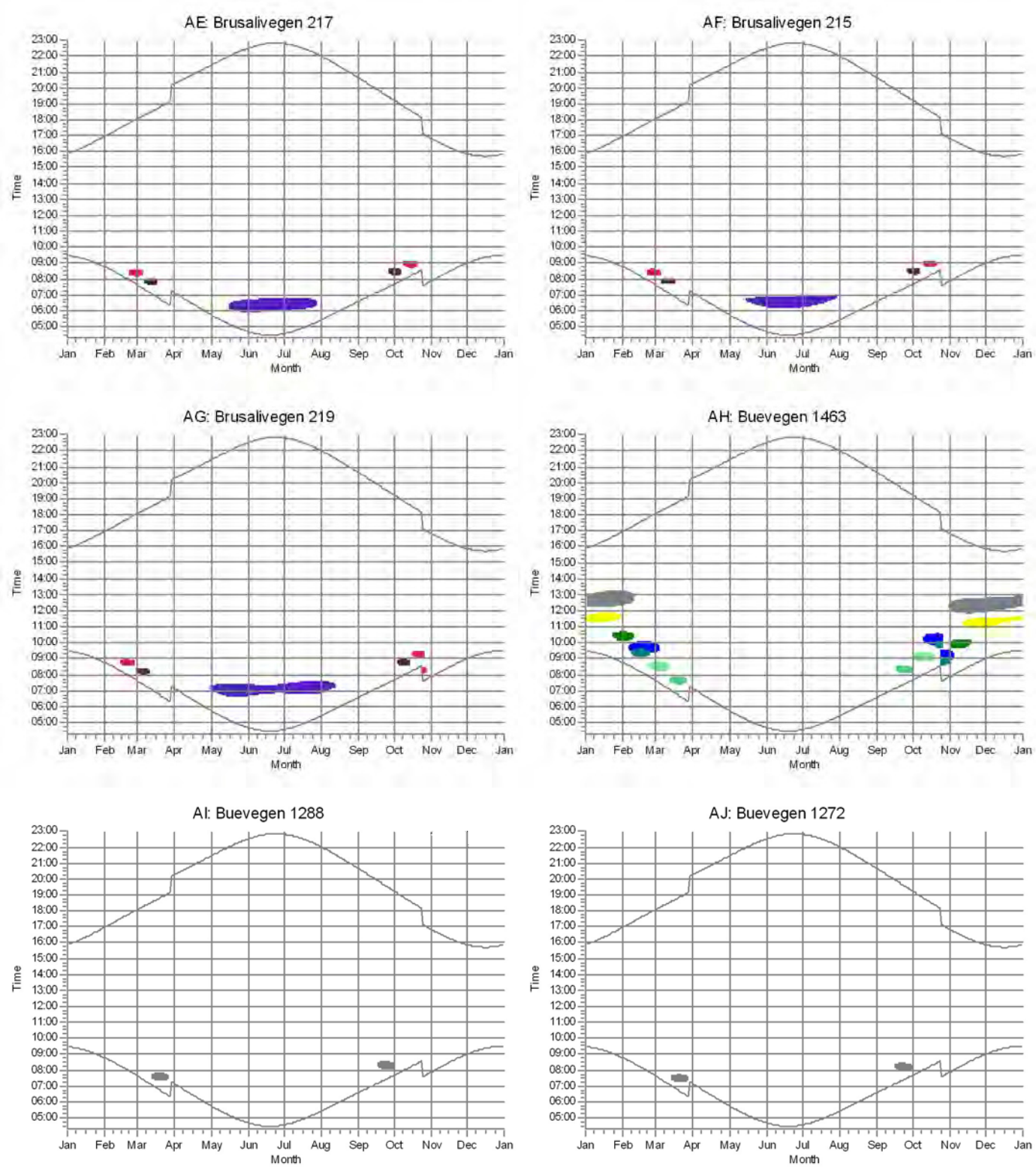


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

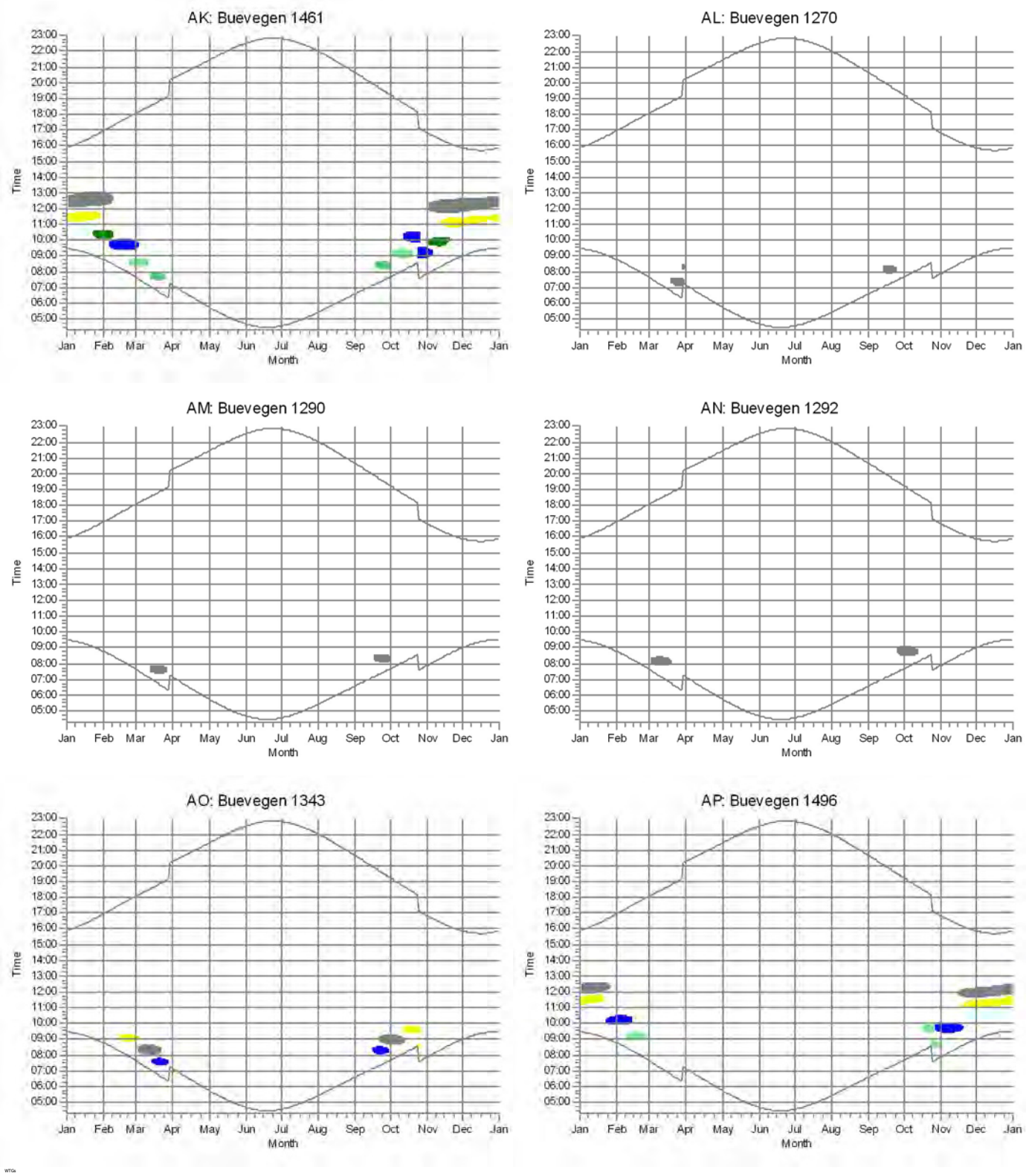


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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

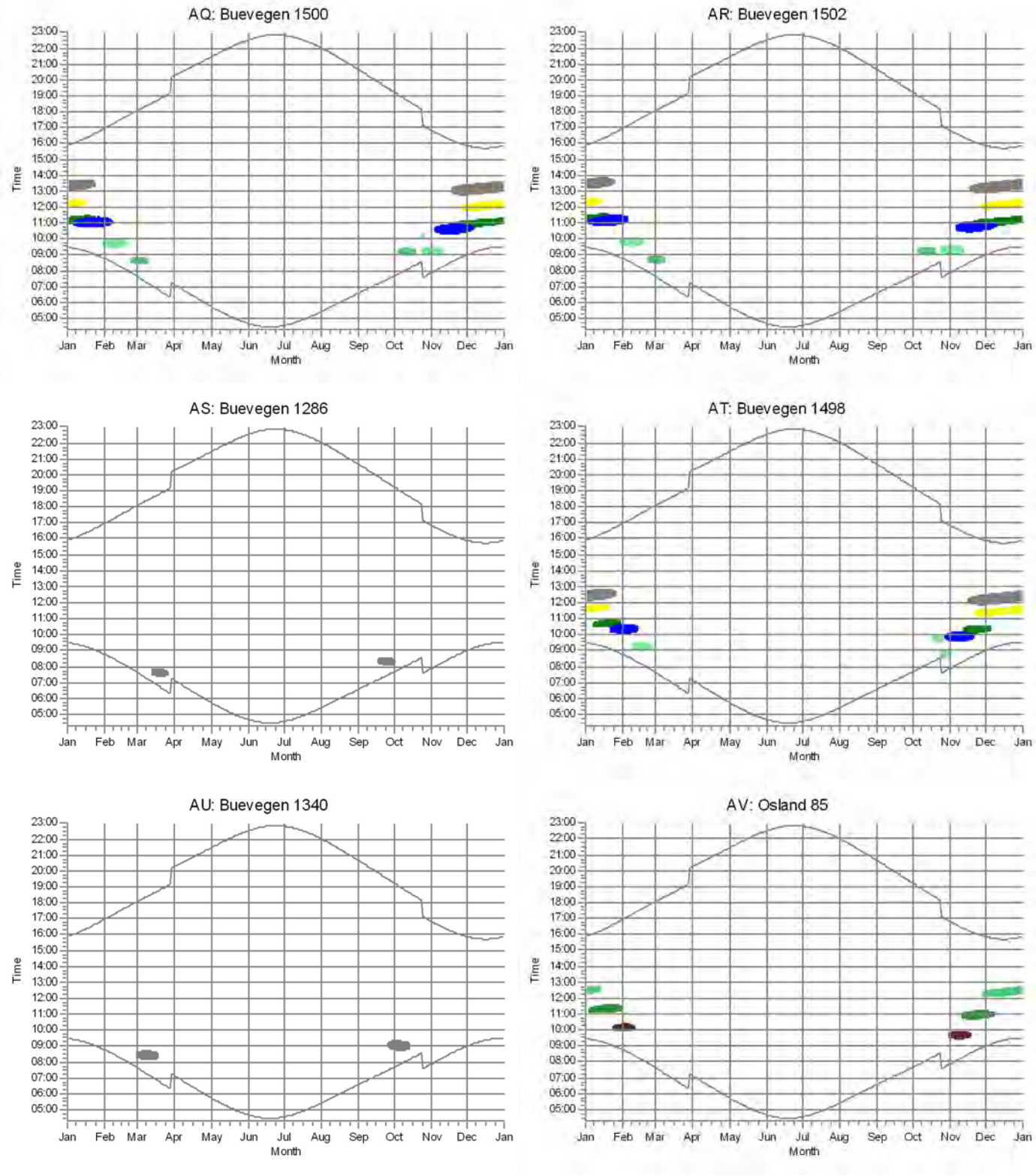


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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

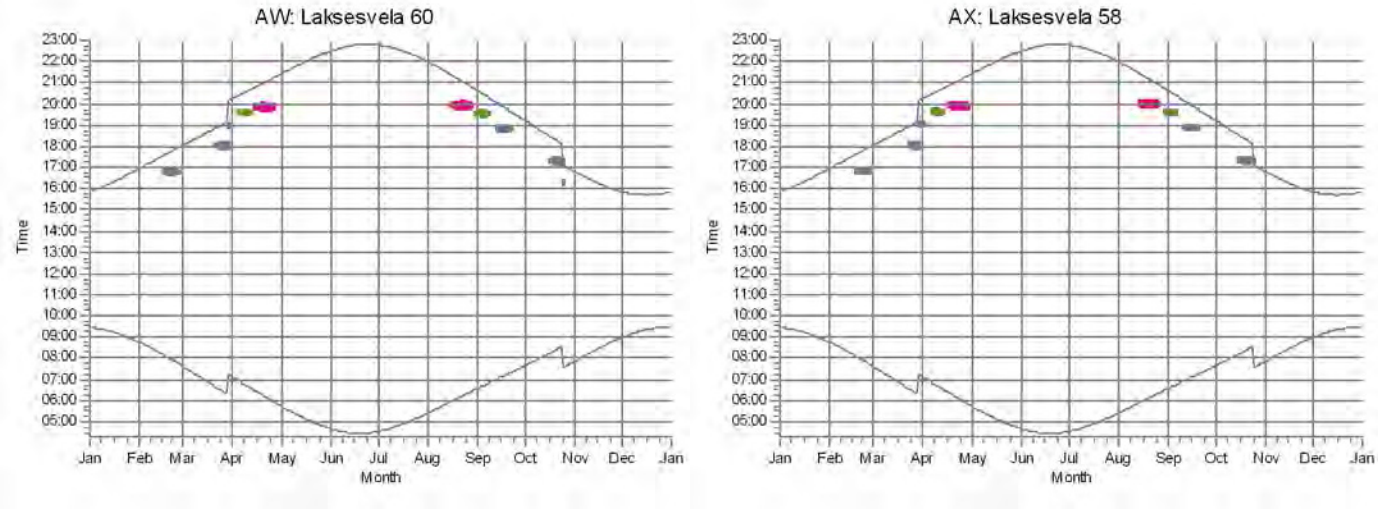


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NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere



Vedlegg 5.1

Tabell Moifjellet vindkraftverk

Worst case

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07		05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17		21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04		05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19		21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01		05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21		21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58		05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24		21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55		05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26		21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52		05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28		21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50		05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30		21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47		05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33		21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44		05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35		21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41		05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37		21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38		05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40		21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35		05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42		21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32		05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44		21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30		05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47		21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27		05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49		21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24		05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51		22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21		05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53		22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00		22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10		04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03		22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08		04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05		22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05		04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07		22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02		04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10		22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59		04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12		22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57		04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14		22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54		04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17		22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52		04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19		22:24	22:50
29	08:52		11:15 (33)				07:15			05:49		04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21		22:25	22:50
30	08:50		11:15 (33)				07:12			05:46		04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24		22:27	22:49
31	08:48		11:17 (33)				07:10					04:41	
	16:54	57	13:05 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		421			1966			363					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	04:32	05:24	06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49	22:01	20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33	05:26	06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48	21:58	20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34	05:28	06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47	21:56	20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35	05:31	06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47	21:54	20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36	05:33	06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46	21:51	20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37	05:35	06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45	21:49	20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39	05:37	06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44	21:47	20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40	05:39	06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43	21:44	20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41	05:42	06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42	21:42	20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43	05:44	06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40	21:39	20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44	05:46	06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39	21:37	20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46	05:48	06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38	21:34	20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47	05:51	07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37	21:31	20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49	05:53	07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35	21:29	20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51	05:55	07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34	21:26	19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52	05:57	07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32	21:24	19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54	06:00	07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30	21:21	19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56	06:02	07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29	21:18	19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58	06:04	07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27	21:16	19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00	06:06	07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25	21:13	19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01	06:08	07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24	21:10	19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03	06:11	07:19			08:27		12:35 (28)	08:41			09:27
	22:22	21:08	19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05	06:13	07:22			08:30		12:35 (28)	08:43			09:27
	22:20	21:05	19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07	06:15	07:24			08:32		12:34 (28)	08:45			09:28
	22:18	21:02	19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09	06:17	07:26			07:35		11:34 (28)	08:47			09:28
	22:16	20:59	19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11	06:20	07:28			07:37		11:33 (28)	08:50			09:28
	22:14	20:56	19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13	06:22	07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12	20:54	19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16	06:24	07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10	20:51	19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18	06:26	07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07	20:48	19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20	06:29	07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05	20:45	19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22	06:31				07:49		11:34 (28)				09:28
	22:03	20:42				16:51	90	15:09 (24)				15:51
Potential sun hours	546	478	386			319			236			199
Total, worst case				57			1700			1022		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		11:25 (28)	09:00
	22:49		22:01		20:40		19:13			16:49	96	15:09 (24)	15:51
2	04:33		05:26		06:35		07:42			07:54		11:25 (28)	09:02
	22:48		21:58		20:37		19:10			16:46	90	15:04 (24)	15:50
3	04:34		05:28		06:37		07:44			07:56		11:26 (28)	09:03
	22:47		21:56		20:34		19:07			16:44	82	14:58 (24)	15:49
4	04:35		05:31		06:40		07:46			07:59		11:26 (28)	09:05
	22:47		21:54		20:31		19:04			16:41	72	14:17 (23)	15:48
5	04:36		05:33		06:42		07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46		21:51		20:28		19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37		05:35		06:44		07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45		21:49		20:25		18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39		05:37		06:46		07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44		21:47		20:22		18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40		05:39		06:49		07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43		21:44		20:20		18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41		05:42		06:51		07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42		21:42		20:17		18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43		05:44		06:53		08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40		21:39		20:14		18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44		05:46		06:55		08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39		21:37		20:11		18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46		05:48		06:57		08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38		21:34		20:08		18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47		05:51		07:00		08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37		21:31		20:05		18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49		05:53		07:02		08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35		21:29		20:02		18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51		05:55		07:04		08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34		21:26		19:59		18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52		05:57		07:06		08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32		21:24		19:56		18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54		06:00		07:08		08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30		21:21		19:54		18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56		06:02		07:11		08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29		21:18		19:51		18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58		06:04		07:13		08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27		21:16		19:48		18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00		06:06		07:15		08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25		21:13		19:45		18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01		06:08		07:17		08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24		21:10		19:42		18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03		06:11		07:19		08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22		21:08		19:39		18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05		06:13		07:22		08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20		21:05		19:36		18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07		06:15		07:24		08:32		12:26 (28)	08:45			09:28
	22:18		21:02		19:33		18:09	75	15:19 (23)	16:01			15:44
25	05:09		06:17		07:26		07:35		11:26 (28)	08:47			09:28
	22:16		20:59		19:30		17:06	76	14:20 (23)	15:59			15:45
26	05:11		06:20		07:28		07:37		11:25 (28)	08:50			09:28
	22:14		20:56		19:27		17:04	81	15:04 (24)	15:58			15:46
27	05:13		06:22		07:30		07:39		11:25 (28)	08:52			09:28
	22:12		20:54		19:25		17:01	91	15:08 (24)	15:56			15:47
28	05:16		06:24		07:33		07:42		11:25 (28)	08:54			09:28
	22:10		20:51		19:22		16:59	95	15:10 (24)	15:55			15:48
29	05:18		06:26		07:35		07:44		11:24 (28)	08:56			09:28
	22:07		20:48		19:19		16:56	99	15:11 (24)	15:54			15:49
30	05:20		06:29		07:37		07:47		11:25 (28)	08:58			09:28
	22:05		20:45		19:16		16:54	99	15:12 (24)	15:52			15:50
31	05:22		06:31				07:49		11:25 (28)				09:28
	22:03		20:42				16:51	101	15:13 (24)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1425			1286		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07		05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17		21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04		05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19		21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01		05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21		21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58		05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24		21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55		05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26		21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52		05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28		21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50		05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30		21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47		05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33		21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44		05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35		21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41		05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37		21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38		05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40		21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35		05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42		21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33		05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44		21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30		05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47		21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27		05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49		21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24		05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51		22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21		05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53		22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00		22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10		04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03		22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08		04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05		04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07		22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02		04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10		22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00		04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12		22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57		04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14		22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54		04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17		22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52		04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19		22:24	22:50
29	08:52		10:56 (33)				07:15			05:49		04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21		22:25	22:50
30	08:50		10:50 (33)				07:13			05:46		04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24		22:27	22:49
31	08:48		10:44 (33)				07:10					04:41	
	16:54	62	14:05 (23)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		228			2114			237					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		10:30 (28)	09:00
	22:49	22:01	20:40	19:13		16:49	107	15:21 (22)	15:51
2	04:33	05:26	06:35	07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48	21:58	20:37	19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34	05:28	06:37	07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47	21:56	20:34	19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35	05:31	06:40	07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47	21:54	20:31	19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36	05:33	06:42	07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46	21:51	20:28	19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37	05:35	06:44	07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45	21:49	20:25	18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39	05:37	06:46	07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44	21:47	20:22	18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40	05:39	06:49	07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43	21:44	20:20	18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41	05:42	06:51	07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42	21:42	20:17	18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43	05:44	06:53	08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40	21:39	20:14	18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44	05:46	06:55	08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39	21:37	20:11	18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46	05:48	06:57	08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38	21:34	20:08	18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47	05:51	07:00	08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37	21:31	20:05	18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49	05:53	07:02	08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35	21:29	20:02	18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51	05:55	07:04	08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34	21:26	19:59	18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52	05:57	07:06	08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32	21:24	19:56	18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54	06:00	07:08	08:16		11:34 (28)	08:29			09:23
	22:30	21:21	19:54	18:28	36	12:10 (28)	16:13			15:42
18	04:56	06:02	07:11	08:18		11:32 (28)	08:32			09:24
	22:29	21:18	19:51	18:25	55	14:33 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		11:32 (28)	08:34			09:25
	22:27	21:16	19:48	18:22	62	14:36 (23)	16:09			15:42
20	05:00	06:06	07:15	08:23		11:31 (28)	08:36			09:26
	22:25	21:13	19:45	18:20	67	14:37 (23)	16:08			15:43
21	05:01	06:09	07:17	08:25		11:30 (28)	08:39			09:26
	22:24	21:10	19:42	18:17	72	14:39 (23)	16:06			15:43
22	05:03	06:11	07:19	08:27		11:29 (28)	08:41			09:27
	22:22	21:08	19:39	18:14	75	14:40 (23)	16:04			15:43
23	05:05	06:13	07:22	08:30		11:29 (28)	08:43			09:27
	22:20	21:05	19:36	18:12	78	14:41 (23)	16:02			15:44
24	05:07	06:15	07:24	08:32		11:29 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	79	14:41 (23)	16:01			15:45
25	05:09	06:17	07:26	07:35		10:29 (28)	08:47			09:28
	22:16	20:59	19:30	17:07	81	13:42 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		10:29 (28)	08:50			09:28
	22:14	20:57	19:27	17:04	82	13:43 (23)	15:58			15:46
27	05:13	06:22	07:30	07:39		10:29 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	81	13:42 (23)	15:56			15:47
28	05:16	06:24	07:33	07:42		10:29 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	87	14:45 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		10:29 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	95	14:48 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		10:30 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	14:51 (24)	15:52			15:50
31	05:22	06:31		07:49		10:31 (28)				09:28
	22:03	20:42		16:51	99	14:52 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1521			1074		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		08:46		11:39 (28)	07:35	09:25 (15)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (24)	18:05	9 09:34 (15)	20:17	21:26	22:31
2	09:27		08:43		11:39 (28)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (24)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (28)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (24)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (28)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (24)	18:12		20:24	21:33	22:35
5	09:26	12:20 (20)	08:37		11:39 (28)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (20)	17:06	80	15:09 (24)	18:14		20:26	21:35	22:37
6	09:25	12:19 (20)	08:34		11:40 (28)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (20)	17:08	74	15:08 (24)	18:17		20:28	21:37	22:38
7	09:24	12:17 (20)	08:32		11:40 (28)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (20)	17:11	62	14:11 (23)	18:19		20:30	21:40	22:39
8	09:24	12:17 (20)	08:30		11:41 (28)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (20)	17:13	61	14:11 (23)	18:21		20:33	21:42	22:40
9	09:23	12:18 (20)	08:27		11:42 (28)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (20)	17:16	57	14:10 (23)	18:24		20:35	21:44	22:42
10	09:22	11:06 (33)	08:25		11:42 (28)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (20)	17:18	54	14:09 (23)	18:26		20:37	21:46	22:43
11	09:21	11:02 (33)	08:23		11:44 (28)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (20)	17:21	48	14:08 (23)	18:28		20:40	21:49	22:44
12	09:20	11:01 (33)	08:20		11:45 (28)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (20)	17:23	42	14:06 (23)	18:31		20:42	21:51	22:45
13	09:18	11:02 (33)	08:18		11:46 (28)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (20)	17:26	32	14:02 (23)	18:33		20:44	21:53	22:46
14	09:17	11:02 (33)	08:15		11:49 (28)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (20)	17:28	18	12:07 (28)	18:35		20:47	21:55	22:47
15	09:16	11:02 (33)	08:13		11:52 (28)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (20)	17:31	12	12:04 (28)	18:38		20:49	21:58	22:47
16	09:15	11:02 (33)	08:10		09:29 (15)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (20)	17:33	5	09:34 (15)	18:40		20:51	22:00	22:48
17	09:13	11:02 (33)	08:07		09:25 (15)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (20)	17:36	12	09:37 (15)	18:42		20:53	22:02	22:49
18	09:12	11:03 (33)	08:05		09:24 (15)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (23)	17:38	16	09:40 (15)	18:45		20:56	22:04	22:49
19	09:10	11:03 (33)	08:02		09:23 (15)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (23)	17:40	17	09:40 (15)	18:47		20:58	22:06	22:50
20	09:08	11:04 (33)	08:00		09:22 (15)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (23)	17:43	19	09:41 (15)	18:49		21:00	22:08	22:50
21	09:07	11:04 (33)	07:57		09:21 (15)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (23)	17:45	20	09:41 (15)	18:51		21:03	22:10	22:50
22	09:05	11:05 (33)	07:54		09:20 (15)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (23)	17:48	21	09:41 (15)	18:54		21:05	22:12	22:50
23	09:03	11:05 (33)	07:52		09:21 (15)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (23)	17:50	21	09:42 (15)	18:56		21:07	22:14	22:51
24	09:02	11:06 (33)	07:49		09:21 (15)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (23)	17:53	20	09:41 (15)	18:58		21:10	22:16	22:51
25	09:00	11:07 (33)	07:46		09:21 (15)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (24)	17:55	20	09:41 (15)	19:01		21:12	22:18	22:51
26	08:58	11:09 (33)	07:44		09:21 (15)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (24)	17:57	19	09:40 (15)	19:03		21:14	22:20	22:50
27	08:56	11:10 (33)	07:41		09:22 (15)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (24)	18:00	16	09:38 (15)	19:05		21:17	22:22	22:50
28	08:54	11:13 (33)	07:38		09:23 (15)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (24)	18:02	14	09:37 (15)	19:08		21:19	22:24	22:50
29	08:52	11:40 (28)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (24)				20:10		21:21	22:25	22:50
30	08:50	11:39 (28)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (24)				20:12		21:24	22:27	22:49
31	08:48	11:39 (28)				07:10			04:41	
	16:54	88 15:13 (24)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49		22:01		20:40		19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33		05:26		06:35		07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48		21:58		20:37		19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34		05:28		06:37		07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47		21:56		20:34		19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35		05:31		06:40		07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47		21:54		20:31		19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36		05:33		06:42		07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46		21:51		20:28		19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37		05:35		06:44		07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45		21:49		20:25		18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39		05:37		06:46		07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44		21:47		20:22		18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40		05:39		06:49		07:55			08:08		11:09 (28)	09:12		
	22:43		21:44		20:20		18:53			16:32	87	14:42 (24)	15:45		
9	04:41		05:42		06:51		07:57			08:11		11:10 (28)	09:13		
	22:42		21:42		20:17		18:50			16:30	87	14:43 (24)	15:44		
10	04:43		05:44		06:53		08:00			08:13		11:10 (28)	09:15		
	22:41		21:39		20:14		18:47			16:28	88	14:44 (24)	15:43		
11	04:44		05:46		06:55		08:02			08:15		11:10 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	88	14:44 (24)	15:43		
12	04:46		05:48		06:57		08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38		21:34		20:08		18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47		05:51		07:00		08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37		21:32		20:05		18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49		05:53		07:02		08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35		21:29		20:02		18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51		05:55		07:04		08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34		21:26		19:59		18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32		21:24		19:56		18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30		21:21		19:54		18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29		21:18		19:51		18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58		06:04		07:13		08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00		06:06		07:15		08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25		21:13		19:45		18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01		06:08		07:17		08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24		21:10		19:42		18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22		21:08		19:39		18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20		21:05		19:36		18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07		06:15		07:24		08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18		21:02		19:33		18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09		06:17		07:26		07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16		20:59		19:30		17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14		20:57		19:27		17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13		06:22		07:30		07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12		20:54		19:25		17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16		06:24		07:33		07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10		20:51		19:22		16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07		20:48		19:19		16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05		20:45		19:16		16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22		06:31				07:49		11:13 (28)				09:28		
	22:03		20:42				16:51	50	13:38 (23)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								389			2122			106	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46		11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43		11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41		12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39		11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34		12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32		12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30		12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27		12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25		12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23		12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20		12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18		12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15		09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13		09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10		09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07		09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05		09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02		09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00		09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57		09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54		09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52		09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49		09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46		09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44		09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41		09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38		09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)				20:10	21:21	22:25	22:50
30	08:50		11:58 (28)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)				20:12	21:24	22:27	22:49
31	08:48		11:58 (28)				07:10		04:41	
	16:54	88	15:22 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49	22:01	20:40	19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33	05:26	06:35	07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48	21:58	20:37	19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34	05:28	06:37	07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47	21:56	20:34	19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35	05:31	06:40	07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47	21:54	20:31	19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36	05:33	06:42	07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46	21:51	20:28	19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37	05:35	06:44	07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45	21:49	20:25	18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39	05:37	06:46	07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44	21:47	20:22	18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40	05:39	06:49	07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43	21:44	20:20	18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41	05:42	06:51	07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42	21:42	20:17	18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43	05:44	06:53	08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41	21:39	20:14	18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44	05:46	06:55	08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39	21:37	20:11	18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46	05:48	06:57	08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38	21:34	20:08	18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47	05:51	07:00	08:07			08:20		11:30 (28)	09:19		
	22:37	21:31	20:05	18:39			16:21	83	14:50 (24)	15:42		
14	04:49	05:53	07:02	08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35	21:29	20:02	18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34	21:26	19:59	18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52	05:57	07:06	08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32	21:24	19:56	18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54	06:00	07:08	08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30	21:21	19:54	18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56	06:02	07:11	08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29	21:18	19:51	18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58	06:04	07:13	08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00	06:06	07:15	08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25	21:13	19:45	18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01	06:08	07:17	08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24	21:10	19:42	18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03	06:11	07:19	08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22	21:08	19:39	18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05	06:13	07:22	08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20	21:05	19:36	18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09	06:17	07:26	07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16	20:59	19:30	17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14	20:57	19:27	17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13	06:22	07:30	07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12	20:54	19:25	17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16	06:24	07:33	07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10	20:51	19:22	16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07	20:48	19:19	16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05	20:45	19:16	16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22	06:31		07:49		11:35 (28)				09:28		11:11 (33)
	22:03	20:42		16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					362			2086			298	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (28)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)				20:10	21:21	22:25	22:50
30	08:50		12:23 (28)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)				20:12	21:24	22:27	22:49
31	08:48		12:24 (28)				07:10		04:41	
	16:53	77	15:26 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27	12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27	12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27	12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26	12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25	12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24	12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24	12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23	12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22	12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21	12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20	12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18	12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16	11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13	11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12	11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09	11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07	11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05	11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03	11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02	11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00	11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58	11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56	11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54	11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (24)				20:10	21:21	22:25	22:50
30	08:50	11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (24)				20:12	21:24	22:27	22:49
31	08:48	11:26 (28)				07:10		04:41	
	16:54	76 14:52 (24)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49	22:01	20:40	19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33	05:26	06:35	07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48	21:59	20:37	19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34	05:28	06:37	07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47	21:56	20:34	19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35	05:31	06:40	07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47	21:54	20:31	19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36	05:33	06:42	07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46	21:51	20:28	19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37	05:35	06:44	07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45	21:49	20:25	18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39	05:37	06:46	07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44	21:47	20:23	18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40	05:39	06:49	07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43	21:44	20:20	18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41	05:42	06:51	07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42	21:42	20:17	18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43	05:44	06:53	08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41	21:39	20:14	18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44	05:46	06:55	08:02			08:15		10:57 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	76	14:23 (24)	15:43		
12	04:46	05:48	06:57	08:04			08:18		10:57 (28)	09:18		
	22:38	21:34	20:08	18:42			16:23	80	14:25 (24)	15:43		
13	04:47	05:51	07:00	08:07			08:20		10:58 (28)	09:19		
	22:37	21:32	20:05	18:39			16:21	81	14:26 (24)	15:42		
14	04:49	05:53	07:02	08:09			08:22		10:58 (28)	09:20		
	22:35	21:29	20:02	18:36			16:19	82	14:26 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34	21:26	19:59	18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32	21:24	19:56	18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31	21:21	19:54	18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29	21:18	19:51	18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58	06:04	07:13	08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27	21:16	19:48	18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00	06:06	07:15	08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25	21:13	19:45	18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01	06:08	07:17	08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24	21:10	19:42	18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22	21:08	19:39	18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20	21:05	19:36	18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07	06:15	07:24	08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18	21:02	19:33	18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09	06:17	07:26	07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16	20:59	19:30	17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11	06:20	07:28	07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14	20:57	19:27	17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13	06:22	07:30	07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12	20:54	19:25	17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16	06:24	07:33	07:42			08:54		11:48 (20)	09:28		
	22:10	20:51	19:22	16:59			15:55	35	13:18 (23)	15:48		
29	05:18	06:26	07:35	07:44			08:56		11:48 (20)	09:28		
	22:07	20:48	19:19	16:56			15:54	33	13:17 (23)	15:49		
30	05:20	06:29	07:37	07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05	20:45	19:16	16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22	06:31		07:49		11:06 (28)				09:28		
	22:03	20:42		16:51	15	11:21 (28)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					225			1881			154	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46		11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43		11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41		11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39		11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34		12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32			07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27		09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25		09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23		09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20		09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18		09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15		09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13		09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10		09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07		09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05		09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02		09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00		09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57		09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54		09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (28)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)				20:10	21:21	22:25	22:50
30	08:50		11:51 (28)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)				20:12	21:24	22:27	22:49
31	08:48		11:52 (28)				07:10		04:41	
	16:54	55	14:55 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1930			409					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		12:08 (20)	08:46		11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (20)	16:56	49	13:50 (23)	18:05	20:17	21:26	22:31
2	09:27		12:08 (20)	08:43		11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (20)	16:58	44	13:48 (23)	18:07	20:19	21:28	22:32
3	09:27		12:09 (20)	08:41		11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (20)	17:01	39	13:47 (23)	18:09	20:21	21:31	22:34
4	09:27		12:09 (20)	08:39		11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (20)	17:03	32	13:45 (23)	18:12	20:24	21:33	22:35
5	09:26		12:09 (20)	08:37		11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (20)	17:06	19	12:02 (28)	18:14	20:26	21:35	22:37
6	09:25		12:10 (20)	08:34		11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (23)	17:08	14	12:00 (28)	18:17	20:28	21:37	22:38
7	09:24		11:43 (28)	08:32		11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (23)	17:11	6	11:56 (28)	18:19	20:30	21:40	22:39
8	09:24		11:41 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	41	13:37 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:40 (28)	08:27			07:13	06:44	05:24	04:31
	16:05	47	13:39 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:38 (28)	08:25		09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (23)	17:18	3	09:42 (15)	18:26	20:37	21:46	22:43
11	09:21		11:38 (28)	08:23		09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (23)	17:21	10	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:37 (28)	08:20		09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (24)	17:23	14	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:37 (28)	08:18		09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (24)	17:26	16	09:49 (15)	18:33	20:44	21:53	22:46
14	09:17		11:36 (28)	08:15		09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (24)	17:28	17	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:36 (28)	08:13		09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (24)	17:31	18	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:35 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:36 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:36 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (24)	17:38	19	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:36 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (24)	17:40	18	09:50 (15)	18:47	20:58	22:06	22:50
20	09:09		11:35 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (24)	17:43	17	09:49 (15)	18:49	21:00	22:08	22:50
21	09:07		11:35 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (24)	17:45	15	09:48 (15)	18:51	21:03	22:10	22:50
22	09:05		11:36 (28)	07:54		09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (24)	17:48	12	09:46 (15)	18:54	21:05	22:12	22:50
23	09:03		11:35 (28)	07:52		09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (24)	17:50	6	09:44 (15)	18:56	21:07	22:14	22:51
24	09:02		11:35 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (28)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (24)				20:10	21:21	22:25	22:50
30	08:50		11:37 (28)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (24)				20:12	21:24	22:27	22:49
31	08:48		11:38 (28)				07:10		04:41	
	16:54	51	13:50 (23)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28	12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (20)	16:56	45 13:44 (23)	18:05	20:17	21:26	22:31
2	09:27	12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (20)	16:58	40 13:42 (23)	18:07	20:19	21:28	22:32
3	09:27	12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (20)	17:01	34 13:40 (23)	18:09	20:21	21:31	22:34
4	09:27	12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (20)	17:03	20 11:59 (28)	18:12	20:24	21:33	22:35
5	09:26	12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (23)	17:06	16 11:57 (28)	18:14	20:26	21:35	22:37
6	09:25	12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (23)	17:08	11 11:55 (28)	18:17	20:28	21:37	22:38
7	09:24	11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (28)	08:25	09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (24)	17:18	6 09:43 (15)	18:26	20:37	21:46	22:43
11	09:21	11:34 (28)	08:23	09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (24)	17:21	11 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:33 (28)	08:20	09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (24)	17:23	15 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:34 (28)	08:18	09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (24)	17:26	16 09:48 (15)	18:33	20:44	21:53	22:46
14	09:17	11:33 (28)	08:15	09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (24)	17:28	18 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:32 (28)	08:13	09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (24)	17:31	19 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:32 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:32 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (24)	17:38	18 09:50 (15)	18:45	20:56	22:04	22:49
19	09:10	11:32 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (24)	17:40	17 09:49 (15)	18:47	20:58	22:06	22:50
20	09:09	11:32 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (24)	17:43	16 09:48 (15)	18:49	21:00	22:08	22:50
21	09:07	11:32 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (24)	17:45	14 09:47 (15)	18:51	21:03	22:10	22:50
22	09:05	11:32 (28)	07:54	09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (24)	17:48	10 09:45 (15)	18:54	21:05	22:12	22:50
23	09:03	11:31 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (28)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (24)			20:10	21:21	22:25	22:50
30	08:50	11:34 (28)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (23)			20:12	21:24	22:27	22:49
31	08:48	11:35 (28)			07:10		04:41	
	16:54	48 13:44 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49		22:01		20:40		19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33		05:26		06:35		07:42			07:54			09:02		11:18 (28)
	22:48		21:59		20:37		19:10			16:46			15:50	58	14:24 (24)
3	04:34		05:28		06:37		07:44			07:56			09:03		11:19 (28)
	22:47		21:56		20:34		19:07			16:44			15:49	51	13:19 (23)
4	04:35		05:31		06:40		07:46			07:59			09:05		11:21 (28)
	22:47		21:54		20:31		19:04			16:41			15:48	46	13:18 (23)
5	04:36		05:33		06:42		07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46		21:51		20:28		19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37		05:35		06:44		07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45		21:49		20:25		18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38		05:37		06:46		07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44		21:47		20:23		18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40		05:39		06:49		07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43		21:44		20:20		18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41		05:42		06:51		07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42		21:42		20:17		18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43		05:44		06:53		08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41		21:39		20:14		18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44		05:46		06:55		08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39		21:37		20:11		18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46		05:48		06:57		08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38		21:34		20:08		18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47		05:51		07:00		08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37		21:32		20:05		18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49		05:53		07:02		08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35		21:29		20:02		18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51		05:55		07:04		08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34		21:26		19:59		18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52		05:57		07:06		08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32		21:24		19:56		18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54		06:00		07:08		08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31		21:21		19:54		18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56		06:02		07:11		08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29		21:18		19:51		18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58		06:04		07:13		08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27		21:16		19:48		18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00		06:06		07:15		08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25		21:13		19:45		18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01		06:08		07:17		08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24		21:10		19:42		18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03		06:11		07:19		08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22		21:08		19:39		18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05		06:13		07:22		08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20		21:05		19:36		18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18		21:02		19:33		18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09		06:17		07:26		07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16		20:59		19:30		17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14		20:57		19:27		17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13		06:22		07:30		07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12		20:54		19:25		17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16		06:24		07:33		07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10		20:51		19:22		16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18		06:26		07:35		07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07		20:48		19:19		16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20		06:29		07:37		07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05		20:45		19:16		16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22		06:31				07:49		09:05 (15)				09:28		12:04 (20)
	22:03		20:42				16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								197			1686			799	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	11:58 (20)	08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00	11:44 (20)
	15:53	16 12:14 (20)	16:56	49 13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	57 14:20 (24)
2	09:28	11:58 (20)	08:43	11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02	11:44 (20)
	15:54	18 12:16 (20)	16:58	47 13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	50 14:19 (24)
3	09:27	11:58 (20)	08:41	11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (28)	09:03	11:44 (20)
	15:55	20 12:18 (20)	17:01	42 13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12 11:14 (28)	15:49	40 14:19 (24)
4	09:27	11:58 (20)	08:39	11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (28)	09:05	11:44 (20)
	15:57	21 12:19 (20)	17:03	35 13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 11:16 (28)	15:48	34 14:19 (24)
5	09:26	11:59 (20)	08:37	11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (28)	09:07	11:45 (20)
	15:58	20 12:19 (20)	17:06	23 11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20 11:18 (28)	15:47	31 13:06 (23)
6	09:25	11:59 (20)	08:34	11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (28)	09:09	11:45 (20)
	16:00	26 13:18 (23)	17:08	20 11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23 11:20 (28)	15:46	27 13:05 (23)
7	09:25	12:00 (20)	08:32	11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (28)	09:10	11:46 (20)
	16:02	30 13:21 (23)	17:11	16 11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37 13:01 (23)	15:45	20 12:06 (20)
8	09:24	12:00 (20)	08:30	11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (28)	09:12	11:47 (20)
	16:03	34 14:35 (24)	17:13	11 11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43 13:03 (23)	15:45	20 12:07 (20)
9	09:23	12:01 (20)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (28)	09:13	11:47 (20)
	16:05	41 14:36 (24)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48 13:05 (23)	15:44	20 12:07 (20)
10	09:22	12:01 (20)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (28)	09:15	11:47 (20)
	16:07	50 14:36 (24)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51 13:06 (23)	15:43	19 12:07 (20)
11	09:21	12:02 (20)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (28)	09:16	11:48 (20)
	16:09	57 14:37 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52 13:06 (23)	15:43	16 12:04 (20)
12	09:20	11:28 (28)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (28)	09:18	11:48 (20)
	16:11	68 14:38 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55 13:08 (23)	15:43	11 11:59 (20)
13	09:18	11:26 (28)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (28)	09:19	11:49 (20)
	16:13	75 14:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62 14:08 (24)	15:42	11 12:00 (20)
14	09:17	11:25 (28)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (28)	09:20	11:50 (20)
	16:15	78 14:39 (24)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69 14:10 (24)	15:42	7 12:00 (20)
15	09:16	11:24 (28)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (28)	09:21	11:50 (20)
	16:17	82 14:40 (24)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71 14:12 (24)	15:42	3 11:53 (20)
16	09:15	11:23 (28)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (28)	09:22	11:50 (20)
	16:19	85 14:40 (24)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75 14:14 (24)	15:42	3 11:53 (20)
17	09:13	11:23 (28)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (28)	09:23	11:51 (20)
	16:21	86 14:41 (24)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77 14:15 (24)	15:42	1 11:52 (20)
18	09:12	11:23 (28)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (28)	09:24	
	16:23	87 14:42 (24)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76 14:15 (24)	15:42	
19	09:10	11:22 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (28)	09:25	
	16:25	88 14:42 (24)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77 14:16 (24)	15:42	
20	09:09	11:22 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (28)	09:26	
	16:28	86 14:42 (24)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77 14:16 (24)	15:43	
21	09:07	11:22 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (28)	09:26	
	16:30	83 14:42 (24)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83 14:17 (24)	15:43	
22	09:05	11:22 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (28)	09:27	
	16:32	77 14:42 (24)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86 14:18 (24)	15:43	
23	09:03	11:21 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (28)	09:27	
	16:34	77 14:41 (24)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88 14:18 (24)	15:44	
24	09:02	11:21 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (28)	09:28	
	16:37	76 14:41 (24)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87 14:19 (24)	15:44	
25	09:00	11:21 (28)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (28)	09:28	
	16:39	77 14:41 (24)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86 14:18 (24)	15:45	
26	08:58	11:22 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (28)	09:28	
	16:41	74 14:41 (24)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85 14:19 (24)	15:46	
27	08:56	11:21 (28)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (28)	09:28	11:56 (20)
	16:44	71 14:39 (24)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83 14:19 (24)	15:47	3 11:59 (20)
28	08:54	11:21 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (28)	09:28	11:57 (20)
	16:46	69 14:38 (24)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79 14:19 (24)	15:48	3 12:00 (20)
29	08:52	11:22 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (28)	09:28	11:56 (20)
	16:49	61 14:36 (24)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73 14:19 (24)	15:49	5 12:07 (20)
30	08:50	11:22 (28)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (28)	09:28	11:57 (20)
	16:51	55 13:36 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69 14:19 (24)	15:50	11 12:08 (20)
31	08:48	11:23 (28)			07:10		04:41		05:22	06:31		07:49			09:28	11:57 (20)
	16:54	53 13:36 (23)			20:14		22:29		22:03	20:42		16:51			15:51	11 12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case		1841		243										1761		403

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35	08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13		16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42		07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10		16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44		07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07		16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46	09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7 09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48	09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12 09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51	09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15 09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53	09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18 09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55	09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19 09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57	09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20 09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00	09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20 09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02	09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20 09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04	09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19 09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06	09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18 09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09	09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26 10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11	09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29 10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13	09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28 10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16	10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21 10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18	10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23 10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20	10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24 10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23	10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25 10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25	10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37 15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27	10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42 15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30	10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50 15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32	10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63 15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35	09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69 14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37	09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74 14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39	09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82 15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42	09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89 15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44	09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90 15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47	09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90 15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49	12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81 15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319		236			199		
Total, worst case					1111		1317			529	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07		05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17		21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04		05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19		21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01		05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21		21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58		05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23		21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55		05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26		21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52		05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28		21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49		05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30		21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47		05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33		21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44		05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35		21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41		05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37		21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38		05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40		21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35		05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42		21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32		05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44		21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30		05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46		21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27		05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49		21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24		05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51		22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21		05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53		22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18		05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56		22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16		05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58		22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13		05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00		22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10		04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03		22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07		04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05		04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07		22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02		04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10		22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59		04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12		22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57		04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14		22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54		04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17		22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51		04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19		22:24	22:50
29	08:52						07:15			05:49		04:44	04:30
	16:49						20:10			21:21		22:25	22:49
30	08:50		14:16 (33)				07:12			05:46		04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23		22:27	22:49
31	08:48		14:08 (33)				07:10					04:41	
	16:53	21	15:27 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		24			1365			367					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17) / 07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12) / 09:00
	15:53		16:56	63	13:43 (15) / 18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28) / 15:51
2	09:27		08:43		11:39 (17) / 07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12) / 09:01
	15:54		16:58	59	13:43 (15) / 18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28) / 15:50
3	09:27		08:41		11:38 (17) / 07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12) / 09:03
	15:55		17:01	51	13:42 (15) / 18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28) / 15:49
4	09:26		08:39		11:39 (17) / 07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12) / 09:05
	15:57		17:03	51	15:59 (28) / 18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28) / 15:48
5	09:26		08:37		11:39 (17) / 07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12) / 09:07
	15:58		17:06	56	16:02 (28) / 18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28) / 15:47
6	09:25		08:34		10:34 (12) / 07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17) / 09:09
	16:00		17:08	57	16:05 (28) / 18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28) / 15:46
7	09:24		08:32		10:32 (12) / 07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17) / 09:10
	16:02		17:11	55	16:05 (28) / 18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15) / 15:45
8	09:24		08:30		10:27 (12) / 07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17) / 09:12
	16:03		17:13	53	16:07 (28) / 18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15) / 15:45
9	09:23		08:27		10:26 (12) / 07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17) / 09:13
	16:05		17:16	49	16:07 (28) / 18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15) / 15:44
10	09:22		08:25		10:15 (12) / 07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17) / 09:15
	16:07		17:18	58	16:07 (28) / 18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15) / 15:43
11	09:21		08:22		10:16 (12) / 07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17) / 09:16
	16:09		17:21	55	16:08 (28) / 18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15) / 15:43
12	09:20		08:20		10:17 (12) / 07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17) / 09:17
	16:11		17:23	48	16:08 (28) / 18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15) / 15:43
13	09:18		08:17		10:18 (12) / 07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17) / 09:19
	16:13		17:26	33	16:07 (28) / 18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15) / 15:42
14	09:17	12:02 (9)	08:15		10:21 (12) / 06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17) / 09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28) / 18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15) / 15:42
15	09:16	12:02 (9)	08:12		15:50 (28) / 06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17) / 09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28) / 18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15) / 15:42
16	09:14	12:02 (9)	08:10		15:51 (28) / 06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17) / 09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28) / 18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15) / 15:42
17	09:13	12:02 (9)	08:07		15:52 (28) / 06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17) / 09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28) / 18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15) / 15:42
18	09:12	11:58 (9)	08:05		15:56 (28) / 06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17) / 09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28) / 18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15) / 15:42
19	09:10	11:58 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17) / 09:25
	16:25	33 13:35 (15)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15) / 15:42
20	09:08	11:58 (9)	08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17) / 09:25
	16:27	36 13:37 (15)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15) / 15:42
21	09:07	11:58 (9)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9) / 09:26
	16:30	39 13:38 (15)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15) / 15:43
22	09:05	11:46 (17)	07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9) / 09:27
	16:32	47 13:38 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15) / 15:43
23	09:03	11:44 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9) / 09:27
	16:34	55 13:39 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15) / 15:44
24	09:01	11:42 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (28)	08:45		11:35 (9) / 09:28
	16:37	60 13:40 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:32 (28)	16:01	30	13:11 (15) / 15:44
25	09:00	11:42 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47		11:41 (9) / 09:28
	16:39	61 13:41 (15)	17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20	13:09 (15) / 15:45
26	08:58	11:41 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49		11:41 (9) / 09:28
	16:41	62 13:42 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11	11:52 (9) / 15:46
27	08:56	11:40 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52		11:41 (9) / 09:28
	16:44	64 13:42 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10	11:51 (9) / 15:47
28	08:54	11:40 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54		11:42 (9) / 09:28
	16:46	65 13:43 (15)	18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8	11:50 (9) / 15:48
29	08:52	11:39 (17)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56		09:28
	16:49	65 13:43 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53		15:49
30	08:50	11:39 (17)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58		09:28
	16:51	65 13:43 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52		15:50
31	08:48	11:39 (17)			07:09		04:41		05:22	06:31		07:49	09:46 (12)			09:28
	16:53	63 13:43 (15)			20:14		22:29		22:03	20:42		16:51	55 15:38 (28)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		793		765									221		1347	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46	10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56 74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49 30	13:49 (15)	15:51
2	09:27		08:43	10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58 73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 45	13:52 (15)	15:50
3	09:27		08:41	10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01 74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44 54	13:54 (15)	15:49
4	09:26		08:39	10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03 71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 61	13:55 (15)	15:48
5	09:26		08:37	10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06 68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39 65	13:56 (15)	15:47
6	09:25		08:34	10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08 64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37 69	13:57 (15)	15:46
7	09:24		08:32	10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11 59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34 72	13:57 (15)	15:45
8	09:24		08:30	10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13 52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32 73	13:57 (15)	15:45
9	09:23		08:27	10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16 43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30 75	13:58 (15)	15:44
10	09:22		08:25	10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18 26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28 72	13:58 (15)	15:43
11	09:21		08:22	12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21 5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25 75	13:58 (15)	15:43
12	09:20		08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23 72	13:58 (15)	15:42
13	09:18	12:39 (9)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13 5	12:44 (9)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21 72	13:58 (15)	15:42
14	09:17	12:39 (9)	08:15		06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15 7	12:46 (9)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 68	13:57 (15)	15:42
15	09:16	12:39 (9)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17 15	12:54 (9)	17:30		18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17 63	13:57 (15)	15:42
16	09:14	12:38 (9)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19 17	12:55 (9)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15 50	13:57 (15)	15:42
17	09:13	12:38 (9)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21 18	12:56 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 45	13:55 (15)	15:42
18	09:12	12:37 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23 19	12:56 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11 42	13:55 (15)	15:42
19	09:10	12:38 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25 20	12:58 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09 39	13:54 (15)	15:42
20	09:08	12:37 (17)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27 22	12:59 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07 33	13:51 (15)	15:42
21	09:07	12:35 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30 23	12:58 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06 23	12:34 (9)	15:43
22	09:05	12:34 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32 33	14:16 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04 22	12:35 (9)	15:43
23	09:03	12:33 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34 39	14:19 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02 20	12:34 (9)	15:44
24	09:01	12:33 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37 42	14:21 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01 20	12:35 (9)	15:44
25	09:00	12:32 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39 45	14:22 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59 18	12:34 (9)	15:45
26	08:58	10:57 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41 50	14:24 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58 17	12:34 (9)	15:46
27	08:56	10:51 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44 64	14:24 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56 15	12:33 (9)	15:47
28	08:54	10:51 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46 69	14:25 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55 7	12:26 (9)	15:48
29	08:52	10:51 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49 70	14:26 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53 5	12:25 (9)	15:49
30	08:50	10:50 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51 72	14:26 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)			07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53 74	14:27 (15)			20:14		22:29		22:03	20:42		16:51 7	12:20 (17)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case	704		609									7		1322		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October			November			December
1	09:28			08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39			07:51		10:19 (12)	09:00
	15:53			16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13			16:49	43	13:46 (15)	15:51
2	09:27			08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:54		10:18 (12)	09:01
	15:54			16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	53	13:48 (15)	15:50
3	09:27			08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44			07:56		10:18 (12)	09:03
	15:55			17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07			16:44	59	13:50 (15)	15:49
4	09:26			08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46			07:58		10:16 (12)	09:05
	15:57			17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	65	13:51 (15)	15:48
5	09:26			08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48			08:01		10:16 (12)	09:07
	15:58			17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01			16:39	70	13:52 (15)	15:47
6	09:25			08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50			08:03		10:16 (12)	09:09
	16:00			17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59			16:37	73	13:53 (15)	15:46
7	09:24			08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53			08:06		10:16 (12)	09:10
	16:02			17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56			16:34	73	13:52 (15)	15:45
8	09:24			08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55			08:08		10:16 (12)	09:12
	16:03			17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53			16:32	73	13:53 (15)	15:45
9	09:23			08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57			08:10		10:16 (12)	09:13
	16:05			17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50			16:30	75	13:53 (15)	15:44
10	09:22			08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00			08:13		10:17 (12)	09:15
	16:07			17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:28	74	13:54 (15)	15:43
11	09:21			08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		10:17 (12)	09:16
	16:09			17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44			16:25	69	13:53 (15)	15:43
12	09:20			08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04			08:18		10:18 (12)	09:17
	16:11			17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42			16:23	54	13:53 (15)	15:42
13	09:18			08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		10:20 (12)	09:19
	16:13			17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39			16:21	53	13:53 (15)	15:42
14	09:17			08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09			08:22		11:57 (17)	09:20
	16:15			17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	51	13:52 (15)	15:42
15	09:16			08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:58 (17)	09:21
	16:17			17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33			16:17	50	13:52 (15)	15:42
16	09:14			08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:59 (17)	09:22
	16:19			17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31			16:15	49	13:52 (15)	15:42
17	09:13		12:33 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18			08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25			16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20			08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22			16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20			16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25			08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17			16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27			08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14			16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30			08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12			16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32			08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09			16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34			08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06			15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37			08:49			09:28
	16:41	49	14:19 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04			15:58			15:46
27	08:56		12:25 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39			08:52			09:28
	16:44	50	14:19 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01			15:56			15:47
28	08:54		12:25 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42			08:54			09:28
	16:46	51	14:20 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59			15:55			15:48
29	08:52		10:48 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44			08:56			09:28
	16:49	53	14:21 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56			15:53			15:49
30	08:50		10:46 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7	12:13 (17)	15:52			15:50
31	08:48		10:46 (12)				07:09		04:41		05:22	06:31		07:49		10:22 (12)				09:28
	16:53	69	14:22 (15)				20:14		22:29		22:03	20:42		16:51	25	12:17 (17)				15:51
Potential sun hours	221			260			365	432	521	547	546	478	386	319			236			199
Total, worst case		564			672										32			1221		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:03 (26)	08:45		14:59 (17)	07:35	07:07	05:44	04:39
	15:52	20	12:23 (26)	16:56	18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27		12:03 (26)	08:43		14:59 (17)	07:32	07:04	05:41	04:38
	15:54	20	12:23 (26)	16:58	19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27		12:03 (26)	08:41		14:58 (17)	07:30	07:01	05:38	04:37
	15:55	20	12:23 (26)	17:01	19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26		12:03 (26)	08:39		14:59 (17)	07:27	06:58	05:36	04:36
	15:57	21	12:24 (26)	17:03	19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26		12:04 (26)	08:37		14:59 (17)	07:24	06:55	05:33	04:34
	15:58	26	13:33 (12)	17:06	19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25		12:04 (26)	08:34		15:00 (17)	07:21	06:52	05:31	04:33
	16:00	29	13:35 (12)	17:08	18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24		12:05 (26)	08:32		15:00 (17)	07:18	06:49	05:29	04:32
	16:01	31	13:37 (12)	17:11	17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23		12:06 (26)	08:30		15:00 (17)	07:16	06:46	05:26	04:31
	16:03	33	13:39 (12)	17:13	16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23		12:06 (26)	08:27		15:02 (17)	07:13	06:44	05:24	04:31
	16:05	33	13:39 (12)	17:15	14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22		12:07 (26)	08:25		15:03 (17)	07:10	06:41	05:21	04:30
	16:07	35	13:41 (12)	17:18	11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21		12:07 (26)	08:22		15:07 (17)	07:07	06:38	05:19	04:29
	16:09	35	13:41 (12)	17:20	5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19		12:08 (26)	08:20			07:04	06:35	05:17	04:29
	16:11	35	13:42 (12)	17:23			18:30	20:42	21:51	22:45
13	09:18		12:09 (26)	08:17			07:01	06:32	05:15	04:28
	16:12	35	13:43 (12)	17:25			18:33	20:44	21:53	22:46
14	09:17		12:10 (26)	08:15			06:58	06:29	05:12	04:28
	16:14	35	13:44 (12)	17:28			18:35	20:46	21:55	22:46
15	09:16		12:11 (26)	08:12			06:56	06:27	05:10	04:27
	16:17	34	13:45 (12)	17:30			18:37	20:49	21:57	22:47
16	09:14		12:12 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	32	13:45 (12)	17:33			18:40	20:51	22:00	22:48
17	09:13		12:14 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	29	13:45 (12)	17:35			18:42	20:53	22:02	22:48
18	09:11		12:16 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	26	13:46 (12)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:25 (12)	08:02			06:44	06:16	05:02	04:26
	16:25	21	13:46 (12)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:25 (12)	07:59			06:41	06:13	05:00	04:26
	16:27	22	13:47 (12)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:26 (12)	07:57			06:38	06:10	04:58	04:26
	16:30	21	13:47 (12)	17:45			18:51	21:03	22:10	22:50
22	09:05		13:26 (12)	07:54			06:35	06:07	04:56	04:27
	16:32	21	13:47 (12)	17:48			18:54	21:05	22:12	22:50
23	09:03		13:27 (12)	07:51			06:33	06:05	04:54	04:27
	16:34	20	13:47 (12)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:28 (12)	07:49			06:30	06:02	04:52	04:27
	16:37	19	13:47 (12)	17:52			18:58	21:09	22:16	22:50
25	09:00		13:29 (12)	07:46			06:27	05:59	04:50	04:28
	16:39	18	13:47 (12)	17:55			19:00	21:12	22:18	22:50
26	08:58		13:30 (12)	07:43			06:24	05:57	04:49	04:28
	16:41	17	13:47 (12)	17:57			19:03	21:14	22:20	22:50
27	08:56		13:30 (12)	07:41			06:21	05:54	04:47	04:29
	16:44	20	15:09 (17)	18:00			19:05	21:16	22:22	22:50
28	08:54		13:32 (12)	07:38			06:18	05:51	04:45	04:29
	16:46	23	15:12 (17)	18:02			19:07	21:19	22:23	22:50
29	08:52		13:35 (12)				07:15	05:49	04:44	04:30
	16:48	21	15:14 (17)				20:10	21:21	22:25	22:49
30	08:50		15:00 (17)				07:12	05:46	04:42	04:31
	16:51	15	15:15 (17)				20:12	21:23	22:27	22:49
31	08:48		15:00 (17)				07:09		04:41	
	16:53	16	15:16 (17)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		783			175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
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SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59	12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51 18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01	12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50 19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03	12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49 20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05	12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48 20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07	12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47 20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08	12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46 20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10	12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45 21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12	12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44 20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13	12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44 21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15	12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43 21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16	12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43 21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17	12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42 20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19	12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42 20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20	12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42 21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21	12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42 21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22	12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42 20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23	12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42 20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24	12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42 20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25	12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42 20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25	12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42 20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26	12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43 20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27	12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43 20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27	12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44 20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27	12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44 21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28	12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45 20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28	12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46 20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28	12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47 20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28	12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47 21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28	12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49 20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28	12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50 20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28	12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51 20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case		631		5										419		625

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:45		10:57 (37)	07:35		16:28 (17)	07:06		05:44	04:39
	15:52			16:56	40	13:50 (26)	18:04	11	16:39 (17)	20:16		21:26	22:30
2	09:27			08:43		10:59 (37)	07:32		16:27 (17)	07:04		05:41	04:38
	15:54			16:58	37	13:51 (26)	18:07	13	16:40 (17)	20:19		21:28	22:32
3	09:27			08:41		11:02 (37)	07:30		16:27 (17)	07:01		05:38	04:37
	15:55			17:01	28	13:49 (26)	18:09	14	16:41 (17)	20:21		21:30	22:33
4	09:26			08:39		13:29 (26)	07:27		16:27 (17)	06:58		05:36	04:36
	15:57			17:03	20	13:49 (26)	18:12	17	16:44 (17)	20:23		21:33	22:35
5	09:26			08:37		13:30 (26)	07:24		16:27 (17)	06:55		05:33	04:34
	15:58			17:06	17	13:47 (26)	18:14	19	16:46 (17)	20:26		21:35	22:36
6	09:25			08:34		13:33 (26)	07:21		16:28 (17)	06:52		05:31	04:33
	16:00			17:08	12	13:45 (26)	18:16	17	16:45 (17)	20:28		21:37	22:38
7	09:24			08:32			07:18		16:29 (17)	06:49		05:29	04:32
	16:01			17:11			18:19	15	16:44 (17)	20:30		21:39	22:39
8	09:23			08:30			07:15		16:30 (17)	06:46		05:26	04:32
	16:03			17:13			18:21	12	16:42 (17)	20:32		21:42	22:40
9	09:23			08:27			07:13		16:33 (17)	06:44		05:24	04:31
	16:05			17:15			18:23	6	16:39 (17)	20:35		21:44	22:41
10	09:22			08:25			07:10			06:41		05:21	04:30
	16:07			17:18			18:26			20:37		21:46	22:43
11	09:20			08:22			07:07			06:38		05:19	04:29
	16:09			17:20			18:28			20:39		21:48	22:44
12	09:19			08:20		14:57 (7)	07:04			06:35		05:17	04:29
	16:11			17:23	8	15:05 (7)	18:30			20:42		21:51	22:45
13	09:18			08:17		14:59 (7)	07:01			06:32		05:15	04:28
	16:12			17:25	11	15:10 (7)	18:33			20:44		21:53	22:45
14	09:17		11:05 (37)	08:15		15:02 (7)	06:58			06:29		05:12	04:28
	16:14	3	11:08 (37)	17:28	12	15:14 (12)	18:35			20:46		21:55	22:46
15	09:16		10:59 (37)	08:12		15:06 (12)	06:56			06:27		05:10	04:27
	16:17	10	11:09 (37)	17:30	12	15:18 (12)	18:37			20:49		21:57	22:47
16	09:14		10:52 (37)	08:10		15:06 (12)	06:53			06:24		05:08	04:27
	16:19	18	11:10 (37)	17:33	15	15:21 (12)	18:40			20:51		21:59	22:48
17	09:13		10:51 (37)	08:07		15:05 (12)	06:50			06:21		05:06	04:27
	16:21	19	11:10 (37)	17:35	16	15:21 (12)	18:42			20:53		22:02	22:48
18	09:11		10:51 (37)	08:05		15:05 (12)	06:47			06:18		05:04	04:26
	16:23	20	11:11 (37)	17:38	15	15:20 (12)	18:44			20:56		22:04	22:49
19	09:10		10:51 (37)	08:02		15:06 (12)	06:44			06:16		05:02	04:26
	16:25	21	11:12 (37)	17:40	16	15:22 (12)	18:47			20:58		22:06	22:49
20	09:08		10:51 (37)	07:59		15:07 (12)	06:41			06:13		05:00	04:26
	16:27	22	11:13 (37)	17:43	17	15:24 (12)	18:49			21:00		22:08	22:50
21	09:07		10:51 (37)	07:57		15:07 (12)	06:38			06:10		04:58	04:26
	16:30	22	11:13 (37)	17:45	20	15:27 (12)	18:51			21:02		22:10	22:50
22	09:05		10:51 (37)	07:54		15:08 (12)	06:35			06:07		04:56	04:27
	16:32	27	12:49 (32)	17:47	20	15:28 (12)	18:53			21:05		22:12	22:50
23	09:03		10:51 (37)	07:51		15:09 (12)	06:32			06:05		04:54	04:27
	16:34	39	13:02 (32)	17:50	18	15:27 (12)	18:56			21:07		22:14	22:50
24	09:01		10:52 (37)	07:49		15:12 (12)	06:30			06:02		04:52	04:27
	16:37	40	13:04 (32)	17:52	13	15:25 (12)	18:58			21:09		22:16	22:50
25	08:59		10:52 (37)	07:46		15:16 (12)	06:27			05:59		04:50	04:28
	16:39	39	13:04 (32)	17:55	5	15:21 (12)	19:00			21:12		22:18	22:50
26	08:58		10:52 (37)	07:43			06:24			05:57		04:49	04:28
	16:41	39	13:24 (26)	17:57			19:03			21:14		22:20	22:50
27	08:56		10:53 (37)	07:41			06:21			05:54		04:47	04:29
	16:44	39	13:28 (26)	18:00			19:05			21:16		22:22	22:50
28	08:54		10:53 (37)	07:38		16:32 (17)	06:18			05:51		04:45	04:29
	16:46	41	13:35 (26)	18:02	4	16:36 (17)	19:07			21:19		22:23	22:50
29	08:52		10:54 (37)				07:15			05:49		04:44	04:30
	16:48	41	13:44 (26)				20:10			21:21		22:25	22:49
30	08:50		10:55 (37)				07:12			05:46		04:42	04:31
	16:51	42	13:47 (26)				20:12			21:23		22:27	22:49
31	08:48		10:56 (37)				07:09					04:41	
	16:53	42	13:49 (26)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		524			356			124					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		08:59
	22:48	22:01	20:39	19:13		16:48		15:51
2	04:33	05:26	06:35	07:41		07:54		09:01
	22:48	21:58	20:37	19:10		16:46		15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44		15:49
4	04:35	05:30	06:39	07:46		07:58	13:07 (26)	09:05
	22:46	21:54	20:31	19:04		16:41	4 13:11 (26)	15:48
5	04:36	05:33	06:42	07:48	17:09 (17)	08:01	13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9 17:18 (17)	16:39	13 13:15 (26)	15:47
6	04:37	05:35	06:44	07:50	17:06 (17)	08:03	13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14 17:20 (17)	16:36	17 13:18 (26)	15:46
7	04:38	05:37	06:46	07:53	17:04 (17)	08:06	12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16 17:20 (17)	16:34	21 13:19 (26)	15:45
8	04:40	05:39	06:48	07:55	17:03 (17)	08:08	10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18 17:21 (17)	16:32	29 13:20 (26)	15:44
9	04:41	05:41	06:50	07:57	17:02 (17)	08:10	10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18 17:20 (17)	16:30	37 13:22 (26)	15:44
10	04:42	05:44	06:53	07:59	17:01 (17)	08:13	10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16 17:17 (17)	16:27	40 13:21 (26)	15:43
11	04:44	05:46	06:55	08:02	17:01 (17)	08:15	10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14 17:15 (17)	16:25	41 13:19 (26)	15:43
12	04:45	05:48	06:57	08:04	17:01 (17)	08:18	10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12 17:13 (17)	16:23	42 13:19 (26)	15:42
13	04:47	05:50	06:59	08:06	17:02 (17)	08:20	10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10 17:12 (17)	16:21	41 13:15 (26)	15:42
14	04:49	05:53	07:01	08:09	17:06 (17)	08:22	10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2 17:08 (17)	16:19	41 13:07 (26)	15:42
15	04:50	05:55	07:04	08:11		08:25	10:25 (37)	09:21
	22:33	21:26	19:59	18:33		16:17	40 13:01 (26)	15:42
16	04:52	05:57	07:06	08:13		08:27	10:26 (37)	09:22
	22:32	21:23	19:56	18:30		16:15	39 12:58 (26)	15:42
17	04:54	05:59	07:08	08:16	15:45 (12)	08:29	10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9 15:54 (12)	16:13	39 12:37 (32)	15:42
18	04:56	06:02	07:10	08:18	15:42 (12)	08:32	10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15 15:57 (12)	16:11	40 12:38 (32)	15:42
19	04:57	06:04	07:12	08:20	15:40 (12)	08:34	10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18 15:58 (12)	16:09	39 12:37 (32)	15:42
20	04:59	06:06	07:15	08:23	15:39 (12)	08:36	10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21 16:00 (12)	16:07	28 12:25 (32)	15:42
21	05:01	06:08	07:17	08:25	15:37 (12)	08:38	10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18 15:55 (12)	16:06	22 10:49 (37)	15:43
22	05:03	06:10	07:19	08:27	15:37 (12)	08:41	10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16 15:53 (12)	16:04	22 10:49 (37)	15:43
23	05:05	06:13	07:21	08:30	15:36 (12)	08:43	10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16 15:52 (12)	16:02	21 10:49 (37)	15:44
24	05:07	06:15	07:24	08:32	15:35 (12)	08:45	10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16 15:51 (12)	16:01	20 10:49 (37)	15:44
25	05:09	06:17	07:26	07:34	14:36 (12)	08:47	10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15 14:51 (12)	15:59	19 10:48 (37)	15:45
26	05:11	06:19	07:28	07:37	14:35 (12)	08:49	10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14 14:49 (12)	15:57	18 10:49 (37)	15:46
27	05:13	06:22	07:30	07:39	14:35 (12)	08:51	10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12 14:47 (12)	15:56	10 10:48 (37)	15:47
28	05:15	06:24	07:32	07:41	14:30 (7)	08:53	10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12 14:42 (12)	15:55	3 10:47 (37)	15:48
29	05:17	06:26	07:35	07:44	14:27 (7)	08:55		09:28
	22:07	20:48	19:19	16:56	11 14:38 (7)	15:53		15:49
30	05:20	06:28	07:37	07:46	14:26 (7)	08:57		09:28
	22:05	20:45	19:16	16:53	8 14:34 (7)	15:52		15:50
31	05:22	06:31		07:49				09:28
	22:03	20:42		16:51				15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					330		686	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June	
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39	
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30	
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38	
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32	
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37	
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33	
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36	
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35	
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35	
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36	
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33	
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37	
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32	
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39	
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32	
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40	
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31	
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41	
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30	
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42	
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29	
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43	
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29	
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44	
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28	
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45	
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28	
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46	
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27	
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47	
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27	
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47	
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27	
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48	
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26	
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49	
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26	
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49	
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26	
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49	
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26	
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50	
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27	
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50	
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27	
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50	
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27	
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50	
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28	
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50	
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28	
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50	
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29	
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50	
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29	
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49	
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30	
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49	
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31	
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49	
31	08:47		15:29 (8)				07:09						04:41				
	16:53	20	15:49 (8)				20:14						22:28				
Potential sun hours	221			260			365			432			521			547	
Total, worst case		77			781			508			1216			65			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	04:32	05:24			06:33			18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60		19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35			18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57		19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37			18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54		19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39			18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35		19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42			18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31		19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44			18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28		19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46			18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25		19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48			18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18		19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50			19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11		19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53				07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13				18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55				08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11				18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57				08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08				18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59				08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05				18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01			18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7		18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04			18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13		18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06			18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16		18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08			18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19		18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10			18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20		18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12			18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21		18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15			18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22		18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17			18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22		18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19			18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22		18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21			18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21		18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23			18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19		18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26			18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18		18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28			18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15		18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30			18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11		18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32				07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21				16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34				07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18				16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37				07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16				16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)					07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)					16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319				236			200
Total, worst case			983			565			839				305		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		11:14 (23)	08:46		10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53	31	12:43 (24)	16:56	18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28		11:14 (23)	08:44		10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54	30	12:43 (24)	16:58	17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27		11:13 (23)	08:41		10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55	31	12:43 (24)	17:01	14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27		11:13 (23)	08:39		10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57	30	12:43 (24)	17:03	11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26		11:14 (23)	08:37		10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58	28	12:42 (24)	17:06	7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25		11:14 (23)	08:35			07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:47 (28)		09:09		11:00 (23)
	16:00	28	12:42 (24)	17:08			18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	7	09:54 (28)		15:46	28	12:28 (24)
7	09:25		11:14 (23)	08:32			07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:45 (28)		09:10		11:01 (23)
	16:02	26	12:41 (24)	17:11			18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	11	09:56 (28)		15:45	29	12:30 (24)
8	09:24		11:14 (23)	08:30			07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:43 (28)		09:12		11:02 (23)
	16:03	21	11:35 (23)	17:13			18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	14	09:57 (28)		15:45	30	12:31 (24)
9	09:23		11:15 (23)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:42 (28)		09:14		11:03 (23)
	16:05	21	11:36 (23)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	17	09:59 (28)		15:44	30	12:32 (24)
10	09:22		11:15 (23)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:42 (28)		09:15		11:03 (23)
	16:07	21	11:36 (23)	17:18			18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	18	10:00 (28)		15:44	30	12:32 (24)
11	09:21		11:15 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:41 (28)		09:16		11:04 (23)
	16:09	22	11:37 (23)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	19	10:00 (28)		15:43	30	12:33 (24)
12	09:20		11:15 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:41 (28)		09:18		11:04 (23)
	16:11	22	11:37 (23)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	19	10:00 (28)		15:43	31	12:34 (24)
13	09:19		11:16 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:41 (28)		09:19		11:05 (23)
	16:13	22	11:38 (23)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	20	10:01 (28)		15:42	31	12:35 (24)
14	09:17		11:16 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:42 (28)		09:20		11:06 (23)
	16:15	22	11:38 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	19	10:01 (28)		15:42	30	12:35 (24)
15	09:16		11:16 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:41 (28)		09:21		11:06 (23)
	16:17	22	11:38 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	20	10:01 (28)		15:42	31	12:36 (24)
16	09:15		11:16 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:42 (28)		09:22		11:08 (23)
	16:19	22	11:38 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	19	10:01 (28)		15:42	30	12:37 (24)
17	09:13		11:18 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:43 (28)		09:23		11:09 (23)
	16:21	21	11:39 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	26	11:08 (23)		15:42	30	12:38 (24)
18	09:12		11:18 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		09:43 (28)		09:24		11:08 (23)
	16:23	21	11:39 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	29	11:10 (23)		15:42	30	12:37 (24)
19	09:10		10:13 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		09:44 (28)		09:25		11:09 (23)
	16:25	27	11:39 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	31	11:12 (23)		15:42	29	12:38 (24)
20	09:09		10:12 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		09:45 (28)		09:26		11:10 (23)
	16:28	30	11:39 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	32	11:13 (23)		15:43	30	12:39 (24)
21	09:07		10:11 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		09:46 (28)		09:26		11:11 (23)
	16:30	32	11:39 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	32	11:14 (23)		15:43	29	12:40 (24)
22	09:05		10:10 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		09:48 (28)		09:27		11:11 (23)
	16:32	32	11:38 (23)	17:48			18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04	29	11:15 (23)		15:43	29	12:40 (24)
23	09:03		10:09 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		09:49 (28)		09:27		11:11 (23)
	16:34	31	11:37 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	27	11:15 (23)		15:44	30	12:40 (24)
24	09:02		10:09 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:55 (23)		09:28		11:12 (23)
	16:37	29	11:36 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	21	11:16 (23)		15:45	30	12:41 (24)
25	09:00		10:09 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:55 (23)		09:28		11:12 (23)
	16:39	26	11:34 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	21	11:16 (23)		15:45	29	12:41 (24)
26	08:58		10:09 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:55 (23)		09:28		11:13 (23)
	16:41	19	10:28 (28)	17:57			19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58	22	11:17 (23)		15:46	30	12:42 (24)
27	08:56		10:09 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:55 (23)		09:28		11:13 (23)
	16:44	20	10:29 (28)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	22	11:17 (23)		15:47	30	12:42 (24)
28	08:54		10:09 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:56 (23)		09:29		11:13 (23)
	16:46	19	10:28 (28)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	22	11:18 (23)		15:48	31	12:43 (24)
29	08:52		10:09 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:56 (23)		09:29		11:13 (23)
	16:49	20	10:29 (28)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	11:18 (23)		15:49	30	12:42 (24)
30	08:50		10:09 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:56 (23)		09:28		11:13 (23)
	16:51	19	10:28 (28)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	22	11:18 (23)		15:50	31	12:43 (24)
31	08:48		10:10 (28)				07:10		04:41		05:22	06:31		07:49					09:28		11:14 (23)
	16:54	19	10:29 (28)				20:14		22:29		22:03	20:43		16:51					15:51	30	12:43 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236				199		
Total, worst case		764			67											541				888	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May	June	July	August	September	October	November	December
1	09:28	12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51	09:00 12:38 (12)
	15:52 16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48	15:51 20 12:58 (12)
2	09:27	12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:01 12:39 (12)
	15:54 16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46	15:50 20 12:59 (12)
3	09:27	12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56	09:03 12:40 (12)
	15:55 17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49 20 13:00 (12)
4	09:26	12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58	09:05 12:40 (12)
	15:57 17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41	15:48 20 13:00 (12)
5	09:26	12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01	09:07 12:41 (12)
	15:58 18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39	15:47 19 13:00 (12)
6	09:25	12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03	09:09 12:41 (12)
	16:00 19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36	15:46 19 13:00 (12)
7	09:24	12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06	09:10 12:42 (12)
	16:01 20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34	15:45 18 13:00 (12)
8	09:24	12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08	09:12 12:43 (12)
	16:03 19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32	15:44 18 13:01 (12)
9	09:23	12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10	09:13 12:43 (12)
	16:05 20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44 17 13:00 (12)
10	09:22	12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	09:15 12:44 (12)
	16:07 20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27	15:43 17 13:01 (12)
11	09:21	12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:16 12:45 (12)
	16:09 20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25	15:43 16 13:01 (12)
12	09:19	12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	09:17 12:45 (12)
	16:11 20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	15:42 16 13:01 (12)
13	09:18	12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:19 12:46 (12)
	16:12 20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	15:42 16 13:02 (12)
14	09:17	12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22	09:20 12:47 (12)
	16:14 20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:42 14 13:01 (12)
15	09:16	12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	09:21 12:47 (12)
	16:17 20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17	15:42 14 13:01 (12)
16	09:14	12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:22 12:48 (12)
	16:19 20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15	15:42 13 13:01 (12)
17	09:13	12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	09:23 12:48 (12)
	16:21 19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	15:42 14 13:02 (12)
18	09:11	12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	09:24 12:49 (12)
	16:23 19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11	15:42 13 13:02 (12)
19	09:10	13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34 12:41 (12)	09:25 12:50 (12)
	16:25 18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 9 12:50 (12)	15:42 13 13:03 (12)
20	09:08	13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36 12:39 (12)	09:25 12:51 (12)
	16:27 16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 12 12:51 (12)	15:42 12 13:03 (12)
21	09:07	13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38 12:38 (12)	09:26 12:51 (12)
	16:30 15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 15 12:53 (12)	15:43 12 13:03 (12)
22	09:05	13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41 12:38 (12)	09:27 12:52 (12)
	16:32 12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 16 12:54 (12)	15:43 12 13:04 (12)
23	09:03	13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43 12:37 (12)	09:27 12:52 (12)
	16:34 9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 18 12:55 (12)	15:44 12 13:04 (12)
24	09:01		07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45 12:38 (12)	09:28 12:52 (12)
	16:37		17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18 12:56 (12)	15:44 12 13:04 (12)
25	09:00		07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47 12:37 (12)	09:28 12:53 (12)
	16:39		17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 19 12:56 (12)	15:45 13 13:06 (12)
26	08:58		07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49 12:37 (12)	09:28 12:53 (12)
	16:41		17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 20 12:57 (12)	15:46 13 13:06 (12)
27	08:56		07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52 12:37 (12)	09:28 12:54 (12)
	16:44		18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 20 12:57 (12)	15:47 13 13:07 (12)
28	08:54		07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54 12:37 (12)	09:28 12:53 (12)
	16:46		18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55 20 12:57 (12)	15:48 14 13:07 (12)
29	08:52			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56 12:38 (12)	09:28 12:53 (12)
	16:48			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 20 12:58 (12)	15:49 15 13:08 (12)
30	08:50			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58 12:38 (12)	09:28 12:54 (12)
	16:51			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 20 12:58 (12)	15:50 15 13:09 (12)
31	08:48			07:09		04:41		05:22	06:31		07:49		09:28 12:54 (12)
	16:53			20:14		22:29		22:03	20:42		16:51		15:51 15 13:09 (12)
Potential sun hours	221		260	365	432	521	547	546	478	386	319	236	199
Total, worst case		410										207	475

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February			March	April	May	June	July	August	September	October			November			December
1	09:28		08:45		13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39			07:51		14:48 (12)	08:59
	15:52		16:56	19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13			16:48	19	15:07 (12)	15:51
2	09:27		08:43		13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:53		14:49 (12)	09:01
	15:54		16:58	16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	17	15:06 (12)	15:50
3	09:27		08:41		13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44			07:56		14:49 (12)	09:03
	15:55		17:01	12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07			16:44	15	15:04 (12)	15:49
4	09:26		08:39		14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46			07:58		14:52 (12)	09:05
	15:57		17:03	5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	10	15:02 (12)	15:48
5	09:26		08:37			07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48			08:01		14:56 (12)	09:07
	15:58		17:06			18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01			16:39	2	14:58 (12)	15:47
6	09:25		08:34		15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50			08:03			09:08
	16:00		17:08	4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58			16:36			15:46
7	09:24		08:32		15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53			08:06		13:31 (26)	09:10
	16:01		17:11	11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56			16:34	7	13:38 (26)	15:45
8	09:23		08:30		15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55			08:08		13:28 (26)	09:12
	16:03		17:13	15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53			16:32	13	13:41 (26)	15:44
9	09:23		08:27		15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57			08:10		13:27 (26)	09:13
	16:05		17:15	18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50			16:30	16	13:43 (26)	15:44
10	09:22		08:25		15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59			08:13		13:25 (26)	09:15
	16:07		17:18	19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:27	19	13:44 (26)	15:43
11	09:20		08:22		15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		13:24 (26)	09:16
	16:09		17:20	21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44			16:25	21	13:45 (26)	15:43
12	09:19		08:20		15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04			08:17		13:24 (26)	09:17
	16:10		17:23	22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41			16:23	22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17		15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		13:23 (26)	09:19
	16:12	5 13:58 (26)	17:25	22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39			16:21	23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15		15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09			08:22		13:23 (26)	09:20
	16:14	9 14:00 (26)	17:28	23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12		15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:07 (37)	09:21
	16:17	11 14:01 (26)	17:30	22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33			16:17	33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10		15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:06 (37)	09:22
	16:19	17 14:07 (26)	17:33	22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30			16:15	36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07		15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		11:04 (37)	09:23
	16:21	21 14:10 (26)	17:35	21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05		15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18			08:32		11:03 (37)	09:24
	16:23	27 14:11 (26)	17:38	19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25			16:11	42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02		15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20			08:34		11:03 (37)	09:25
	16:25	32 14:12 (26)	17:40	17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22			16:09	44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59		15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		11:02 (37)	09:25
	16:27	36 14:12 (26)	17:43	14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19			16:07	45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57		15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25		15:53 (12)	08:38		11:05 (37)	09:26
	16:30	42 14:13 (26)	17:45	8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17	10	16:03 (12)	16:06	42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54			06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27		15:51 (12)	08:41		11:08 (37)	09:27
	16:32	45 14:14 (26)	17:47			18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	15	16:06 (12)	16:04	36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51			06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30		15:49 (12)	08:43		11:12 (37)	09:27
	16:34	44 14:14 (26)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	17	16:06 (12)	16:02	32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32		15:48 (12)	08:45		11:16 (37)	09:27
	16:36	42 14:15 (26)	17:52			18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	19	16:07 (12)	16:01	28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		14:48 (12)	08:47		13:27 (26)	09:28
	16:39	40 14:15 (26)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	20	15:08 (12)	15:59	21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43			06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37		14:46 (12)	08:49		13:29 (26)	09:28
	16:41	37 14:15 (26)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	22	15:08 (12)	15:57	17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		14:46 (12)	08:51		13:29 (26)	09:28
	16:44	33 14:15 (26)	18:00			19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01	23	15:09 (12)	15:56	12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41		14:46 (12)	08:53		13:30 (26)	09:28
	16:46	24 14:15 (26)	18:02			19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	22	15:08 (12)	15:55	9	13:39 (26)	15:47
29	08:52	13:51 (26)				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44		14:46 (12)	08:55		13:35 (26)	09:28
	16:48	23 14:14 (26)				20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56	22	15:08 (12)	15:53	5	13:40 (26)	15:49
30	08:50	13:52 (26)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		14:47 (12)	08:57			09:28
	16:51	22 14:14 (26)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	21	15:08 (12)	15:52			15:50
31	08:48	13:54 (26)				07:09		04:41		05:22	06:31		07:49		14:47 (12)				09:28
	16:53	20 14:14 (26)				20:14		22:29		22:03	20:42		16:51	20	15:07 (12)				15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319			236			199
Total, worst case		530		330										211			650		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June
1	09:28		12:11 (32)	08:45		10:15 (13)	07:35		13:26 (26)	07:07		18:42 (17)	05:44		04:39
	15:52	47	14:26 (14)	16:56	119	15:37 (35)	18:04	35	17:05 (9)	20:16	19	19:01 (17)	21:26		22:30
2	09:27		12:11 (32)	08:43		12:16 (32)	07:32		15:45 (7)	07:04		18:43 (17)	05:41		04:38
	15:54	53	14:28 (14)	16:58	114	15:38 (35)	18:07	27	17:09 (9)	20:19	16	18:59 (17)	21:28		22:32
3	09:27		12:10 (32)	08:41		12:17 (32)	07:30		16:34 (12)	07:01		18:46 (17)	05:38		04:37
	15:55	58	14:29 (14)	17:01	113	15:38 (35)	18:09	33	17:12 (9)	20:21	11	18:57 (17)	21:30		22:33
4	09:26		12:10 (32)	08:39		09:39 (37)	07:27		16:31 (12)	06:58			05:36		04:36
	15:57	61	14:29 (14)	17:03	109	15:39 (35)	18:12	43	17:15 (9)	20:23			21:33		22:35
5	09:26		12:10 (32)	08:36		09:39 (37)	07:24		16:29 (12)	06:55			05:34		04:35
	15:58	64	14:30 (14)	17:06	105	15:39 (35)	18:14	46	17:15 (9)	20:26			21:35		22:36
6	09:25		12:09 (32)	08:34		09:40 (37)	07:21		16:26 (12)	06:52			05:31		04:34
	16:00	70	14:31 (14)	17:08	95	15:39 (35)	18:16	49	17:15 (9)	20:28			21:37		22:38
7	09:24		10:10 (13)	08:32		09:40 (37)	07:18		16:25 (12)	06:49			05:29		04:33
	16:01	78	14:32 (14)	17:11	96	15:39 (35)	18:19	50	17:15 (9)	20:30			21:39		22:39
8	09:23		10:10 (13)	08:30		09:38 (37)	07:15		16:23 (12)	06:46			05:26		04:32
	16:03	84	14:33 (14)	17:13	96	15:38 (35)	18:21	52	17:15 (9)	20:32			21:42		22:40
9	09:22		10:10 (13)	08:27		09:36 (37)	07:13		16:22 (12)	06:44			05:24		04:31
	16:05	86	14:33 (14)	17:16	98	15:38 (35)	18:23	53	17:15 (9)	20:35			21:44		22:41
10	09:21		10:11 (13)	08:25		09:33 (37)	07:10		16:20 (12)	06:41			05:21		04:30
	16:07	91	14:34 (14)	17:18	107	15:57 (7)	18:26	54	17:14 (9)	20:37			21:46		22:42
11	09:20		10:10 (13)	08:22		09:29 (37)	07:07		16:19 (12)	06:38			05:19		04:29
	16:09	97	14:34 (14)	17:20	114	16:00 (7)	18:28	54	17:13 (9)	20:39			21:48		22:44
12	09:19		10:09 (13)	08:20		09:27 (37)	07:04		16:18 (12)	06:35			05:17		04:29
	16:11	102	14:35 (14)	17:23	118	16:03 (7)	18:30	54	17:12 (9)	20:42			21:51		22:44
13	09:18		10:09 (13)	08:17		09:24 (37)	07:01		16:18 (12)	06:32			05:15		04:28
	16:13	105	14:35 (14)	17:25	118	16:04 (7)	18:33	52	17:10 (9)	20:44			21:53		22:45
14	09:17		10:10 (13)	08:15		09:21 (37)	06:58		16:17 (12)	06:29			05:12		04:28
	16:15	107	14:36 (14)	17:28	114	16:05 (7)	18:35	51	17:08 (9)	20:46			21:55		22:46
15	09:16		10:10 (13)	08:12		09:18 (37)	06:56		16:17 (12)	06:27			05:10		04:27
	16:17	112	14:37 (14)	17:30	120	16:07 (7)	18:37	47	17:04 (9)	20:49			21:57		22:47
16	09:14		10:02 (13)	08:10		09:13 (37)	06:53		16:17 (12)	06:24			05:08		04:27
	16:19	119	14:37 (14)	17:33	125	16:08 (7)	18:40	46	17:03 (12)	20:51			21:59		22:48
17	09:13		10:02 (13)	08:07		09:13 (37)	06:50		16:17 (12)	06:21			05:06		04:27
	16:21	126	14:37 (14)	17:35	123	16:08 (7)	18:42	46	17:03 (12)	20:53			22:02		22:48
18	09:11		10:02 (13)	08:05		09:13 (37)	06:47		16:16 (12)	06:18			05:04		04:27
	16:23	127	14:37 (14)	17:38	121	16:08 (7)	18:44	46	17:02 (12)	20:56			22:04		22:49
19	09:10		10:02 (13)	08:02		09:15 (37)	06:44		16:16 (12)	06:16			05:02		04:26
	16:25	129	14:37 (14)	17:40	118	16:09 (7)	18:47	56	18:01 (17)	20:58			22:06		22:49
20	09:08		10:02 (13)	07:59		09:16 (37)	06:41		16:16 (12)	06:13			05:00		04:26
	16:27	130	14:37 (14)	17:43	114	16:09 (7)	18:49	60	18:03 (17)	21:00			22:08		22:50
21	09:07		10:03 (13)	07:57		09:17 (37)	06:38		16:16 (12)	06:10			04:58		04:27
	16:30	131	14:37 (14)	17:45	110	16:09 (7)	18:51	64	18:05 (17)	21:02			22:10		22:50
22	09:05		10:03 (13)	07:54		09:18 (37)	06:35		16:17 (12)	06:07			04:56		04:27
	16:32	129	14:36 (14)	17:48	104	16:08 (7)	18:54	63	18:05 (17)	21:05			22:12		22:50
23	09:03		10:04 (13)	07:51		09:20 (37)	06:32		16:17 (12)	06:05			04:54		04:27
	16:34	131	14:36 (14)	17:50	95	16:08 (7)	18:56	64	18:06 (17)	21:07			22:14		22:50
24	09:01		10:04 (13)	07:49		13:09 (26)	06:30		16:18 (12)	06:02			04:52		04:27
	16:37	128	14:35 (14)	17:52	77	16:08 (7)	18:58	64	18:06 (17)	21:09			22:16		22:50
25	08:59		10:05 (13)	07:46		13:11 (26)	06:27		16:18 (12)	05:59			04:50		04:28
	16:39	125	14:34 (14)	17:55	71	16:07 (7)	19:00	62	18:06 (17)	21:12			22:18		22:50
26	08:58		10:05 (13)	07:43		13:13 (26)	06:24		16:20 (12)	05:57			04:49		04:28
	16:41	124	15:28 (35)	17:57	66	16:06 (7)	19:03	61	18:07 (17)	21:14			22:20		22:50
27	08:56		10:06 (13)	07:41		13:16 (26)	06:21		16:22 (12)	05:54			04:47		04:29
	16:44	127	15:30 (35)	18:00	58	16:05 (7)	19:05	57	18:07 (17)	21:16			22:22		22:50
28	08:54		10:07 (13)	07:38		13:19 (26)	06:18		16:23 (12)	05:51			04:45		04:29
	16:46	130	15:33 (35)	18:02	49	16:04 (7)	19:07	54	18:06 (17)	21:19			22:23		22:50
29	08:52		10:08 (13)				07:15		17:26 (12)	05:49			04:44		04:30
	16:48	131	15:35 (35)				20:10	47	19:05 (17)	21:21			22:25		22:49
30	08:50		10:09 (13)				07:12		17:29 (12)	05:46			04:42		04:31
	16:51	129	15:36 (35)				20:12	38	19:04 (17)	21:23			22:27		22:49
31	08:47		10:12 (13)				07:09		18:41 (17)				04:41		
	16:53	126	15:37 (35)				20:14	22	19:03 (17)				22:29		
Potential sun hours	221			260			365			432			521		547
Total, worst case		3257			2867			1550			46				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:39		16:57 (12)	07:51		09:03 (37)	08:59		09:52 (13)
	22:48	22:01	20:39			19:13	53	17:50 (9)	16:49	107	15:26 (7)	15:51	96	14:16 (14)
2	04:33	05:26	06:35			07:41		16:58 (12)	07:53		09:06 (37)	09:01		09:53 (13)
	22:48	21:58	20:37			19:10	54	17:52 (9)	16:46	98	15:08 (35)	15:50	91	14:16 (14)
3	04:34	05:28	06:37			07:44		16:58 (12)	07:56		09:08 (37)	09:03		09:54 (13)
	22:47	21:56	20:34			19:07	54	17:52 (9)	16:44	96	15:08 (35)	15:49	88	14:17 (14)
4	04:35	05:30	06:39			07:46		16:58 (12)	07:58		09:10 (37)	09:05		09:54 (13)
	22:46	21:54	20:31			19:04	54	17:52 (9)	16:41	94	15:08 (35)	15:48	83	14:17 (14)
5	04:36	05:33	06:42			07:48		17:00 (12)	08:01		09:10 (37)	09:07		09:55 (13)
	22:45	21:51	20:28			19:01	52	17:52 (9)	16:39	95	15:09 (35)	15:47	77	14:17 (14)
6	04:37	05:35	06:44			07:50		17:00 (12)	08:03		09:10 (37)	09:08		09:57 (13)
	22:45	21:49	20:25			18:58	52	17:52 (9)	16:37	105	15:09 (35)	15:46	71	14:17 (14)
7	04:38	05:37	06:46			07:53		17:01 (12)	08:06		09:08 (37)	09:10		11:57 (32)
	22:44	21:46	20:22			18:56	50	17:51 (9)	16:34	111	15:09 (35)	15:45	64	14:17 (14)
8	04:40	05:39	06:48			07:55		17:03 (12)	08:08		11:48 (32)	09:12		11:57 (32)
	22:43	21:44	20:19			18:53	48	17:51 (9)	16:32	112	15:09 (35)	15:44	62	14:17 (14)
9	04:41	05:41	06:51		18:40 (17)	07:57		17:04 (12)	08:10		11:47 (32)	09:13		11:59 (32)
	22:41	21:41	20:16	10	18:50 (17)	18:50	46	17:50 (9)	16:30	113	15:09 (35)	15:44	57	14:17 (14)
10	04:42	05:44	06:53		18:37 (17)	07:59		17:06 (12)	08:13		09:45 (13)	09:15		12:00 (32)
	22:40	21:39	20:14	15	18:52 (17)	18:47	40	17:48 (9)	16:27	121	15:08 (35)	15:43	53	14:17 (14)
11	04:44	05:46	06:55		18:35 (17)	08:02		16:22 (7)	08:15		09:42 (13)	09:16		12:01 (32)
	22:39	21:36	20:11	19	18:54 (17)	18:44	36	17:45 (9)	16:25	127	15:08 (35)	15:43	47	14:16 (14)
12	04:45	05:48	06:57		18:34 (17)	08:04		16:18 (7)	08:17		09:41 (13)	09:17		12:03 (32)
	22:38	21:34	20:08	21	18:55 (17)	18:42	25	17:41 (9)	16:23	130	15:08 (35)	15:42	44	14:17 (14)
13	04:47	05:50	06:59		17:21 (12)	08:06		13:56 (26)	08:20		09:39 (13)	09:19		12:04 (32)
	22:36	21:31	20:05	37	18:55 (17)	18:39	42	17:38 (9)	16:21	131	15:06 (35)	15:42	39	14:17 (14)
14	04:49	05:53	07:02		17:17 (12)	08:09		13:50 (26)	08:22		09:39 (13)	09:20		12:07 (32)
	22:35	21:29	20:02	45	18:55 (17)	18:36	53	16:37 (7)	16:19	131	15:05 (35)	15:42	34	14:17 (14)
15	04:50	05:55	07:04		17:13 (12)	08:11		13:46 (26)	08:25		09:39 (13)	09:21		13:06 (26)
	22:33	21:26	19:59	52	18:55 (17)	18:33	62	16:37 (7)	16:17	128	15:03 (35)	15:42	26	14:16 (14)
16	04:52	05:57	07:06		17:11 (12)	08:13		13:44 (26)	08:27		09:39 (13)	09:22		13:08 (26)
	22:32	21:23	19:56	56	18:55 (17)	18:30	69	16:39 (7)	16:15	124	15:02 (35)	15:42	22	14:15 (14)
17	04:54	05:59	07:08		17:08 (12)	08:16		13:41 (26)	08:29		09:38 (13)	09:23		13:10 (26)
	22:30	21:21	19:53	59	18:54 (17)	18:28	75	16:39 (7)	16:13	125	14:07 (14)	15:42	18	14:15 (14)
18	04:56	06:02	07:10		17:07 (12)	08:18		09:55 (37)	08:32		09:38 (13)	09:24		13:12 (26)
	22:29	21:18	19:50	63	18:55 (17)	18:25	86	16:39 (7)	16:11	129	14:09 (14)	15:42	16	14:15 (14)
19	04:58	06:04	07:12		17:06 (12)	08:20		09:51 (37)	08:34		09:39 (13)	09:25		13:16 (3)
	22:27	21:15	19:47	63	18:54 (17)	18:22	98	16:39 (7)	16:09	131	14:11 (14)	15:42	11	14:15 (14)
20	04:59	06:06	07:15		17:04 (12)	08:23		09:49 (37)	08:36		09:38 (13)	09:25		13:16 (3)
	22:25	21:13	19:45	65	18:53 (17)	18:20	106	16:40 (7)	16:07	129	14:11 (14)	15:42	9	14:14 (14)
21	05:01	06:08	07:17		17:03 (12)	08:25		09:46 (37)	08:38		09:39 (13)	09:26		13:17 (3)
	22:23	21:10	19:42	64	18:51 (17)	18:17	113	16:39 (7)	16:06	131	14:13 (14)	15:43	9	14:15 (14)
22	05:03	06:11	07:19		17:01 (12)	08:27		09:45 (37)	08:41		09:38 (13)	09:26		13:18 (3)
	22:21	21:07	19:39	64	18:50 (17)	18:14	116	16:39 (7)	16:04	131	14:13 (14)	15:43	9	14:16 (14)
23	05:05	06:13	07:21		17:00 (12)	08:30		09:44 (37)	08:43		09:39 (13)	09:27		13:18 (3)
	22:19	21:05	19:36	62	18:48 (17)	18:12	119	16:38 (7)	16:02	128	14:14 (14)	15:44	9	14:16 (14)
24	05:07	06:15	07:24		17:00 (12)	08:32		09:43 (37)	08:45		09:39 (13)	09:27		13:18 (3)
	22:18	21:02	19:33	58	18:46 (17)	18:09	122	16:38 (7)	16:01	127	14:14 (14)	15:44	11	14:17 (14)
25	05:09	06:17	07:26		16:59 (12)	07:34		08:43 (37)	08:47		09:40 (13)	09:28		13:15 (26)
	22:16	20:59	19:30	46	17:45 (12)	17:06	123	15:38 (7)	15:59	124	14:15 (14)	15:45	14	14:17 (14)
26	05:11	06:19	07:28		16:58 (12)	07:37		08:44 (37)	08:49		09:40 (13)	09:28		13:14 (26)
	22:14	20:56	19:27	47	17:45 (12)	17:04	122	15:37 (7)	15:58	119	14:15 (14)	15:46	17	14:18 (14)
27	05:13	06:22	07:30		16:58 (12)	07:39		08:48 (37)	08:51		09:49 (13)	09:28		13:13 (26)
	22:11	20:53	19:24	46	17:44 (12)	17:01	118	15:36 (7)	15:56	112	14:16 (14)	15:47	20	14:19 (14)
28	05:15	06:24	07:32		16:58 (12)	07:41		08:51 (37)	08:53		09:49 (13)	09:28		13:12 (26)
	22:09	20:51	19:21	46	17:44 (12)	16:59	115	15:35 (7)	15:55	109	14:16 (14)	15:48	24	14:21 (14)
29	05:17	06:26	07:35		16:58 (12)	07:44		08:54 (37)	08:55		09:50 (13)	09:28		12:14 (32)
	22:07	20:48	19:19	50	17:48 (9)	16:56	119	15:34 (7)	15:53	106	14:16 (14)	15:49	31	14:23 (14)
30	05:20	06:28	07:37		16:57 (12)	07:46		08:57 (37)	08:57		09:50 (13)	09:28		12:13 (32)
	22:05	20:45	19:16	52	17:49 (9)	16:53	117	15:32 (7)	15:52	103	14:16 (14)	15:50	37	14:25 (14)
31	05:22	06:31				07:49		08:59 (37)				09:28		12:12 (32)
	22:03	20:42				16:51	115	15:29 (7)				15:51	41	14:25 (14)
Potential sun hours	546	478	386			319			236			199		
Total, worst case				1040			2454			3527			1230	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case							34		1					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44		04:40		20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25		22:30	8	20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41		04:38		20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28		22:31	11	20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39		04:37		20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30		22:33	12	20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36		04:36		20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32		22:34	12	20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34		04:35		20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35		22:36	13	20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31		04:34		20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37		22:37	13	20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29		04:33		20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39		22:38	14	20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26		04:32		20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41		22:40	14	20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24		04:31		20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44		22:41	14	20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22		04:30		20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46		22:42	14	20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19		04:29		20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48		22:43	16	20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17		04:29		20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50		22:44	16	20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15		04:28		20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53		22:45	16	20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12		04:28		20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55		22:46	17	20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10		04:27		20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57		22:47	17	20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08		04:27		20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59		22:47	17	20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06		04:27		20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01		22:48	18	20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04		04:27		20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03		22:48	17	20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02		04:27		20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05		22:49	18	20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00		04:27		20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07		22:49	18	20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58		04:27		20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10		22:49	18	20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56		04:27		20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12		22:50	18	20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54		04:27		20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14		22:50	18	20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52		04:27		20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15		22:50	17	20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51		04:28		20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17		22:50	17	20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49		04:28		20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19		22:50	18	20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47		04:29		20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21		22:49	17	20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46		04:30		20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23		22:49	17	20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44		04:30		20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25		22:49	17	20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1)	04:31		20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1)	22:48	17	20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)				05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)				22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						5		469			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April			May			June		
1	09:28	08:46	07:35	07:07			05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56	18:05	20:17			21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43	07:33	07:04			05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59	18:07	20:19			21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41	07:30	07:01			05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01	18:10	20:21			21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39	07:27	06:58			05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04	18:12	20:24			21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37	07:24	06:55			05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06	18:14	20:26			21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34	07:21	06:53			05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09	18:17	20:28			21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32	07:19	06:50			05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11	18:19	20:31			21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	07:16	06:47			05:27			04:32		06:15 (36)
	16:04	17:14	18:21	20:33			21:42			22:40	29	06:44 (36)
9	09:23	08:27	07:13	06:44			05:24			04:31		06:16 (36)
	16:06	17:16	18:24	20:35			21:44			22:42	29	06:45 (36)
10	09:22	08:25	07:10	06:41		07:48 (38)	05:22			04:31		06:15 (36)
	16:07	17:18	18:26	20:37	10	07:58 (38)	21:46			22:43	30	06:45 (36)
11	09:21	08:23	07:07	06:38		07:45 (38)	05:20			04:30		06:16 (36)
	16:09	17:21	18:28	20:40	17	08:02 (38)	21:49			22:44	29	06:45 (36)
12	09:20	08:20	07:04	06:36		07:41 (38)	05:17			04:29		06:15 (36)
	16:11	17:23	18:31	20:42	22	08:03 (38)	21:51			22:45	30	06:45 (36)
13	09:18	08:18	07:02	06:33		07:37 (38)	05:15			04:29		06:16 (36)
	16:13	17:26	18:33	20:44	27	08:04 (38)	21:53			22:46	30	06:46 (36)
14	09:17	08:15	06:59	06:30		07:35 (38)	05:13			04:28		06:16 (36)
	16:15	17:28	18:35	20:47	30	08:05 (38)	21:55			22:46	30	06:46 (36)
15	09:16	08:13	06:56	06:27		07:34 (38)	05:11			04:28		06:15 (36)
	16:17	17:31	18:38	20:49	33	08:07 (38)	21:57			22:47	31	06:46 (36)
16	09:14	08:10	06:53	06:24		07:33 (38)	05:09			04:28		06:16 (36)
	16:19	17:33	18:40	20:51	34	08:07 (38)	22:00			22:48	30	06:46 (36)
17	09:13	08:07	06:50	06:22		07:32 (38)	05:06			04:27		06:16 (36)
	16:21	17:36	18:42	20:54	35	08:07 (38)	22:02			22:48	31	06:47 (36)
18	09:12	08:05	06:47	06:19		07:31 (38)	05:04			04:27		06:16 (36)
	16:24	17:38	18:45	20:56	37	08:08 (38)	22:04			22:49	31	06:47 (36)
19	09:10	08:02	06:44	06:16		07:30 (38)	05:02			04:27		06:16 (36)
	16:26	17:41	18:47	20:58	38	08:08 (38)	22:06			22:49	31	06:47 (36)
20	09:08	08:00	06:42	06:13		07:30 (38)	05:00			04:27		06:16 (36)
	16:28	17:43	18:49	21:00	39	08:09 (38)	22:08			22:50	31	06:47 (36)
21	09:07	07:57	06:39	06:11		07:30 (38)	04:58			04:27		06:16 (36)
	16:30	17:46	18:52	21:03	38	08:08 (38)	22:10			22:50	31	06:47 (36)
22	09:05	07:54	06:36	06:08		07:29 (38)	04:56			04:27		06:17 (36)
	16:32	17:48	18:54	21:05	39	08:08 (38)	22:12			22:50	31	06:48 (36)
23	09:03	07:52	06:33	06:05		07:29 (38)	04:55			04:28		06:17 (36)
	16:35	17:50	18:56	21:07	39	08:08 (38)	22:14			22:50	31	06:48 (36)
24	09:02	07:49	06:30	06:02		07:29 (38)	04:53			04:28		06:17 (36)
	16:37	17:53	18:58	21:10	38	08:07 (38)	22:16			22:50	31	06:48 (36)
25	09:00	07:46	06:27	06:00		07:29 (38)	04:51			04:28		06:18 (36)
	16:39	17:55	19:01	21:12	38	08:07 (38)	22:18			22:50	31	06:49 (36)
26	08:58	07:44	06:24	05:57		07:29 (38)	04:49		06:24 (36)	04:29		06:18 (36)
	16:42	17:58	19:03	21:14	37	08:06 (38)	22:20	8	06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41	06:21	05:54		07:29 (38)	04:48		06:21 (36)	04:29		06:19 (36)
	16:44	18:00	19:05	21:17	37	08:06 (38)	22:22	13	06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38	06:18	05:52		07:29 (38)	04:46		06:20 (36)	04:30		06:18 (36)
	16:47	18:02	19:08	21:19	36	08:05 (38)	22:24	16	06:36 (36)	22:50	31	06:49 (36)
29	08:52		07:16	05:49		07:30 (38)	04:44		06:19 (36)	04:31		06:19 (36)
	16:49		20:10	21:21	34	08:04 (38)	22:25	18	06:37 (36)	22:49	30	06:49 (36)
30	08:50		07:13	05:47		07:30 (38)	04:43		06:19 (36)	04:31		06:19 (36)
	16:51		20:12	21:24	33	08:03 (38)	22:27	20	06:39 (36)	22:49	30	06:49 (36)
31	08:48		07:10				04:41		06:17 (36)			
	16:54		20:14				22:29	22	06:39 (36)			
Potential sun hours	221	260	365	432			521			547		
Total, worst case					691			254			878	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October	November	December
1	04:32		06:20 (36)	05:24		06:33	07:44 (38)	07:39	07:51	09:00
	22:48	30	06:50 (36)	22:01		20:40	17 08:01 (38)	19:13	16:49	15:51
2	04:33		06:20 (36)	05:27		06:35	07:47 (38)	07:42	07:54	09:01
	22:48	30	06:50 (36)	21:58		20:37	10 07:57 (38)	19:10	16:47	15:50
3	04:34		06:20 (36)	05:29		06:38		07:44	07:56	09:03
	22:47	29	06:49 (36)	21:56		20:34		19:07	16:44	15:49
4	04:35		06:20 (36)	05:31		06:40		07:46	07:59	09:05
	22:46	29	06:49 (36)	21:54		20:31		19:05	16:42	15:48
5	04:36		06:21 (36)	05:33		06:42		07:48	08:01	09:07
	22:46	28	06:49 (36)	21:51		20:28		19:02	16:39	15:47
6	04:38		06:21 (36)	05:35	07:49 (38)	06:44		07:51	08:03	09:09
	22:45	28	06:49 (36)	21:49	13 08:02 (38)	20:25		18:59	16:37	15:47
7	04:39		06:23 (36)	05:38	07:46 (38)	06:47		07:53	08:06	09:10
	22:44	27	06:50 (36)	21:47	18 08:04 (38)	20:23		18:56	16:35	15:46
8	04:40		06:23 (36)	05:40	07:44 (38)	06:49		07:55	08:08	09:12
	22:43	26	06:49 (36)	21:44	22 08:06 (38)	20:20		18:53	16:32	15:45
9	04:42		06:23 (36)	05:42	07:43 (38)	06:51		07:57	08:11	09:13
	22:42	26	06:49 (36)	21:42	25 08:08 (38)	20:17		18:50	16:30	15:44
10	04:43		06:24 (36)	05:44	07:41 (38)	06:53		08:00	08:13	09:15
	22:40	24	06:48 (36)	21:39	28 08:09 (38)	20:14		18:48	16:28	15:44
11	04:45		06:25 (36)	05:46	07:40 (38)	06:55		08:02	08:15	09:16
	22:39	23	06:48 (36)	21:37	30 08:10 (38)	20:11		18:45	16:26	15:43
12	04:46		06:25 (36)	05:49	07:39 (38)	06:58		08:04	08:18	09:17
	22:38	23	06:48 (36)	21:34	32 08:11 (38)	20:08		18:42	16:24	15:43
13	04:48		06:26 (36)	05:51	07:38 (38)	07:00		08:07	08:20	09:19
	22:36	21	06:47 (36)	21:32	33 08:11 (38)	20:05		18:39	16:22	15:43
14	04:49		06:28 (36)	05:53	07:37 (38)	07:02		08:09	08:22	09:20
	22:35	18	06:46 (36)	21:29	35 08:12 (38)	20:02		18:36	16:19	15:43
15	04:51		06:28 (36)	05:55	07:36 (38)	07:04		08:11	08:25	09:21
	22:34	17	06:45 (36)	21:26	36 08:12 (38)	19:59		18:34	16:17	15:42
16	04:53		06:30 (36)	05:58	07:36 (38)	07:06		08:14	08:27	09:22
	22:32	14	06:44 (36)	21:24	37 08:13 (38)	19:57		18:31	16:15	15:42
17	04:54		06:31 (36)	06:00	07:35 (38)	07:09		08:16	08:29	09:23
	22:30	11	06:42 (36)	21:21	38 08:13 (38)	19:54		18:28	16:13	15:42
18	04:56		06:35 (36)	06:02	07:36 (38)	07:11		08:18	08:32	09:24
	22:29	5	06:40 (36)	21:18	38 08:14 (38)	19:51		18:25	16:12	15:42
19	04:58			06:04	07:35 (38)	07:13		08:21	08:34	09:25
	22:27			21:16	39 08:14 (38)	19:48		18:23	16:10	15:43
20	05:00			06:07	07:35 (38)	07:15		08:23	08:36	09:25
	22:25			21:13	38 08:13 (38)	19:45		18:20	16:08	15:43
21	05:02			06:09	07:34 (38)	07:17		08:25	08:39	09:26
	22:23			21:10	39 08:13 (38)	19:42		18:17	16:06	15:43
22	05:04			06:11	07:34 (38)	07:20		08:28	08:41	09:27
	22:22			21:08	39 08:13 (38)	19:39		18:15	16:04	15:44
23	05:06			06:13	07:34 (38)	07:22		08:30	08:43	09:27
	22:20			21:05	38 08:12 (38)	19:36		18:12	16:03	15:44
24	05:08			06:15	07:34 (38)	07:24		08:32	08:45	09:28
	22:18			21:02	37 08:11 (38)	19:33		18:09	16:01	15:45
25	05:10			06:18	07:34 (38)	07:26		07:35	08:47	09:28
	22:16			20:59	37 08:11 (38)	19:30		17:07	16:00	15:46
26	05:12			06:20	07:34 (38)	07:28		07:37	08:50	09:28
	22:14			20:57	36 08:10 (38)	19:28		17:04	15:58	15:46
27	05:14			06:22	07:35 (38)	07:31		07:39	08:52	09:28
	22:12			20:54	34 08:09 (38)	19:25		17:02	15:57	15:47
28	05:16			06:24	07:35 (38)	07:33		07:42	08:54	09:28
	22:10			20:51	32 08:07 (38)	19:22		16:59	15:55	15:48
29	05:18			06:27	07:36 (38)	07:35		07:44	08:56	09:28
	22:07			20:48	30 08:06 (38)	19:19		16:56	15:54	15:49
30	05:20			06:29	07:38 (38)	07:37		07:47	08:58	09:28
	22:05			20:45	27 08:05 (38)	19:16		16:54	15:53	15:50
31	05:22			06:31	07:41 (38)			07:49		09:28
	22:03			20:43	22 08:03 (38)			16:51		15:51
Potential sun hours	545			478		386		319	236	200
Total, worst case		409			833		27			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March		April		May			June			July			August		September		October		November		December
1	09:28		08:46		07:35		07:07		05:44			04:40		06:01 (38)	04:32		06:06 (38)	05:24		06:33		07:39		07:51		09:00
	15:53		16:56		18:05		20:17		21:26			22:30	34	06:35 (38)	22:48	37	06:43 (38)	22:01		20:40		19:13		16:49		15:52
2	09:27		08:43		07:33		07:04		05:42			04:39		06:01 (38)	04:33		06:07 (38)	05:27		06:35		07:42		07:54		09:01
	15:54		16:59		18:07		20:19		21:28			22:32	35	06:36 (38)	22:48	36	06:43 (38)	21:58		20:37		19:10		16:47		15:50
3	09:27		08:41		07:30		07:01		05:39			04:38		06:01 (38)	04:34		06:06 (38)	05:29		06:38		07:44		07:56		09:03
	15:56		17:01		18:10		20:21		21:30			22:33	35	06:36 (38)	22:47	37	06:43 (38)	21:56		20:34		19:07		16:44		15:49
4	09:26		08:39		07:27		06:58		05:37			04:36		06:00 (38)	04:35		06:06 (38)	05:31		06:40		07:46		07:59		09:05
	15:57		17:04		18:12		20:24		21:33			22:35	36	06:36 (38)	22:46	37	06:43 (38)	21:54		20:31		19:05		16:42		15:48
5	09:26		08:37		07:24		06:55		05:34			04:35		06:01 (38)	04:37		06:06 (38)	05:33		06:42		07:48		08:01		09:07
	15:59		17:06		18:14		20:26		21:35			22:36	36	06:37 (38)	22:46	37	06:43 (38)	21:51		20:28		19:02		16:39		15:47
6	09:25		08:34		07:21		06:53		05:32			04:34		06:01 (38)	04:38		06:08 (38)	05:35		06:44		07:51		08:03		09:09
	16:00		17:09		18:17		20:28		21:37			22:38	36	06:37 (38)	22:45	36	06:44 (38)	21:49		20:25		18:59		16:37		15:47
7	09:24		08:32		07:19		06:50		05:29			04:33		06:01 (38)	04:39		06:08 (38)	05:38		06:47		07:53		08:06		09:10
	16:02		17:11		18:19		20:31		21:40			22:39	36	06:37 (38)	22:44	36	06:44 (38)	21:47		20:23		18:56		16:35		15:46
8	09:24		08:30		07:16		06:47		05:27			04:32		06:01 (38)	04:40		06:08 (38)	05:40		06:49		07:55		08:08		09:12
	16:04		17:14		18:21		20:33		21:42			22:40	36	06:37 (38)	22:43	36	06:44 (38)	21:44		20:20		18:53		16:32		15:45
9	09:23		08:27		07:13		06:44		05:24			04:31		06:02 (38)	04:42		06:08 (38)	05:42		06:51		07:57		08:11		09:13
	16:06		17:16		18:24		20:35		21:44			22:41	36	06:38 (38)	22:42	36	06:44 (38)	21:42		20:17		18:50		16:30		15:44
10	09:22		08:25		07:10		06:41		05:22			04:31		06:01 (38)	04:43		06:08 (38)	05:44		06:53		08:00		08:13		09:15
	16:07		17:19		18:26		20:37		21:46			22:43	37	06:38 (38)	22:40	35	06:43 (38)	21:39		20:14		18:48		16:28		15:44
11	09:21		08:23		07:07		06:38		05:20			04:30		06:02 (38)	04:45		06:09 (38)	05:46		06:55		08:02		08:15		09:16
	16:09		17:21		18:28		20:40		21:49			22:44	37	06:39 (38)	22:39	35	06:44 (38)	21:37		20:11		18:45		16:26		15:43
12	09:20		08:20		07:04		06:36		05:17			04:29		06:02 (38)	04:46		06:09 (38)	05:49		06:58		08:04		08:18		09:17
	16:11		17:23		18:31		20:42		21:51			22:45	36	06:38 (38)	22:38	35	06:44 (38)	21:34		20:08		18:42		16:24		15:43
13	09:18		08:18		07:02		06:33		05:15			04:29		06:02 (38)	04:48		06:09 (38)	05:51		07:00		08:07		08:20		09:19
	16:13		17:26		18:33		20:44		21:53			22:46	37	06:39 (38)	22:36	34	06:43 (38)	21:31		20:05		18:39		16:22		15:43
14	09:17		08:15		06:59		06:30		05:13			04:28		06:03 (38)	04:49		06:10 (38)	05:53		07:02		08:09		08:22		09:20
	16:15		17:28		18:35		20:47		21:55			22:46	36	06:39 (38)	22:35	33	06:43 (38)	21:29		20:02		18:36		16:19		15:43
15	09:16		08:13		06:56		06:27		05:11			04:28		06:02 (38)	04:51		06:10 (38)	05:55		07:04		08:11		08:25		09:21
	16:17		17:31		18:38		20:49		21:57			22:47	37	06:39 (38)	22:34	33	06:43 (38)	21:26		19:59		18:34		16:17		15:42
16	09:14		08:10		06:53		06:24		05:09			04:28		06:02 (38)	04:53		06:11 (38)	05:58		07:06		08:14		08:27		09:22
	16:19		17:33		18:40		20:51		22:00			22:48	37	06:39 (38)	22:32	32	06:43 (38)	21:24		19:57		18:31		16:15		15:42
17	09:13		08:07		06:50		06:22		05:06		06:12 (38)	04:27		06:03 (38)	04:54		06:11 (38)	06:00		07:09		08:16		08:29		09:23
	16:21		17:36		18:42		20:54		22:02	10	06:22 (38)	22:48	37	06:40 (38)	22:30	31	06:42 (38)	21:21		19:54		18:28		16:14		15:42
18	09:12		08:05		06:47		06:19		05:04		06:11 (38)	04:27		06:03 (38)	04:56		06:12 (38)	06:02		07:11		08:18		08:32		09:24
	16:24		17:38		18:45		20:56		22:04	14	06:25 (38)	22:49	37	06:40 (38)	22:29	30	06:42 (38)	21:18		19:51		18:25		16:12		15:42
19	09:10		08:02		06:44		06:16		05:02		06:09 (38)	04:27		06:03 (38)	04:58		06:13 (38)	06:04		07:13		08:20		08:34		09:25
	16:26		17:41		18:47		20:58		22:06	18	06:27 (38)	22:49	37	06:40 (38)	22:27	29	06:42 (38)	21:16		19:48		18:23		16:10		15:43
20	09:08		08:00		06:42		06:13		05:00		06:08 (38)	04:27		06:03 (38)	05:00		06:13 (38)	06:07		07:15		08:23		08:36		09:25
	16:28		17:43		18:49		21:00		22:08	20	06:28 (38)	22:50	37	06:40 (38)	22:25	28	06:41 (38)	21:13		19:45		18:20		16:08		15:43
21	09:07		07:57		06:39		06:11		04:58		06:06 (38)	04:27		06:03 (38)	05:02		06:14 (38)	06:09		07:17		08:25		08:39		09:26
	16:30		17:46		18:52		21:03		22:10	23	06:29 (38)	22:50	37	06:40 (38)	22:23	27	06:41 (38)	21:10		19:42		18:17		16:06		15:43
22	09:05		07:54		06:36		06:08		04:56		06:05 (38)	04:27		06:04 (38)	05:04		06:16 (38)	06:11		07:20		08:28		08:41		09:27
	16:32		17:48		18:54		21:05		22:12	25	06:30 (38)	22:50	37	06:41 (38)	22:22	24	06:40 (38)	21:08		19:39		18:15		16:04		15:44
23	09:03		07:52		06:33		06:05		04:55		06:03 (38)	04:28		06:04 (38)	05:06		06:17 (38)	06:13		07:22		08:30		08:43		09:27
	16:35		17:50		18:56		21:07		22:14	28	06:31 (38)	22:50	37	06:41 (38)	22:20	21	06:38 (38)	21:05		19:36		18:12		16:03		15:44
24	09:02		07:49		06:30		06:02		04:53		06:03 (38)	04:28		06:04 (38)	05:08		06:18 (38)	06:15		07:24		08:32		08:45		09:28
	16:37		17:53		18:58		21:10		22:16	29	06:32 (38)	22:50	37	06:41 (38)	22:18	19	06:37 (38)	21:02		19:33		18:09		16:01		15:45
25	09:00		07:46		06:27		06:00		04:51		06:02 (38)	04:28		06:05 (38)	05:10		06:20 (38)	06:18		07:26		07:35		08:47		09:28
	16:39		17:55		19:01		21:12		22:18	30	06:32 (38)	22:50	37	06:42 (38)	22:16	16	06:36 (38)	20:59		19:30		17:07		16:00		15:46
26	08:58		07:44		06:24		05:57		04:49		06:02 (38)	04:29		06:05 (38)	05:12		06:22 (38)	06:20		07:28		07:37		08:49		09:28
	16:42		17:58		19:03		21:14		22:20	31	06:33 (38)	22:50	36	06:41 (38)	22:14	12	06:34 (38)	20:57		19:28		17:04		15:58		15:46
27	08:56		07:41		06:21		05:54		04:48		06:01 (38)	04:29		06:05 (38)	05:14		06:25 (38)	06:22		07:31		07:39		08:52		09:28
	16:44		18:00		19:05		21:17		22:22	32	06:33 (38)	22:50	37	06:42 (38)	22:12	6	06:31 (38)	20:54		19:25		17:02		15:57		15:47
28	08:54		07:38		06:18		05:52		04:46		06:01 (38)	04:30		06:05 (38)	05:16			06:24		07:33		07:42		08:54		09:28
	16:47		18:02		19:08		21:19		22:24	33	06:34 (38)	22:50	37	06:42 (38)	22:10			20:51		19:22		16:59		15:55		15:48
29	08:52				07:16		05:49		04:44		06:01 (38)	04:31		06:05 (38)	05:18			06:27		07:35		07:44		08:56		09:28
	16:49				20:10		21:21		22:25	34	06:35 (38)	22:49	37	06:42 (38)	22:07			20:48		19:19		16:56		15:54		15:49
30	08:50				07:13		05:47		04:43		06:01 (38)	04:32		06:06 (38)	05:20			06:29		07:37		07:47		08:58		09:28
	16:51				20:12		21:24		22:27	34	06:35 (38)	22:49	37	06:43 (38)	22:05			20:45		19:16		16:54		15:53		15:50
31	08:48				07:10				04:41		06:01 (38)				05:22			06:31				07:49				09:28
	16:54				20:14				22:29	34	06:35 (38)				22:03			20:43				16:51				15:51
Potential sun hours	221		260		365		432		521			547			545			478		386		319		236		200
Total, worst case										395			1094			808										

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		06:18 (38)	04:32	06:18 (38)	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:46 (38)	22:48	33	06:51 (38)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (38)	04:33		06:19 (38)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	28	06:46 (38)	22:48	33	06:52 (38)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:17 (38)	04:34		06:18 (38)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:46 (38)	22:47	33	06:51 (38)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:16 (38)	04:35		06:18 (38)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:46 (38)	22:46	33	06:51 (38)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:16 (38)	04:37		06:19 (38)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:47 (38)	22:46	33	06:52 (38)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:15 (38)	04:38		06:21 (38)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:47 (38)	22:45	32	06:53 (38)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:14 (38)	04:39		06:22 (38)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:46 (38)	22:44	31	06:53 (38)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:13 (38)	04:40		06:23 (38)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	33	06:46 (38)	22:43	30	06:53 (38)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:14 (38)	04:42		06:24 (38)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	33	06:47 (38)	22:42	29	06:53 (38)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:13 (38)	04:43		06:25 (38)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:46 (38)	22:40	28	06:53 (38)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:14 (38)	04:45		06:26 (38)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:47 (38)	22:39	28	06:54 (38)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (38)	04:46		06:27 (38)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	32	06:46 (38)	22:38	27	06:54 (38)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:14 (38)	04:48		06:28 (38)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	33	06:47 (38)	22:36	26	06:54 (38)	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:15 (38)	04:49		06:30 (38)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	32	06:47 (38)	22:35	24	06:54 (38)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:15 (38)	04:51		06:31 (38)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	32	06:47 (38)	22:34	23	06:54 (38)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:39 (38)	04:28	06:15 (38)	04:53		06:33 (38)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	2	06:41 (38)	22:48	32	06:47 (38)	22:32	22	06:55 (38)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:37 (38)	04:27	06:15 (38)	04:54		06:33 (38)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	4	06:41 (38)	22:48	32	06:47 (38)	22:30	21	06:54 (38)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04		06:36 (38)	04:27	06:16 (38)	04:56		06:35 (38)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	7	06:43 (38)	22:49	31	06:47 (38)	22:29	20	06:55 (38)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:35 (38)	04:27	06:16 (38)	04:58		06:37 (38)	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	8	06:43 (38)	22:49	31	06:47 (38)	22:27	18	06:55 (38)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:33 (38)	04:27	06:16 (38)	05:00		06:38 (38)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	10	06:43 (38)	22:50	31	06:47 (38)	22:25	16	06:54 (38)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:31 (38)	04:27	06:16 (38)	05:02		06:39 (38)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	12	06:43 (38)	22:50	31	06:47 (38)	22:23	15	06:54 (38)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:30 (38)	04:27	06:17 (38)	05:04		06:41 (38)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	14	06:44 (38)	22:50	31	06:48 (38)	22:22	13	06:54 (38)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:29 (38)	04:28	06:17 (38)	05:06		06:42 (38)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	15	06:44 (38)	22:50	31	06:48 (38)	22:20	11	06:53 (38)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:28 (38)	04:28	06:17 (38)	05:08		06:44 (38)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	17	06:45 (38)	22:50	31	06:48 (38)	22:18	9	06:53 (38)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:26 (38)	04:28	06:18 (38)	05:10		06:45 (38)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	19	06:45 (38)	22:50	31	06:49 (38)	22:16	8	06:53 (38)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:25 (38)	04:29	06:17 (38)	05:12		06:47 (38)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	20	06:45 (38)	22:50	32	06:49 (38)	22:14	6	06:53 (38)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:23 (38)	04:29	06:18 (38)	05:14		06:49 (38)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22	06:45 (38)	22:50	32	06:50 (38)	22:12	3	06:52 (38)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:23 (38)	04:30	06:17 (38)	05:16		06:51 (38)	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	22	06:45 (38)	22:50	32	06:49 (38)	22:10	1	06:52 (38)	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:22 (38)	04:31	06:18 (38)	05:18			06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	24	06:46 (38)	22:49	32	06:50 (38)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:21 (38)	04:32	06:18 (38)	05:20			06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	25	06:46 (38)	22:49	33	06:51 (38)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:19 (38)				05:22		06:31		07:49		09:28
	16:54		20:14		22:29	26	06:45 (38)				22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521			547			545		478	386	319	236	200
Total, worst case						247			944			606					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May		June		July		August		September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		07:08 (38)	04:40	06:45 (38)	04:32	06:56 (38)	05:24	06:57 (38)	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	1	07:09 (38)	22:30	32	07:17 (38)	22:48	23	07:19 (38)	22:01	33	07:30 (38)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		07:06 (38)	04:39	06:46 (38)	04:33	06:56 (38)	05:27	06:59 (38)	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	6	07:12 (38)	22:32	31	07:17 (38)	22:48	24	07:20 (38)	21:58	31	07:30 (38)	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		07:04 (38)	04:38	06:46 (38)	04:34	06:55 (38)	05:29	07:01 (38)	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31	9	07:13 (38)	22:33	31	07:17 (38)	22:47	25	07:20 (38)	21:56	28	07:29 (38)	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		07:02 (38)	04:36	06:47 (38)	04:35	06:55 (38)	05:31	07:03 (38)	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	13	07:15 (38)	22:35	29	07:16 (38)	22:46	25	07:20 (38)	21:54	26	07:29 (38)	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		07:00 (38)	04:35	06:48 (38)	04:37	06:54 (38)	05:33	07:05 (38)	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	16	07:16 (38)	22:36	29	07:17 (38)	22:46	27	07:21 (38)	21:51	23	07:28 (38)	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		06:58 (38)	04:34	06:49 (38)	04:38	06:55 (38)	05:35	07:06 (38)	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37	19	07:17 (38)	22:38	27	07:16 (38)	22:45	28	07:23 (38)	21:49	21	07:27 (38)	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		06:55 (38)	04:33	06:49 (38)	04:39	06:55 (38)	05:38	07:08 (38)	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22	07:17 (38)	22:39	27	07:16 (38)	22:44	28	07:23 (38)	21:47	18	07:26 (38)	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		06:54 (38)	04:32	06:49 (38)	04:40	06:54 (38)	05:40	07:10 (38)	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	24	07:18 (38)	22:40	26	07:15 (38)	22:43	30	07:24 (38)	21:44	15	07:25 (38)	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		06:52 (38)	04:31	06:50 (38)	04:42	06:54 (38)	05:42	07:12 (38)	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	27	07:19 (38)	22:42	26	07:16 (38)	22:42	30	07:24 (38)	21:42	12	07:24 (38)	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		06:50 (38)	04:31	06:51 (38)	04:43	06:53 (38)	05:44	07:13 (38)	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	29	07:19 (38)	22:43	24	07:15 (38)	22:40	31	07:24 (38)	21:39	9	07:22 (38)	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		06:48 (38)	04:30	06:52 (38)	04:45	06:54 (38)	05:46	07:15 (38)	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	32	07:20 (38)	22:44	23	07:15 (38)	22:39	32	07:26 (38)	21:37	5	07:20 (38)	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		06:46 (38)	04:29	06:52 (38)	04:46	06:53 (38)	05:49		06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	34	07:20 (38)	22:45	22	07:14 (38)	22:38	33	07:26 (38)	21:34			20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		06:45 (38)	04:29	06:53 (38)	04:48	06:53 (38)	05:51		07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	35	07:20 (38)	22:46	21	07:14 (38)	22:36	33	07:26 (38)	21:32			20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		06:43 (38)	04:28	06:53 (38)	04:49	06:53 (38)	05:53		07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	37	07:20 (38)	22:46	22	07:15 (38)	22:35	34	07:27 (38)	21:29			20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		06:41 (38)	04:28	06:53 (38)	04:51	06:52 (38)	05:55		07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	39	07:20 (38)	22:47	21	07:14 (38)	22:34	35	07:27 (38)	21:26			19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:41 (38)	04:28	06:54 (38)	04:53	06:52 (38)	05:58		07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	39	07:20 (38)	22:48	20	07:14 (38)	22:32	36	07:28 (38)	21:24			19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:40 (38)	04:27	06:54 (38)	04:54	06:52 (38)	06:00		07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	40	07:20 (38)	22:48	20	07:14 (38)	22:30	36	07:28 (38)	21:21			19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04		06:41 (38)	04:27	06:55 (38)	04:56	06:52 (38)	06:02		07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	40	07:21 (38)	22:49	19	07:14 (38)	22:29	37	07:29 (38)	21:18			19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:41 (38)	04:27	06:55 (38)	04:58	06:52 (38)	06:04		07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	40	07:21 (38)	22:49	19	07:14 (38)	22:27	38	07:30 (38)	21:16			19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:41 (38)	04:27	06:55 (38)	05:00	06:51 (38)	06:07		07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	39	07:20 (38)	22:50	19	07:14 (38)	22:25	38	07:29 (38)	21:13			19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:41 (38)	04:27	06:55 (38)	05:02	06:51 (38)	06:09		07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	39	07:20 (38)	22:50	19	07:14 (38)	22:23	39	07:30 (38)	21:10			19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:41 (38)	04:27	06:56 (38)	05:04	06:52 (38)	06:11		07:19	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	39	07:20 (38)	22:50	19	07:15 (38)	22:22	39	07:31 (38)	21:08			19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:41 (38)	04:28	06:56 (38)	05:06	06:51 (38)	06:13		07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	39	07:20 (38)	22:50	19	07:15 (38)	22:20	39	07:30 (38)	21:05			19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:42 (38)	04:28	06:56 (38)	05:08	06:51 (38)	06:15		07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	38	07:20 (38)	22:50	19	07:15 (38)	22:18	40	07:31 (38)	21:02			19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:42 (38)	04:28	06:57 (38)	05:10	06:51 (38)	06:18		07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	37	07:19 (38)	22:50	19	07:16 (38)	22:16	40	07:31 (38)	20:59			19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:43 (38)	04:29	06:56 (38)	05:12	06:51 (38)	06:20		07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	37	07:20 (38)	22:50	20	07:16 (38)	22:14	40	07:31 (38)	20:57			19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:43 (38)	04:29	06:56 (38)	05:14	06:52 (38)	06:22		07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	36	07:19 (38)	22:50	21	07:17 (38)	22:12	39	07:31 (38)	20:54			19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:43 (38)	04:30	06:56 (38)	05:16	06:52 (38)	06:24		07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	36	07:19 (38)	22:50	21	07:17 (38)	22:10	39	07:31 (38)	20:51			19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:44 (38)	04:31	06:56 (38)	05:18	06:52 (38)	06:27		07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	35	07:19 (38)	22:49	21	07:17 (38)	22:07	38	07:30 (38)	20:48			19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:45 (38)	04:32	06:56 (38)	05:20	06:54 (38)	06:29		07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34	07:19 (38)	22:49	22	07:18 (38)	22:05	36	07:30 (38)	20:45			19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:44 (38)				05:22		06:55 (38)	06:31				07:49		09:28
	16:54		20:14		22:29	34	07:18 (38)				22:03	35	07:30 (38)	20:43				16:51		15:51
Potential sun hours	221	260	365	432	521			547		545		478		386	319	236	200
Total, worst case						945			688		1047		221				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	04:32	05:24	06:33			07:40			07:52		08:47 (2)	09:00
	22:49	22:01	20:40			19:13			16:49	9	08:56 (2)	15:51
2	04:33	05:26	06:35			07:42		09:06 (22)	07:54			09:02
	22:48	21:59	20:37			19:10	6	09:12 (22)	16:46			15:50
3	04:34	05:29	06:38			07:44		09:02 (22)	07:56			09:04
	22:47	21:56	20:34			19:07	13	09:15 (22)	16:44			15:49
4	04:35	05:31	06:40			07:46		09:00 (22)	07:59			09:05
	22:47	21:54	20:31			19:05	17	09:17 (22)	16:42			15:48
5	04:36	05:33	06:42			07:48		08:58 (22)	08:01			09:07
	22:46	21:52	20:28			19:02	20	09:18 (22)	16:39			15:47
6	04:38	05:35	06:44			07:51		08:57 (22)	08:04			09:09
	22:45	21:49	20:26			18:59	22	09:19 (22)	16:37			15:46
7	04:39	05:37	06:47			07:53		08:57 (22)	08:06			09:10
	22:44	21:47	20:23			18:56	23	09:20 (22)	16:35			15:46
8	04:40	05:40	06:49			07:55		08:55 (22)	08:08			09:12
	22:43	21:44	20:20			18:53	24	09:19 (22)	16:32			15:45
9	04:41	05:42	06:51			07:58		08:55 (22)	08:11			09:14
	22:42	21:42	20:17			18:50	24	09:19 (22)	16:30			15:44
10	04:43	05:44	06:53			08:00		08:55 (22)	08:13			09:15
	22:41	21:39	20:14			18:48	24	09:19 (22)	16:28			15:44
11	04:44	05:46	06:55			08:02		08:54 (22)	08:16			09:16
	22:39	21:37	20:11			18:45	25	09:19 (22)	16:26			15:43
12	04:46	05:49	06:58			08:04		08:55 (22)	08:18			09:18
	22:38	21:34	20:08			18:42	23	09:18 (22)	16:24			15:43
13	04:48	05:51	07:00			08:07		08:55 (22)	08:20			09:19
	22:37	21:32	20:05			18:39	22	09:17 (22)	16:21			15:43
14	04:49	05:53	07:02			08:09		08:55 (22)	08:23			09:20
	22:35	21:29	20:02			18:36	21	09:16 (22)	16:19			15:42
15	04:51	05:55	07:04			08:11		08:57 (22)	08:25			09:21
	22:34	21:26	20:00			18:34	18	09:15 (22)	16:17			15:42
16	04:53	05:58	07:06			08:14		08:58 (22)	08:27			09:22
	22:32	21:24	19:57			18:31	15	09:13 (22)	16:15			15:42
17	04:54	06:00	07:09			08:16		09:01 (22)	08:30			09:23
	22:31	21:21	19:54			18:28	10	09:11 (22)	16:13			15:42
18	04:56	06:02	07:11		08:19 (24)	08:18			08:32			09:24
	22:29	21:19	19:51	9	08:28 (24)	18:25			16:11			15:42
19	04:58	06:04	07:13		08:16 (24)	08:21			08:34			09:25
	22:27	21:16	19:48	13	08:29 (24)	18:23			16:10			15:43
20	05:00	06:06	07:15		08:14 (24)	08:23		09:48 (2)	08:37			09:26
	22:25	21:13	19:45	16	08:30 (24)	18:20	9	09:57 (2)	16:08			15:43
21	05:02	06:09	07:17		08:14 (24)	08:25		09:46 (2)	08:39			09:26
	22:24	21:10	19:42	17	08:31 (24)	18:17	13	09:59 (2)	16:06			15:43
22	05:04	06:11	07:20		08:13 (24)	08:28		09:44 (2)	08:41			09:27
	22:22	21:08	19:39	18	08:31 (24)	18:15	16	10:00 (2)	16:04			15:44
23	05:06	06:13	07:22		08:12 (24)	08:30		09:44 (2)	08:43			09:27
	22:20	21:05	19:36	19	08:31 (24)	18:12	17	10:01 (2)	16:03			15:44
24	05:08	06:15	07:24		08:12 (24)	08:32		09:42 (2)	08:45			09:28
	22:18	21:02	19:33	19	08:31 (24)	18:09	19	10:01 (2)	16:01			15:45
25	05:10	06:18	07:26		08:11 (24)	07:35		08:42 (2)	08:48			09:28
	22:16	20:59	19:31	19	08:30 (24)	17:07	19	09:01 (2)	15:59			15:45
26	05:12	06:20	07:28		08:12 (24)	07:37		08:43 (2)	08:50			09:28
	22:14	20:57	19:28	17	08:29 (24)	17:04	19	09:02 (2)	15:58			15:46
27	05:14	06:22	07:31		08:13 (24)	07:40		08:42 (2)	08:52			09:28
	22:12	20:54	19:25	15	08:28 (24)	17:02	19	09:01 (2)	15:57			15:47
28	05:16	06:24	07:33		08:14 (24)	07:42		08:43 (2)	08:54			09:29
	22:10	20:51	19:22	12	08:26 (24)	16:59	18	09:01 (2)	15:55			15:48
29	05:18	06:27	07:35		08:15 (24)	07:44		08:44 (2)	08:56			09:29
	22:08	20:48	19:19	8	08:23 (24)	16:56	17	09:01 (2)	15:54			15:49
30	05:20	06:29	07:37			07:47		08:44 (2)	08:58			09:28
	22:05	20:45	19:16			16:54	15	08:59 (2)	15:53			15:50
31	05:22	06:31				07:49		08:45 (2)				09:28
	22:03	20:43				16:51	13	08:58 (2)				15:51
Potential sun hours	545	478	386			319			236			200
Total, worst case				182			501			9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June	July	August	September			October			November	December
1	09:28	08:46			07:35		08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33			07:40			07:52	09:00
	15:53	16:56			18:05	23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40			19:13			16:49	15:51
2	09:28	08:44			07:33		08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35			07:42			07:54	09:02
	15:54	16:59			18:07	24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37			19:10			16:46	15:50
3	09:27	08:41			07:30		08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38			07:44			07:56	09:04
	15:56	17:01			18:10	24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34			19:07			16:44	15:49
4	09:27	08:39			07:27		08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40			07:46		09:05 (22)	07:59	09:05
	15:57	17:04			18:12	23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31			19:05	11	09:16 (22)	16:42	15:48
5	09:26	08:37			07:24		08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42			07:48		09:02 (22)	08:01	09:07
	15:59	17:06			18:14	22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28			19:02	16	09:18 (22)	16:39	15:47
6	09:25	08:35			07:22		08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44			07:51		09:00 (22)	08:04	09:09
	16:00	17:09			18:17	22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26			18:59	19	09:19 (22)	16:37	15:46
7	09:25	08:32			07:19		08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47			07:53		09:00 (22)	08:06	09:10
	16:02	17:11			18:19	19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23			18:56	20	09:20 (22)	16:35	15:46
8	09:24	08:30			07:16		08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49			07:55		08:58 (22)	08:08	09:12
	16:04	17:13			18:21	18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20			18:53	23	09:21 (22)	16:32	15:45
9	09:23	08:28			07:13		08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51			07:58		08:57 (22)	08:11	09:14
	16:05	17:16			18:24	13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17			18:50	23	09:20 (22)	16:30	15:44
10	09:22	08:25			07:10		08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53			08:00		08:57 (22)	08:13	09:15
	16:07	17:18			18:26	7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14			18:48	24	09:21 (22)	16:28	15:44
11	09:21	08:23			07:07			06:38	05:20	04:30	04:44	05:46	06:55			08:02		08:57 (22)	08:16	09:16
	16:09	17:21			18:28			20:40	21:49	22:44	22:39	21:37	20:11			18:45	23	09:20 (22)	16:26	15:43
12	09:20	08:20			07:05			06:36	05:17	04:29	04:46	05:49	06:58			08:04		08:57 (22)	08:18	09:18
	16:11	17:23			18:31			20:42	21:51	22:45	22:38	21:34	20:08			18:42	24	09:21 (22)	16:24	15:43
13	09:19	08:18			07:02		07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00			08:07		08:57 (22)	08:20	09:19
	16:13	17:26			18:33	5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05			18:39	23	09:20 (22)	16:21	15:43
14	09:17	08:15			06:59		07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02			08:09		08:57 (22)	08:23	09:20
	16:15	17:28			18:35	11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02			18:36	21	09:18 (22)	16:19	15:42
15	09:16	08:13			06:56		07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04			08:11		08:58 (22)	08:25	09:21
	16:17	17:31			18:38	15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00			18:34	20	09:18 (22)	16:17	15:42
16	09:15	08:10			06:53		07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06			08:14		08:58 (22)	08:27	09:22
	16:19	17:33			18:40	16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57			18:31	18	09:16 (22)	16:15	15:42
17	09:13	08:08			06:50		07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09			08:16		09:00 (22)	08:30	09:23
	16:21	17:36			18:42	18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54			18:28	15	09:15 (22)	16:13	15:42
18	09:12	08:05			06:47		07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11			08:18		09:02 (22)	08:32	09:24
	16:23	17:38			18:45	19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51			18:25	10	09:12 (22)	16:11	15:42
19	09:10	08:02			06:44		07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13		08:22 (24)	08:21			08:34	09:25
	16:26	17:41			18:47	18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48	7	08:29 (24)	18:23			16:10	15:43
20	09:09	08:00			06:42		07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15		08:19 (24)	08:23			08:37	09:26
	16:28	17:43			18:49	19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45	12	08:31 (24)	18:20			16:08	15:43
21	09:07	07:57			06:39		07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17		08:18 (24)	08:25			08:39	09:26
	16:30	17:46			18:52	17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42	15	08:33 (24)	18:17			16:06	15:43
22	09:05	07:54			06:36		07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20		08:16 (24)	08:28			08:41	09:27
	16:32	17:48			18:54	15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39	17	08:33 (24)	18:15			16:04	15:44
23	09:04	07:52			06:33		07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22		08:15 (24)	08:30			08:43	09:27
	16:35	17:50			18:56	13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36	18	08:33 (24)	18:12			16:03	15:44
24	09:02	07:49		08:30 (22)	06:30		07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24		08:14 (24)	08:32			08:45	09:28
	16:37	17:53	12	08:42 (22)	18:59	8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33	19	08:33 (24)	18:09			16:01	15:45
25	09:00	07:46		08:28 (22)	06:27			06:00	04:51	04:28	05:10	06:18	07:26		08:14 (24)	07:35			08:48	09:28
	16:39	17:55	15	08:43 (22)	19:01			21:12	22:18	22:51	22:16	20:59	19:31	18	08:32 (24)	17:07			15:59	15:45
26	08:58	07:44		08:26 (22)	06:24			05:57	04:49	04:29	05:12	06:20	07:28		08:14 (24)	07:37			08:50	09:28
	16:42	17:58	19	08:45 (22)	19:03			21:14	22:20	22:50	22:14	20:57	19:28	19	08:33 (24)	17:04			15:58	15:46
27	08:56	07:41		08:25 (22)	06:21			05:54	04:47	04:29	05:14	06:22	07:31		08:14 (24)	07:40			08:52	09:28
	16:44	18:00	20	08:45 (22)	19:05			21:17	22:22	22:50	22:12	20:54	19:25	18	08:32 (24)	17:02			15:57	15:47
28	08:54	07:38		08:25 (22)	06:18			05:52	04:46	04:30	05:16	06:24	07:33		08:15 (24)	07:42			08:54	09:29
	16:46	18:02	22	08:47 (22)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	15	08:30 (24)	16:59			15:55	15:48
29	08:52				07:16			05:49	04:44	04:31	05:18	06:27	07:35		08:15 (24)	07:44			08:56	09:29
	16:49				20:10			21:21	22:26	22:50	22:08	20:48	19:19	13	08:28 (24)	16:56			15:54	15:49
30	08:50				07:13			05:47	04:43	04:31	05:20	06:29	07:37		08:18 (24)	07:47			08:58	09:28
	16:51				20:12			21:24	22:27	22:49	22:05	20:45	19:16	8	08:26 (24)	16:54			15:53	15:50
31	08:48				07:10				04:41		05:22	06:31				07:49				09:28
	16:54				20:15				22:29		22:03	20:43				16:51				15:51
Potential sun hours	221	260			365			432	521	547	545	478	386			319			236	200
Total, worst case			88			369								179			290			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
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	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
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	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
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	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
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21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
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25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
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29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
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	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
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	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
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11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
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20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
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23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
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	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
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27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
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12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February			March			April		May		June		July		August		September		October			November			December
1	09:28		08:46		09:41 (22)	07:35		08:28 (24)	07:07		05:44		04:40		04:32		05:24		06:33		07:39			07:52		09:00 (22)	09:00
	15:53		16:56	3	09:44 (22)	18:05	19	08:47 (24)	20:17		21:26		22:31		22:49		22:01		20:40		19:13			16:49	24	09:24 (22)	15:51
2	09:28		08:44		09:37 (22)	07:33		08:27 (24)	07:04		05:41		04:39		04:33		05:26		06:35		07:42			07:54		09:01 (22)	09:02
	15:54		16:59	10	09:47 (22)	18:07	20	08:47 (24)	20:19		21:28		22:32		22:48		21:59		20:37		19:10			16:46	23	09:24 (22)	15:50
3	09:27		08:41		09:35 (22)	07:30		08:27 (24)	07:01		05:39		04:37		04:34		05:29		06:38		07:44			07:56		09:01 (22)	09:04
	15:56		17:01	15	09:50 (22)	18:10	20	08:47 (24)	20:21		21:31		22:34		22:47		21:56		20:34		19:07			16:44	23	09:24 (22)	15:49
4	09:27		08:39		09:34 (22)	07:27		08:27 (24)	06:58		05:36		04:36		04:35		05:31		06:40		07:46			07:59		09:02 (22)	09:05
	15:57		17:04	17	09:51 (22)	18:12	19	08:46 (24)	20:24		21:33		22:35		22:47		21:54		20:31		19:05			16:42	22	09:24 (22)	15:48
5	09:26		08:37		09:33 (22)	07:24		08:28 (24)	06:55		05:34		04:35		04:36		05:33		06:42		07:48		09:11 (24)	08:01		09:02 (22)	09:07
	15:59		17:06	20	09:53 (22)	18:14	17	08:45 (24)	20:26		21:35		22:37		22:46		21:52		20:28		19:02	3	09:14 (24)	16:39	21	09:23 (22)	15:47
6	09:25		08:35		09:32 (22)	07:22		08:28 (24)	06:53		05:31		04:34		04:37		05:35		06:44		07:51		09:06 (24)	08:04		09:03 (22)	09:09
	16:00		17:08	21	09:53 (22)	18:17	16	08:44 (24)	20:28		21:38		22:38		22:45		21:49		20:26		18:59	11	09:17 (24)	16:37	19	09:22 (22)	15:46
7	09:25		08:32		09:31 (22)	07:19		08:29 (24)	06:50		05:29		04:33		04:39		05:37		06:47		07:53		09:05 (24)	08:06		09:05 (22)	09:10
	16:02		17:11	22	09:53 (22)	18:19	13	08:42 (24)	20:31		21:40		22:39		22:44		21:47		20:23		18:56	15	09:20 (24)	16:35	17	09:22 (22)	15:46
8	09:24		08:30		09:32 (22)	07:16		08:31 (24)	06:47		05:27		04:32		04:40		05:40		06:49		07:55		09:03 (24)	08:08		09:05 (22)	09:12
	16:04		17:13	22	09:54 (22)	18:21	8	08:39 (24)	20:33		21:42		22:41		22:43		21:44		20:20		18:53	17	09:20 (24)	16:32	15	09:20 (22)	15:45
9	09:23		08:28		09:31 (22)	07:13			06:44		05:24		04:31		04:41		05:42		06:51		07:58		09:02 (24)	08:11		09:08 (22)	09:14
	16:05		17:16	23	09:54 (22)	18:24			20:35		21:44		22:42		22:42		21:42		20:17		18:50	18	09:20 (24)	16:30	10	09:18 (22)	15:44
10	09:22		08:25		09:32 (22)	07:10			06:41		05:22		04:30		04:43		05:44		06:53		08:00		09:02 (24)	08:13		09:13 (22)	09:15
	16:07		17:18	23	09:55 (22)	18:26			20:38		21:47		22:43		22:41		21:39		20:14		18:48	19	09:21 (24)	16:28	1	09:14 (22)	15:44
11	09:21		08:23		09:31 (22)	07:07			06:38		05:20		04:30		04:44		05:46		06:55		08:02		09:01 (24)	08:16			09:16
	16:09		17:21	24	09:55 (22)	18:28			20:40		21:49		22:44		22:39		21:37		20:11		18:45	20	09:21 (24)	16:26			15:43
12	09:20		08:20		09:31 (22)	07:05			06:36		05:17		04:29		04:46		05:49		06:58		08:04		09:01 (24)	08:18			09:18
	16:11		17:23	23	09:54 (22)	18:31			20:42		21:51		22:45		22:38		21:34		20:08		18:42	20	09:21 (24)	16:24			15:43
13	09:19		08:18		09:31 (22)	07:02			06:33		05:15		04:28		04:47		05:51		07:00		08:07		09:01 (24)	08:20			09:19
	16:13		17:26	23	09:54 (22)	18:33			20:44		21:53		22:46		22:37		21:32		20:05		18:39	19	09:20 (24)	16:21			15:43
14	09:17		08:15		09:33 (22)	06:59			06:30		05:13		04:28		04:49		05:53		07:02		08:09		09:01 (24)	08:23			09:20
	16:15		17:28	21	09:54 (22)	18:35			20:47		21:55		22:47		22:35		21:29		20:02		18:36	18	09:19 (24)	16:19			15:42
15	09:16		08:13		09:33 (22)	06:56			06:27		05:11		04:28		04:51		05:55		07:04		08:11		09:02 (24)	08:25			09:21
	16:17		17:31	20	09:53 (22)	18:38			20:49		21:58		22:47		22:34		21:26		20:00		18:34	16	09:18 (24)	16:17			15:42
16	09:15		08:10		09:34 (22)	06:53			06:24		05:08		04:27		04:53		05:57		07:06		08:14		09:03 (24)	08:27			09:22
	16:19		17:33	17	09:51 (22)	18:40			20:51		22:00		22:48		22:32		21:24		19:57		18:31	13	09:16 (24)	16:15			15:42
17	09:13		08:08		09:36 (22)	06:50			06:22		05:06		04:27		04:54		06:00		07:09		08:16		09:05 (24)	08:30			09:23
	16:21		17:36	14	09:50 (22)	18:42			20:54		22:02		22:49		22:31		21:21		19:54		18:28	10	09:15 (24)	16:13			15:42
18	09:12		08:05		09:39 (22)	06:47			06:19		05:04		04:27		04:56		06:02		07:11		08:18			08:32			09:24
	16:23		17:38	8	09:47 (22)	18:45			20:56		22:04		22:49		22:29		21:19		19:51		18:25			16:11			15:42
19	09:10		08:02			06:44			06:16		05:02		04:27		04:58		06:04		07:13		08:21			08:34			09:25
	16:26		17:41			18:47			20:58		22:06		22:50		22:27		21:16		19:48		18:23			16:10			15:42
20	09:09		08:00			06:42			06:13		05:00		04:27		05:00		06:06		07:15		08:23			08:37			09:26
	16:28		17:43			18:49			21:01		22:08		22:50		22:25		21:13		19:45		18:20			16:08			15:43
21	09:07		07:57			06:39			06:10		04:58		04:27		05:02		06:09		07:17		08:25			08:39			09:26
	16:30		17:45			18:52			21:03		22:10		22:50		22:24		21:10		19:42		18:17			16:06			15:43
22	09:05		07:54			06:36			06:08		04:56		04:27		05:04		06:11		07:20		08:28			08:41			09:27
	16:32		17:48			18:54			21:05		22:12		22:51		22:22		21:08		19:39		18:15			16:04			15:44
23	09:04		07:52			06:33			06:05		04:54		04:27		05:06		06:13		07:22		08:30			08:43			09:27
	16:35		17:50			18:56			21:08		22:14		22:51		22:20		21:05		19:36		18:12			16:03			15:44
24	09:02		07:49		08:36 (24)	06:30			06:02		04:53		04:28		05:08		06:15		07:24		08:32		10:07 (22)	08:45			09:28
	16:37		17:53	5	08:41 (24)	18:59			21:10		22:16		22:51		22:18		21:02		19:33		18:09	10	10:17 (22)	16:01			15:45
25	09:00		07:46		08:32 (24)	06:27			06:00		04:51		04:28		05:10		06:18		07:26		07:35		09:05 (22)	08:48			09:28
	16:39		17:55	12	08:44 (24)	19:01			21:12		22:18		22:51		22:16		20:59		19:30		17:07	15	09:20 (22)	15:59			15:45
26	08:58		07:44		08:30 (24)	06:24			05:57		04:49		04:29		05:12		06:20		07:28		07:37		09:04 (22)	08:50			09:28
	16:42		17:58	15	08:45 (24)	19:03			21:14		22:20		22:51		22:14		20:57		19:28		17:04	18	09:22 (22)	15:58			15:46
27	08:56		07:41		08:29 (24)	06:21			05:54		04:47		04:29		05:14		06:22		07:31		07:40		09:02 (22)	08:52			09:28
	16:44		18:00	17	08:46 (24)	19:05			21:17		22:22		22:50		22:12		20:54		19:25		17:02	20	09:22 (22)	15:56			15:47
28	08:54		07:38		08:29 (24)	06:18			05:52		04:46		04:30		05:16		06:24		07:33		07:42		09:02 (22)	08:54			09:29
	16:46		18:02	18	08:47 (24)	19:08			21:19		22:24		22:50		22:10		20:51		19:22		16:59	21	09:23 (22)	15:55			15:48
29	08:52					07:16			05:49		04:44		04:30		05:18		06:27		07:35		07:44		09:02 (22)	08:56			09:29
	16:49					20:10			21:21		22:26		22:50		22:08		20:48		19:19		16:56	22	09:24 (22)	15:54			15:49
30	08:50					07:13			05:47		04:43		04:31		05:20		06:29		07:37		07:47		09:01 (22)	08:58			09:28
	16:51					20:12			21:24		22:27		22:49		22:05		20:45		19:16		16:54	23	09:24 (22)	15:53			15:50
31	08:48					07:10					04:41				05:22		06:31				07:49		09:01 (22)				09:28
	16:54					20:15					22:29				22:03		20:43				16:51	23	09:24 (22)				15:51
Potential sun hours	221		260			365			432		521		547		546		478		386		319			236			199
Total, worst case				393			132															351			175		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		09:41 (22)	07:35		08:31 (24)	07:07	05:44	04:40
	15:53			16:56	14	09:55 (22)	18:05	20	08:51 (24)	20:17	21:26	22:31
2	09:28			08:44		09:40 (22)	07:33		08:31 (24)	07:04	05:41	04:39
	15:54			16:59	16	09:56 (22)	18:07	20	08:51 (24)	20:19	21:28	22:32
3	09:27			08:41		09:39 (22)	07:30		08:31 (24)	07:01	05:39	04:37
	15:56			17:01	19	09:58 (22)	18:10	19	08:50 (24)	20:21	21:31	22:34
4	09:27			08:39		09:38 (22)	07:27		08:31 (24)	06:58	05:36	04:36
	15:57			17:04	20	09:58 (22)	18:12	19	08:50 (24)	20:24	21:33	22:35
5	09:26			08:37		09:38 (22)	07:24		08:32 (24)	06:55	05:34	04:35
	15:59			17:06	22	10:00 (22)	18:14	16	08:48 (24)	20:26	21:35	22:37
6	09:25			08:35		09:37 (22)	07:22		08:33 (24)	06:53	05:31	04:34
	16:00			17:08	23	10:00 (22)	18:17	14	08:47 (24)	20:28	21:38	22:38
7	09:25			08:32		09:36 (22)	07:19		08:35 (24)	06:50	05:29	04:33
	16:02			17:11	24	10:00 (22)	18:19	9	08:44 (24)	20:31	21:40	22:39
8	09:24			08:30		09:37 (22)	07:16			06:47	05:27	04:32
	16:04			17:13	24	10:01 (22)	18:21			20:33	21:42	22:41
9	09:23			08:28		09:36 (22)	07:13			06:44	05:24	04:31
	16:05			17:16	24	10:00 (22)	18:24			20:35	21:44	22:42
10	09:22			08:25		09:37 (22)	07:10			06:41	05:22	04:30
	16:07			17:18	24	10:01 (22)	18:26			20:38	21:47	22:43
11	09:21			08:23		09:37 (22)	07:07			06:38	05:20	04:30
	16:09			17:21	23	10:00 (22)	18:28			20:40	21:49	22:44
12	09:20			08:20		09:37 (22)	07:05			06:36	05:17	04:29
	16:11			17:23	23	10:00 (22)	18:31			20:42	21:51	22:45
13	09:19			08:18		09:38 (22)	07:02			06:33	05:15	04:28
	16:13			17:26	21	09:59 (22)	18:33			20:44	21:53	22:46
14	09:17			08:15		09:39 (22)	06:59			06:30	05:13	04:28
	16:15			17:28	20	09:59 (22)	18:35			20:47	21:55	22:47
15	09:16			08:13		09:40 (22)	06:56			06:27	05:11	04:28
	16:17			17:31	17	09:57 (22)	18:38			20:49	21:58	22:47
16	09:15			08:10		09:42 (22)	06:53			06:24	05:08	04:27
	16:19			17:33	13	09:55 (22)	18:40			20:51	22:00	22:48
17	09:13			08:08		09:45 (22)	06:50			06:21	05:06	04:27
	16:21			17:36	8	09:53 (22)	18:42			20:54	22:02	22:49
18	09:12			08:05			06:47			06:19	05:04	04:27
	16:23			17:38			18:45			20:56	22:04	22:49
19	09:10			08:02			06:44			06:16	05:02	04:27
	16:26			17:41			18:47			20:58	22:06	22:50
20	09:09			08:00			06:42			06:13	05:00	04:27
	16:28			17:43			18:49			21:01	22:08	22:50
21	09:07			07:57			06:39			06:10	04:58	04:27
	16:30			17:45			18:52			21:03	22:10	22:50
22	09:05			07:54			06:36			06:08	04:56	04:27
	16:32			17:48			18:54			21:05	22:12	22:51
23	09:04			07:52		08:40 (24)	06:33			06:05	04:54	04:27
	16:35			17:50	5	08:45 (24)	18:56			21:08	22:14	22:51
24	09:02			07:49		08:36 (24)	06:30			06:02	04:53	04:28
	16:37			17:53	12	08:48 (24)	18:59			21:10	22:16	22:51
25	09:00			07:46		08:34 (24)	06:27			06:00	04:51	04:28
	16:39			17:55	15	08:49 (24)	19:01			21:12	22:18	22:51
26	08:58			07:44		08:33 (24)	06:24			05:57	04:49	04:29
	16:42			17:58	17	08:50 (24)	19:03			21:14	22:20	22:51
27	08:56			07:41		08:32 (24)	06:21			05:54	04:47	04:29
	16:44			18:00	18	08:50 (24)	19:05			21:17	22:22	22:50
28	08:54			07:38		08:32 (24)	06:18			05:52	04:46	04:30
	16:46			18:02	19	08:51 (24)	19:08			21:19	22:24	22:50
29	08:52						07:16			05:49	04:44	04:30
	16:49						20:10			21:21	22:26	22:50
30	08:50						07:13			05:47	04:43	04:31
	16:51						20:12			21:24	22:27	22:49
31	08:48		09:43 (22)				07:10				04:41	
	16:54	9	09:52 (22)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		9			421			117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51	09:06 (22)	09:00
	22:49	22:01	20:40	19:13		16:49	24 09:30 (22)	15:51
2	04:33	05:26	06:35	07:42		07:54	09:06 (22)	09:02
	22:48	21:59	20:37	19:10		16:46	24 09:30 (22)	15:50
3	04:34	05:29	06:38	07:44		07:56	09:06 (22)	09:04
	22:47	21:56	20:34	19:07		16:44	24 09:30 (22)	15:49
4	04:35	05:31	06:40	07:46		07:59	09:07 (22)	09:05
	22:47	21:54	20:31	19:05		16:42	23 09:30 (22)	15:48
5	04:36	05:33	06:42	07:48		08:01	09:07 (22)	09:07
	22:46	21:52	20:28	19:02		16:39	22 09:29 (22)	15:47
6	04:37	05:35	06:44	07:51	09:12 (24)	08:04	09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7 09:19 (24)	16:37	21 09:29 (22)	15:46
7	04:39	05:37	06:47	07:53	09:10 (24)	08:06	09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12 09:22 (24)	16:35	20 09:29 (22)	15:46
8	04:40	05:40	06:49	07:55	09:08 (24)	08:08	09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15 09:23 (24)	16:32	18 09:27 (22)	15:45
9	04:41	05:42	06:51	07:58	09:06 (24)	08:11	09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18 09:24 (24)	16:30	17 09:27 (22)	15:44
10	04:43	05:44	06:53	08:00	09:06 (24)	08:13	09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19 09:25 (24)	16:28	13 09:25 (22)	15:44
11	04:44	05:46	06:55	08:02	09:05 (24)	08:16	09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19 09:24 (24)	16:26	9 09:23 (22)	15:43
12	04:46	05:49	06:58	08:04	09:05 (24)	08:18		09:18
	22:38	21:34	20:08	18:42	20 09:25 (24)	16:24		15:43
13	04:47	05:51	07:00	08:07	09:04 (24)	08:20		09:19
	22:37	21:32	20:05	18:39	20 09:24 (24)	16:21		15:43
14	04:49	05:53	07:02	08:09	09:04 (24)	08:23		09:20
	22:35	21:29	20:02	18:36	19 09:23 (24)	16:19		15:42
15	04:51	05:55	07:04	08:11	09:05 (24)	08:25		09:21
	22:34	21:26	20:00	18:34	18 09:23 (24)	16:17		15:42
16	04:53	05:57	07:06	08:14	09:05 (24)	08:27		09:22
	22:32	21:24	19:57	18:31	16 09:21 (24)	16:15		15:42
17	04:54	06:00	07:09	08:16	09:07 (24)	08:30		09:23
	22:31	21:21	19:54	18:28	14 09:21 (24)	16:13		15:42
18	04:56	06:02	07:11	08:18	09:08 (24)	08:32		09:24
	22:29	21:19	19:51	18:25	10 09:18 (24)	16:11		15:42
19	04:58	06:04	07:13	08:21		08:34		09:25
	22:27	21:16	19:48	18:23		16:10		15:42
20	05:00	06:06	07:15	08:23		08:37		09:26
	22:25	21:13	19:45	18:20		16:08		15:43
21	05:02	06:09	07:17	08:25		08:39		09:26
	22:24	21:10	19:42	18:17		16:06		15:43
22	05:04	06:11	07:20	08:28		08:41		09:27
	22:22	21:08	19:39	18:15		16:04		15:44
23	05:06	06:13	07:22	08:30		08:43		09:27
	22:20	21:05	19:36	18:12		16:03		15:44
24	05:08	06:15	07:24	08:32		08:45		09:28
	22:18	21:02	19:33	18:09		16:01		15:45
25	05:10	06:18	07:26	07:35	09:13 (22)	08:48		09:28
	22:16	20:59	19:30	17:07	10 09:23 (22)	15:59		15:45
26	05:12	06:20	07:28	07:37	09:11 (22)	08:50		09:28
	22:14	20:57	19:28	17:04	15 09:26 (22)	15:58		15:46
27	05:14	06:22	07:31	07:40	09:09 (22)	08:52		09:28
	22:12	20:54	19:25	17:01	18 09:27 (22)	15:56		15:47
28	05:16	06:24	07:33	07:42	09:08 (22)	08:54		09:29
	22:10	20:51	19:22	16:59	20 09:28 (22)	15:55		15:48
29	05:18	06:27	07:35	07:44	09:08 (22)	08:56		09:29
	22:08	20:48	19:19	16:56	21 09:29 (22)	15:54		15:49
30	05:20	06:29	07:37	07:47	09:07 (22)	08:58		09:28
	22:05	20:45	19:16	16:54	22 09:29 (22)	15:53		15:50
31	05:22	06:31		07:49	09:07 (22)			09:28
	22:03	20:43		16:51	23 09:30 (22)			15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case				336		215		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February			March		April		May		June		July		August		September		October			November			December
1	09:28		08:46			07:35		07:07		05:44		04:40		04:32		05:24		06:33		07:40			07:52		08:41 (22)		09:00
	15:53		16:56			18:05		20:17		21:26		22:31		22:49		22:01		20:40		19:13			16:49	7	08:48 (22)		15:51
2	09:28		08:44			07:33		07:04		05:41		04:39		04:33		05:26		06:35		07:42			07:54				09:02
	15:54		16:59			18:07		20:19		21:28		22:32		22:48		21:59		20:37		19:10			16:46				15:50
3	09:27		08:41			07:30		07:01		05:39		04:37		04:34		05:29		06:38		07:44			07:56				09:04
	15:56		17:01			18:10		20:21		21:31		22:34		22:47		21:56		20:34		19:07			16:44				15:49
4	09:27		08:39			07:27		06:58		05:36		04:36		04:35		05:31		06:40		07:46			07:59				09:05
	15:57		17:04			18:12		20:24		21:33		22:35		22:47		21:54		20:31		19:05			16:42				15:48
5	09:26		08:37			07:24		06:55		05:34		04:35		04:36		05:33		06:42		07:48			08:01				09:07
	15:59		17:06			18:14		20:26		21:35		22:37		22:46		21:52		20:28		19:02			16:39				15:47
6	09:25		08:35			07:22		06:53		05:31		04:34		04:37		05:35		06:44		07:51			08:04				09:09
	16:00		17:09			18:17		20:28		21:38		22:38		22:45		21:49		20:26		18:59			16:37				15:46
7	09:25		08:32			07:19		06:50		05:29		04:33		04:39		05:37		06:47		07:53			08:06				09:10
	16:02		17:11			18:19		20:31		21:40		22:39		22:44		21:47		20:23		18:56			16:35				15:46
8	09:24		08:30			07:16		06:47		05:27		04:32		04:40		05:40		06:49		07:55			08:08				09:12
	16:04		17:13			18:21		20:33		21:42		22:41		22:43		21:44		20:20		18:53			16:32				15:45
9	09:23		08:28			07:13		06:44		05:24		04:31		04:41		05:42		06:51		07:58			08:11				09:14
	16:05		17:16			18:24		20:35		21:44		22:42		22:42		21:42		20:17		18:50			16:30				15:44
10	09:22		08:25		09:11 (22)	07:10		06:41		05:22		04:30		04:43		05:44		06:53		08:00			08:13				09:15
	16:07		17:18	8	09:19 (22)	18:26		20:38		21:47		22:43		22:41		21:39		20:14		18:48			16:28				15:44
11	09:21		08:23		09:09 (22)	07:07		06:38		05:20		04:30		04:44		05:46		06:55		08:02			08:16				09:16
	16:09		17:21	12	09:21 (22)	18:28		20:40		21:49		22:44		22:39		21:37		20:11		18:45			16:26				15:43
12	09:20		08:20		09:07 (22)	07:05		06:36		05:17		04:29		04:46		05:49		06:58		08:04			08:18				09:18
	16:11		17:23	15	09:22 (22)	18:31		20:42		21:51		22:45		22:38		21:34		20:08		18:42			16:24				15:43
13	09:19		08:18		09:06 (22)	07:02		06:33		05:15		04:28		04:48		05:51		07:00		08:07			08:20				09:19
	16:13		17:26	18	09:24 (22)	18:33		20:44		21:53		22:46		22:37		21:32		20:05		18:39			16:21				15:43
14	09:17		08:15		09:05 (22)	06:59		06:30		05:13		04:28		04:49		05:53		07:02		08:09			08:23				09:20
	16:15		17:28	20	09:25 (22)	18:35		20:47		21:56		22:47		22:35		21:29		20:02		18:36			16:19				15:42
15	09:16		08:13		09:05 (22)	06:56		06:27		05:11		04:28		04:51		05:55		07:04		08:11			08:25				09:21
	16:17		17:31	20	09:25 (22)	18:38		20:49		21:58		22:47		22:34		21:26		20:00		18:34			16:17				15:42
16	09:15		08:10		09:04 (22)	06:53		06:24		05:08		04:27		04:53		05:58		07:06		08:14			08:27				09:22
	16:19		17:33	21	09:25 (22)	18:40		20:51		22:00		22:48		22:32		21:24		19:57		18:31			16:15				15:42
17	09:13		08:08		09:05 (22)	06:50		06:22		05:06		04:27		04:54		06:00		07:09		08:16			08:30				09:23
	16:21		17:36	21	09:26 (22)	18:42		20:54		22:02		22:49		22:31		21:21		19:54		18:28			16:13				15:42
18	09:12		08:05		09:05 (22)	06:47		06:19		05:04		04:27		04:56		06:02		07:11		08:18		09:42 (22)	08:32				09:24
	16:23		17:38	20	09:25 (22)	18:45		20:56		22:04		22:49		22:29		21:19		19:51		18:25	7	09:49 (22)	16:11				15:42
19	09:10		08:02		09:05 (22)	06:44		06:16		05:02		04:27		04:58		06:04		07:13		08:21		09:39 (22)	08:34				09:25
	16:26		17:41	20	09:25 (22)	18:47		20:58		22:06		22:50		22:27		21:16		19:48		18:23	13	09:52 (22)	16:10				15:42
20	09:09		08:00		09:05 (22)	06:42		06:13		05:00		04:27		05:00		06:06		07:15		08:23		09:37 (22)	08:37				09:26
	16:28		17:43	19	09:24 (22)	18:49		21:01		22:08		22:50		22:26		21:13		19:45		18:20	16	09:53 (22)	16:08				15:43
21	09:07		07:57		09:05 (22)	06:39		06:11		04:58		04:27		05:02		06:09		07:17		08:25		09:36 (22)	08:39				09:26
	16:30		17:46	18	09:23 (22)	18:52		21:03		22:10		22:50		22:24		21:10		19:42		18:17	18	09:54 (22)	16:06				15:43
22	09:05		07:54		09:07 (22)	06:36		06:08		04:56		04:27		05:04		06:11		07:20		08:28		09:35 (22)	08:41				09:27
	16:32		17:48	15	09:22 (22)	18:54		21:05		22:12		22:51		22:22		21:08		19:39		18:15	19	09:54 (22)	16:04				15:44
23	09:04		07:52		09:09 (22)	06:33		06:05		04:54		04:27		05:06		06:13		07:22		08:30		09:35 (22)	08:43				09:27
	16:35		17:50	11	09:20 (22)	18:56		21:08		22:14		22:51		22:20		21:05		19:36		18:12	20	09:55 (22)	16:03				15:44
24	09:02		07:49		09:13 (22)	06:30		06:02		04:53		04:28		05:08		06:15		07:24		08:32		09:34 (22)	08:45				09:28
	16:37		17:53	3	09:16 (22)	18:59		21:10		22:16		22:51		22:18		21:02		19:33		18:09	21	09:55 (22)	16:01				15:45
25	09:00		07:46			06:27		06:00		04:51		04:28		05:10		06:18		07:26		07:35		08:34 (22)	08:48				09:28
	16:39		17:55			19:01		21:12		22:18		22:51		22:16		20:59		19:31		17:07	21	08:55 (22)	15:59				15:45
26	08:58		07:44			06:24		05:57		04:49		04:29		05:12		06:20		07:28		07:37		08:34 (22)	08:50				09:28
	16:42		17:58			19:03		21:15		22:20		22:51		22:14		20:57		19:28		17:04	21	08:55 (22)	15:58				15:46
27	08:56		07:41			06:21		05:54		04:47		04:29		05:14		06:22		07:31		07:40		08:34 (22)	08:52				09:29
	16:44		18:00			19:05		21:17		22:22		22:50		22:12		20:54		19:25		17:02	20	08:54 (22)	15:57				15:47
28	08:54		07:38			06:18		05:52		04:46		04:30		05:16		06:24		07:33		07:42		08:35 (22)	08:54				09:29
	16:46		18:02			19:08		21:19		22:24		22:50		22:10		20:51		19:22		16:59	19	08:54 (22)	15:55				15:48
29	08:52					07:16		05:49		04:44		04:30		05:18		06:27		07:35		07:44		08:36 (22)	08:56				09:29
	16:49					20:10		21:21		22:26		22:50		22:08		20:48		19:19		16:56	17	08:53 (22)	15:54				15:49
30	08:50					07:13		05:47		04:43		04:31		05:20		06:29		07:37		07:47		08:36 (22)	08:58				09:28
	16:51					20:12		21:24		22:27		22:49		22:05		20:45		19:16		16:54	16	08:52 (22)	15:53				15:50
31	08:48					07:10				04:41				05:22		06:31				07:49		08:38 (22)					09:28
	16:54					20:15				22:29				22:03		20:43				16:51	12	08:50 (22)					15:51
Potential sun hours	221		260			365		432		521		547		546		478		386		319			236				199
Total, worst case				241																	240			7			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		12:21 (24)	08:46		10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:36 (28)	09:00	10:51 (23)
	15:53	20	12:41 (24)	16:56	20	10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6	09:42 (28)	15:51	28 12:23 (24)
2	09:28		12:22 (24)	08:44		09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:34 (28)	09:02	10:51 (23)
	15:54	19	12:41 (24)	16:58	21	10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11	09:45 (28)	15:50	30 12:24 (24)
3	09:27		12:22 (24)	08:41		10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:33 (28)	09:04	10:52 (23)
	15:55	19	12:41 (24)	17:01	20	10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14	09:47 (28)	15:49	29 12:25 (24)
4	09:27		11:12 (23)	08:39		10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:31 (28)	09:05	10:53 (23)
	15:57	22	12:41 (24)	17:03	20	10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	09:48 (28)	15:48	30 12:26 (24)
5	09:26		11:11 (23)	08:37		10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:31 (28)	09:07	10:54 (23)
	15:58	26	12:42 (24)	17:06	19	10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18	09:49 (28)	15:47	29 12:27 (24)
6	09:25		11:10 (23)	08:35		10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:30 (28)	09:09	10:56 (23)
	16:00	28	12:42 (24)	17:08	18	10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20	09:50 (28)	15:46	28 12:28 (24)
7	09:25		11:09 (23)	08:32		10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:30 (28)	09:10	10:58 (23)
	16:02	29	12:42 (24)	17:11	17	10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20	09:50 (28)	15:45	26 12:29 (24)
8	09:24		11:09 (23)	08:30		10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:30 (28)	09:12	11:00 (23)
	16:03	30	12:42 (24)	17:13	15	10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20	09:50 (28)	15:45	23 12:30 (24)
9	09:23		11:09 (23)	08:27		10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:30 (28)	09:13	12:11 (24)
	16:05	30	12:42 (24)	17:16	12	10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20	09:50 (28)	15:44	19 12:30 (24)
10	09:22		11:08 (23)	08:25		10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:31 (28)	09:15	12:11 (24)
	16:07	30	12:41 (24)	17:18	5	10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20	09:51 (28)	15:44	19 12:30 (24)
11	09:21		11:09 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:30 (28)	09:16	12:11 (24)
	16:09	28	12:41 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20	09:50 (28)	15:43	20 12:31 (24)
12	09:20		11:08 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:31 (28)	09:18	12:11 (24)
	16:11	27	12:40 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27	10:58 (23)	15:43	20 12:31 (24)
13	09:19		11:08 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:32 (28)	09:19	12:12 (24)
	16:13	25	12:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31	11:01 (23)	15:42	21 12:33 (24)
14	09:17		11:08 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:33 (28)	09:20	12:12 (24)
	16:15	20	11:28 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32	11:03 (23)	15:42	21 12:33 (24)
15	09:16		11:08 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:34 (28)	09:21	12:12 (24)
	16:17	21	11:29 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31	11:03 (23)	15:42	21 12:33 (24)
16	09:15		11:08 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:36 (28)	09:22	12:13 (24)
	16:19	21	11:29 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31	11:05 (23)	15:42	20 12:33 (24)
17	09:13		11:09 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:38 (28)	09:23	12:14 (24)
	16:21	22	11:31 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28	11:06 (23)	15:42	21 12:35 (24)
18	09:12		11:09 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:44 (23)	09:24	12:14 (24)
	16:23	22	11:31 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22	11:06 (23)	15:42	21 12:35 (24)
19	09:10		11:09 (23)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		10:45 (23)	09:25	12:14 (24)
	16:25	22	11:31 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22	11:07 (23)	15:42	21 12:35 (24)
20	09:09		11:09 (23)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:45 (23)	09:26	12:15 (24)
	16:28	23	11:32 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22	11:07 (23)	15:43	21 12:36 (24)
21	09:07		11:09 (23)	07:57			06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39		10:45 (23)	09:26	12:16 (24)
	16:30	23	11:32 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	11:07 (23)	15:43	21 12:37 (24)
22	09:05		11:10 (23)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		10:45 (23)	09:27	12:16 (24)
	16:32	22	11:32 (23)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	11:08 (23)	15:43	21 12:37 (24)
23	09:03		11:10 (23)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:45 (23)	09:27	12:16 (24)
	16:34	22	11:32 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	11:08 (23)	15:44	21 12:37 (24)
24	09:02		11:10 (23)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:46 (23)	09:28	12:17 (24)
	16:37	22	11:32 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22	11:08 (23)	15:45	21 12:38 (24)
25	09:00		10:04 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:46 (23)	09:28	12:17 (24)
	16:39	28	11:32 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22	11:08 (23)	15:45	21 12:38 (24)
26	08:58		10:03 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:47 (23)	09:28	12:18 (24)
	16:42	31	11:32 (23)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21	11:08 (23)	15:46	21 12:39 (24)
27	08:56		10:02 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:47 (23)	09:28	12:18 (24)
	16:44	31	11:31 (23)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21	11:08 (23)	15:47	21 12:39 (24)
28	08:54		10:00 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:48 (23)	09:29	12:19 (24)
	16:46	32	11:30 (23)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21	11:09 (23)	15:48	21 12:40 (24)
29	08:52		10:00 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:49 (23)	09:29	12:19 (24)
	16:49	31	11:29 (23)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	12:18 (24)	15:49	21 12:40 (24)
30	08:50		09:59 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:49 (23)	09:28	12:20 (24)
	16:51	27	11:26 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28	12:21 (24)	15:50	20 12:40 (24)
31	08:48		09:59 (28)				07:10		04:41		05:22	06:31		07:49				09:28	12:21 (24)
	16:54	20	10:19 (28)				20:14		22:29		22:03	20:43		16:51				15:51	20 12:41 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199	
Total, worst case		773			167											657			697

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	22:07	20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:43	04:31	05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
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	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
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	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
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28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
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30	08:49		07:12	05:46	04:43	04:31	05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 5.2

Grafisk Moifjellet vindkraftverk

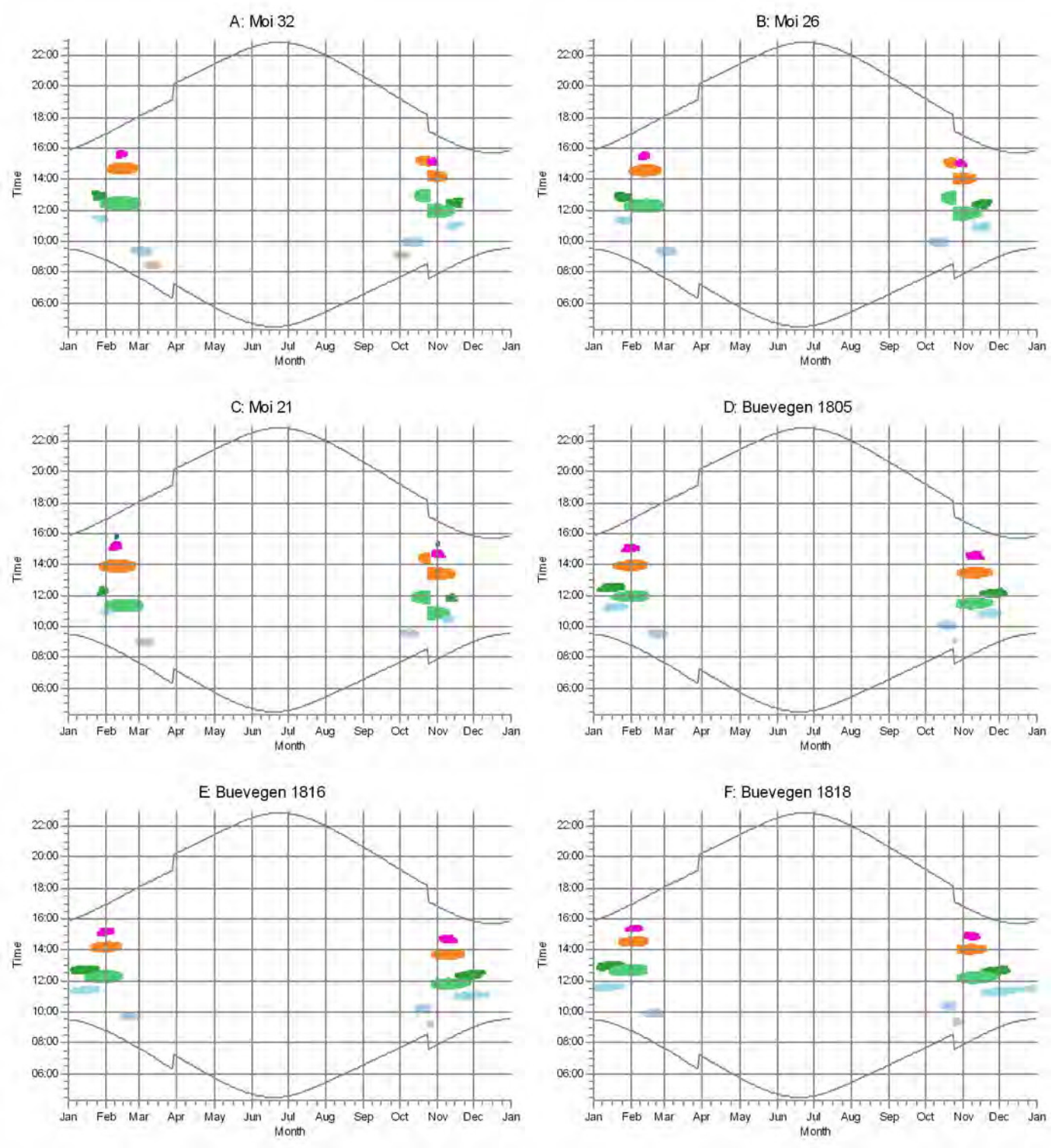
Worst case

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

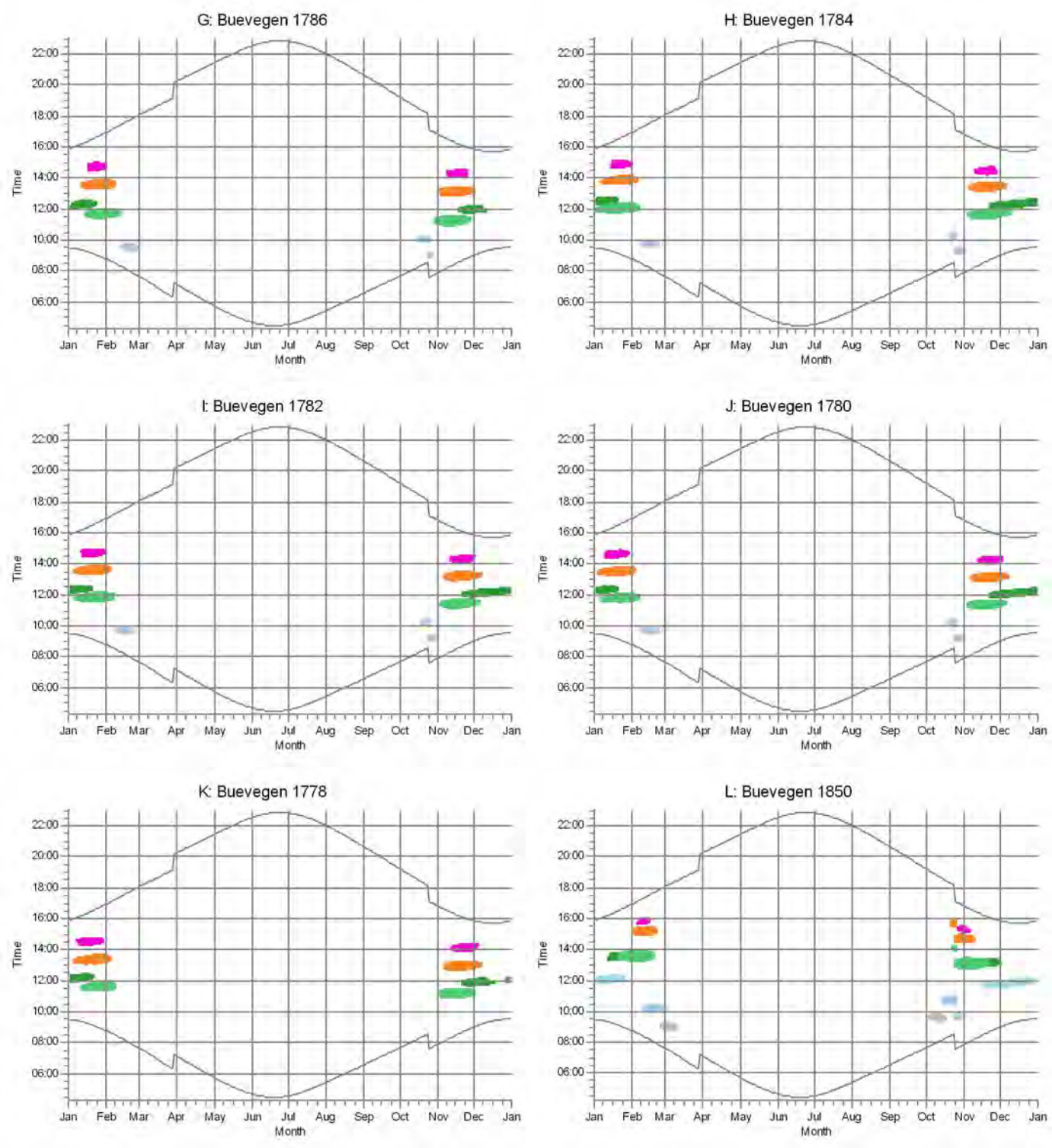
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
22: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2565
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

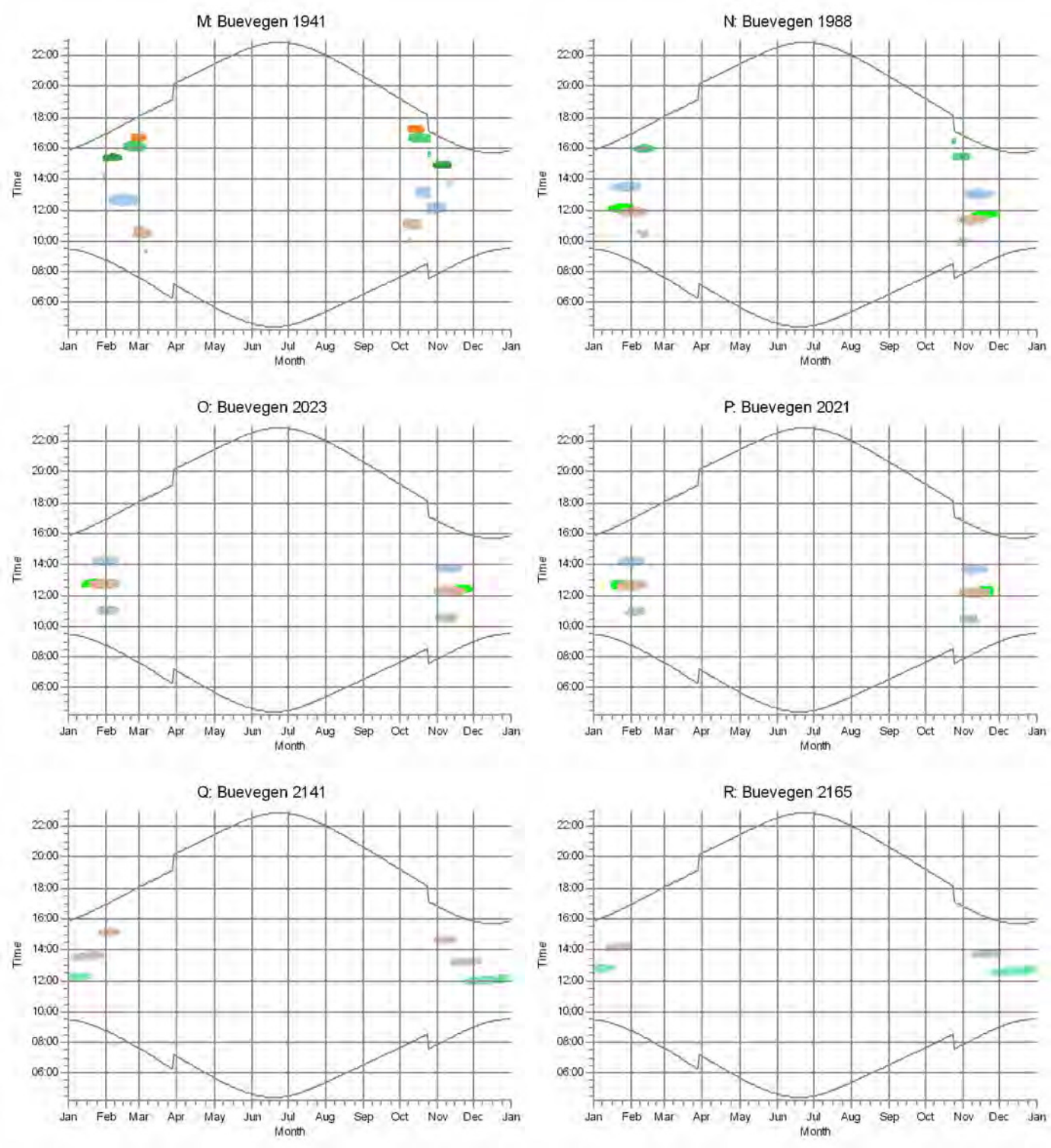
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

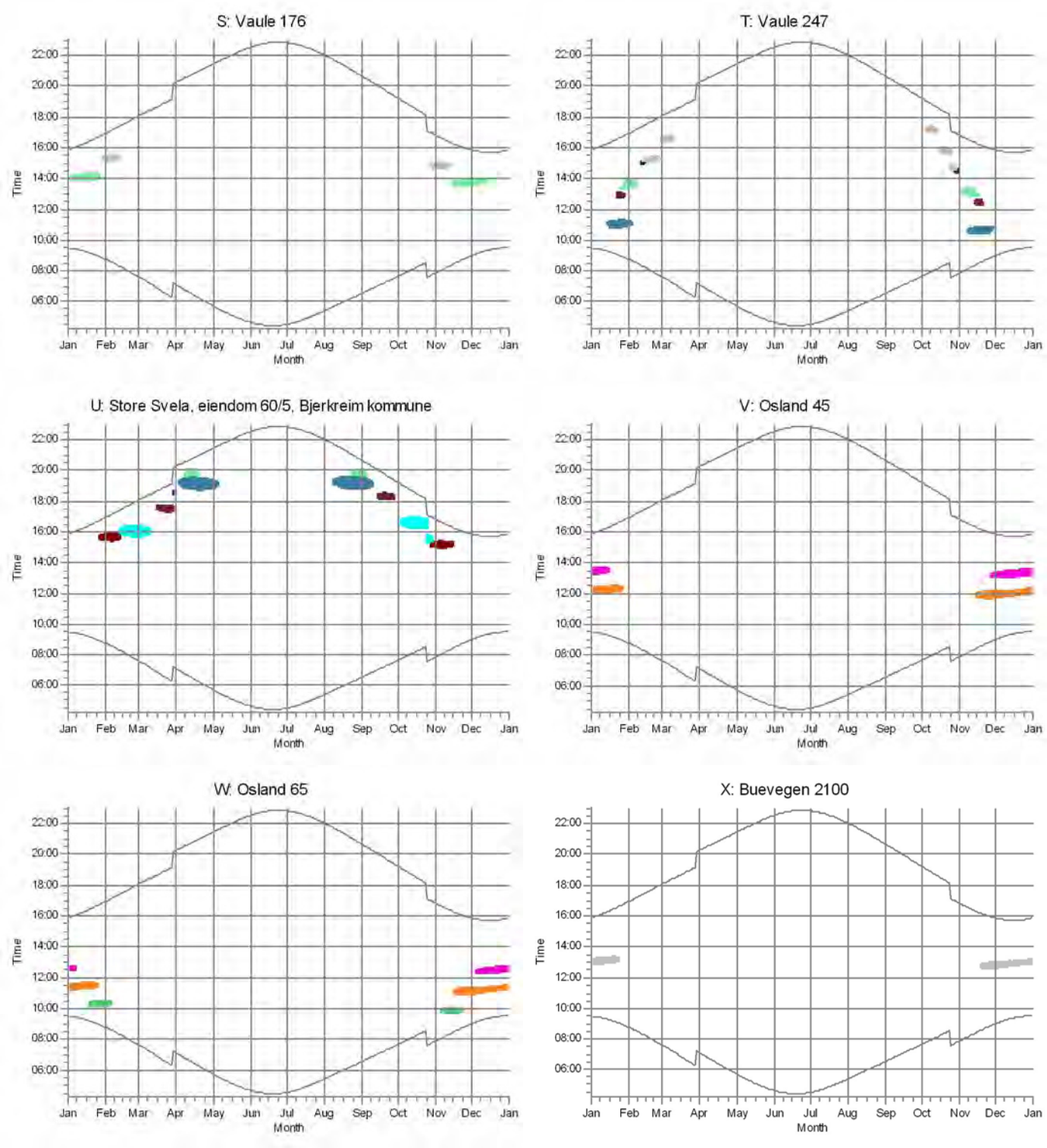
9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

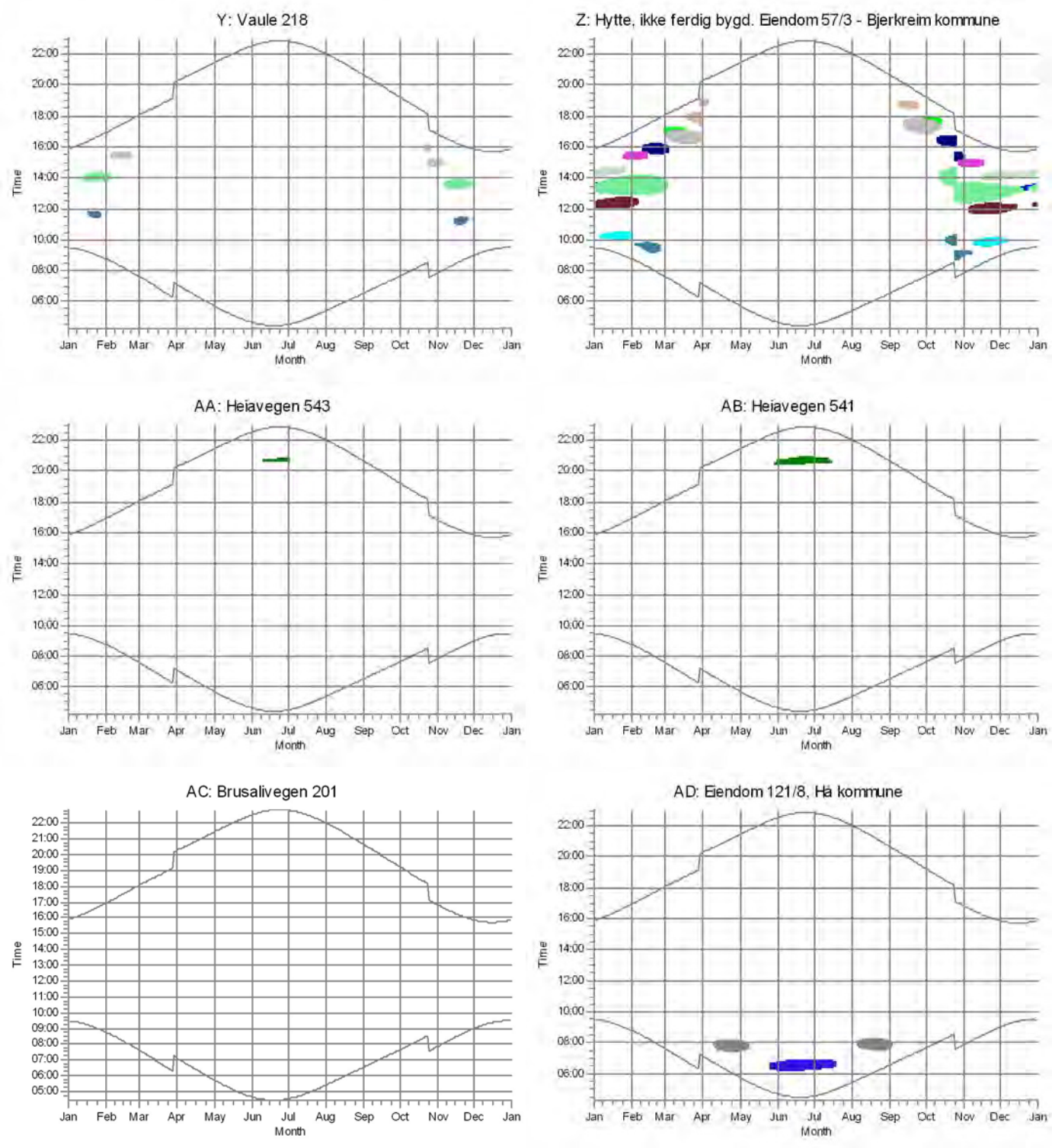
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
8: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

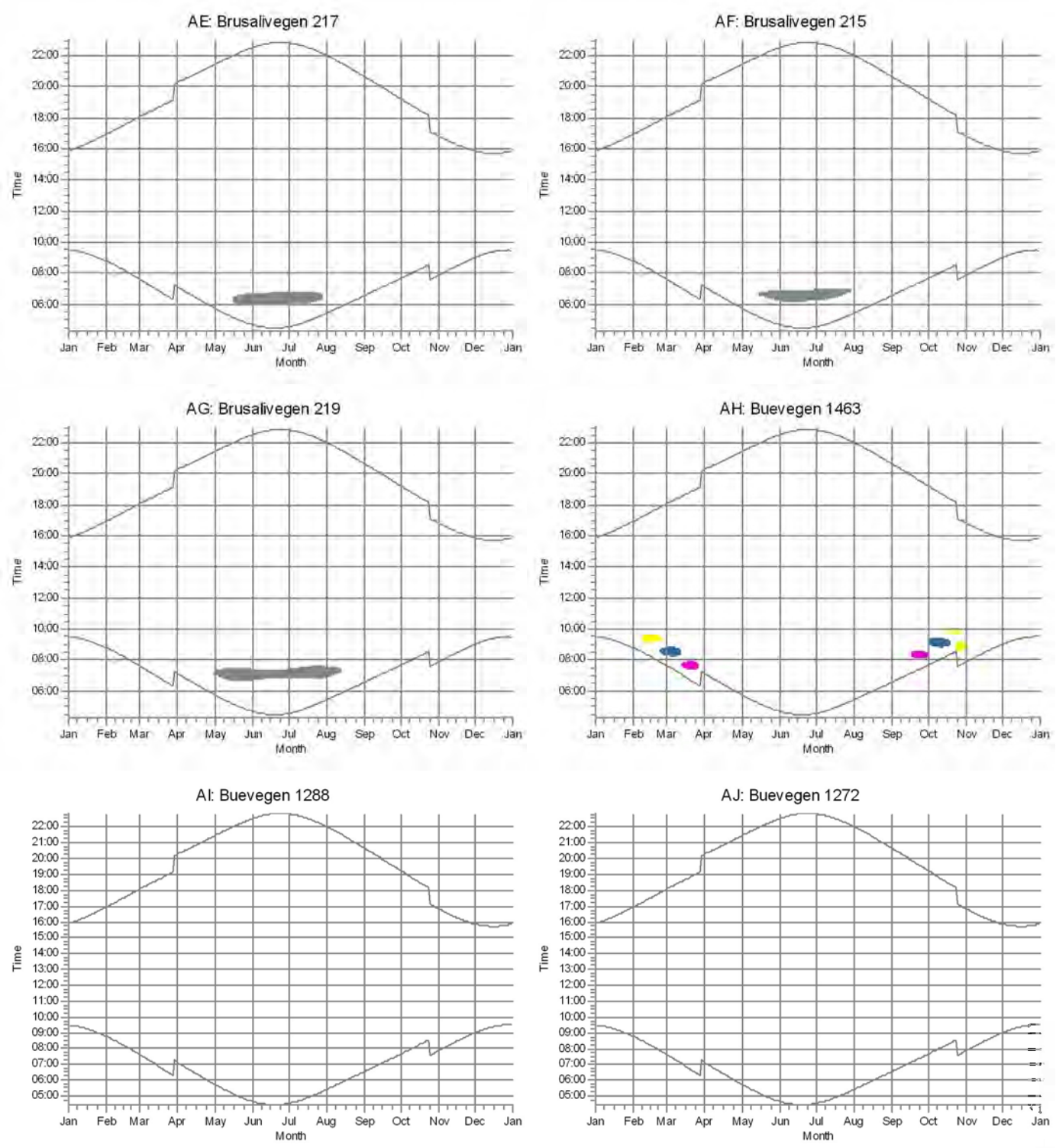
1: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544	13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556	35: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
3: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546	14: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557	36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550	17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560	37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552	26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569	38: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555	32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575	

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere

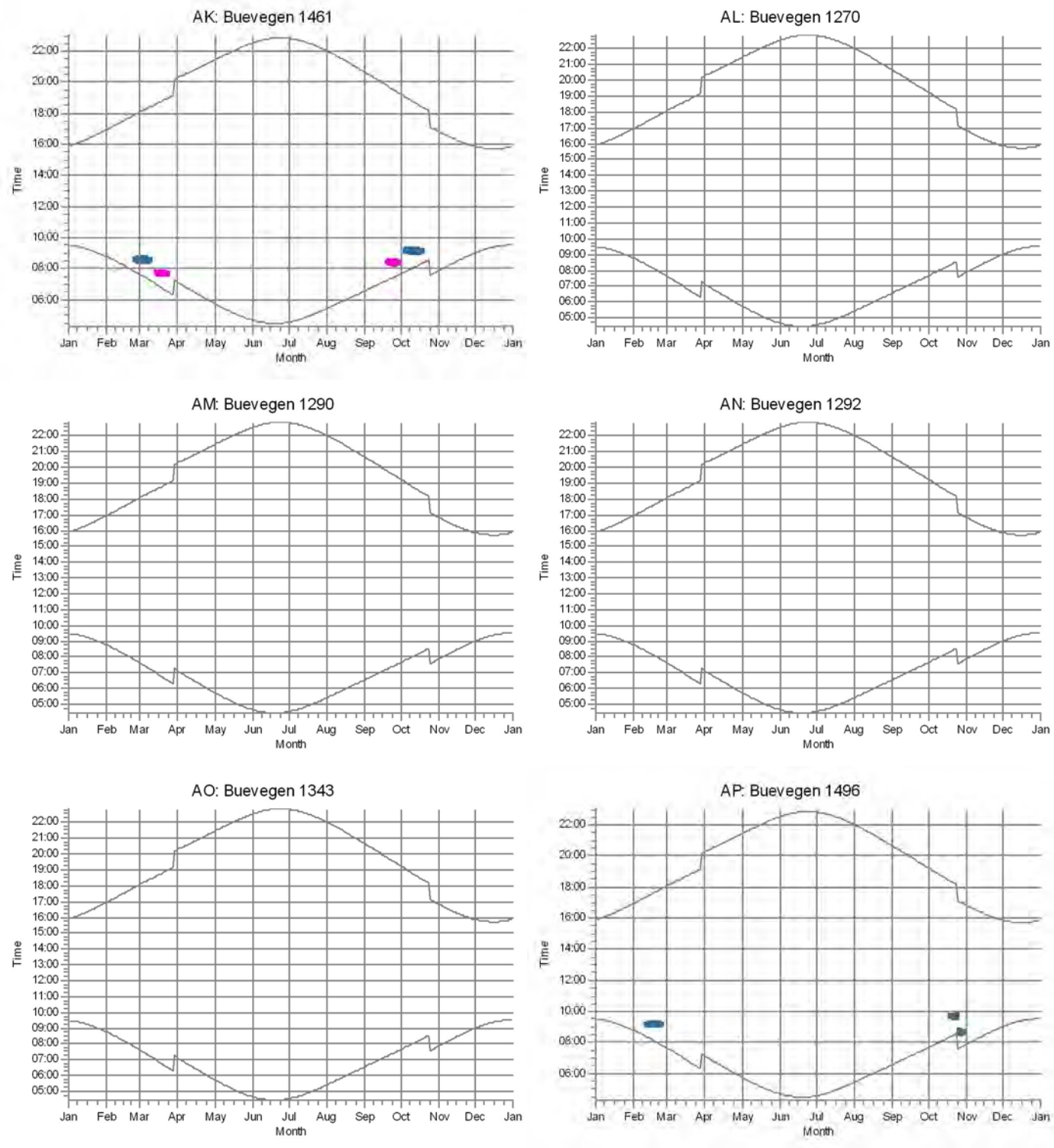


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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere

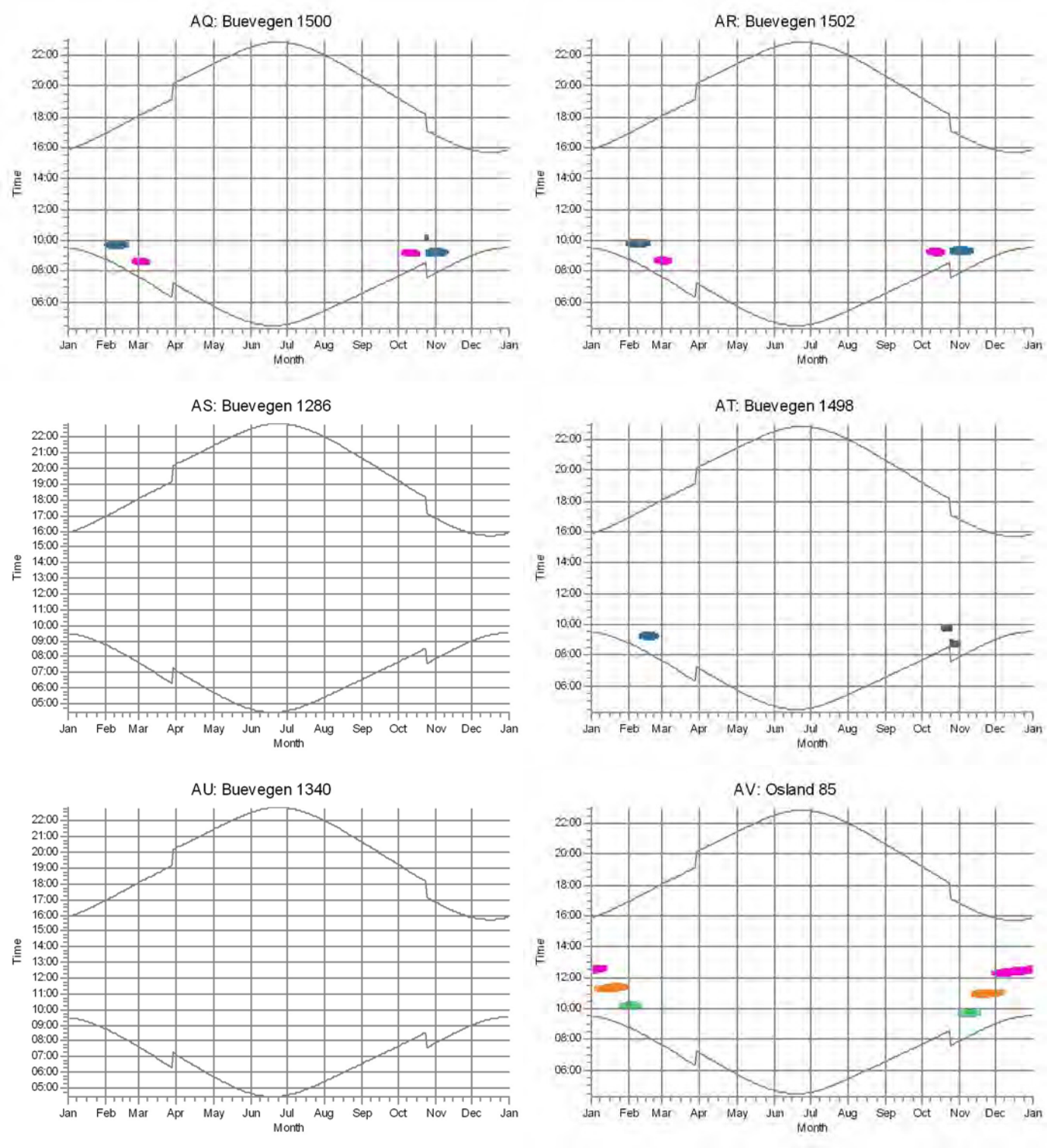


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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar, graphical

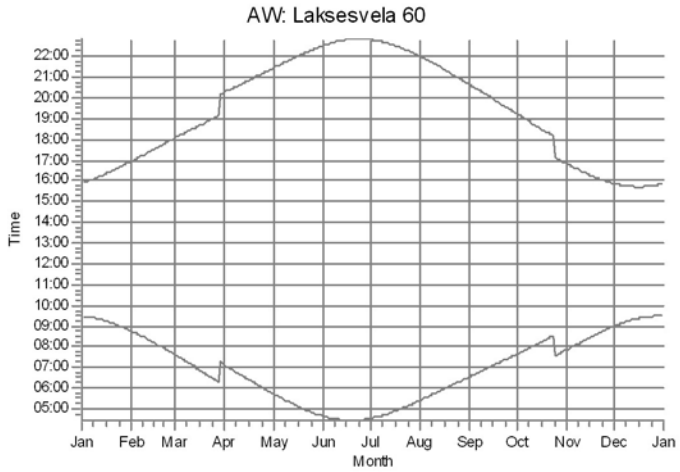
Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere

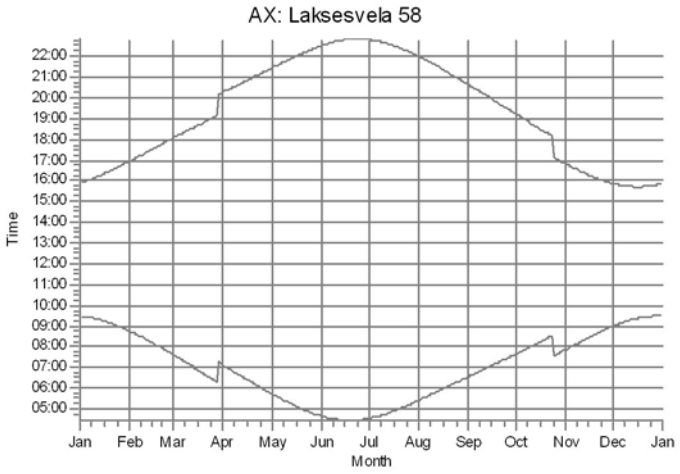


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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere





WTGs

Vedlegg 6.1

Tabell Moifjellet vindkraftverk

Realistic case

Project:

Moifjellet og Mellomstrand vrk

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19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17	21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19	21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21	21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24	21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26	21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28	21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30	21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33	21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35	21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37	21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40	21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42	21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44	21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47	21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49	21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51	22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53	22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00	22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03	22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05	22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07	22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10	22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12	22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14	22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17	22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19	22:24	22:50
29	08:52		11:15 (33)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21	22:25	22:50
30	08:50		11:15 (33)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24	22:27	22:49
31	08:48		11:17 (33)				07:10				04:41	
	16:54	57	13:05 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33		05:26		06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34		05:28		06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35		05:31		06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36		05:33		06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37		05:35		06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39		05:37		06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40		05:39		06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41		05:42		06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43		05:44		06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44		05:46		06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46		05:48		06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47		05:51		07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49		05:53		07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51		05:55		07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52		05:57		07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54		06:00		07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56		06:02		07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58		06:04		07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00		06:06		07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01		06:08		07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03		06:11		07:19			08:27		12:35 (28)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (28)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (28)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (28)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (28)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13		06:22		07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16		06:24		07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18		06:26		07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20		06:29		07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22		06:31					07:49		11:34 (28)				09:28
	22:03		20:42					16:51	90	15:09 (24)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17	21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19	21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21	21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24	21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26	21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28	21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30	21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33	21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35	21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37	21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40	21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12	22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14	22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17	22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19	22:24	22:50
29	08:52		10:56 (33)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21	22:25	22:50
30	08:50		10:50 (33)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24	22:27	22:49
31	08:48		10:44 (33)				07:10				04:41	
	16:54	62	14:05 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		10:30 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	107	15:21 (22)	15:51
2	04:33	05:26	06:35	07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48	21:58	20:37	19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34	05:28	06:37	07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47	21:56	20:34	19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35	05:31	06:40	07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47	21:54	20:31	19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36	05:33	06:42	07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46	21:51	20:28	19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37	05:35	06:44	07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45	21:49	20:25	18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39	05:37	06:46	07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44	21:47	20:22	18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40	05:39	06:49	07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43	21:44	20:20	18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41	05:42	06:51	07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42	21:42	20:17	18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43	05:44	06:53	08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40	21:39	20:14	18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44	05:46	06:55	08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39	21:37	20:11	18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46	05:48	06:57	08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38	21:34	20:08	18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47	05:51	07:00	08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37	21:31	20:05	18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49	05:53	07:02	08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35	21:29	20:02	18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51	05:55	07:04	08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34	21:26	19:59	18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52	05:57	07:06	08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32	21:24	19:56	18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54	06:00	07:08	08:16		11:34 (28)	08:29			09:23
	22:30	21:21	19:54	18:28	36	12:10 (28)	16:13			15:42
18	04:56	06:02	07:11	08:18		11:32 (28)	08:32			09:24
	22:29	21:18	19:51	18:25	55	14:33 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		11:32 (28)	08:34			09:25
	22:27	21:16	19:48	18:22	62	14:36 (23)	16:09			15:42
20	05:00	06:06	07:15	08:23		11:31 (28)	08:36			09:26
	22:25	21:13	19:45	18:20	67	14:37 (23)	16:08			15:43
21	05:01	06:09	07:17	08:25		11:30 (28)	08:39			09:26
	22:24	21:10	19:42	18:17	72	14:39 (23)	16:06			15:43
22	05:03	06:11	07:19	08:27		11:29 (28)	08:41			09:27
	22:22	21:08	19:39	18:14	75	14:40 (23)	16:04			15:43
23	05:05	06:13	07:22	08:30		11:29 (28)	08:43			09:27
	22:20	21:05	19:36	18:12	78	14:41 (23)	16:02			15:44
24	05:07	06:15	07:24	08:32		11:29 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	79	14:41 (23)	16:01			15:45
25	05:09	06:17	07:26	07:35		10:29 (28)	08:47			09:28
	22:16	20:59	19:30	17:07	81	13:42 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		10:29 (28)	08:50			09:28
	22:14	20:57	19:27	17:04	82	13:43 (23)	15:58			15:46
27	05:13	06:22	07:30	07:39		10:29 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	81	13:42 (23)	15:56			15:47
28	05:16	06:24	07:33	07:42		10:29 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	87	14:45 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		10:29 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	95	14:48 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		10:30 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	14:51 (24)	15:52			15:50
31	05:22	06:31		07:49		10:31 (28)				09:28
	22:03	20:42		16:51	99	14:52 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1521			1074		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,65			0,62		
Total reduction					0,26			0,25		
Total, real					396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46		11:39 (28)	07:35	09:25 (15)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (24)	18:05	9 09:34 (15)	20:17	21:26	22:31
2	09:27		08:43		11:39 (28)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (24)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (28)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (24)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (28)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (24)	18:12		20:24	21:33	22:35
5	09:26	12:20 (20)	08:37		11:39 (28)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (20)	17:06	80	15:09 (24)	18:14		20:26	21:35	22:37
6	09:25	12:19 (20)	08:34		11:40 (28)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (20)	17:08	74	15:08 (24)	18:17		20:28	21:37	22:38
7	09:24	12:17 (20)	08:32		11:40 (28)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (20)	17:11	62	14:11 (23)	18:19		20:30	21:40	22:39
8	09:24	12:17 (20)	08:30		11:41 (28)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (20)	17:13	61	14:11 (23)	18:21		20:33	21:42	22:40
9	09:23	12:18 (20)	08:27		11:42 (28)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (20)	17:16	57	14:10 (23)	18:24		20:35	21:44	22:42
10	09:22	11:06 (33)	08:25		11:42 (28)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (20)	17:18	54	14:09 (23)	18:26		20:37	21:46	22:43
11	09:21	11:02 (33)	08:23		11:44 (28)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (20)	17:21	48	14:08 (23)	18:28		20:40	21:49	22:44
12	09:20	11:01 (33)	08:20		11:45 (28)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (20)	17:23	42	14:06 (23)	18:31		20:42	21:51	22:45
13	09:18	11:02 (33)	08:18		11:46 (28)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (20)	17:26	32	14:02 (23)	18:33		20:44	21:53	22:46
14	09:17	11:02 (33)	08:15		11:49 (28)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (20)	17:28	18	12:07 (28)	18:35		20:47	21:55	22:47
15	09:16	11:02 (33)	08:13		11:52 (28)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (20)	17:31	12	12:04 (28)	18:38		20:49	21:58	22:47
16	09:15	11:02 (33)	08:10		09:29 (15)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (20)	17:33	5	09:34 (15)	18:40		20:51	22:00	22:48
17	09:13	11:02 (33)	08:07		09:25 (15)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (20)	17:36	12	09:37 (15)	18:42		20:53	22:02	22:49
18	09:12	11:03 (33)	08:05		09:24 (15)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (23)	17:38	16	09:40 (15)	18:45		20:56	22:04	22:49
19	09:10	11:03 (33)	08:02		09:23 (15)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (23)	17:40	17	09:40 (15)	18:47		20:58	22:06	22:50
20	09:08	11:04 (33)	08:00		09:22 (15)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (23)	17:43	19	09:41 (15)	18:49		21:00	22:08	22:50
21	09:07	11:04 (33)	07:57		09:21 (15)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (23)	17:45	20	09:41 (15)	18:51		21:03	22:10	22:50
22	09:05	11:05 (33)	07:54		09:20 (15)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (23)	17:48	21	09:41 (15)	18:54		21:05	22:12	22:50
23	09:03	11:05 (33)	07:52		09:21 (15)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (23)	17:50	21	09:42 (15)	18:56		21:07	22:14	22:51
24	09:02	11:06 (33)	07:49		09:21 (15)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (23)	17:53	20	09:41 (15)	18:58		21:10	22:16	22:51
25	09:00	11:07 (33)	07:46		09:21 (15)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (24)	17:55	20	09:41 (15)	19:01		21:12	22:18	22:51
26	08:58	11:09 (33)	07:44		09:21 (15)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (24)	17:57	19	09:40 (15)	19:03		21:14	22:20	22:50
27	08:56	11:10 (33)	07:41		09:22 (15)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (24)	18:00	16	09:38 (15)	19:05		21:17	22:22	22:50
28	08:54	11:13 (33)	07:38		09:23 (15)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (24)	18:02	14	09:37 (15)	19:08		21:19	22:24	22:50
29	08:52	11:40 (28)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (24)				20:10		21:21	22:25	22:50
30	08:50	11:39 (28)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (24)				20:12		21:24	22:27	22:49
31	08:48	11:39 (28)				07:10			04:41	
	16:54	88 15:13 (24)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				
Sun reduction		0,50		0,50		0,50				
Oper. time red.		0,80		0,80		0,80				
Wind dir. red.		0,62		0,63		0,73				
Total reduction		0,25		0,25		0,29				
Total, real		371		276		3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49		22:01		20:40		19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33		05:26		06:35		07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48		21:58		20:37		19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34		05:28		06:37		07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47		21:56		20:34		19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35		05:31		06:40		07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47		21:54		20:31		19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36		05:33		06:42		07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46		21:51		20:28		19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37		05:35		06:44		07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45		21:49		20:25		18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39		05:37		06:46		07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44		21:47		20:22		18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40		05:39		06:49		07:55			08:08		11:09 (28)	09:12		
	22:43		21:44		20:20		18:53			16:32	87	14:42 (24)	15:45		
9	04:41		05:42		06:51		07:57			08:11		11:10 (28)	09:13		
	22:42		21:42		20:17		18:50			16:30	87	14:43 (24)	15:44		
10	04:43		05:44		06:53		08:00			08:13		11:10 (28)	09:15		
	22:41		21:39		20:14		18:47			16:28	88	14:44 (24)	15:43		
11	04:44		05:46		06:55		08:02			08:15		11:10 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	88	14:44 (24)	15:43		
12	04:46		05:48		06:57		08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38		21:34		20:08		18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47		05:51		07:00		08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37		21:32		20:05		18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49		05:53		07:02		08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35		21:29		20:02		18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51		05:55		07:04		08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34		21:26		19:59		18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32		21:24		19:56		18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30		21:21		19:54		18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29		21:18		19:51		18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58		06:04		07:13		08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00		06:06		07:15		08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25		21:13		19:45		18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01		06:08		07:17		08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24		21:10		19:42		18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22		21:08		19:39		18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20		21:05		19:36		18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07		06:15		07:24		08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18		21:02		19:33		18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09		06:17		07:26		07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16		20:59		19:30		17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14		20:57		19:27		17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13		06:22		07:30		07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12		20:54		19:25		17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16		06:24		07:33		07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10		20:51		19:22		16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07		20:48		19:19		16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05		20:45		19:16		16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22		06:31				07:49		11:13 (28)				09:28		
	22:03		20:42				16:51	50	13:38 (23)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								389			2122			106	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,64	
Total reduction								0,27			0,25			0,25	
Total, real								107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46	11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43	11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41	12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39	11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34	12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32	12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30	12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27	12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25	12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23	12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20	12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18	12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15	09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13	09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10	09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07	09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05	09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02	09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00	09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57	09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54	09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52	09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49	09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46	09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44	09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41	09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38	09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)			07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)			20:10	21:21	22:25	22:50
30	08:50		11:58 (28)			07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)			20:12	21:24	22:27	22:49
31	08:48		11:58 (28)			07:10		04:41	
	16:54	88	15:22 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1646		1063					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,63		0,63					
Total reduction		0,25		0,25					
Total, real		411		265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33		05:26		06:35		07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34		05:28		06:37		07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35		05:31		06:40		07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36		05:33		06:42		07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37		05:35		06:44		07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39		05:37		06:46		07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40		05:39		06:49		07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41		05:42		06:51		07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43		05:44		06:53		08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44		05:46		06:55		08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46		05:48		06:57		08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47		05:51		07:00		08:07			08:20		11:30 (28)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (24)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22		06:31				07:49		11:35 (28)				09:28		11:11 (33)
	22:03		20:42				16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02		19:07	21:19	22:24	22:50
29	08:52		12:24 (28)			07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)			20:10	21:21	22:25	22:50
30	08:50		12:23 (28)			07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)			20:12	21:24	22:27	22:49
31	08:48		12:24 (28)			07:10		04:41	
	16:53	77	15:26 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1549		1149					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,62		0,62					
Total reduction		0,25		0,25					
Total, real		386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28			08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53			16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27		12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1	12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27		12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4	12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27		12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7	12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26		12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17	12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25		12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16	12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24		12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19	12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24		12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22	12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23		12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22	12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22		12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22	12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21		12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22	12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20		12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28	13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18		12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33	13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17		12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36	13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16		11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47	13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54	13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13		11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57	13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12		11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72	14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85	14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09		11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88	14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07		11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88	14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05		11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89	14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03		11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87	14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02		11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81	14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00		11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82	14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58		11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83	14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56		11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83	14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54		11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82	14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80	14:54 (24)				20:10	21:21	22:25	22:50
30	08:50		11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79	14:53 (24)				20:12	21:24	22:27	22:49
31	08:48		11:26 (28)				07:10		04:41	
	16:54	76	14:52 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1562			681					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,61			0,66					
Total reduction		0,24			0,26					
Total, real		382			180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33		05:26		06:35		07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34		05:28		06:37		07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35		05:31		06:40		07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36		05:33		06:42		07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37		05:35		06:44		07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39		05:37		06:46		07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40		05:39		06:49		07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41		05:42		06:51		07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43		05:44		06:53		08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44		05:46		06:55		08:02			08:15		10:57 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (24)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (28)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (24)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (28)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (24)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (28)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (20)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (23)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (20)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (23)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22		06:31				07:49		11:06 (28)				09:28		
	22:03		20:42				16:51	15	11:21 (28)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46	11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43	11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41	11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39	11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34	12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27	09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25	09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23	09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20	09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18	09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15	09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13	09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10	09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07	09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05	09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02	09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00	09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57	09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54	09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (28)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)			20:10	21:21	22:25	22:50
30	08:50		11:51 (28)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)			20:12	21:24	22:27	22:49
31	08:48		11:52 (28)			07:10		04:41	
	16:54	55	14:55 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:08 (20)	08:46	11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:29 (20)	16:56	49 13:50 (23)	18:05	20:17	21:26	22:31
2	09:27	12:08 (20)	08:43	11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21 12:29 (20)	16:58	44 13:48 (23)	18:07	20:19	21:28	22:32
3	09:27	12:09 (20)	08:41	11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:29 (20)	17:01	39 13:47 (23)	18:09	20:21	21:31	22:34
4	09:27	12:09 (20)	08:39	11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:30 (20)	17:03	32 13:45 (23)	18:12	20:24	21:33	22:35
5	09:26	12:09 (20)	08:37	11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21 12:30 (20)	17:06	19 12:02 (28)	18:14	20:26	21:35	22:37
6	09:25	12:10 (20)	08:34	11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25 13:32 (23)	17:08	14 12:00 (28)	18:17	20:28	21:37	22:38
7	09:24	11:43 (28)	08:32	11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33 13:35 (23)	17:11	6 11:56 (28)	18:19	20:30	21:40	22:39
8	09:24	11:41 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	41 13:37 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:40 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	47 13:39 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:38 (28)	08:25	09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51 13:40 (23)	17:18	3 09:42 (15)	18:26	20:37	21:46	22:43
11	09:21	11:38 (28)	08:23	09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55 13:42 (23)	17:21	10 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:37 (28)	08:20	09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60 14:46 (24)	17:23	14 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:37 (28)	08:18	09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72 14:49 (24)	17:26	16 09:49 (15)	18:33	20:44	21:53	22:46
14	09:17	11:36 (28)	08:15	09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83 14:49 (24)	17:28	17 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:36 (28)	08:13	09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87 14:50 (24)	17:31	18 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:35 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86 14:50 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:36 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:51 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:36 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89 14:52 (24)	17:38	19 09:51 (15)	18:45	20:56	22:04	22:49
19	09:10	11:36 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87 14:52 (24)	17:40	18 09:50 (15)	18:47	20:58	22:06	22:50
20	09:09	11:35 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85 14:53 (24)	17:43	17 09:49 (15)	18:49	21:00	22:08	22:50
21	09:07	11:35 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79 14:53 (24)	17:45	15 09:48 (15)	18:51	21:03	22:10	22:50
22	09:05	11:36 (28)	07:54	09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:53 (24)	17:48	12 09:46 (15)	18:54	21:05	22:12	22:50
23	09:03	11:35 (28)	07:52	09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79 14:52 (24)	17:50	6 09:44 (15)	18:56	21:07	22:14	22:51
24	09:02	11:35 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	79 14:52 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:35 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	78 14:52 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:36 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	77 14:52 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:36 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	74 14:51 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:36 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	71 14:50 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:37 (28)			07:15	05:49	04:44	04:30
	16:49	66 14:49 (24)			20:10	21:21	22:25	22:50
30	08:50	11:37 (28)			07:13	05:46	04:42	04:31
	16:51	56 14:45 (24)			20:12	21:24	22:27	22:49
31	08:48	11:38 (28)			07:10		04:41	
	16:54	51 13:50 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1881		406				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,68				
Total reduction		0,24		0,27				
Total, real		457		110				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:26 (20)	16:56	45	13:44 (23)	18:05	20:17	21:26	22:31
2	09:27		12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20	12:26 (20)	16:58	40	13:42 (23)	18:07	20:19	21:28	22:32
3	09:27		12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:26 (20)	17:01	34	13:40 (23)	18:09	20:21	21:31	22:34
4	09:27		12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:27 (20)	17:03	20	11:59 (28)	18:12	20:24	21:33	22:35
5	09:26		12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28	13:28 (23)	17:06	16	11:57 (28)	18:14	20:26	21:35	22:37
6	09:25		12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32	13:31 (23)	17:08	11	11:55 (28)	18:17	20:28	21:37	22:38
7	09:24		11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38	13:32 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46	13:34 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50	13:36 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:35 (28)	08:25		09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58	14:41 (24)	17:18	6	09:43 (15)	18:26	20:37	21:46	22:43
11	09:21		11:34 (28)	08:23		09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71	14:43 (24)	17:21	11	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:33 (28)	08:20		09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79	14:44 (24)	17:23	15	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:34 (28)	08:18		09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81	14:45 (24)	17:26	16	09:48 (15)	18:33	20:44	21:53	22:46
14	09:17		11:33 (28)	08:15		09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84	14:45 (24)	17:28	18	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:32 (28)	08:13		09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86	14:46 (24)	17:31	19	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87	14:46 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:32 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:47 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:32 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88	14:48 (24)	17:38	18	09:50 (15)	18:45	20:56	22:04	22:49
19	09:10		11:32 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86	14:48 (24)	17:40	17	09:49 (15)	18:47	20:58	22:06	22:50
20	09:09		11:32 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79	14:48 (24)	17:43	16	09:48 (15)	18:49	21:00	22:08	22:50
21	09:07		11:32 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77	14:48 (24)	17:45	14	09:47 (15)	18:51	21:03	22:10	22:50
22	09:05		11:32 (28)	07:54		09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:49 (24)	17:48	10	09:45 (15)	18:54	21:05	22:12	22:50
23	09:03		11:31 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	78	14:48 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:32 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	77	14:48 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:32 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	75	14:47 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:33 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	73	14:47 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:32 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	70	14:45 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:33 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	66	14:44 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:34 (28)				07:15	05:49	04:44	04:30
	16:49	57	14:41 (24)				20:10	21:21	22:25	22:50
30	08:50		11:34 (28)				07:13	05:46	04:42	04:31
	16:51	52	13:45 (23)				20:12	21:24	22:27	22:49
31	08:48		11:35 (28)				07:10		04:41	
	16:54	48	13:44 (23)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1914			364				
Sun reduction		0,50			0,50				
Oper. time red.		0,80			0,80				
Wind dir. red.		0,61			0,69				
Total reduction		0,24			0,27				
Total, real		467			100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (24)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (23)
5	04:36	05:33	06:42	07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37	05:35	06:44	07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38	05:37	06:46	07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40	05:39	06:49	07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41	05:42	06:51	07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43	05:44	06:53	08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44	05:46	06:55	08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46	05:48	06:57	08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47	05:51	07:00	08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49	05:53	07:02	08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51	05:55	07:04	08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52	05:57	07:06	08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54	06:00	07:08	08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56	06:02	07:11	08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58	06:04	07:13	08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27	21:16	19:48	18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25	21:13	19:45	18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24	21:10	19:42	18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18	21:02	19:33	18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14	20:57	19:27	17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12	20:54	19:25	17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20	06:29	07:37	07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05	20:45	19:16	16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22	06:31		07:49		09:05 (15)				09:28		12:04 (20)
	22:03	20:42		16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28		11:58 (20)	08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56	49 13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43	11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58	47 13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41	11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01	42 13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39	11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03	35 13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37	11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06	23 11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34	11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08	20 11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32	11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11	16 11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30	11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13	11 11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)			07:10		04:41		05:22	06:31		07:49				09:28		11:57 (20)
	16:54	53	13:36 (23)			20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236				199		
Total, worst case		1841		243										1761				403	
Sun reduction		0,50		0,50										0,50				0,50	
Oper. time red.		0,80		0,80										0,80				0,80	
Wind dir. red.		0,62		0,65										0,62				0,62	
Total reduction		0,25		0,26										0,25				0,25	
Total, real		452		63										435				100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35		08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13			16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42			07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10			16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44			07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07			16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46		09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7	09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48		09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12	09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51		09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15	09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53		09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18	09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55		09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19	09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57		09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20	09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00		09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20	09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02		09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20	09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04		09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19	09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06		09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18	09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09		09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26	10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11		09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29	10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13		09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28	10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16		10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21	10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18		10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23	10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20		10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24	10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23		10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25	10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25		10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37	15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27		10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42	15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30		10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50	15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32		10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63	15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35		09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69	14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37		09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74	14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39		09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82	15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42		09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89	15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44		09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90	15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47		09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90	15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49		12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81	15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					1111			1317			529	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,64			0,59			0,64	
Total reduction					0,26			0,23			0,26	
Total, real					286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17	21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19	21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21	21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23	21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26	21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28	21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30	21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33	21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35	21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (33)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23	22:27	22:49
31	08:48		14:08 (33)				07:10				04:41	
	16:53	21	15:27 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (28)	08:45		11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:32 (28)	16:01	30	13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47		11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20	13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49		11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11	11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52		11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10	11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54		11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8	11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56			09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53			15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58			09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52			15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49	09:46 (12)				09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55 15:38 (28)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		793		765									221		1347			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,62		0,61									0,60		0,62			
Total reduction		0,25		0,24									0,24		0,25			
Total, real		197		187									53		334			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56	74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (15)	15:51
2	09:27		08:43		10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58	73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (15)	15:50
3	09:27		08:41		10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01	74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (15)	15:49
4	09:26		08:39		10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03	71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (15)	15:48
5	09:26		08:37		10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06	68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (15)	15:47
6	09:25		08:34		10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08	64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (15)	15:46
7	09:24		08:32		10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11	59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (15)	15:45
8	09:24		08:30		10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13	52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (15)	15:45
9	09:23		08:27		10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16	43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (15)	15:44
10	09:22		08:25		10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18	26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (15)	15:43
11	09:21		08:22		12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21	5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (15)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (15)	15:42
13	09:18	12:39 (9)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13	5 12:44 (9)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (15)	15:42
14	09:17	12:39 (9)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15	7 12:46 (9)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (15)	15:42
15	09:16	12:39 (9)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17	15 12:54 (9)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (15)	15:42
16	09:14	12:38 (9)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19	17 12:55 (9)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (15)	15:42
17	09:13	12:38 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21	18 12:56 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (15)	15:42
18	09:12	12:37 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23	19 12:56 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (15)	15:42
19	09:10	12:38 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25	20 12:58 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (15)	15:42
20	09:08	12:37 (17)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27	22 12:59 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (15)	15:42
21	09:07	12:35 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30	23 12:58 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (9)	15:43
22	09:05	12:34 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32	33 14:16 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (9)	15:43
23	09:03	12:33 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34	39 14:19 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (9)	15:44
24	09:01	12:33 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37	42 14:21 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (9)	15:44
25	09:00	12:32 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39	45 14:22 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (9)	15:45
26	08:58	10:57 (12)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41	50 14:24 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (9)	15:46
27	08:56	10:51 (12)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44	64 14:24 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (9)	15:47
28	08:54	10:51 (12)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46	69 14:25 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (9)	15:48
29	08:52	10:51 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49	70 14:26 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (9)	15:49
30	08:50	10:50 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)				07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53	74 14:27 (15)				20:14		22:29		22:03	20:42		16:51	7 12:20 (17)			15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319		236		199
Total, worst case		704		609										7		1322	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,63										0,63		0,62	
Total reduction		0,25		0,25										0,25		0,25	
Total, real		174		153										2		328	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (12)	09:00
	15:53		16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (15)	15:51
2	09:27		08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (12)	09:01
	15:54		16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (15)	15:50
3	09:27		08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (12)	09:03
	15:55		17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (15)	15:49
4	09:26		08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (12)	09:05
	15:57		17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (15)	15:48
5	09:26		08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (12)	09:07
	15:58		17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (15)	15:47
6	09:25		08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (12)	09:09
	16:00		17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (15)	15:46
7	09:24		08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (12)	09:10
	16:02		17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (15)	15:45
8	09:24		08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (12)	09:12
	16:03		17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (15)	15:45
9	09:23		08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (12)	09:13
	16:05		17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (15)	15:44
10	09:22		08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (12)	09:15
	16:07		17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (15)	15:43
11	09:21		08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (12)	09:16
	16:09		17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (15)	15:43
12	09:20		08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (12)	09:17
	16:11		17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (15)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (12)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (15)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (17)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (15)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (17)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (15)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (17)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (15)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (17)	15:52			15:50
31	08:48		10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)				09:28
	16:53	69	14:22 (15)			20:14		22:29		22:03	20:42		16:51	25 12:17 (17)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (26)	08:45	14:59 (17)	07:35	07:07	05:44	04:39
	15:52 20	12:23 (26)	16:56 18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27	12:03 (26)	08:43	14:59 (17)	07:32	07:04	05:41	04:38
	15:54 20	12:23 (26)	16:58 19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27	12:03 (26)	08:41	14:58 (17)	07:30	07:01	05:38	04:37
	15:55 20	12:23 (26)	17:01 19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26	12:03 (26)	08:39	14:59 (17)	07:27	06:58	05:36	04:36
	15:57 21	12:24 (26)	17:03 19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26	12:04 (26)	08:37	14:59 (17)	07:24	06:55	05:33	04:34
	15:58 26	13:33 (12)	17:06 19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25	12:04 (26)	08:34	15:00 (17)	07:21	06:52	05:31	04:33
	16:00 29	13:35 (12)	17:08 18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24	12:05 (26)	08:32	15:00 (17)	07:18	06:49	05:29	04:32
	16:01 31	13:37 (12)	17:11 17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23	12:06 (26)	08:30	15:00 (17)	07:16	06:46	05:26	04:31
	16:03 33	13:39 (12)	17:13 16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23	12:06 (26)	08:27	15:02 (17)	07:13	06:44	05:24	04:31
	16:05 33	13:39 (12)	17:15 14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22	12:07 (26)	08:25	15:03 (17)	07:10	06:41	05:21	04:30
	16:07 35	13:41 (12)	17:18 11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21	12:07 (26)	08:22	15:07 (17)	07:07	06:38	05:19	04:29
	16:09 35	13:41 (12)	17:20 5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19	12:08 (26)	08:20		07:04	06:35	05:17	04:29
	16:11 35	13:42 (12)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (26)	08:17		07:01	06:32	05:15	04:28
	16:12 35	13:43 (12)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (26)	08:15		06:58	06:29	05:12	04:28
	16:14 35	13:44 (12)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (26)	08:12		06:56	06:27	05:10	04:27
	16:17 34	13:45 (12)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (26)	08:10		06:53	06:24	05:08	04:27
	16:19 32	13:45 (12)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (26)	08:07		06:50	06:21	05:06	04:27
	16:21 29	13:45 (12)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (26)	08:05		06:47	06:18	05:04	04:26
	16:23 26	13:46 (12)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (12)	08:02		06:44	06:16	05:02	04:26
	16:25 21	13:46 (12)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (12)	07:59		06:41	06:13	05:00	04:26
	16:27 22	13:47 (12)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (12)	07:57		06:38	06:10	04:58	04:26
	16:30 21	13:47 (12)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (12)	07:54		06:35	06:07	04:56	04:27
	16:32 21	13:47 (12)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (12)	07:51		06:33	06:05	04:54	04:27
	16:34 20	13:47 (12)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (12)	07:49		06:30	06:02	04:52	04:27
	16:37 19	13:47 (12)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (12)	07:46		06:27	05:59	04:50	04:28
	16:39 18	13:47 (12)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (12)	07:43		06:24	05:57	04:49	04:28
	16:41 17	13:47 (12)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (12)	07:41		06:21	05:54	04:47	04:29
	16:44 20	15:09 (17)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (12)	07:38		06:18	05:51	04:45	04:29
	16:46 23	15:12 (17)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (12)			07:15	05:49	04:44	04:30
	16:48 21	15:14 (17)			20:10	21:21	22:25	22:49
30	08:50	15:00 (17)			07:12	05:46	04:42	04:31
	16:51 15	15:15 (17)			20:12	21:23	22:27	22:49
31	08:48	15:00 (17)			07:09		04:41	
	16:53 16	15:16 (17)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15		12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43	21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16		12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43	21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17		12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42	20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19		12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42	20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20		12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42	21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21		12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42	21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22		12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42	20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23		12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42	20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24		12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42	20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25		12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42	20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25		12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42	20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26		12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43	20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27		12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43	20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27		12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44	20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27		12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44	21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28		12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45	20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28		12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46	20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28		12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47	20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28		12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47	21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28		12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49	20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28		12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50	20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,55			0,55	
Total reduction					0,22			0,22			0,22	
Total, real					7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:45	10:57 (37)	07:35	16:28 (17)	07:06	05:44	04:39
	15:52		16:56 40	13:50 (26)	18:04 11	16:39 (17)	20:16	21:26	22:30
2	09:27		08:43	10:59 (37)	07:32	16:27 (17)	07:04	05:41	04:38
	15:54		16:58 37	13:51 (26)	18:07 13	16:40 (17)	20:19	21:28	22:32
3	09:27		08:41	11:02 (37)	07:30	16:27 (17)	07:01	05:38	04:37
	15:55		17:01 28	13:49 (26)	18:09 14	16:41 (17)	20:21	21:30	22:33
4	09:26		08:39	13:29 (26)	07:27	16:27 (17)	06:58	05:36	04:36
	15:57		17:03 20	13:49 (26)	18:12 17	16:44 (17)	20:23	21:33	22:35
5	09:26		08:37	13:30 (26)	07:24	16:27 (17)	06:55	05:33	04:34
	15:58		17:06 17	13:47 (26)	18:14 19	16:46 (17)	20:26	21:35	22:36
6	09:25		08:34	13:33 (26)	07:21	16:28 (17)	06:52	05:31	04:33
	16:00		17:08 12	13:45 (26)	18:16 17	16:45 (17)	20:28	21:37	22:38
7	09:24		08:32		07:18	16:29 (17)	06:49	05:29	04:32
	16:01		17:11		18:19 15	16:44 (17)	20:30	21:39	22:39
8	09:23		08:30		07:15	16:30 (17)	06:46	05:26	04:32
	16:03		17:13		18:21 12	16:42 (17)	20:32	21:42	22:40
9	09:23		08:27		07:13	16:33 (17)	06:44	05:24	04:31
	16:05		17:15		18:23 6	16:39 (17)	20:35	21:44	22:41
10	09:22		08:25		07:10		06:41	05:21	04:30
	16:07		17:18		18:26		20:37	21:46	22:43
11	09:20		08:22		07:07		06:38	05:19	04:29
	16:09		17:20		18:28		20:39	21:48	22:44
12	09:19		08:20	14:57 (7)	07:04		06:35	05:17	04:29
	16:11		17:23 8	15:05 (7)	18:30		20:42	21:51	22:45
13	09:18		08:17	14:59 (7)	07:01		06:32	05:15	04:28
	16:12		17:25 11	15:10 (7)	18:33		20:44	21:53	22:45
14	09:17	11:05 (37)	08:15	15:02 (7)	06:58		06:29	05:12	04:28
	16:14 3	11:08 (37)	17:28 12	15:14 (12)	18:35		20:46	21:55	22:46
15	09:16	10:59 (37)	08:12	15:06 (12)	06:56		06:27	05:10	04:27
	16:17 10	11:09 (37)	17:30 12	15:18 (12)	18:37		20:49	21:57	22:47
16	09:14	10:52 (37)	08:10	15:06 (12)	06:53		06:24	05:08	04:27
	16:19 18	11:10 (37)	17:33 15	15:21 (12)	18:40		20:51	21:59	22:48
17	09:13	10:51 (37)	08:07	15:05 (12)	06:50		06:21	05:06	04:27
	16:21 19	11:10 (37)	17:35 16	15:21 (12)	18:42		20:53	22:02	22:48
18	09:11	10:51 (37)	08:05	15:05 (12)	06:47		06:18	05:04	04:26
	16:23 20	11:11 (37)	17:38 15	15:20 (12)	18:44		20:56	22:04	22:49
19	09:10	10:51 (37)	08:02	15:06 (12)	06:44		06:16	05:02	04:26
	16:25 21	11:12 (37)	17:40 16	15:22 (12)	18:47		20:58	22:06	22:49
20	09:08	10:51 (37)	07:59	15:07 (12)	06:41		06:13	05:00	04:26
	16:27 22	11:13 (37)	17:43 17	15:24 (12)	18:49		21:00	22:08	22:50
21	09:07	10:51 (37)	07:57	15:07 (12)	06:38		06:10	04:58	04:26
	16:30 22	11:13 (37)	17:45 20	15:27 (12)	18:51		21:02	22:10	22:50
22	09:05	10:51 (37)	07:54	15:08 (12)	06:35		06:07	04:56	04:27
	16:32 27	12:49 (32)	17:47 20	15:28 (12)	18:53		21:05	22:12	22:50
23	09:03	10:51 (37)	07:51	15:09 (12)	06:32		06:05	04:54	04:27
	16:34 39	13:02 (32)	17:50 18	15:27 (12)	18:56		21:07	22:14	22:50
24	09:01	10:52 (37)	07:49	15:12 (12)	06:30		06:02	04:52	04:27
	16:37 40	13:04 (32)	17:52 13	15:25 (12)	18:58		21:09	22:16	22:50
25	08:59	10:52 (37)	07:46	15:16 (12)	06:27		05:59	04:50	04:28
	16:39 39	13:04 (32)	17:55 5	15:21 (12)	19:00		21:12	22:18	22:50
26	08:58	10:52 (37)	07:43		06:24		05:57	04:49	04:28
	16:41 39	13:24 (26)	17:57		19:03		21:14	22:20	22:50
27	08:56	10:53 (37)	07:41		06:21		05:54	04:47	04:29
	16:44 39	13:28 (26)	18:00		19:05		21:16	22:22	22:50
28	08:54	10:53 (37)	07:38	16:32 (17)	06:18		05:51	04:45	04:29
	16:46 41	13:35 (26)	18:02 4	16:36 (17)	19:07		21:19	22:23	22:50
29	08:52	10:54 (37)			07:15		05:49	04:44	04:30
	16:48 41	13:44 (26)			20:10		21:21	22:25	22:49
30	08:50	10:55 (37)			07:12		05:46	04:42	04:31
	16:51 42	13:47 (26)			20:12		21:23	22:27	22:49
31	08:48	10:56 (37)			07:09			04:41	
	16:53 42	13:49 (26)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	524		356		124				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,67		0,57		0,57				
Total reduction	0,27		0,23		0,23				
Total, real	139		81		28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (26)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (26)	15:48
5	04:36	05:33	06:42	07:48		17:09 (17)	08:01		13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (17)	16:39	13	13:15 (26)	15:47
6	04:37	05:35	06:44	07:50		17:06 (17)	08:03		13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (17)	16:36	17	13:18 (26)	15:46
7	04:38	05:37	06:46	07:53		17:04 (17)	08:06		12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (17)	16:34	21	13:19 (26)	15:45
8	04:40	05:39	06:48	07:55		17:03 (17)	08:08		10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (17)	16:32	29	13:20 (26)	15:44
9	04:41	05:41	06:50	07:57		17:02 (17)	08:10		10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (17)	16:30	37	13:22 (26)	15:44
10	04:42	05:44	06:53	07:59		17:01 (17)	08:13		10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (17)	16:27	40	13:21 (26)	15:43
11	04:44	05:46	06:55	08:02		17:01 (17)	08:15		10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (17)	16:25	41	13:19 (26)	15:43
12	04:45	05:48	06:57	08:04		17:01 (17)	08:18		10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (17)	16:23	42	13:19 (26)	15:42
13	04:47	05:50	06:59	08:06		17:02 (17)	08:20		10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (17)	16:21	41	13:15 (26)	15:42
14	04:49	05:53	07:01	08:09		17:06 (17)	08:22		10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (17)	16:19	41	13:07 (26)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (37)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (26)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (37)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (26)	15:42
17	04:54	05:59	07:08	08:16		15:45 (12)	08:29		10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (12)	16:13	39	12:37 (32)	15:42
18	04:56	06:02	07:10	08:18		15:42 (12)	08:32		10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (12)	16:11	40	12:38 (32)	15:42
19	04:57	06:04	07:12	08:20		15:40 (12)	08:34		10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (12)	16:09	39	12:37 (32)	15:42
20	04:59	06:06	07:15	08:23		15:39 (12)	08:36		10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (12)	16:07	28	12:25 (32)	15:42
21	05:01	06:08	07:17	08:25		15:37 (12)	08:38		10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (12)	16:06	22	10:49 (37)	15:43
22	05:03	06:10	07:19	08:27		15:37 (12)	08:41		10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (12)	16:04	22	10:49 (37)	15:43
23	05:05	06:13	07:21	08:30		15:36 (12)	08:43		10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (12)	16:02	21	10:49 (37)	15:44
24	05:07	06:15	07:24	08:32		15:35 (12)	08:45		10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (12)	16:01	20	10:49 (37)	15:44
25	05:09	06:17	07:26	07:34		14:36 (12)	08:47		10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (12)	15:59	19	10:48 (37)	15:45
26	05:11	06:19	07:28	07:37		14:35 (12)	08:49		10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (12)	15:57	18	10:49 (37)	15:46
27	05:13	06:22	07:30	07:39		14:35 (12)	08:51		10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (12)	15:56	10	10:48 (37)	15:47
28	05:15	06:24	07:32	07:41		14:30 (7)	08:53		10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (12)	15:55	3	10:47 (37)	15:48
29	05:17	06:26	07:35	07:44		14:27 (7)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (7)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (7)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (7)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39		
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30		
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38		
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32		
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37		
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33		
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36		
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35		
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35		
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36		
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33		
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37		
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32		
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39		
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32		
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40		
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31		
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41		
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30		
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42		
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29		
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43		
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29		
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44		
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28		
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45		
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28		
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46		
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27		
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47		
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27		
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47		
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27		
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48		
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26		
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49		
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26		
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49		
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26		
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49		
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26		
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50		
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27		
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50		
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27		
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50		
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27		
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50		
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28		
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50		
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28		
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50		
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29		
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50		
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29		
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49		
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30		
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49		
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31		
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49		
31	08:47		15:29 (8)				07:09						04:41					
	16:53	20	15:49 (8)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				
Sun reduction		0,50			0,50			0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80			0,80			0,80				
Wind dir. red.		0,53			0,54			0,58			0,68			0,68				
Total reduction		0,21			0,22			0,23			0,27			0,27				
Total, real		16			169			118			331			18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24		19:10 (37)	06:33		18:48 (37)	07:39		16:33 (13)	07:51		15:00 (8)	08:59
	22:48	22:00		19:20 (37)	20:39	60	19:58 (26)	19:13		16:44 (13)	16:48	21	15:21 (8)	15:51
2	04:33	05:26		19:07 (37)	06:35		18:49 (37)	07:41		16:29 (13)	07:53		15:00 (8)	09:01
	22:47	21:58		19:24 (37)	20:36	57	19:57 (26)	19:10		16:47 (13)	16:46	22	15:22 (8)	15:50
3	04:34	05:28		19:04 (37)	06:37		18:49 (37)	07:43		16:26 (13)	07:56		14:59 (8)	09:03
	22:47	21:56		19:26 (37)	20:34	54	19:56 (26)	19:07		16:50 (13)	16:44	23	15:22 (8)	15:49
4	04:35	05:30		19:02 (37)	06:39		18:51 (37)	07:46		16:24 (13)	07:58		14:59 (8)	09:05
	22:46	21:53		19:28 (37)	20:31	35	19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33		19:00 (37)	06:42		18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51		19:30 (37)	20:28	31	19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35		19:00 (37)	06:44		18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49		19:32 (37)	20:25	28	19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37		19:02 (37)	06:46		18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46		19:34 (37)	20:22	25	19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39		19:04 (37)	06:48		18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44		19:36 (37)	20:19	18	19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:07 (37)	06:50		19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11	19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53			07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13			18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55			08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11			18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57			08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08			18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59			08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05			18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01		18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7	18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04		18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13	18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06		18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16	18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08		18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19	18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10		18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20	18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12		18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21	18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15		18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22	18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17		18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22	18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19		18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22	18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21		18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21	18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23		18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19	18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26		18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18	18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28		18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15	18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30		18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11	18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32			07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21			16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34			07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18			16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37			07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16			16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)				07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)				16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (23)	08:46	10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53 31	12:43 (24)	16:56 18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28	11:14 (23)	08:44	10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54 30	12:43 (24)	16:58 17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27	11:13 (23)	08:41	10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55 31	12:43 (24)	17:01 14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27	11:13 (23)	08:39	10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57 30	12:43 (24)	17:03 11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26	11:14 (23)	08:37	10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58 28	12:42 (24)	17:06 7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25	11:14 (23)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (28)	09:09		11:00 (23)
	16:00 28	12:42 (24)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (28)	15:46	28	12:28 (24)
7	09:25	11:14 (23)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (28)	09:10		11:01 (23)
	16:02 26	12:41 (24)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (28)	15:45	29	12:30 (24)
8	09:24	11:14 (23)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (28)	09:12		11:02 (23)
	16:03 21	11:35 (23)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (28)	15:45	30	12:31 (24)
9	09:23	11:15 (23)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (28)	09:14		11:03 (23)
	16:05 21	11:36 (23)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (28)	15:44	30	12:32 (24)
10	09:22	11:15 (23)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (28)	09:15		11:03 (23)
	16:07 21	11:36 (23)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (28)	15:44	30	12:32 (24)
11	09:21	11:15 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (28)	09:16		11:04 (23)
	16:09 22	11:37 (23)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (28)	15:43	30	12:33 (24)
12	09:20	11:15 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (28)	09:18		11:04 (23)
	16:11 22	11:37 (23)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (28)	15:43	31	12:34 (24)
13	09:19	11:16 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (28)	09:19		11:05 (23)
	16:13 22	11:38 (23)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (28)	15:42	31	12:35 (24)
14	09:17	11:16 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (28)	09:20		11:06 (23)
	16:15 22	11:38 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (28)	15:42	30	12:35 (24)
15	09:16	11:16 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (28)	09:21		11:06 (23)
	16:17 22	11:38 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (28)	15:42	31	12:36 (24)
16	09:15	11:16 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (28)	09:22		11:08 (23)
	16:19 22	11:38 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (28)	15:42	30	12:37 (24)
17	09:13	11:18 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (28)	09:23		11:09 (23)
	16:21 21	11:39 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (23)	15:42	30	12:38 (24)
18	09:12	11:18 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (28)	09:24		11:08 (23)
	16:23 21	11:39 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (23)	15:42	30	12:37 (24)
19	09:10	10:13 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (28)	09:25		11:09 (23)
	16:25 27	11:39 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (23)	15:42	29	12:38 (24)
20	09:09	10:12 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (28)	09:26		11:10 (23)
	16:28 30	11:39 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (23)	15:43	30	12:39 (24)
21	09:07	10:11 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (28)	09:26		11:11 (23)
	16:30 32	11:39 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (23)	15:43	29	12:40 (24)
22	09:05	10:10 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (28)	09:27		11:11 (23)
	16:32 32	11:38 (23)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (23)	15:43	29	12:40 (24)
23	09:03	10:09 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (28)	09:27		11:11 (23)
	16:34 31	11:37 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (23)	15:44	30	12:40 (24)
24	09:02	10:09 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (23)	09:28		11:12 (23)
	16:37 29	11:36 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (23)	15:45	30	12:41 (24)
25	09:00	10:09 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (23)	09:28		11:12 (23)
	16:39 26	11:34 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (23)	15:45	29	12:41 (24)
26	08:58	10:09 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (23)	09:28		11:13 (23)
	16:41 19	10:28 (28)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (23)	15:46	30	12:42 (24)
27	08:56	10:09 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (23)	09:28		11:13 (23)
	16:44 20	10:29 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (23)	15:47	30	12:42 (24)
28	08:54	10:09 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (23)	09:29		11:13 (23)
	16:46 19	10:28 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (23)	15:48	31	12:43 (24)
29	08:52	10:09 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (23)	09:29		11:13 (23)
	16:49 20	10:29 (28)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (23)	15:49	30	12:42 (24)
30	08:50	10:09 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (23)	09:28		11:13 (23)
	16:51 19	10:28 (28)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (23)	15:50	31	12:43 (24)
31	08:48	10:10 (28)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (23)
	16:54 19	10:29 (28)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (12)
	15:52	16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (12)
2	09:27		12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (12)
	15:54	16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (12)
3	09:27		12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (12)
	15:55	17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (12)
4	09:26		12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (12)
	15:57	17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (12)
5	09:26		12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (12)
	15:58	18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (12)
6	09:25		12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (12)
	16:00	19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (12)
7	09:24		12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (12)
	16:01	20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (12)
8	09:24		12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (12)
	16:03	19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (12)
9	09:23		12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (12)
	16:05	20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (12)
10	09:22		12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (12)
	16:07	20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (12)
11	09:21		12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (12)
	16:09	20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (12)
12	09:19		12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (12)
	16:11	20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (12)
13	09:18		12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (12)
	16:12	20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (12)
14	09:17		12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (12)
	16:14	20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (12)
15	09:16		12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (12)
	16:17	20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (12)
16	09:14		12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (12)
	16:19	20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (12)
17	09:13		12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (12)
	16:21	19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (12)
18	09:11		12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (12)
	16:23	19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (12)
19	09:10		13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (12)	09:25		12:50 (12)
	16:25	18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (12)	15:42	13	13:03 (12)
20	09:08		13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (12)	09:25		12:51 (12)
	16:27	16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (12)	15:42	12	13:03 (12)
21	09:07		13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (12)	09:26		12:51 (12)
	16:30	15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (12)	15:43	12	13:03 (12)
22	09:05		13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (12)	09:27		12:52 (12)
	16:32	12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (12)	15:43	12	13:04 (12)
23	09:03		13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (12)	09:27		12:52 (12)
	16:34	9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (12)	15:44	12	13:04 (12)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (12)	09:28		12:52 (12)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (12)	15:44	12	13:04 (12)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (12)	09:28		12:53 (12)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (12)	15:45	13	13:06 (12)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (12)	09:28		12:53 (12)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (12)	15:46	13	13:06 (12)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (12)	09:28		12:54 (12)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (12)	15:47	13	13:07 (12)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (12)	09:28		12:53 (12)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (12)	15:48	14	13:07 (12)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (12)	09:28		12:53 (12)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (12)	15:49	15	13:08 (12)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (12)	09:28		12:54 (12)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (12)	15:50	15	13:09 (12)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (12)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (12)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (12)	08:59
	15:52		16:56 19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (12)	15:51
2	09:27		08:43	13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (12)	09:01
	15:54		16:58 16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (12)	15:50
3	09:27		08:41	13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (12)	09:03
	15:55		17:01 12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (12)	15:49
4	09:26		08:39	14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (12)	09:05
	15:57		17:03 5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (12)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (12)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (12)	15:47
6	09:25		08:34	15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (26)	09:10
	16:01		17:11 11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (26)	15:45
8	09:23		08:30	15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (26)	09:12
	16:03		17:13 15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (26)	15:44
9	09:23		08:27	15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (26)	09:13
	16:05		17:15 18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (26)	15:44
10	09:22		08:25	15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (26)	09:15
	16:07		17:18 19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (26)	15:43
11	09:20		08:22	15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (26)	09:16
	16:09		17:20 21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (26)	15:43
12	09:19		08:20	15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (26)	09:17
	16:10		17:23 22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17	15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (26)	09:19
	16:12 5	13:58 (26)	17:25 22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15	15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (26)	09:20
	16:14 9	14:00 (26)	17:28 23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12	15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (37)	09:21
	16:17 11	14:01 (26)	17:30 22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10	15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (37)	09:22
	16:19 17	14:07 (26)	17:33 22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07	15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (37)	09:23
	16:21 21	14:10 (26)	17:35 21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05	15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (37)	09:24
	16:23 27	14:11 (26)	17:38 19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02	15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (37)	09:25
	16:25 32	14:12 (26)	17:40 17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59	15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (37)	09:25
	16:27 36	14:12 (26)	17:43 14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57	15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (12)	08:38	11:05 (37)	09:26
	16:30 42	14:13 (26)	17:45 8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (12)	16:06 42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (12)	08:41	11:08 (37)	09:27
	16:32 45	14:14 (26)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (12)	16:04 36	13:48 (26)	15:43
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	16:34 44	14:14 (26)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (12)	16:02 32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (12)	08:45	11:16 (37)	09:27
	16:36 42	14:15 (26)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (12)	16:01 28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (12)	08:47	13:27 (26)	09:28
	16:39 40	14:15 (26)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (12)	15:59 21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (12)	08:49	13:29 (26)	09:28
	16:41 37	14:15 (26)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (12)	15:57 17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (12)	08:51	13:29 (26)	09:28
	16:44 33	14:15 (26)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (12)	15:56 12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (12)	08:53	13:30 (26)	09:28
	16:46 24	14:15 (26)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (12)	15:55 9	13:39 (26)	15:47
29	08:52	13:51 (26)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (12)	08:55	13:35 (26)	09:28
	16:48 23	14:14 (26)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (12)	15:53 5	13:40 (26)	15:49
30	08:50	13:52 (26)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (12)	08:57		09:28
	16:51 22	14:14 (26)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (12)	15:52		15:50
31	08:48	13:54 (26)			07:09		04:41		05:22	06:31		07:49	14:47 (12)			09:28
	16:53 20	14:14 (26)			20:14		22:29		22:03	20:42		16:51 20	15:07 (12)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (32) | 08:45		10:15 (13) | 07:35		13:26 (26) | 07:07		18:42 (17) | 05:44	| 04:39
	15:52	47	14:26 (14) | 16:56	119	15:37 (35) | 18:04	35	17:05 (9) | 20:16	19	19:01 (17) | 21:26	| 22:30
2	09:27		12:11 (32) | 08:43		12:16 (32) | 07:32		15:45 (7) | 07:04		18:43 (17) | 05:41	| 04:38
	15:54	53	14:28 (14) | 16:58	114	15:38 (35) | 18:07	27	17:09 (9) | 20:19	16	18:59 (17) | 21:28	| 22:32
3	09:27		12:10 (32) | 08:41		12:17 (32) | 07:30		16:34 (12) | 07:01		18:46 (17) | 05:38	| 04:37
	15:55	58	14:29 (14) | 17:01	113	15:38 (35) | 18:09	33	17:12 (9) | 20:21	11	18:57 (17) | 21:30	| 22:33
4	09:26		12:10 (32) | 08:39		09:39 (37) | 07:27		16:31 (12) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (14) | 17:03	109	15:39 (35) | 18:12	43	17:15 (9) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (32) | 08:36		09:39 (37) | 07:24		16:29 (12) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (14) | 17:06	105	15:39 (35) | 18:14	46	17:15 (9) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (32) | 08:34		09:40 (37) | 07:21		16:26 (12) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (14) | 17:08	95	15:39 (35) | 18:16	49	17:15 (9) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (13) | 08:32		09:40 (37) | 07:18		16:25 (12) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (14) | 17:11	96	15:39 (35) | 18:19	50	17:15 (9) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (13) | 08:30		09:38 (37) | 07:15		16:23 (12) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (14) | 17:13	96	15:38 (35) | 18:21	52	17:15 (9) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (13) | 08:27		09:36 (37) | 07:13		16:22 (12) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (14) | 17:16	98	15:38 (35) | 18:23	53	17:15 (9) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (13) | 08:25		09:33 (37) | 07:10		16:20 (12) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (14) | 17:18	107	15:57 (7) | 18:26	54	17:14 (9) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (13) | 08:22		09:29 (37) | 07:07		16:19 (12) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (14) | 17:20	114	16:00 (7) | 18:28	54	17:13 (9) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (13) | 08:20		09:27 (37) | 07:04		16:18 (12) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (14) | 17:23	118	16:03 (7) | 18:30	54	17:12 (9) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (13) | 08:17		09:24 (37) | 07:01		16:18 (12) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (14) | 17:25	118	16:04 (7) | 18:33	52	17:10 (9) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (13) | 08:15		09:21 (37) | 06:58		16:17 (12) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (14) | 17:28	114	16:05 (7) | 18:35	51	17:08 (9) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (13) | 08:12		09:18 (37) | 06:56		16:17 (12) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (14) | 17:30	120	16:07 (7) | 18:37	47	17:04 (9) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (13) | 08:10		09:13 (37) | 06:53		16:17 (12) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (14) | 17:33	125	16:08 (7) | 18:40	46	17:03 (12) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (13) | 08:07		09:13 (37) | 06:50		16:17 (12) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (14) | 17:35	123	16:08 (7) | 18:42	46	17:03 (12) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (13) | 08:05		09:13 (37) | 06:47		16:16 (12) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (14) | 17:38	121	16:08 (7) | 18:44	46	17:02 (12) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (13) | 08:02		09:15 (37) | 06:44		16:16 (12) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (14) | 17:40	118	16:09 (7) | 18:47	56	18:01 (17) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (13) | 07:59		09:16 (37) | 06:41		16:16 (12) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (14) | 17:43	114	16:09 (7) | 18:49	60	18:03 (17) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (13) | 07:57		09:17 (37) | 06:38		16:16 (12) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (14) | 17:45	110	16:09 (7) | 18:51	64	18:05 (17) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (13) | 07:54		09:18 (37) | 06:35		16:17 (12) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (14) | 17:48	104	16:08 (7) | 18:54	63	18:05 (17) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (13) | 07:51		09:20 (37) | 06:32		16:17 (12) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (14) | 17:50	95	16:08 (7) | 18:56	64	18:06 (17) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (13) | 07:49		13:09 (26) | 06:30		16:18 (12) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (14) | 17:52	77	16:08 (7) | 18:58	64	18:06 (17) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (13) | 07:46		13:11 (26) | 06:27		16:18 (12) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (14) | 17:55	71	16:07 (7) | 19:00	62	18:06 (17) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (13) | 07:43		13:13 (26) | 06:24		16:20 (12) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (35) | 17:57	66	16:06 (7) | 19:03	61	18:07 (17) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (13) | 07:41		13:16 (26) | 06:21		16:22 (12) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (35) | 18:00	58	16:05 (7) | 19:05	57	18:07 (17) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (13) | 07:38		13:19 (26) | 06:18		16:23 (12) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (35) | 18:02	49	16:04 (7) | 19:07	54	18:06 (17) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (13) |		| 07:15		17:26 (12) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (35) |		| 20:10	47	19:05 (17) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (13) |		| 07:12		17:29 (12) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (35) |		| 20:12	38	19:04 (17) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (13) |		| 07:09		18:41 (17) |			| 04:41	|
	16:53	126	15:37 (35) |		| 20:14	22	19:03 (17) |			| 22:29	|
Potential sun hours	221		| 260		| 365		| 432		| 521	| 547
Total, worst case	| 3257		| 2867		| 1550		| 46		|	|
Sun reduction	| 0,50		| 0,50		| 0,50		| 0,50		|	|
Oper. time red.	| 0,80		| 0,80		| 0,80		| 0,80		|	|
Wind dir. red.	| 0,60		| 0,59		| 0,58		| 0,62		|	|
Total reduction	| 0,24		| 0,24		| 0,23		| 0,25		|	|
Total, real	| 786		| 675		| 361		| 11		|	|

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:39		16:57 (12)	07:51	09:03 (37)	08:59	09:52 (13)
	22:48	22:01	20:39		19:13	53	17:50 (9)	16:49 107	15:26 (7)	15:51 96	14:16 (14)
2	04:33	05:26	06:35		07:41		16:58 (12)	07:53	09:06 (37)	09:01	09:53 (13)
	22:48	21:58	20:37		19:10	54	17:52 (9)	16:46 98	15:08 (35)	15:50 91	14:16 (14)
3	04:34	05:28	06:37		07:44		16:58 (12)	07:56	09:08 (37)	09:03	09:54 (13)
	22:47	21:56	20:34		19:07	54	17:52 (9)	16:44 96	15:08 (35)	15:49 88	14:17 (14)
4	04:35	05:30	06:39		07:46		16:58 (12)	07:58	09:10 (37)	09:05	09:54 (13)
	22:46	21:54	20:31		19:04	54	17:52 (9)	16:41 94	15:08 (35)	15:48 83	14:17 (14)
5	04:36	05:33	06:42		07:48		17:00 (12)	08:01	09:10 (37)	09:07	09:55 (13)
	22:45	21:51	20:28		19:01	52	17:52 (9)	16:39 95	15:09 (35)	15:47 77	14:17 (14)
6	04:37	05:35	06:44		07:50		17:00 (12)	08:03	09:10 (37)	09:08	09:57 (13)
	22:45	21:49	20:25		18:58	52	17:52 (9)	16:37 105	15:09 (35)	15:46 71	14:17 (14)
7	04:38	05:37	06:46		07:53		17:01 (12)	08:06	09:08 (37)	09:10	11:57 (32)
	22:44	21:46	20:22		18:56	50	17:51 (9)	16:34 111	15:09 (35)	15:45 64	14:17 (14)
8	04:40	05:39	06:48		07:55		17:03 (12)	08:08	11:48 (32)	09:12	11:57 (32)
	22:43	21:44	20:19		18:53	48	17:51 (9)	16:32 112	15:09 (35)	15:44 62	14:17 (14)
9	04:41	05:41	06:51	18:40 (17)	07:57		17:04 (12)	08:10	11:47 (32)	09:13	11:59 (32)
	22:41	21:41	20:16	10 18:50 (17)	18:50	46	17:50 (9)	16:30 113	15:09 (35)	15:44 57	14:17 (14)
10	04:42	05:44	06:53	18:37 (17)	07:59		17:06 (12)	08:13	09:45 (13)	09:15	12:00 (32)
	22:40	21:39	20:14	15 18:52 (17)	18:47	40	17:48 (9)	16:27 121	15:08 (35)	15:43 53	14:17 (14)
11	04:44	05:46	06:55	18:35 (17)	08:02		16:22 (7)	08:15	09:42 (13)	09:16	12:01 (32)
	22:39	21:36	20:11	19 18:54 (17)	18:44	36	17:45 (9)	16:25 127	15:08 (35)	15:43 47	14:16 (14)
12	04:45	05:48	06:57	18:34 (17)	08:04		16:18 (7)	08:17	09:41 (13)	09:17	12:03 (32)
	22:38	21:34	20:08	21 18:55 (17)	18:42	25	17:41 (9)	16:23 130	15:08 (35)	15:42 44	14:17 (14)
13	04:47	05:50	06:59	17:21 (12)	08:06		13:56 (26)	08:20	09:39 (13)	09:19	12:04 (32)
	22:36	21:31	20:05	37 18:55 (17)	18:39	42	17:38 (9)	16:21 131	15:06 (35)	15:42 39	14:17 (14)
14	04:49	05:53	07:02	17:17 (12)	08:09		13:50 (26)	08:22	09:39 (13)	09:20	12:07 (32)
	22:35	21:29	20:02	45 18:55 (17)	18:36	53	16:37 (7)	16:19 131	15:05 (35)	15:42 34	14:17 (14)
15	04:50	05:55	07:04	17:13 (12)	08:11		13:46 (26)	08:25	09:39 (13)	09:21	13:06 (26)
	22:33	21:26	19:59	52 18:55 (17)	18:33	62	16:37 (7)	16:17 128	15:03 (35)	15:42 26	14:16 (14)
16	04:52	05:57	07:06	17:11 (12)	08:13		13:44 (26)	08:27	09:39 (13)	09:22	13:08 (26)
	22:32	21:23	19:56	56 18:55 (17)	18:30	69	16:39 (7)	16:15 124	15:02 (35)	15:42 22	14:15 (14)
17	04:54	05:59	07:08	17:08 (12)	08:16		13:41 (26)	08:29	09:38 (13)	09:23	13:10 (26)
	22:30	21:21	19:53	59 18:54 (17)	18:28	75	16:39 (7)	16:13 125	14:07 (14)	15:42 18	14:15 (14)
18	04:56	06:02	07:10	17:07 (12)	08:18		09:55 (37)	08:32	09:38 (13)	09:24	13:12 (26)
	22:29	21:18	19:50	63 18:55 (17)	18:25	86	16:39 (7)	16:11 129	14:09 (14)	15:42 16	14:15 (14)
19	04:58	06:04	07:12	17:06 (12)	08:20		09:51 (37)	08:34	09:39 (13)	09:25	13:16 (3)
	22:27	21:15	19:47	63 18:54 (17)	18:22	98	16:39 (7)	16:09 131	14:11 (14)	15:42 11	14:15 (14)
20	04:59	06:06	07:15	17:04 (12)	08:23		09:49 (37)	08:36	09:38 (13)	09:25	13:16 (3)
	22:25	21:13	19:45	65 18:53 (17)	18:20	106	16:40 (7)	16:07 129	14:11 (14)	15:42 9	14:14 (14)
21	05:01	06:08	07:17	17:03 (12)	08:25		09:46 (37)	08:38	09:39 (13)	09:26	13:17 (3)
	22:23	21:10	19:42	64 18:51 (17)	18:17	113	16:39 (7)	16:06 131	14:13 (14)	15:43 9	14:15 (14)
22	05:03	06:11	07:19	17:01 (12)	08:27		09:45 (37)	08:41	09:38 (13)	09:26	13:18 (3)
	22:21	21:07	19:39	64 18:50 (17)	18:14	116	16:39 (7)	16:04 131	14:13 (14)	15:43 9	14:16 (14)
23	05:05	06:13	07:21	17:00 (12)	08:30		09:44 (37)	08:43	09:39 (13)	09:27	13:18 (3)
	22:19	21:05	19:36	62 18:48 (17)	18:12	119	16:38 (7)	16:02 128	14:14 (14)	15:44 9	14:16 (14)
24	05:07	06:15	07:24	17:00 (12)	08:32		09:43 (37)	08:45	09:39 (13)	09:27	13:18 (3)
	22:18	21:02	19:33	58 18:46 (17)	18:09	122	16:38 (7)	16:01 127	14:14 (14)	15:44 11	14:17 (14)
25	05:09	06:17	07:26	16:59 (12)	07:34		08:43 (37)	08:47	09:40 (13)	09:28	13:15 (26)
	22:16	20:59	19:30	46 17:45 (12)	17:06	123	15:38 (7)	15:59 124	14:15 (14)	15:45 14	14:17 (14)
26	05:11	06:19	07:28	16:58 (12)	07:37		08:44 (37)	08:49	09:40 (13)	09:28	13:14 (26)
	22:14	20:56	19:27	47 17:45 (12)	17:04	122	15:37 (7)	15:58 119	14:15 (14)	15:46 17	14:18 (14)
27	05:13	06:22	07:30	16:58 (12)	07:39		08:48 (37)	08:51	09:49 (13)	09:28	13:13 (26)
	22:11	20:53	19:24	46 17:44 (12)	17:01	118	15:36 (7)	15:56 112	14:16 (14)	15:47 20	14:19 (14)
28	05:15	06:24	07:32	16:58 (12)	07:41		08:51 (37)	08:53	09:49 (13)	09:28	13:12 (26)
	22:09	20:51	19:21	46 17:44 (12)	16:59	115	15:35 (7)	15:55 109	14:16 (14)	15:48 24	14:21 (14)
29	05:17	06:26	07:35	16:58 (12)	07:44		08:54 (37)	08:55	09:50 (13)	09:28	12:14 (32)
	22:07	20:48	19:19	50 17:48 (9)	16:56	119	15:34 (7)	15:53 106	14:16 (14)	15:49 31	14:23 (14)
30	05:20	06:28	07:37	16:57 (12)	07:46		08:57 (37)	08:57	09:50 (13)	09:28	12:13 (32)
	22:05	20:45	19:16	52 17:49 (9)	16:53	117	15:32 (7)	15:52 103	14:16 (14)	15:50 37	14:25 (14)
31	05:22	06:31			07:49		08:59 (37)			09:28	12:12 (32)
	22:03	20:42			16:51	115	15:29 (7)			15:51 41	14:25 (14)
Potential sun hours	546	478	386		319			236		199	
Total, worst case				1040		2454		3527		1230	
Sun reduction				0,50		0,50		0,50		0,50	
Oper. time red.				0,80		0,80		0,80		0,80	
Wind dir. red.				0,59		0,59		0,60		0,59	
Total reduction				0,24		0,24		0,24		0,24	
Total, real				245		577		846		289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1)	04:31	20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1)	22:48	17 20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)			05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521		547		545		478	386	319	236	200
Total, worst case						5		469		150					
Sun reduction						0,50		0,50		0,50					
Oper. time red.						0,80		0,80		0,80					
Wind dir. red.						0,73		0,73		0,73					
Total reduction						0,29		0,29		0,29					
Total, real						1		138		44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April			May			June		
1	09:28	08:46	07:35	07:07			05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56	18:05	20:17			21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43	07:33	07:04			05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59	18:07	20:19			21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41	07:30	07:01			05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01	18:10	20:21			21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39	07:27	06:58			05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04	18:12	20:24			21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37	07:24	06:55			05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06	18:14	20:26			21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34	07:21	06:53			05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09	18:17	20:28			21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32	07:19	06:50			05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11	18:19	20:31			21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	07:16	06:47			05:27			04:32		06:15 (36)
	16:04	17:14	18:21	20:33			21:42			22:40	29	06:44 (36)
9	09:23	08:27	07:13	06:44			05:24			04:31		06:16 (36)
	16:06	17:16	18:24	20:35			21:44			22:42	29	06:45 (36)
10	09:22	08:25	07:10	06:41		07:48 (38)	05:22			04:31		06:15 (36)
	16:07	17:18	18:26	20:37	10	07:58 (38)	21:46			22:43	30	06:45 (36)
11	09:21	08:23	07:07	06:38		07:45 (38)	05:20			04:30		06:16 (36)
	16:09	17:21	18:28	20:40	17	08:02 (38)	21:49			22:44	29	06:45 (36)
12	09:20	08:20	07:04	06:36		07:41 (38)	05:17			04:29		06:15 (36)
	16:11	17:23	18:31	20:42	22	08:03 (38)	21:51			22:45	30	06:45 (36)
13	09:18	08:18	07:02	06:33		07:37 (38)	05:15			04:29		06:16 (36)
	16:13	17:26	18:33	20:44	27	08:04 (38)	21:53			22:46	30	06:46 (36)
14	09:17	08:15	06:59	06:30		07:35 (38)	05:13			04:28		06:16 (36)
	16:15	17:28	18:35	20:47	30	08:05 (38)	21:55			22:46	30	06:46 (36)
15	09:16	08:13	06:56	06:27		07:34 (38)	05:11			04:28		06:15 (36)
	16:17	17:31	18:38	20:49	33	08:07 (38)	21:57			22:47	31	06:46 (36)
16	09:14	08:10	06:53	06:24		07:33 (38)	05:09			04:28		06:16 (36)
	16:19	17:33	18:40	20:51	34	08:07 (38)	22:00			22:48	30	06:46 (36)
17	09:13	08:07	06:50	06:22		07:32 (38)	05:06			04:27		06:16 (36)
	16:21	17:36	18:42	20:54	35	08:07 (38)	22:02			22:48	31	06:47 (36)
18	09:12	08:05	06:47	06:19		07:31 (38)	05:04			04:27		06:16 (36)
	16:24	17:38	18:45	20:56	37	08:08 (38)	22:04			22:49	31	06:47 (36)
19	09:10	08:02	06:44	06:16		07:30 (38)	05:02			04:27		06:16 (36)
	16:26	17:41	18:47	20:58	38	08:08 (38)	22:06			22:49	31	06:47 (36)
20	09:08	08:00	06:42	06:13		07:30 (38)	05:00			04:27		06:16 (36)
	16:28	17:43	18:49	21:00	39	08:09 (38)	22:08			22:50	31	06:47 (36)
21	09:07	07:57	06:39	06:11		07:30 (38)	04:58			04:27		06:16 (36)
	16:30	17:46	18:52	21:03	38	08:08 (38)	22:10			22:50	31	06:47 (36)
22	09:05	07:54	06:36	06:08		07:29 (38)	04:56			04:27		06:17 (36)
	16:32	17:48	18:54	21:05	39	08:08 (38)	22:12			22:50	31	06:48 (36)
23	09:03	07:52	06:33	06:05		07:29 (38)	04:55			04:28		06:17 (36)
	16:35	17:50	18:56	21:07	39	08:08 (38)	22:14			22:50	31	06:48 (36)
24	09:02	07:49	06:30	06:02		07:29 (38)	04:53			04:28		06:17 (36)
	16:37	17:53	18:58	21:10	38	08:07 (38)	22:16			22:50	31	06:48 (36)
25	09:00	07:46	06:27	06:00		07:29 (38)	04:51			04:28		06:18 (36)
	16:39	17:55	19:01	21:12	38	08:07 (38)	22:18			22:50	31	06:49 (36)
26	08:58	07:44	06:24	05:57		07:29 (38)	04:49		06:24 (36)	04:29		06:18 (36)
	16:42	17:58	19:03	21:14	37	08:06 (38)	22:20	8	06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41	06:21	05:54		07:29 (38)	04:48		06:21 (36)	04:29		06:19 (36)
	16:44	18:00	19:05	21:17	37	08:06 (38)	22:22	13	06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38	06:18	05:52		07:29 (38)	04:46		06:20 (36)	04:30		06:18 (36)
	16:47	18:02	19:08	21:19	36	08:05 (38)	22:24	16	06:36 (36)	22:50	31	06:49 (36)
29	08:52		07:16	05:49		07:30 (38)	04:44		06:19 (36)	04:31		06:19 (36)
	16:49		20:10	21:21	34	08:04 (38)	22:25	18	06:37 (36)	22:49	30	06:49 (36)
30	08:50		07:13	05:47		07:30 (38)	04:43		06:19 (36)	04:31		06:19 (36)
	16:51		20:12	21:24	33	08:03 (38)	22:27	20	06:39 (36)	22:49	30	06:49 (36)
31	08:48		07:10				04:41		06:17 (36)			
	16:54		20:14				22:29	22	06:39 (36)			
Potential sun hours	221	260	365	432			521			547		
Total, worst case					691			254			878	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,65			0,62			0,58	
Total reduction					0,26			0,25			0,23	
Total, real					178			63			204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October	November	December
1	04:32		06:20 (36)	05:24			06:33		07:44 (38)	07:39	07:51	09:00
	22:48	30	06:50 (36)	22:01			20:40	17	08:01 (38)	19:13	16:49	15:51
2	04:33		06:20 (36)	05:27			06:35		07:47 (38)	07:42	07:54	09:01
	22:48	30	06:50 (36)	21:58			20:37	10	07:57 (38)	19:10	16:47	15:50
3	04:34		06:20 (36)	05:29			06:38			07:44	07:56	09:03
	22:47	29	06:49 (36)	21:56			20:34			19:07	16:44	15:49
4	04:35		06:20 (36)	05:31			06:40			07:46	07:59	09:05
	22:46	29	06:49 (36)	21:54			20:31			19:05	16:42	15:48
5	04:36		06:21 (36)	05:33			06:42			07:48	08:01	09:07
	22:46	28	06:49 (36)	21:51			20:28			19:02	16:39	15:47
6	04:38		06:21 (36)	05:35		07:49 (38)	06:44			07:51	08:03	09:09
	22:45	28	06:49 (36)	21:49	13	08:02 (38)	20:25			18:59	16:37	15:47
7	04:39		06:23 (36)	05:38		07:46 (38)	06:47			07:53	08:06	09:10
	22:44	27	06:50 (36)	21:47	18	08:04 (38)	20:23			18:56	16:35	15:46
8	04:40		06:23 (36)	05:40		07:44 (38)	06:49			07:55	08:08	09:12
	22:43	26	06:49 (36)	21:44	22	08:06 (38)	20:20			18:53	16:32	15:45
9	04:42		06:23 (36)	05:42		07:43 (38)	06:51			07:57	08:11	09:13
	22:42	26	06:49 (36)	21:42	25	08:08 (38)	20:17			18:50	16:30	15:44
10	04:43		06:24 (36)	05:44		07:41 (38)	06:53			08:00	08:13	09:15
	22:40	24	06:48 (36)	21:39	28	08:09 (38)	20:14			18:48	16:28	15:44
11	04:45		06:25 (36)	05:46		07:40 (38)	06:55			08:02	08:15	09:16
	22:39	23	06:48 (36)	21:37	30	08:10 (38)	20:11			18:45	16:26	15:43
12	04:46		06:25 (36)	05:49		07:39 (38)	06:58			08:04	08:18	09:17
	22:38	23	06:48 (36)	21:34	32	08:11 (38)	20:08			18:42	16:24	15:43
13	04:48		06:26 (36)	05:51		07:38 (38)	07:00			08:07	08:20	09:19
	22:36	21	06:47 (36)	21:32	33	08:11 (38)	20:05			18:39	16:22	15:43
14	04:49		06:28 (36)	05:53		07:37 (38)	07:02			08:09	08:22	09:20
	22:35	18	06:46 (36)	21:29	35	08:12 (38)	20:02			18:36	16:19	15:43
15	04:51		06:28 (36)	05:55		07:36 (38)	07:04			08:11	08:25	09:21
	22:34	17	06:45 (36)	21:26	36	08:12 (38)	19:59			18:34	16:17	15:42
16	04:53		06:30 (36)	05:58		07:36 (38)	07:06			08:14	08:27	09:22
	22:32	14	06:44 (36)	21:24	37	08:13 (38)	19:57			18:31	16:15	15:42
17	04:54		06:31 (36)	06:00		07:35 (38)	07:09			08:16	08:29	09:23
	22:30	11	06:42 (36)	21:21	38	08:13 (38)	19:54			18:28	16:13	15:42
18	04:56		06:35 (36)	06:02		07:36 (38)	07:11			08:18	08:32	09:24
	22:29	5	06:40 (36)	21:18	38	08:14 (38)	19:51			18:25	16:12	15:42
19	04:58			06:04		07:35 (38)	07:13			08:21	08:34	09:25
	22:27			21:16	39	08:14 (38)	19:48			18:23	16:10	15:43
20	05:00			06:07		07:35 (38)	07:15			08:23	08:36	09:25
	22:25			21:13	38	08:13 (38)	19:45			18:20	16:08	15:43
21	05:02			06:09		07:34 (38)	07:17			08:25	08:39	09:26
	22:23			21:10	39	08:13 (38)	19:42			18:17	16:06	15:43
22	05:04			06:11		07:34 (38)	07:20			08:28	08:41	09:27
	22:22			21:08	39	08:13 (38)	19:39			18:15	16:04	15:44
23	05:06			06:13		07:34 (38)	07:22			08:30	08:43	09:27
	22:20			21:05	38	08:12 (38)	19:36			18:12	16:03	15:44
24	05:08			06:15		07:34 (38)	07:24			08:32	08:45	09:28
	22:18			21:02	37	08:11 (38)	19:33			18:09	16:01	15:45
25	05:10			06:18		07:34 (38)	07:26			07:35	08:47	09:28
	22:16			20:59	37	08:11 (38)	19:30			17:07	16:00	15:46
26	05:12			06:20		07:34 (38)	07:28			07:37	08:50	09:28
	22:14			20:57	36	08:10 (38)	19:28			17:04	15:58	15:46
27	05:14			06:22		07:35 (38)	07:31			07:39	08:52	09:28
	22:12			20:54	34	08:09 (38)	19:25			17:02	15:57	15:47
28	05:16			06:24		07:35 (38)	07:33			07:42	08:54	09:28
	22:10			20:51	32	08:07 (38)	19:22			16:59	15:55	15:48
29	05:18			06:27		07:36 (38)	07:35			07:44	08:56	09:28
	22:07			20:48	30	08:06 (38)	19:19			16:56	15:54	15:49
30	05:20			06:29		07:38 (38)	07:37			07:47	08:58	09:28
	22:05			20:45	27	08:05 (38)	19:16			16:54	15:53	15:50
31	05:22			06:31		07:41 (38)				07:49		09:28
	22:03			20:43	22	08:03 (38)				16:51		15:51
Potential sun hours	545			478			386			319	236	200
Total, worst case		409			833			27				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,58			0,65			0,65				
Total reduction		0,23			0,26			0,26				
Total, real		95			215			7				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		06:01 (38)	04:32	06:06 (38)	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	34	06:35 (38)	22:48	37 06:43 (38)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:01 (38)	04:33	06:07 (38)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	35	06:36 (38)	22:48	36 06:43 (38)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:01 (38)	04:34	06:06 (38)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30		22:33	35	06:36 (38)	22:47	37 06:43 (38)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:00 (38)	04:35	06:06 (38)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	36	06:36 (38)	22:46	37 06:43 (38)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:01 (38)	04:37	06:06 (38)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	36	06:37 (38)	22:46	37 06:43 (38)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:01 (38)	04:38	06:08 (38)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	36	06:37 (38)	22:45	36 06:44 (38)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:01 (38)	04:39	06:08 (38)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	36	06:37 (38)	22:44	36 06:44 (38)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:01 (38)	04:40	06:08 (38)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	36	06:37 (38)	22:43	36 06:44 (38)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:02 (38)	04:42	06:08 (38)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	36	06:38 (38)	22:42	36 06:44 (38)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:01 (38)	04:43	06:08 (38)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	37	06:38 (38)	22:40	35 06:43 (38)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:02 (38)	04:45	06:09 (38)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	37	06:39 (38)	22:39	35 06:44 (38)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:02 (38)	04:46	06:09 (38)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	36	06:38 (38)	22:38	35 06:44 (38)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:02 (38)	04:48	06:09 (38)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	37	06:39 (38)	22:36	34 06:43 (38)	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:03 (38)	04:49	06:10 (38)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	36	06:39 (38)	22:35	33 06:43 (38)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:02 (38)	04:51	06:10 (38)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	37	06:39 (38)	22:34	33 06:43 (38)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		04:28		06:02 (38)	04:53	06:11 (38)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00		22:48	37	06:39 (38)	22:32	32 06:43 (38)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	06:12 (38)	04:27		06:03 (38)	04:54	06:11 (38)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	10 06:22 (38)	22:48	37	06:40 (38)	22:30	31 06:42 (38)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	06:11 (38)	04:27		06:03 (38)	04:56	06:12 (38)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	14 06:25 (38)	22:49	37	06:40 (38)	22:29	30 06:42 (38)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	06:09 (38)	04:27		06:03 (38)	04:58	06:13 (38)	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	18 06:27 (38)	22:49	37	06:40 (38)	22:27	29 06:42 (38)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	06:08 (38)	04:27		06:03 (38)	05:00	06:13 (38)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	20 06:28 (38)	22:50	37	06:40 (38)	22:25	28 06:41 (38)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	06:06 (38)	04:27		06:03 (38)	05:02	06:14 (38)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	23 06:29 (38)	22:50	37	06:40 (38)	22:23	27 06:41 (38)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	06:05 (38)	04:27		06:04 (38)	05:04	06:16 (38)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	25 06:30 (38)	22:50	37	06:41 (38)	22:22	24 06:40 (38)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	06:03 (38)	04:28		06:04 (38)	05:06	06:17 (38)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	28 06:31 (38)	22:50	37	06:41 (38)	22:20	21 06:38 (38)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	06:03 (38)	04:28		06:04 (38)	05:08	06:18 (38)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	29 06:32 (38)	22:50	37	06:41 (38)	22:18	19 06:37 (38)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	06:02 (38)	04:28		06:05 (38)	05:10	06:20 (38)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	30 06:32 (38)	22:50	37	06:42 (38)	22:16	16 06:36 (38)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	06:02 (38)	04:29		06:05 (38)	05:12	06:22 (38)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	31 06:33 (38)	22:50	36	06:41 (38)	22:14	12 06:34 (38)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	06:01 (38)	04:29		06:05 (38)	05:14	06:25 (38)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	32 06:33 (38)	22:50	37	06:42 (38)	22:12	6 06:31 (38)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	06:01 (38)	04:30		06:05 (38)	05:16		06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	33 06:34 (38)	22:50	37	06:42 (38)	22:10		20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	06:01 (38)	04:31		06:05 (38)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	34 06:35 (38)	22:49	37	06:42 (38)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	06:01 (38)	04:32		06:06 (38)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34 06:35 (38)	22:49	37	06:43 (38)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41	06:01 (38)				05:22		06:31		07:49		09:28
	16:54		20:14		22:29	34 06:35 (38)				22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						395		1094		808						
Sun reduction						0,50		0,50		0,50						
Oper. time red.						0,80		0,80		0,80						
Wind dir. red.						0,58		0,58		0,58						
Total reduction						0,23		0,23		0,23						
Total, real						91		252		186						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		04:32		05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:18 (38)	33	06:51 (38)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (38)		06:19 (38)	22:01	20:40	19:13	16:49
	15:54	16:59	18:07	20:19	21:28		22:32	28	04:33	33	06:52 (38)	05:27	06:35	07:42	07:54
3	09:27	08:41	07:30	07:01	05:39		04:38		06:46 (38)		06:18 (38)	21:58	20:37	19:10	16:47
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:17 (38)	33	06:51 (38)	05:29	06:38	07:44	07:56
4	09:26	08:39	07:27	06:58	05:37		04:36		06:46 (38)		06:18 (38)	21:56	20:34	19:07	16:44
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:16 (38)	33	06:51 (38)	05:31	06:40	07:46	07:59
5	09:26	08:37	07:24	06:55	05:34		04:35		06:46 (38)		06:51 (38)	21:54	20:31	19:05	16:42
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:16 (38)	33	06:19 (38)	05:33	06:42	07:48	08:01
6	09:25	08:34	07:21	06:53	05:32		04:34		06:47 (38)		06:52 (38)	21:51	20:28	19:02	16:39
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:15 (38)	32	06:21 (38)	05:35	06:44	07:51	08:03
7	09:24	08:32	07:19	06:50	05:29		04:33		06:47 (38)		06:53 (38)	21:49	20:25	18:59	16:37
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:14 (38)	32	06:22 (38)	05:38	06:47	07:53	08:06
8	09:24	08:30	07:16	06:47	05:27		04:32		06:46 (38)		06:53 (38)	21:47	20:23	18:56	16:35
	16:04	17:14	18:21	20:33	21:42		22:40	33	04:40	31	06:23 (38)	05:40	06:49	07:55	08:08
9	09:23	08:27	07:13	06:44	05:24		04:31		06:46 (38)		06:53 (38)	21:44	20:20	18:53	16:32
	16:06	17:16	18:24	20:35	21:44		22:41	33	04:43	30	06:24 (38)	05:42	06:51	07:57	08:11
10	09:22	08:25	07:10	06:41	05:22		04:31		06:47 (38)		06:53 (38)	21:42	20:17	18:50	16:30
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:13 (38)	29	06:25 (38)	05:44	06:53	08:00	08:13
11	09:21	08:23	07:07	06:38	05:20		04:30		04:40		06:53 (38)	21:39	20:14	18:48	16:28
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:46 (38)	28	06:26 (38)	05:46	06:55	08:02	08:15
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (38)		06:54 (38)	21:37	20:11	18:45	16:26
	16:11	17:23	18:31	20:42	21:51		22:45	32	04:46	28	06:27 (38)	05:49	06:58	08:04	08:18
13	09:18	08:18	07:02	06:33	05:15		04:29		06:46 (38)		06:54 (38)	21:34	20:08	18:42	16:24
	16:13	17:26	18:33	20:44	21:53		22:46	33	04:48	27	06:28 (38)	05:51	07:00	08:07	08:20
14	09:17	08:15	06:59	06:30	05:13		04:28		06:47 (38)		06:54 (38)	21:32	20:05	18:39	16:22
	16:15	17:28	18:35	20:47	21:55		22:46	32	04:49	26	06:30 (38)	05:53	07:02	08:09	08:22
15	09:16	08:13	06:56	06:27	05:11		04:28		06:47 (38)		06:54 (38)	21:29	20:02	18:36	16:19
	16:17	17:31	18:38	20:49	21:57		22:47	32	04:51	24	06:31 (38)	05:55	07:04	08:11	08:25
16	09:14	08:10	06:53	06:24	05:09		04:28		06:47 (38)		06:54 (38)	21:26	19:59	18:34	16:17
	16:19	17:33	18:40	20:51	22:00	2	06:39 (38)	32	06:15 (38)	23	06:33 (38)	05:58	07:06	08:14	08:27
17	09:13	08:07	06:50	06:22	05:06		04:28		04:53		06:55 (38)	21:24	19:57	18:31	16:15
	16:21	17:36	18:42	20:54	22:02	4	06:41 (38)	32	06:47 (38)	22	06:33 (38)	06:00	07:09	08:16	08:29
18	09:12	08:05	06:47	06:19	05:04		04:27		06:15 (38)		06:54 (38)	21:21	19:54	18:28	16:14
	16:24	17:38	18:45	20:56	22:04	7	06:36 (38)	32	06:47 (38)	21	06:35 (38)	06:02	07:11	08:18	08:32
19	09:10	08:02	06:44	06:16	05:02		04:27		04:54		06:55 (38)	21:18	19:51	18:25	16:12
	16:26	17:41	18:47	20:58	22:06	8	06:43 (38)	31	06:16 (38)	20	06:37 (38)	06:04	07:13	08:21	08:34
20	09:08	08:00	06:42	06:13	05:00		04:27		04:58		06:55 (38)	21:16	19:48	18:23	16:10
	16:28	17:43	18:49	21:00	22:08	10	06:33 (38)	31	06:47 (38)	18	06:38 (38)	06:07	07:15	08:23	08:36
21	09:07	07:57	06:39	06:11	04:58		04:27		06:16 (38)		06:54 (38)	21:13	19:45	18:20	16:08
	16:30	17:46	18:52	21:03	22:10	12	06:31 (38)	31	06:47 (38)	16	06:39 (38)	06:09	07:17	08:25	08:39
22	09:05	07:54	06:36	06:08	04:56		04:27		05:02		06:54 (38)	21:10	19:42	18:17	16:06
	16:32	17:48	18:54	21:05	22:12	14	06:43 (38)	31	06:47 (38)	15	06:41 (38)	06:11	07:20	08:28	08:41
23	09:03	07:52	06:33	06:05	04:55		04:27		06:16 (38)		06:54 (38)	21:08	19:39	18:15	16:04
	16:35	17:50	18:56	21:07	22:14	15	06:44 (38)	31	06:47 (38)	13	06:42 (38)	06:13	07:22	08:30	08:43
24	09:02	07:49	06:30	06:02	04:53		04:28		06:17 (38)		06:53 (38)	21:05	19:36	18:12	16:03
	16:37	17:53	18:58	21:10	22:16	17	06:45 (38)	31	06:48 (38)	11	06:44 (38)	06:15	07:24	08:32	08:45
25	09:00	07:46	06:27	06:00	04:51		04:28		06:17 (38)		06:53 (38)	21:02	19:33	18:09	16:01
	16:39	17:55	19:01	21:12	22:18	19	06:26 (38)	31	06:48 (38)	9	06:45 (38)	06:18	07:26	07:35	08:47
26	08:58	07:44	06:24	05:57	04:49		04:28		06:18 (38)		06:53 (38)	20:59	19:30	17:07	16:00
	16:42	17:58	19:03	21:14	22:20	20	06:45 (38)	31	06:49 (38)	8	06:47 (38)	06:20	07:28	07:37	08:49
27	08:56	07:41	06:21	05:54	04:48		04:29		05:10		06:53 (38)	20:57	19:28	17:04	15:58
	16:44	18:00	19:05	21:17	22:22	22	06:23 (38)	32	06:49 (38)	6	06:49 (38)	06:22	07:31	07:39	08:52
28	08:54	07:38	06:18	05:52	04:46		04:29		06:18 (38)		06:52 (38)	20:54	19:25	17:02	15:57
	16:47	18:02	19:08	21:19	22:24	22	06:45 (38)	32	06:50 (38)	3	06:51 (38)	06:24	07:33	07:42	08:54
29	08:52		07:16	05:49	04:44		06:22 (38)	32	06:17 (38)	32	06:52 (38)	20:51	19:22	16:59	15:55
	16:49		20:10	21:21	22:25	24	04:31		06:49 (38)	1		06:27	07:35	07:44	08:56
30	08:50		07:13	05:47	04:43		06:46 (38)	32	06:18 (38)			20:48	19:19	16:56	15:54
	16:51		20:12	21:24	22:27	25	06:21 (38)	32	05:14			06:29	07:37	07:47	08:58
31	08:48		07:10		04:41		04:32		06:18 (38)			20:45	19:16	16:54	15:53
	16:54		20:14		22:29	26	06:19 (38)	33	05:20			06:31		07:49	
Potential sun hours	221	260	365	432	521		06:45 (38)		05:22			20:43		16:51	
Total, worst case						247		547		545			478	386	319	236	200
Sun reduction								944		606							
Oper. time red.						0,50		0,50		0,50							
Wind dir. red.						0,80		0,80		0,80							
Total reduction						0,58		0,58		0,58							
Total, real						0,23		0,23		0,23							
						58		220		141							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 15:53	08:46 16:56	07:35 18:05	07:07 20:17	05:44 21:26 1	07:08 (38) | 04:40 07:09 (38) | 22:30 32	06:45 (38) | 04:32 07:17 (38) | 22:48 23	06:56 (38) | 05:24 07:19 (38) | 22:01 33	06:57 (38) | 06:33 07:30 (38) | 20:40	07:39 19:13	07:51 16:49	09:00 15:52
2	09:27 15:54	08:43 16:59	07:33 18:07	07:04 20:19	05:42 21:28 6	07:06 (38) | 04:39 07:12 (38) | 22:32 31	06:46 (38) | 04:33 07:17 (38) | 22:48 24	06:56 (38) | 05:27 07:20 (38) | 21:58 31	06:59 (38) | 06:35 07:30 (38) | 20:37	07:42 19:10	07:54 16:47	09:01 15:50
3	09:27 15:56	08:41 17:01	07:30 18:10	07:01 20:21	05:39 21:31 9	07:04 (38) | 04:38 07:13 (38) | 22:33 31	06:46 (38) | 04:34 07:17 (38) | 22:47 25	06:55 (38) | 05:29 07:20 (38) | 21:56 28	07:01 (38) | 06:38 07:29 (38) | 20:34	07:44 19:07	07:56 16:44	09:03 15:49
4	09:26 15:57	08:39 17:04	07:27 18:12	06:58 20:24	05:37 21:33 13	07:02 (38) | 04:36 07:15 (38) | 22:35 29	06:47 (38) | 04:35 07:16 (38) | 22:46 25	06:55 (38) | 05:31 07:20 (38) | 21:54 26	07:03 (38) | 06:40 07:29 (38) | 20:31	07:46 19:05	07:59 16:42	09:05 15:48
5	09:26 15:59	08:37 17:06	07:24 18:14	06:55 20:26	05:34 21:35 16	07:00 (38) | 04:35 07:16 (38) | 22:36 29	06:48 (38) | 04:37 07:17 (38) | 22:46 27	06:54 (38) | 05:33 07:21 (38) | 21:51 23	07:05 (38) | 06:42 07:28 (38) | 20:28	07:48 19:02	08:01 16:39	09:07 15:47
6	09:25 16:00	08:34 17:09	07:21 18:17	06:53 20:28	05:32 21:37 19	06:58 (38) | 04:34 07:17 (38) | 22:38 27	06:49 (38) | 04:38 07:16 (38) | 22:45 28	06:55 (38) | 05:35 07:23 (38) | 21:49 21	07:06 (38) | 06:44 07:27 (38) | 20:25	07:51 18:59	08:03 16:37	09:09 15:47
7	09:24 16:02	08:32 17:11	07:19 18:19	06:50 20:31	05:29 21:40 22	06:55 (38) | 04:33 07:17 (38) | 22:39 27	06:49 (38) | 04:39 07:16 (38) | 22:44 28	06:55 (38) | 05:38 07:23 (38) | 21:47 18	07:08 (38) | 06:47 07:26 (38) | 20:23	07:53 18:56	08:06 16:35	09:10 15:46
8	09:24 16:04	08:30 17:14	07:16 18:21	06:47 20:33	05:27 21:42 24	06:54 (38) | 04:32 07:18 (38) | 22:40 26	06:49 (38) | 04:40 07:15 (38) | 22:43 30	06:54 (38) | 05:40 07:24 (38) | 21:44 15	07:10 (38) | 06:49 07:25 (38) | 20:20	07:55 18:53	08:08 16:32	09:12 15:45
9	09:23 16:06	08:27 17:16	07:13 18:24	06:44 20:35	05:24 21:44 27	06:52 (38) | 04:31 07:19 (38) | 22:42 26	06:50 (38) | 04:42 07:16 (38) | 22:42 30	06:54 (38) | 05:42 07:24 (38) | 21:42 12	07:12 (38) | 06:51 07:24 (38) | 20:17	07:57 18:50	08:11 16:30	09:13 15:44
10	09:22 16:07	08:25 17:18	07:10 18:26	06:41 20:37	05:22 21:46 29	06:50 (38) | 04:31 07:19 (38) | 22:43 24	06:51 (38) | 04:43 07:15 (38) | 22:40 31	06:53 (38) | 05:44 07:24 (38) | 21:39 9	07:13 (38) | 06:53 07:22 (38) | 20:14	08:00 18:48	08:13 16:28	09:15 15:44
11	09:21 16:09	08:23 17:21	07:07 18:28	06:38 20:40	05:20 21:49 32	06:48 (38) | 04:30 07:20 (38) | 22:44 23	06:52 (38) | 04:45 07:15 (38) | 22:39 32	06:54 (38) | 05:46 07:26 (38) | 21:37 5	07:15 (38) | 06:55 07:20 (38) | 20:11	08:02 18:45	08:15 16:26	09:16 15:43
12	09:20 16:11	08:20 17:23	07:04 18:31	06:36 20:42	05:17 21:51 34	06:46 (38) | 04:29 07:20 (38) | 22:45 22	06:52 (38) | 04:46 07:14 (38) | 22:38 33	06:53 (38) | 05:49 07:26 (38) | 21:34	06:58 20:08	08:04 18:42	08:18 16:24	09:17 15:43
13	09:18 16:13	08:18 17:26	07:02 18:33	06:33 20:44	05:15 21:53 35	06:45 (38) | 04:29 07:20 (38) | 22:46 21	06:53 (38) | 04:48 07:14 (38) | 22:36 33	06:53 (38) | 05:51 07:26 (38) | 21:32	07:00 20:05	08:07 18:39	08:20 16:22	09:19 15:43
14	09:17 16:15	08:15 17:28	06:59 18:35	06:30 20:47	05:13 21:55 37	06:43 (38) | 04:28 07:20 (38) | 22:46 22	06:53 (38) | 04:49 07:15 (38) | 22:35 34	06:53 (38) | 05:53 07:27 (38) | 21:29	07:02 20:02	08:09 18:36	08:22 16:19	09:20 15:43
15	09:16 16:17	08:13 17:31	06:56 18:38	06:27 20:49	05:11 21:57 39	06:41 (38) | 04:28 07:20 (38) | 22:47 21	06:53 (38) | 04:51 07:14 (38) | 22:34 35	06:52 (38) | 05:55 07:27 (38) | 21:26	07:04 19:59	08:11 18:34	08:25 16:17	09:21 15:42
16	09:14 16:19	08:10 17:33	06:53 18:40	06:24 20:51	05:09 22:00 39	06:41 (38) | 04:28 07:20 (38) | 22:48 20	06:54 (38) | 04:53 07:14 (38) | 22:32 36	06:52 (38) | 05:58 07:28 (38) | 21:24	07:06 19:57	08:14 18:31	08:27 16:15	09:22 15:42
17	09:13 16:21	08:07 17:36	06:50 18:42	06:22 20:54	05:06 22:02 40	06:40 (38) | 04:27 07:20 (38) | 22:48 20	06:54 (38) | 04:54 07:14 (38) | 22:30 36	06:52 (38) | 06:00 07:28 (38) | 21:21	07:09 19:54	08:16 18:28	08:29 16:13	09:23 15:42
18	09:12 16:24	08:05 17:38	06:47 18:45	06:19 20:56	05:04 22:04 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:56 07:14 (38) | 22:29 37	06:52 (38) | 06:02 07:29 (38) | 21:18	07:11 19:51	08:18 18:25	08:32 16:12	09:24 15:42
19	09:10 16:26	08:02 17:41	06:44 18:47	06:16 20:58	05:02 22:06 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:58 07:14 (38) | 22:27 38	06:52 (38) | 06:04 07:30 (38) | 21:16	07:13 19:48	08:21 18:23	08:34 16:10	09:25 15:43
20	09:08 16:28	08:00 17:43	06:42 18:49	06:13 21:00	05:00 22:08 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:00 07:14 (38) | 22:25 38	06:51 (38) | 06:07 07:29 (38) | 21:13	07:15 19:45	08:23 18:20	08:36 16:08	09:25 15:43
21	09:07 16:30	07:57 17:46	06:39 18:52	06:11 21:03	04:58 22:10 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:02 07:14 (38) | 22:23 39	06:51 (38) | 06:09 07:30 (38) | 21:10	07:17 19:42	08:25 18:17	08:39 16:06	09:26 15:43
22	09:05 16:32	07:54 17:48	06:36 18:54	06:08 21:05	04:56 22:12 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:56 (38) | 05:04 07:15 (38) | 22:22 39	06:52 (38) | 06:11 07:31 (38) | 21:08	07:19 19:39	08:28 18:15	08:41 16:04	09:27 15:44
23	09:03 16:35	07:52 17:50	06:33 18:56	06:05 21:07	04:55 22:14 39	06:41 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:06 07:15 (38) | 22:20 39	06:51 (38) | 06:13 07:30 (38) | 21:05	07:22 19:36	08:30 18:12	08:43 16:03	09:27 15:44
24	09:02 16:37	07:49 17:53	06:30 18:58	06:02 21:10	04:53 22:16 38	06:42 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:08 07:15 (38) | 22:18 40	06:51 (38) | 06:15 07:31 (38) | 21:02	07:24 19:33	08:32 18:09	08:45 16:01	09:28 15:45
25	09:00 16:39	07:46 17:55	06:27 19:01	06:00 21:12	04:51 22:18 37	06:42 (38) | 04:28 07:19 (38) | 22:50 19	06:57 (38) | 05:10 07:16 (38) | 22:16 40	06:51 (38) | 06:18 07:31 (38) | 20:59	07:26 19:30	08:35 17:07	08:47 16:00	09:28 15:46
26	08:58 16:42	07:44 17:58	06:24 19:03	05:57 21:14	04:49 22:20 37	06:43 (38) | 04:29 07:20 (38) | 22:50 20	06:56 (38) | 05:12 07:16 (38) | 22:14 40	06:51 (38) | 06:20 07:31 (38) | 20:57	07:28 19:28	08:37 17:04	08:49 15:58	09:28 15:46
27	08:56 16:44	07:41 18:00	06:21 19:05	05:54 21:17	04:48 22:22 36	06:43 (38) | 04:29 07:19 (38) | 22:50 21	06:56 (38) | 05:14 07:17 (38) | 22:12 39	06:52 (38) | 06:22 07:31 (38) | 20:54	07:31 19:25	07:39 17:02	08:52 15:57	09:28 15:47
28	08:54 16:47	07:38 18:02	06:18 19:08	05:52 21:19	04:46 22:24 36	06:43 (38) | 04:30 07:19 (38) | 22:50 21	06:56 (38) | 05:16 07:17 (38) | 22:10 39	06:52 (38) | 06:24 07:31 (38) | 20:51	07:33 19:22	07:42 16:59	08:54 15:55	09:28 15:48
29	08:52 16:49		07:16 20:10	05:49 21:21	04:44 22:25 35	06:44 (38) | 04:31 07:19 (38) | 22:49 21	06:56 (38) | 05:18 07:17 (38) | 22:07 38	06:52 (38) | 06:27 07:30 (38) | 20:48	07:35 19:19	07:44 16:56	08:56 15:54	09:28 15:49
30	08:50 16:51		07:13 20:12	05:47 21:24	04:43 22:27 34	06:45 (38) | 04:32 07:19 (38) | 22:49 22	06:56 (38) | 05:20 07:18 (38) | 22:05 36	06:54 (38) | 06:29 07:30 (38) | 20:45	07:37 19:16	07:47 16:54	08:58 15:53	09:28 15:50
31	08:48 16:54		07:10 20:14		04:41 22:29 34	06:44 (38) | 07:18 (38) |	05:22 22:03 35	06:55 (38) | 06:31 07:30 (38) | 20:43		07:49 16:51		09:28 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					945	688	1047	221				
Sun reduction					0,50	0,50	0,50	0,50				
Oper. time red.					0,80	0,80	0,80	0,80				
Wind dir. red.					0,59	0,59	0,59	0,59				
Total reduction					0,24	0,24	0,24	0,24				
Total, real					224	163	248	52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				
Sun reduction			0,50		0,50				
Oper. time red.			0,80		0,80				
Wind dir. red.			0,73		0,71				
Total reduction			0,29		0,28				
Total, real			80		117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December
1	04:32	05:24	06:33		07:40		07:52	08:47 (2)	09:00
	22:49	22:01	20:40		19:13		16:49	9 08:56 (2)	15:51
2	04:33	05:26	06:35		07:42	09:06 (22)	07:54		09:02
	22:48	21:59	20:37		19:10	6 09:12 (22)	16:46		15:50
3	04:34	05:29	06:38		07:44	09:02 (22)	07:56		09:04
	22:47	21:56	20:34		19:07	13 09:15 (22)	16:44		15:49
4	04:35	05:31	06:40		07:46	09:00 (22)	07:59		09:05
	22:47	21:54	20:31		19:05	17 09:17 (22)	16:42		15:48
5	04:36	05:33	06:42		07:48	08:58 (22)	08:01		09:07
	22:46	21:52	20:28		19:02	20 09:18 (22)	16:39		15:47
6	04:38	05:35	06:44		07:51	08:57 (22)	08:04		09:09
	22:45	21:49	20:26		18:59	22 09:19 (22)	16:37		15:46
7	04:39	05:37	06:47		07:53	08:57 (22)	08:06		09:10
	22:44	21:47	20:23		18:56	23 09:20 (22)	16:35		15:46
8	04:40	05:40	06:49		07:55	08:55 (22)	08:08		09:12
	22:43	21:44	20:20		18:53	24 09:19 (22)	16:32		15:45
9	04:41	05:42	06:51		07:58	08:55 (22)	08:11		09:14
	22:42	21:42	20:17		18:50	24 09:19 (22)	16:30		15:44
10	04:43	05:44	06:53		08:00	08:55 (22)	08:13		09:15
	22:41	21:39	20:14		18:48	24 09:19 (22)	16:28		15:44
11	04:44	05:46	06:55		08:02	08:54 (22)	08:16		09:16
	22:39	21:37	20:11		18:45	25 09:19 (22)	16:26		15:43
12	04:46	05:49	06:58		08:04	08:55 (22)	08:18		09:18
	22:38	21:34	20:08		18:42	23 09:18 (22)	16:24		15:43
13	04:48	05:51	07:00		08:07	08:55 (22)	08:20		09:19
	22:37	21:32	20:05		18:39	22 09:17 (22)	16:21		15:43
14	04:49	05:53	07:02		08:09	08:55 (22)	08:23		09:20
	22:35	21:29	20:02		18:36	21 09:16 (22)	16:19		15:42
15	04:51	05:55	07:04		08:11	08:57 (22)	08:25		09:21
	22:34	21:26	20:00		18:34	18 09:15 (22)	16:17		15:42
16	04:53	05:58	07:06		08:14	08:58 (22)	08:27		09:22
	22:32	21:24	19:57		18:31	15 09:13 (22)	16:15		15:42
17	04:54	06:00	07:09		08:16	09:01 (22)	08:30		09:23
	22:31	21:21	19:54		18:28	10 09:11 (22)	16:13		15:42
18	04:56	06:02	07:11	08:19 (24)	08:18		08:32		09:24
	22:29	21:19	19:51	9 08:28 (24)	18:25		16:11		15:42
19	04:58	06:04	07:13	08:16 (24)	08:21		08:34		09:25
	22:27	21:16	19:48	13 08:29 (24)	18:23		16:10		15:43
20	05:00	06:06	07:15	08:14 (24)	08:23	09:48 (2)	08:37		09:26
	22:25	21:13	19:45	16 08:30 (24)	18:20	9 09:57 (2)	16:08		15:43
21	05:02	06:09	07:17	08:14 (24)	08:25	09:46 (2)	08:39		09:26
	22:24	21:10	19:42	17 08:31 (24)	18:17	13 09:59 (2)	16:06		15:43
22	05:04	06:11	07:20	08:13 (24)	08:28	09:44 (2)	08:41		09:27
	22:22	21:08	19:39	18 08:31 (24)	18:15	16 10:00 (2)	16:04		15:44
23	05:06	06:13	07:22	08:12 (24)	08:30	09:44 (2)	08:43		09:27
	22:20	21:05	19:36	19 08:31 (24)	18:12	17 10:01 (2)	16:03		15:44
24	05:08	06:15	07:24	08:12 (24)	08:32	09:42 (2)	08:45		09:28
	22:18	21:02	19:33	19 08:31 (24)	18:09	19 10:01 (2)	16:01		15:45
25	05:10	06:18	07:26	08:11 (24)	07:35	08:42 (2)	08:48		09:28
	22:16	20:59	19:31	19 08:30 (24)	17:07	19 09:01 (2)	15:59		15:45
26	05:12	06:20	07:28	08:12 (24)	07:37	08:43 (2)	08:50		09:28
	22:14	20:57	19:28	17 08:29 (24)	17:04	19 09:02 (2)	15:58		15:46
27	05:14	06:22	07:31	08:13 (24)	07:40	08:42 (2)	08:52		09:28
	22:12	20:54	19:25	15 08:28 (24)	17:02	19 09:01 (2)	15:57		15:47
28	05:16	06:24	07:33	08:14 (24)	07:42	08:43 (2)	08:54		09:29
	22:10	20:51	19:22	12 08:26 (24)	16:59	18 09:01 (2)	15:55		15:48
29	05:18	06:27	07:35	08:15 (24)	07:44	08:44 (2)	08:56		09:29
	22:08	20:48	19:19	8 08:23 (24)	16:56	17 09:01 (2)	15:54		15:49
30	05:20	06:29	07:37		07:47	08:44 (2)	08:58		09:28
	22:05	20:45	19:16		16:54	15 08:59 (2)	15:53		15:50
31	05:22	06:31			07:49	08:45 (2)			09:28
	22:03	20:43			16:51	13 08:58 (2)			15:51
Potential sun hours	545	478	386		319		236		200
Total, worst case			182		501		9		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,70		0,73		0,74		
Total reduction			0,28		0,29		0,29		
Total, real			51		146		3		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56		18:05 23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40		19:13		16:49	15:51
2	09:28	08:44		07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35		07:42		07:54	09:02
	15:54	16:59		18:07 24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:46	15:50
3	09:27	08:41		07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01		18:10 24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34		19:07		16:44	15:49
4	09:27	08:39		07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	09:05 (22)	07:59	09:05
	15:57	17:04		18:12 23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31		19:05 11	09:16 (22)	16:42	15:48
5	09:26	08:37		07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42		07:48	09:02 (22)	08:01	09:07
	15:59	17:06		18:14 22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28		19:02 16	09:18 (22)	16:39	15:47
6	09:25	08:35		07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44		07:51	09:00 (22)	08:04	09:09
	16:00	17:09		18:17 22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26		18:59 19	09:19 (22)	16:37	15:46
7	09:25	08:32		07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47		07:53	09:00 (22)	08:06	09:10
	16:02	17:11		18:19 19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23		18:56 20	09:20 (22)	16:35	15:46
8	09:24	08:30		07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:58 (22)	08:08	09:12
	16:04	17:13		18:21 18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20		18:53 23	09:21 (22)	16:32	15:45
9	09:23	08:28		07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51		07:58	08:57 (22)	08:11	09:14
	16:05	17:16		18:24 13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17		18:50 23	09:20 (22)	16:30	15:44
10	09:22	08:25		07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53		08:00	08:57 (22)	08:13	09:15
	16:07	17:18		18:26 7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14		18:48 24	09:21 (22)	16:28	15:44
11	09:21	08:23		07:07		06:38	05:20	04:30	04:44	05:46	06:55		08:02	08:57 (22)	08:16	09:16
	16:09	17:21		18:28		20:40	21:49	22:44	22:39	21:37	20:11		18:45 23	09:20 (22)	16:26	15:43
12	09:20	08:20		07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:04	08:57 (22)	08:18	09:18
	16:11	17:23		18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42 24	09:21 (22)	16:24	15:43
13	09:19	08:18		07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:57 (22)	08:20	09:19
	16:13	17:26		18:33 5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05		18:39 23	09:20 (22)	16:21	15:43
14	09:17	08:15		06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:57 (22)	08:23	09:20
	16:15	17:28		18:35 11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02		18:36 21	09:18 (22)	16:19	15:42
15	09:16	08:13		06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:58 (22)	08:25	09:21
	16:17	17:31		18:38 15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00		18:34 20	09:18 (22)	16:17	15:42
16	09:15	08:10		06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06		08:14	08:58 (22)	08:27	09:22
	16:19	17:33		18:40 16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57		18:31 18	09:16 (22)	16:15	15:42
17	09:13	08:08		06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	09:00 (22)	08:30	09:23
	16:21	17:36		18:42 18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54		18:28 15	09:15 (22)	16:13	15:42
18	09:12	08:05		06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11		08:18	09:02 (22)	08:32	09:24
	16:23	17:38		18:45 19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51		18:25 10	09:12 (22)	16:11	15:42
19	09:10	08:02		06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13	08:22 (24)	08:21		08:34	09:25
	16:26	17:41		18:47 18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48 7	08:29 (24)	18:23		16:10	15:43
20	09:09	08:00		06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15	08:19 (24)	08:23		08:37	09:26
	16:28	17:43		18:49 19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45 12	08:31 (24)	18:20		16:08	15:43
21	09:07	07:57		06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17	08:18 (24)	08:25		08:39	09:26
	16:30	17:46		18:52 17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42 15	08:33 (24)	18:17		16:06	15:43
22	09:05	07:54		06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20	08:16 (24)	08:28		08:41	09:27
	16:32	17:48		18:54 15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39 17	08:33 (24)	18:15		16:04	15:44
23	09:04	07:52		06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22	08:15 (24)	08:30		08:43	09:27
	16:35	17:50		18:56 13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36 18	08:33 (24)	18:12		16:03	15:44
24	09:02	07:49	08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24	08:14 (24)	08:32		08:45	09:28
	16:37	17:53 12	08:42 (22)	18:59 8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33 19	08:33 (24)	18:09		16:01	15:45
25	09:00	07:46	08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	08:14 (24)	07:35		08:48	09:28
	16:39	17:55 15	08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31 18	08:32 (24)	17:07		15:59	15:45
26	08:58	07:44	08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:14 (24)	07:37		08:50	09:28
	16:42	17:58 19	08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28 19	08:33 (24)	17:04		15:58	15:46
27	08:56	07:41	08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	08:14 (24)	07:40		08:52	09:28
	16:44	18:00 20	08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25 18	08:32 (24)	17:02		15:57	15:47
28	08:54	07:38	08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	08:15 (24)	07:42		08:54	09:29
	16:46	18:02 22	08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 15	08:30 (24)	16:59		15:55	15:48
29	08:52			07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:15 (24)	07:44		08:56	09:29
	16:49			20:10		21:21	22:26	22:50	22:08	20:48	19:19 13	08:28 (24)	16:56		15:54	15:49
30	08:50			07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:18 (24)	07:47		08:58	09:28
	16:51			20:12		21:24	22:27	22:49	22:05	20:45	19:16 8	08:26 (24)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:15			22:29		22:03	20:43			16:51			15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			88		369							179		290		
Sun reduction			0,50		0,50							0,50		0,50		
Oper. time red.			0,80		0,80							0,80		0,80		
Wind dir. red.			0,73		0,71							0,70		0,73		
Total reduction			0,29		0,29							0,28		0,29		
Total, real			26		105							50		84		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
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27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
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28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
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29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
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10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
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15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
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16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
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	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
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16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
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	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
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	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
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Calculated:

19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		
Sun reduction			0,50									0,50		
Oper. time red.			0,80									0,80		
Wind dir. red.			0,74									0,74		
Total reduction			0,29									0,29		
Total, real			66									67		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September	October		November		December
1	09:28	08:46		09:41 (22)		08:28 (24)	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:52		09:00 (22)	09:00
	15:53	16:56	3	09:44 (22)	19	08:47 (24)	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	24	09:24 (22)	15:51
2	09:28	08:44		09:37 (22)		08:27 (24)	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:01 (22)	09:02
	15:54	16:59	10	09:47 (22)	20	08:47 (24)	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	23	09:24 (22)	15:50
3	09:27	08:41		09:35 (22)		08:27 (24)	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:01 (22)	09:04
	15:56	17:01	15	09:50 (22)	20	08:47 (24)	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	23	09:24 (22)	15:49
4	09:27	08:39		09:34 (22)		08:27 (24)	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:02 (22)	09:05
	15:57	17:04	17	09:51 (22)	19	08:46 (24)	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	22	09:24 (22)	15:48
5	09:26	08:37		09:33 (22)		08:28 (24)	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:02 (22)	09:07
	15:59	17:06	20	09:53 (22)	17	08:45 (24)	20:26	21:35	22:37	22:46	21:52	20:28	19:02	3	09:14 (24)	21	09:23 (22)	15:47
6	09:25	08:35		09:32 (22)		08:28 (24)	06:53	05:31	04:34	04:37	05:35	06:44	07:51		09:06 (24)		09:03 (22)	09:09
	16:00	17:08	21	09:53 (22)	16	08:44 (24)	20:28	21:38	22:38	22:45	21:49	20:26	18:59	11	09:17 (24)	19	09:22 (22)	15:46
7	09:25	08:32		09:31 (22)		08:29 (24)	06:50	05:29	04:33	04:39	05:37	06:47	07:53		09:05 (24)		09:05 (22)	09:10
	16:02	17:11	22	09:53 (22)	13	08:42 (24)	20:31	21:40	22:39	22:44	21:47	20:23	18:56	15	09:20 (24)	17	09:22 (22)	15:46
8	09:24	08:30		09:32 (22)		08:31 (24)	06:47	05:27	04:32	04:40	05:40	06:49	07:55		09:03 (24)		09:05 (22)	09:12
	16:04	17:13	22	09:54 (22)	8	08:39 (24)	20:33	21:42	22:41	22:43	21:44	20:20	18:53	17	09:20 (24)	15	09:20 (22)	15:45
9	09:23	08:28		09:31 (22)			06:44	05:24	04:31	04:41	05:42	06:51	07:58		09:02 (24)		09:08 (22)	09:14
	16:05	17:16	23	09:54 (22)			20:35	21:44	22:42	22:42	21:42	20:17	18:50	18	09:20 (24)	10	09:18 (22)	15:44
10	09:22	08:25		09:32 (22)			06:41	05:22	04:30	04:43	05:44	06:53	08:00		09:02 (24)		09:13 (22)	09:15
	16:07	17:18	23	09:55 (22)			20:38	21:47	22:43	22:41	21:39	20:14	18:48	19	09:21 (24)	1	09:14 (22)	15:44
11	09:21	08:23		09:31 (22)			06:38	05:20	04:30	04:44	05:46	06:55	08:02		09:01 (24)			09:16
	16:09	17:21	24	09:55 (22)			20:40	21:49	22:44	22:39	21:37	20:11	18:45	20	09:21 (24)			15:43
12	09:20	08:20		09:31 (22)			06:36	05:17	04:29	04:46	05:49	06:58	08:04		09:01 (24)			09:18
	16:11	17:23	23	09:54 (22)			20:42	21:51	22:45	22:38	21:34	20:08	18:42	20	09:21 (24)			15:43
13	09:19	08:18		09:31 (22)			06:33	05:15	04:28	04:47	05:51	07:00	08:07		09:01 (24)			09:19
	16:13	17:26	23	09:54 (22)			20:44	21:53	22:46	22:37	21:32	20:05	18:39	19	09:20 (24)			15:43
14	09:17	08:15		09:33 (22)			06:30	05:13	04:28	04:49	05:53	07:02	08:09		09:01 (24)			09:20
	16:15	17:28	21	09:54 (22)			20:47	21:55	22:47	22:35	21:29	20:02	18:36	18	09:19 (24)			15:42
15	09:16	08:13		09:33 (22)			06:27	05:11	04:28	04:51	05:55	07:04	08:11		09:02 (24)			09:21
	16:17	17:31	20	09:53 (22)			20:49	21:58	22:47	22:34	21:26	20:00	18:34	16	09:18 (24)			15:42
16	09:15	08:10		09:34 (22)			06:24	05:08	04:27	04:53	05:57	07:06	08:14		09:03 (24)			09:22
	16:19	17:33	17	09:51 (22)			20:51	22:00	22:48	22:32	21:24	19:57	18:31	13	09:16 (24)			15:42
17	09:13	08:08		09:36 (22)			06:22	05:06	04:27	04:54	06:00	07:09	08:16		09:05 (24)			09:23
	16:21	17:36	14	09:50 (22)			20:54	22:02	22:49	22:31	21:21	19:54	18:28	10	09:15 (24)			15:42
18	09:12	08:05		09:39 (22)			06:19	05:04	04:27	04:56	06:02	07:11	08:18					09:24
	16:23	17:38	8	09:47 (22)			20:56	22:04	22:49	22:29	21:19	19:51	18:25					15:42
19	09:10	08:02			06:44		06:16	05:02	04:27	04:58	06:04	07:13	08:21					09:25
	16:26	17:41			18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23					15:42
20	09:09	08:00			06:42		06:13	05:00	04:27	05:00	06:06	07:15	08:23					09:26
	16:28	17:43			18:49		21:01	22:08	22:50	22:25	21:13	19:45	18:20					15:43
21	09:07	07:57			06:39		06:10	04:58	04:27	05:02	06:09	07:17	08:25					09:26
	16:30	17:45			18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17					15:43
22	09:05	07:54			06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28					09:27
	16:32	17:48			18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15					15:44
23	09:04	07:52			06:33		06:05	04:54	04:27	05:06	06:13	07:22	08:30					09:27
	16:35	17:50			18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12					15:44
24	09:02	07:49		08:36 (24)	06:30		06:02	04:53	04:28	05:08	06:15	07:24	08:32		10:07 (22)		08:45	09:28
	16:37	17:53	5	08:41 (24)	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09	10	10:17 (22)		16:01	15:45
25	09:00	07:46		08:32 (24)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		09:05 (22)		08:48	09:28
	16:39	17:55	12	08:44 (24)	19:01		21:12	22:18	22:51	22:16	20:59	19:30	17:07	15	09:20 (22)		15:59	15:45
26	08:58	07:44		08:30 (24)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	07:37		09:04 (22)		08:50	09:28
	16:42	17:58	15	08:45 (24)	19:03		21:14	22:20	22:51	22:14	20:57	19:28	17:04	18	09:22 (22)		15:58	15:46
27	08:56	07:41		08:29 (24)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	07:40		09:02 (22)		08:52	09:28
	16:44	18:00	17	08:46 (24)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	17:02	20	09:22 (22)		15:56	15:47
28	08:54	07:38		08:29 (24)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	07:42		09:02 (22)		08:54	09:29
	16:46	18:02	18	08:47 (24)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	16:59	21	09:23 (22)		15:55	15:48
29	08:52				07:16		05:49	04:44	04:30	05:18	06:27	07:35	07:44		09:02 (22)		08:56	09:29
	16:49				20:10		21:21	22:26	22:50	22:08	20:48	19:19	16:56	22	09:24 (22)		15:54	15:49
30	08:50				07:13		05:47	04:43	04:31	05:20	06:29	07:37	07:47		09:01 (22)		08:58	09:28
	16:51				20:12		21:24	22:27	22:49	22:05	20:45	19:16	16:54	23	09:24 (22)		15:53	15:50
31	08:48				07:10			04:41		05:22	06:31		07:49		09:01 (22)			09:28
	16:54				20:15			22:29		22:03	20:43		16:51	23	09:24 (22)			15:51
Potential sun hours	221	260			365		432	521	547	546	478	386	319			236		199
Total, worst case			393		132									351		175		
Sun reduction			0,50		0,50									0,50		0,50		
Oper. time red.			0,80		0,80									0,80		0,80		
Wind dir. red.			0,73		0,73									0,73		0,73		
Total reduction			0,29		0,29									0,29		0,29		
Total, real			114		38									102		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		09:41 (22)	07:35		08:31 (24)	07:07	05:44	04:40
	15:53			16:56	14	09:55 (22)	18:05	20	08:51 (24)	20:17	21:26	22:31
2	09:28			08:44		09:40 (22)	07:33		08:31 (24)	07:04	05:41	04:39
	15:54			16:59	16	09:56 (22)	18:07	20	08:51 (24)	20:19	21:28	22:32
3	09:27			08:41		09:39 (22)	07:30		08:31 (24)	07:01	05:39	04:37
	15:56			17:01	19	09:58 (22)	18:10	19	08:50 (24)	20:21	21:31	22:34
4	09:27			08:39		09:38 (22)	07:27		08:31 (24)	06:58	05:36	04:36
	15:57			17:04	20	09:58 (22)	18:12	19	08:50 (24)	20:24	21:33	22:35
5	09:26			08:37		09:38 (22)	07:24		08:32 (24)	06:55	05:34	04:35
	15:59			17:06	22	10:00 (22)	18:14	16	08:48 (24)	20:26	21:35	22:37
6	09:25			08:35		09:37 (22)	07:22		08:33 (24)	06:53	05:31	04:34
	16:00			17:08	23	10:00 (22)	18:17	14	08:47 (24)	20:28	21:38	22:38
7	09:25			08:32		09:36 (22)	07:19		08:35 (24)	06:50	05:29	04:33
	16:02			17:11	24	10:00 (22)	18:19	9	08:44 (24)	20:31	21:40	22:39
8	09:24			08:30		09:37 (22)	07:16			06:47	05:27	04:32
	16:04			17:13	24	10:01 (22)	18:21			20:33	21:42	22:41
9	09:23			08:28		09:36 (22)	07:13			06:44	05:24	04:31
	16:05			17:16	24	10:00 (22)	18:24			20:35	21:44	22:42
10	09:22			08:25		09:37 (22)	07:10			06:41	05:22	04:30
	16:07			17:18	24	10:01 (22)	18:26			20:38	21:47	22:43
11	09:21			08:23		09:37 (22)	07:07			06:38	05:20	04:30
	16:09			17:21	23	10:00 (22)	18:28			20:40	21:49	22:44
12	09:20			08:20		09:37 (22)	07:05			06:36	05:17	04:29
	16:11			17:23	23	10:00 (22)	18:31			20:42	21:51	22:45
13	09:19			08:18		09:38 (22)	07:02			06:33	05:15	04:28
	16:13			17:26	21	09:59 (22)	18:33			20:44	21:53	22:46
14	09:17			08:15		09:39 (22)	06:59			06:30	05:13	04:28
	16:15			17:28	20	09:59 (22)	18:35			20:47	21:55	22:47
15	09:16			08:13		09:40 (22)	06:56			06:27	05:11	04:28
	16:17			17:31	17	09:57 (22)	18:38			20:49	21:58	22:47
16	09:15			08:10		09:42 (22)	06:53			06:24	05:08	04:27
	16:19			17:33	13	09:55 (22)	18:40			20:51	22:00	22:48
17	09:13			08:08		09:45 (22)	06:50			06:21	05:06	04:27
	16:21			17:36	8	09:53 (22)	18:42			20:54	22:02	22:49
18	09:12			08:05			06:47			06:19	05:04	04:27
	16:23			17:38			18:45			20:56	22:04	22:49
19	09:10			08:02			06:44			06:16	05:02	04:27
	16:26			17:41			18:47			20:58	22:06	22:50
20	09:09			08:00			06:42			06:13	05:00	04:27
	16:28			17:43			18:49			21:01	22:08	22:50
21	09:07			07:57			06:39			06:10	04:58	04:27
	16:30			17:45			18:52			21:03	22:10	22:50
22	09:05			07:54			06:36			06:08	04:56	04:27
	16:32			17:48			18:54			21:05	22:12	22:51
23	09:04			07:52		08:40 (24)	06:33			06:05	04:54	04:27
	16:35			17:50	5	08:45 (24)	18:56			21:08	22:14	22:51
24	09:02			07:49		08:36 (24)	06:30			06:02	04:53	04:28
	16:37			17:53	12	08:48 (24)	18:59			21:10	22:16	22:51
25	09:00			07:46		08:34 (24)	06:27			06:00	04:51	04:28
	16:39			17:55	15	08:49 (24)	19:01			21:12	22:18	22:51
26	08:58			07:44		08:33 (24)	06:24			05:57	04:49	04:29
	16:42			17:58	17	08:50 (24)	19:03			21:14	22:20	22:51
27	08:56			07:41		08:32 (24)	06:21			05:54	04:47	04:29
	16:44			18:00	18	08:50 (24)	19:05			21:17	22:22	22:50
28	08:54			07:38		08:32 (24)	06:18			05:52	04:46	04:30
	16:46			18:02	19	08:51 (24)	19:08			21:19	22:24	22:50
29	08:52						07:16			05:49	04:44	04:30
	16:49						20:10			21:21	22:26	22:50
30	08:50						07:13			05:47	04:43	04:31
	16:51						20:12			21:24	22:27	22:49
31	08:48		09:43 (22)				07:10				04:41	
	16:54	9	09:52 (22)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		9			421			117				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,72			0,73			0,73				
Total reduction		0,29			0,29			0,29				
Total, real		3			122			34				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		09:06 (22)	09:00
	22:49	22:01	20:40	19:13			16:49	24	09:30 (22)	15:51
2	04:33	05:26	06:35	07:42			07:54		09:06 (22)	09:02
	22:48	21:59	20:37	19:10			16:46	24	09:30 (22)	15:50
3	04:34	05:29	06:38	07:44			07:56		09:06 (22)	09:04
	22:47	21:56	20:34	19:07			16:44	24	09:30 (22)	15:49
4	04:35	05:31	06:40	07:46			07:59		09:07 (22)	09:05
	22:47	21:54	20:31	19:05			16:42	23	09:30 (22)	15:48
5	04:36	05:33	06:42	07:48			08:01		09:07 (22)	09:07
	22:46	21:52	20:28	19:02			16:39	22	09:29 (22)	15:47
6	04:37	05:35	06:44	07:51		09:12 (24)	08:04		09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7	09:19 (24)	16:37	21	09:29 (22)	15:46
7	04:39	05:37	06:47	07:53		09:10 (24)	08:06		09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12	09:22 (24)	16:35	20	09:29 (22)	15:46
8	04:40	05:40	06:49	07:55		09:08 (24)	08:08		09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15	09:23 (24)	16:32	18	09:27 (22)	15:45
9	04:41	05:42	06:51	07:58		09:06 (24)	08:11		09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18	09:24 (24)	16:30	17	09:27 (22)	15:44
10	04:43	05:44	06:53	08:00		09:06 (24)	08:13		09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19	09:25 (24)	16:28	13	09:25 (22)	15:44
11	04:44	05:46	06:55	08:02		09:05 (24)	08:16		09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19	09:24 (24)	16:26	9	09:23 (22)	15:43
12	04:46	05:49	06:58	08:04		09:05 (24)	08:18			09:18
	22:38	21:34	20:08	18:42	20	09:25 (24)	16:24			15:43
13	04:47	05:51	07:00	08:07		09:04 (24)	08:20			09:19
	22:37	21:32	20:05	18:39	20	09:24 (24)	16:21			15:43
14	04:49	05:53	07:02	08:09		09:04 (24)	08:23			09:20
	22:35	21:29	20:02	18:36	19	09:23 (24)	16:19			15:42
15	04:51	05:55	07:04	08:11		09:05 (24)	08:25			09:21
	22:34	21:26	20:00	18:34	18	09:23 (24)	16:17			15:42
16	04:53	05:57	07:06	08:14		09:05 (24)	08:27			09:22
	22:32	21:24	19:57	18:31	16	09:21 (24)	16:15			15:42
17	04:54	06:00	07:09	08:16		09:07 (24)	08:30			09:23
	22:31	21:21	19:54	18:28	14	09:21 (24)	16:13			15:42
18	04:56	06:02	07:11	08:18		09:08 (24)	08:32			09:24
	22:29	21:19	19:51	18:25	10	09:18 (24)	16:11			15:42
19	04:58	06:04	07:13	08:21			08:34			09:25
	22:27	21:16	19:48	18:23			16:10			15:42
20	05:00	06:06	07:15	08:23			08:37			09:26
	22:25	21:13	19:45	18:20			16:08			15:43
21	05:02	06:09	07:17	08:25			08:39			09:26
	22:24	21:10	19:42	18:17			16:06			15:43
22	05:04	06:11	07:20	08:28			08:41			09:27
	22:22	21:08	19:39	18:15			16:04			15:44
23	05:06	06:13	07:22	08:30			08:43			09:27
	22:20	21:05	19:36	18:12			16:03			15:44
24	05:08	06:15	07:24	08:32			08:45			09:28
	22:18	21:02	19:33	18:09			16:01			15:45
25	05:10	06:18	07:26	07:35		09:13 (22)	08:48			09:28
	22:16	20:59	19:30	17:07	10	09:23 (22)	15:59			15:45
26	05:12	06:20	07:28	07:37		09:11 (22)	08:50			09:28
	22:14	20:57	19:28	17:04	15	09:26 (22)	15:58			15:46
27	05:14	06:22	07:31	07:40		09:09 (22)	08:52			09:28
	22:12	20:54	19:25	17:01	18	09:27 (22)	15:56			15:47
28	05:16	06:24	07:33	07:42		09:08 (22)	08:54			09:29
	22:10	20:51	19:22	16:59	20	09:28 (22)	15:55			15:48
29	05:18	06:27	07:35	07:44		09:08 (22)	08:56			09:29
	22:08	20:48	19:19	16:56	21	09:29 (22)	15:54			15:49
30	05:20	06:29	07:37	07:47		09:07 (22)	08:58			09:28
	22:05	20:45	19:16	16:54	22	09:29 (22)	15:53			15:50
31	05:22	06:31		07:49		09:07 (22)				09:28
	22:03	20:43		16:51	23	09:30 (22)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					336			215		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,73			0,72		
Total reduction					0,29			0,29		
Total, real					98			62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	
Sun reduction			0,50									0,50		0,50	
Oper. time red.			0,80									0,80		0,80	
Wind dir. red.			0,74									0,74		0,74	
Total reduction			0,29									0,29		0,29	
Total, real			71									71		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (24)	08:46	10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (28)	09:00	10:51 (23)	
	15:53	20 12:41 (24)	16:56	20 10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (28)	15:51	28 12:23 (24)	
2	09:28	12:22 (24)	08:44	09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (28)	09:02	10:51 (23)	
	15:54	19 12:41 (24)	16:58	21 10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (28)	15:50	30 12:24 (24)	
3	09:27	12:22 (24)	08:41	10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (28)	09:04	10:52 (23)	
	15:55	19 12:41 (24)	17:01	20 10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (28)	15:49	29 12:25 (24)	
4	09:27	11:12 (23)	08:39	10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (28)	09:05	10:53 (23)	
	15:57	22 12:41 (24)	17:03	20 10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (28)	15:48	30 12:26 (24)	
5	09:26	11:11 (23)	08:37	10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (28)	09:07	10:54 (23)	
	15:58	26 12:42 (24)	17:06	19 10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (28)	15:47	29 12:27 (24)	
6	09:25	11:10 (23)	08:35	10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (28)	09:09	10:56 (23)	
	16:00	28 12:42 (24)	17:08	18 10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (28)	15:46	28 12:28 (24)	
7	09:25	11:09 (23)	08:32	10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (28)	09:10	10:58 (23)	
	16:02	29 12:42 (24)	17:11	17 10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (28)	15:45	26 12:29 (24)	
8	09:24	11:09 (23)	08:30	10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (28)	09:12	11:00 (23)	
	16:03	30 12:42 (24)	17:13	15 10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (28)	15:45	23 12:30 (24)	
9	09:23	11:09 (23)	08:27	10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (28)	09:13	12:11 (24)	
	16:05	30 12:42 (24)	17:16	12 10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (28)	15:44	19 12:30 (24)	
10	09:22	11:08 (23)	08:25	10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (28)	09:15	12:11 (24)	
	16:07	30 12:41 (24)	17:18	5 10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (28)	15:44	19 12:30 (24)	
11	09:21	11:09 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (28)	09:16	12:11 (24)	
	16:09	28 12:41 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (28)	15:43	20 12:31 (24)	
12	09:20	11:08 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (28)	09:18	12:11 (24)	
	16:11	27 12:40 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (23)	15:43	20 12:31 (24)	
13	09:19	11:08 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (28)	09:19	12:12 (24)	
	16:13	25 12:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (23)	15:42	21 12:33 (24)	
14	09:17	11:08 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (28)	09:20	12:12 (24)	
	16:15	20 11:28 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (23)	15:42	21 12:33 (24)	
15	09:16	11:08 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (28)	09:21	12:12 (24)	
	16:17	21 11:29 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (23)	15:42	21 12:33 (24)	
16	09:15	11:08 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (28)	09:22	12:13 (24)	
	16:19	21 11:29 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (23)	15:42	20 12:33 (24)	
17	09:13	11:09 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (28)	09:23	12:14 (24)	
	16:21	22 11:31 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (23)	15:42	21 12:35 (24)	
18	09:12	11:09 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (23)	09:24	12:14 (24)	
	16:23	22 11:31 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (23)	15:42	21 12:35 (24)	
19	09:10	11:09 (23)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (23)	09:25	12:14 (24)	
	16:25	22 11:31 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (23)	15:42	21 12:35 (24)	
20	09:09	11:09 (23)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (23)	09:26	12:15 (24)	
	16:28	23 11:32 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (23)	15:43	21 12:36 (24)	
21	09:07	11:09 (23)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (23)	09:26	12:16 (24)	
	16:30	23 11:32 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (23)	15:43	21 12:37 (24)	
22	09:05	11:10 (23)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (23)	09:27	12:16 (24)	
	16:32	22 11:32 (23)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (23)	15:43	21 12:37 (24)	
23	09:03	11:10 (23)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (23)	09:27	12:16 (24)	
	16:34	22 11:32 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (23)	15:44	21 12:37 (24)	
24	09:02	11:10 (23)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (23)	09:28	12:17 (24)	
	16:37	22 11:32 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (23)	15:45	21 12:38 (24)	
25	09:00	10:04 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (23)	09:28	12:17 (24)	
	16:39	28 11:32 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (23)	15:45	21 12:38 (24)	
26	08:58	10:03 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (23)	09:28	12:18 (24)	
	16:42	31 11:32 (23)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (23)	15:46	21 12:39 (24)	
27	08:56	10:02 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (23)	09:28	12:18 (24)	
	16:44	31 11:31 (23)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (23)	15:47	21 12:39 (24)	
28	08:54	10:00 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (23)	09:29	12:19 (24)	
	16:46	32 11:30 (23)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (23)	15:48	21 12:40 (24)	
29	08:52	10:00 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (23)	09:29	12:19 (24)	
	16:49	31 11:29 (23)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (24)	15:49	21 12:40 (24)	
30	08:50	09:59 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (23)	09:28	12:20 (24)	
	16:51	27 11:26 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (24)	15:50	20 12:40 (24)	
31	08:48	09:59 (28)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (24)	
	16:54	20 10:19 (28)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (24)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
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	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
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14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
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15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
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31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
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	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
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	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
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Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 6.2

Grafisk Moifjellet vindkraftverk

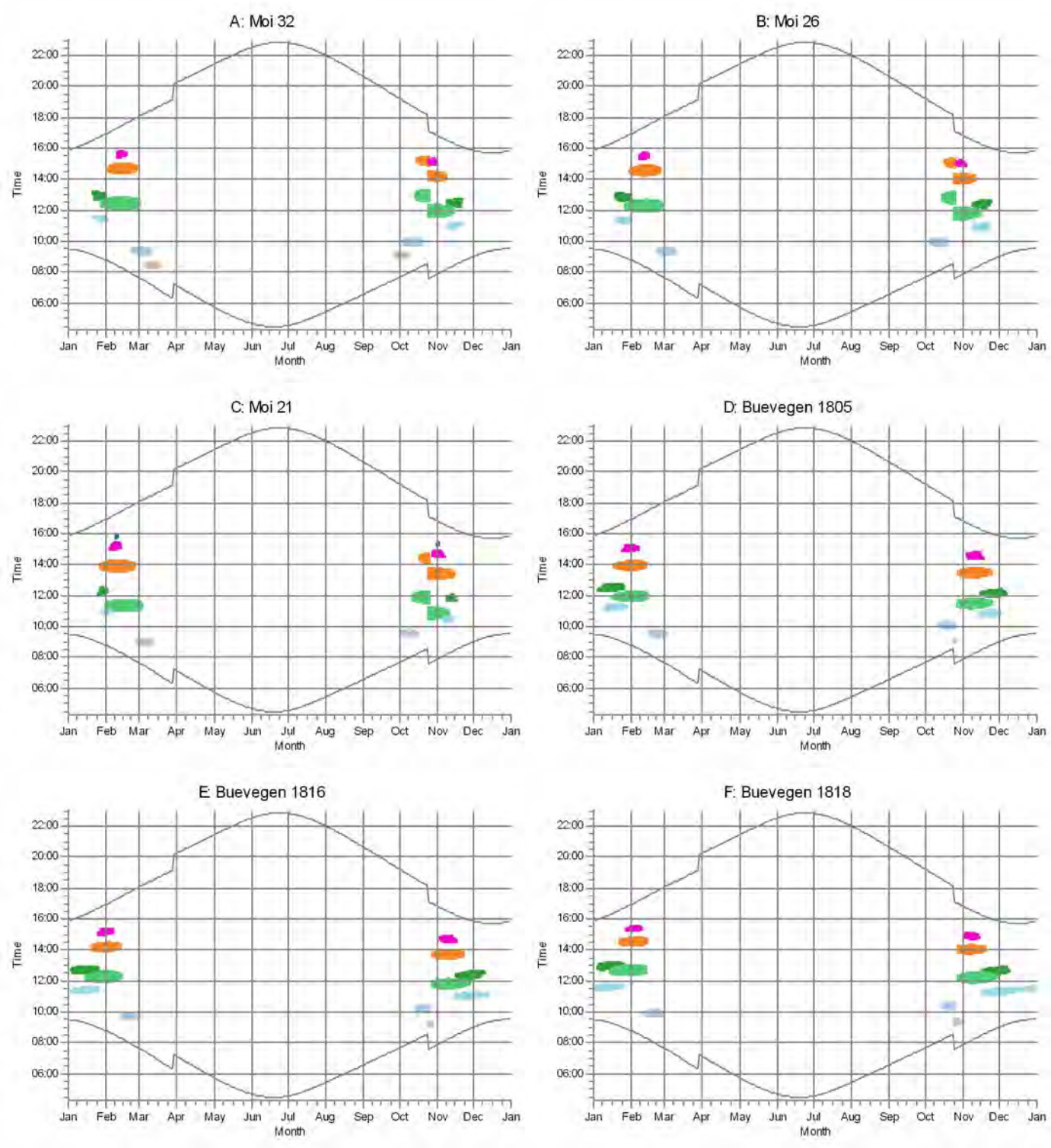
Realistic case

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere



WTGs

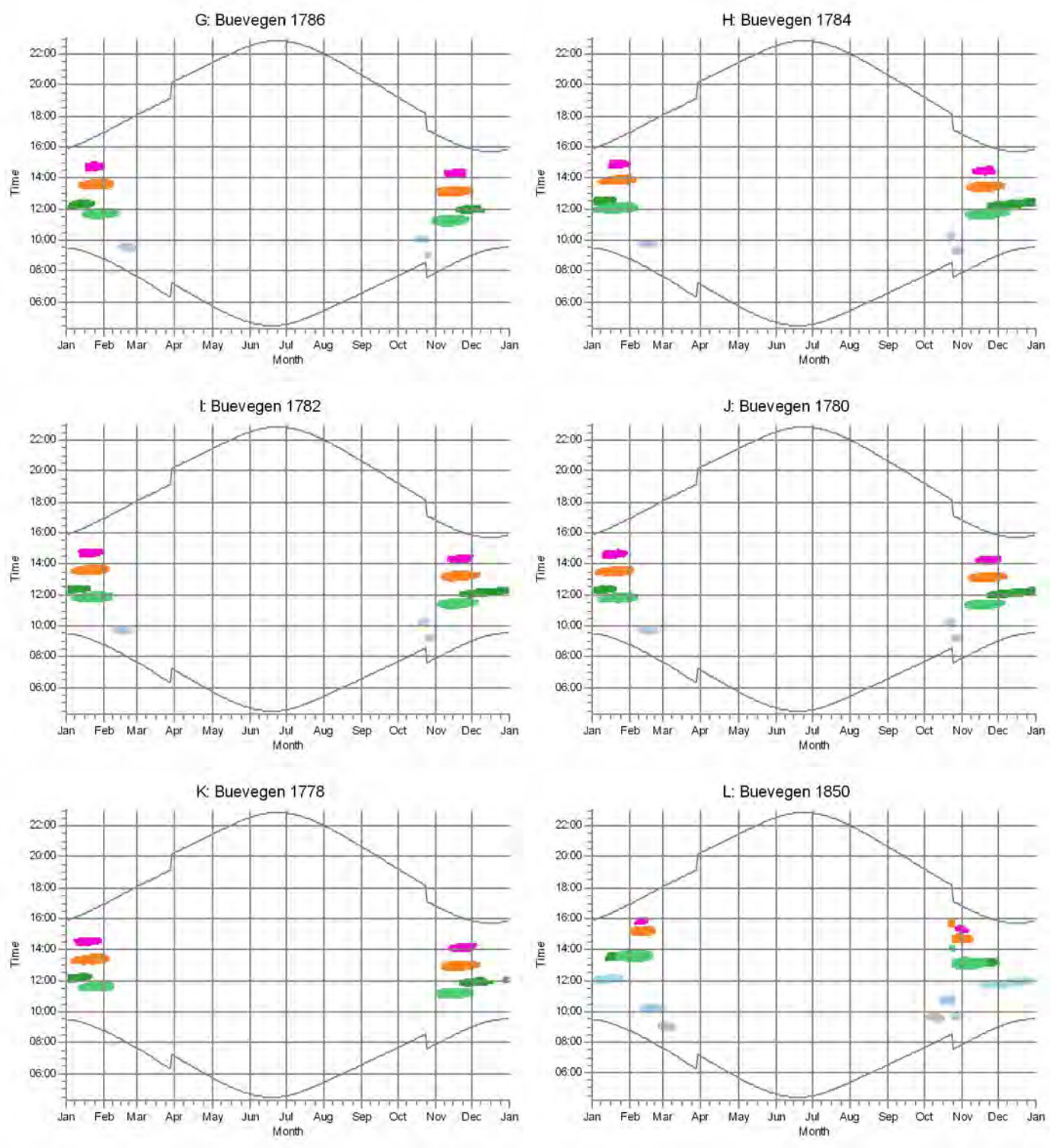
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
22: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2565
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere



WTGs

15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
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28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

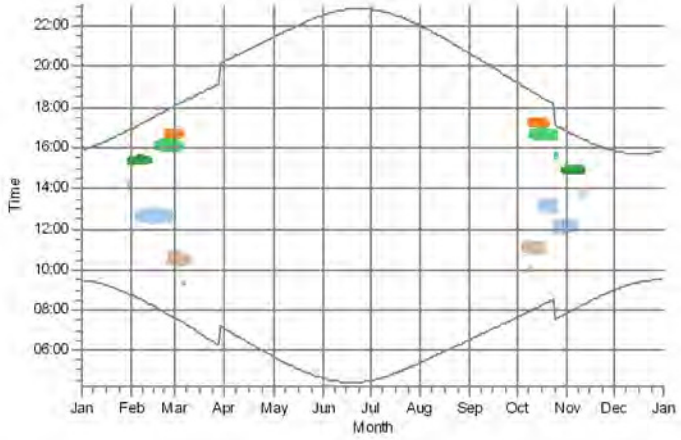
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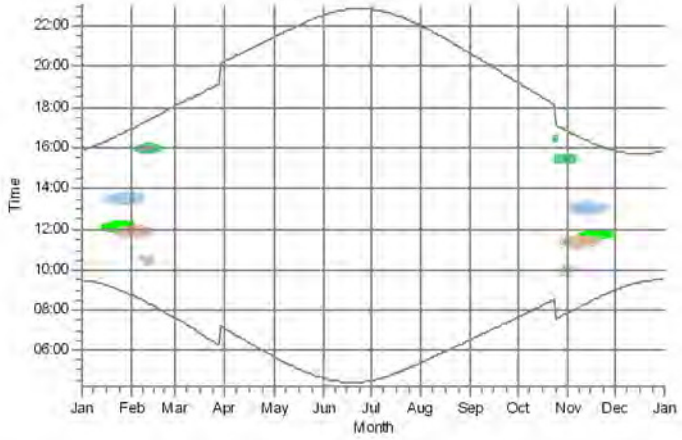
SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

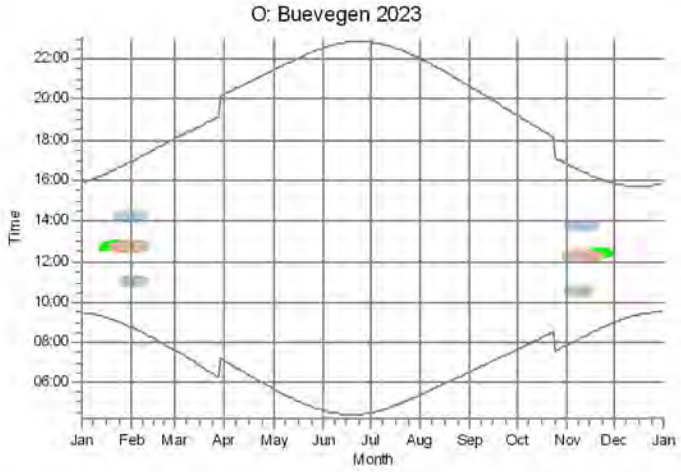
M: Buevegen 1941



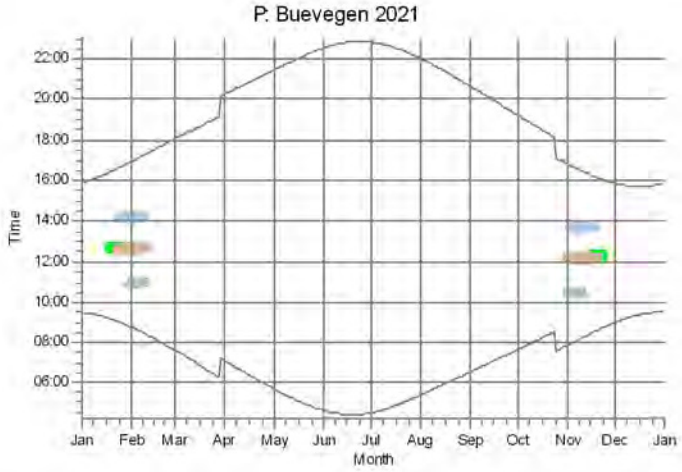
N: Buevegen 1988



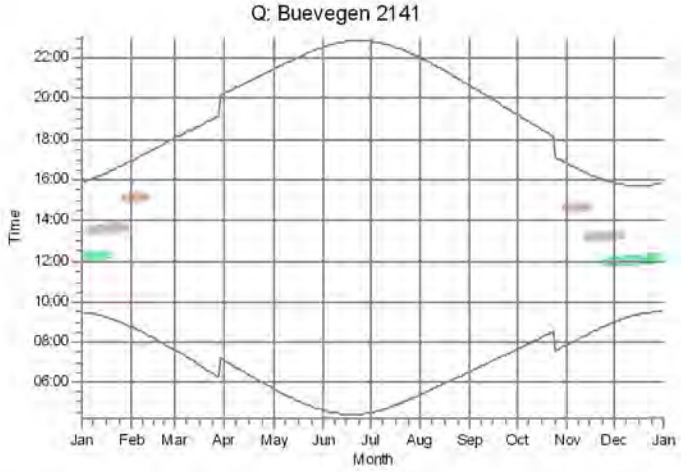
O: Buevegen 2023



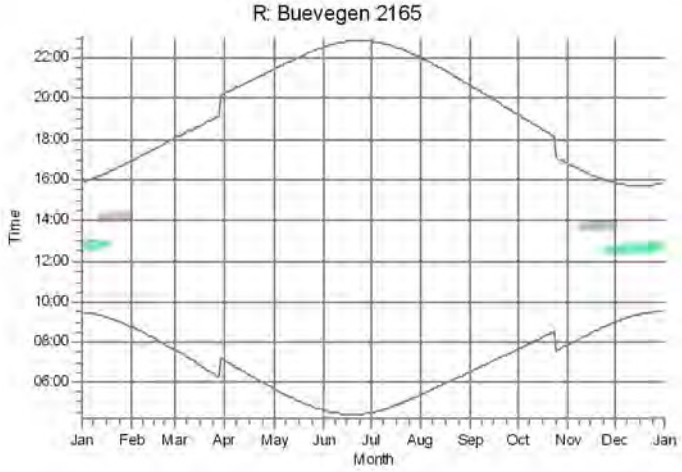
P: Buevegen 2021



Q: Buevegen 2141



R: Buevegen 2165



WTGs

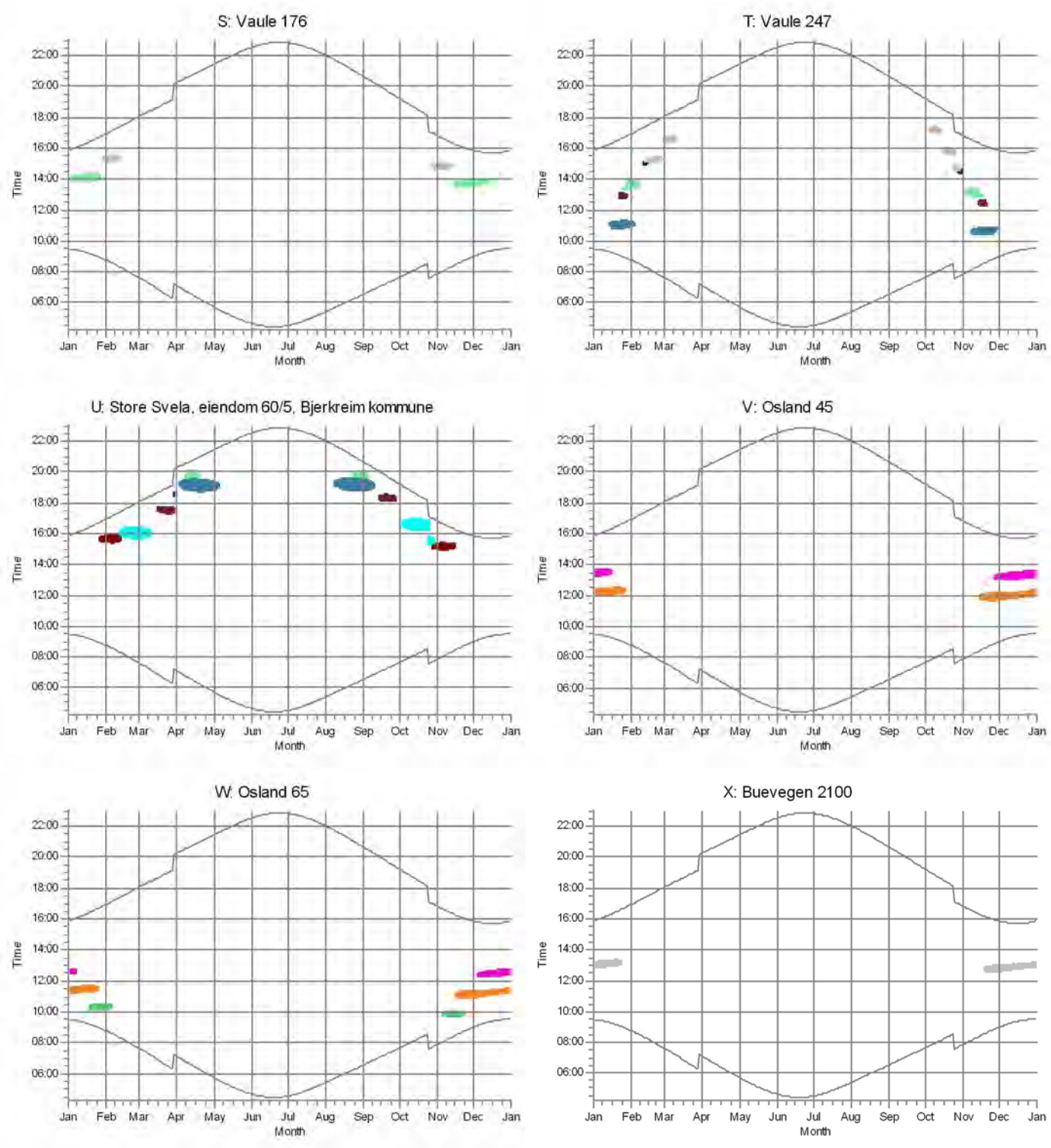
9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere



WTGs

7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
8: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

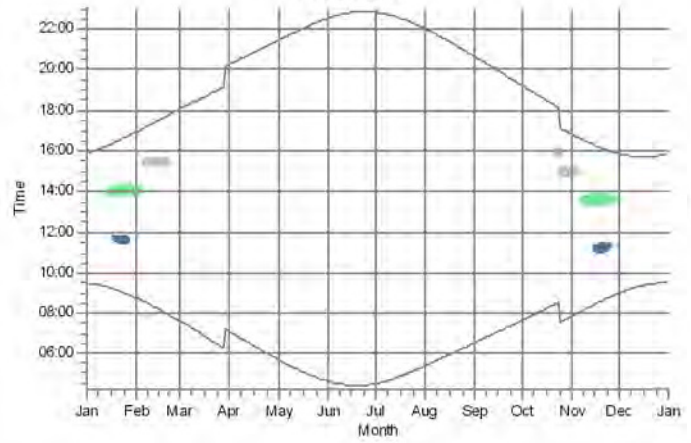
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Calculated:
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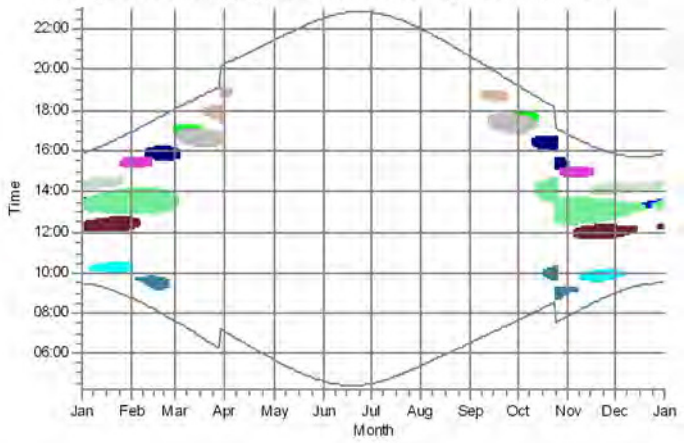
SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

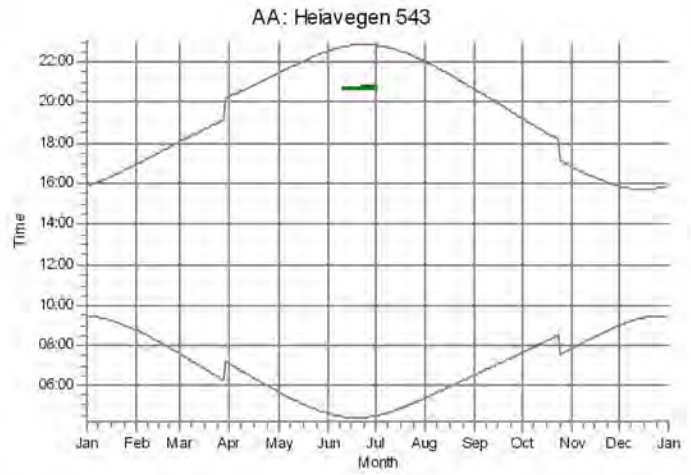
Y: Vaule 218



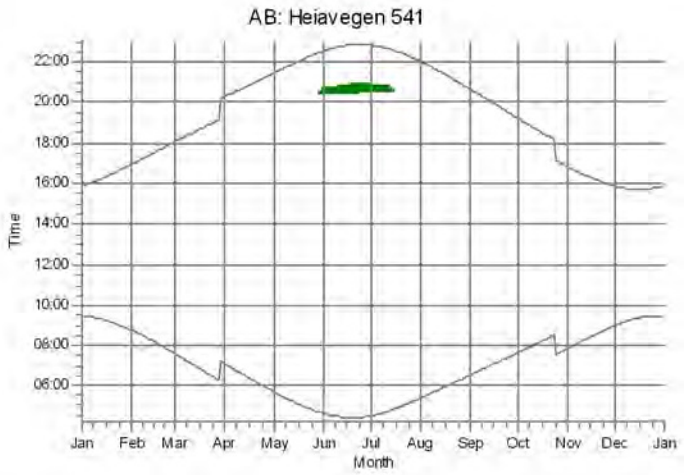
Z: Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune



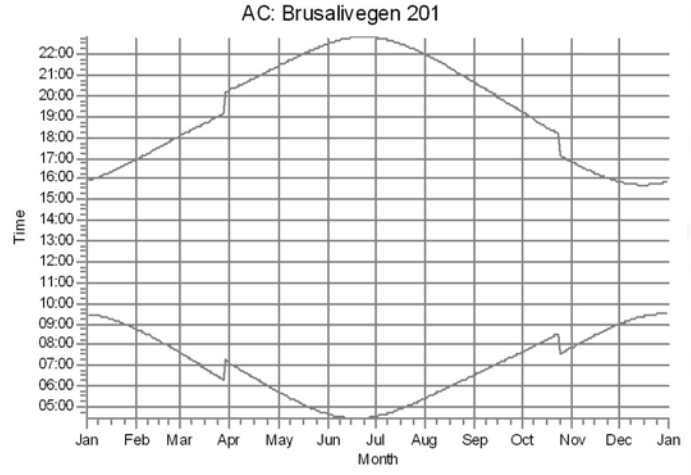
AA: Heiavegen 543



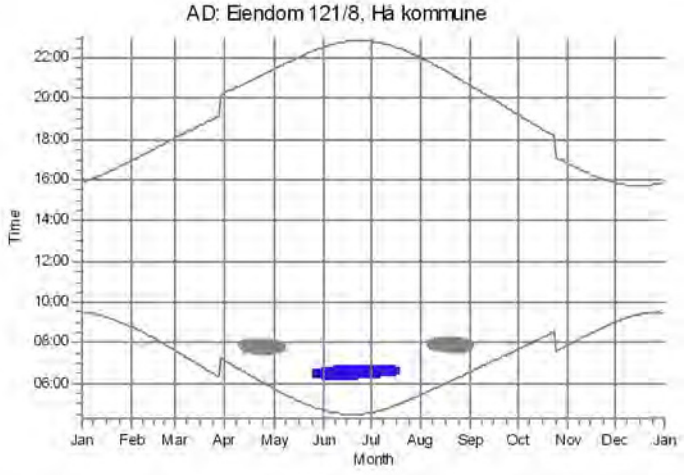
AB: Heiavegen 541



AC: Brusalivegen 201



AD: Eiendom 121/8, Hå kommune



WTGs

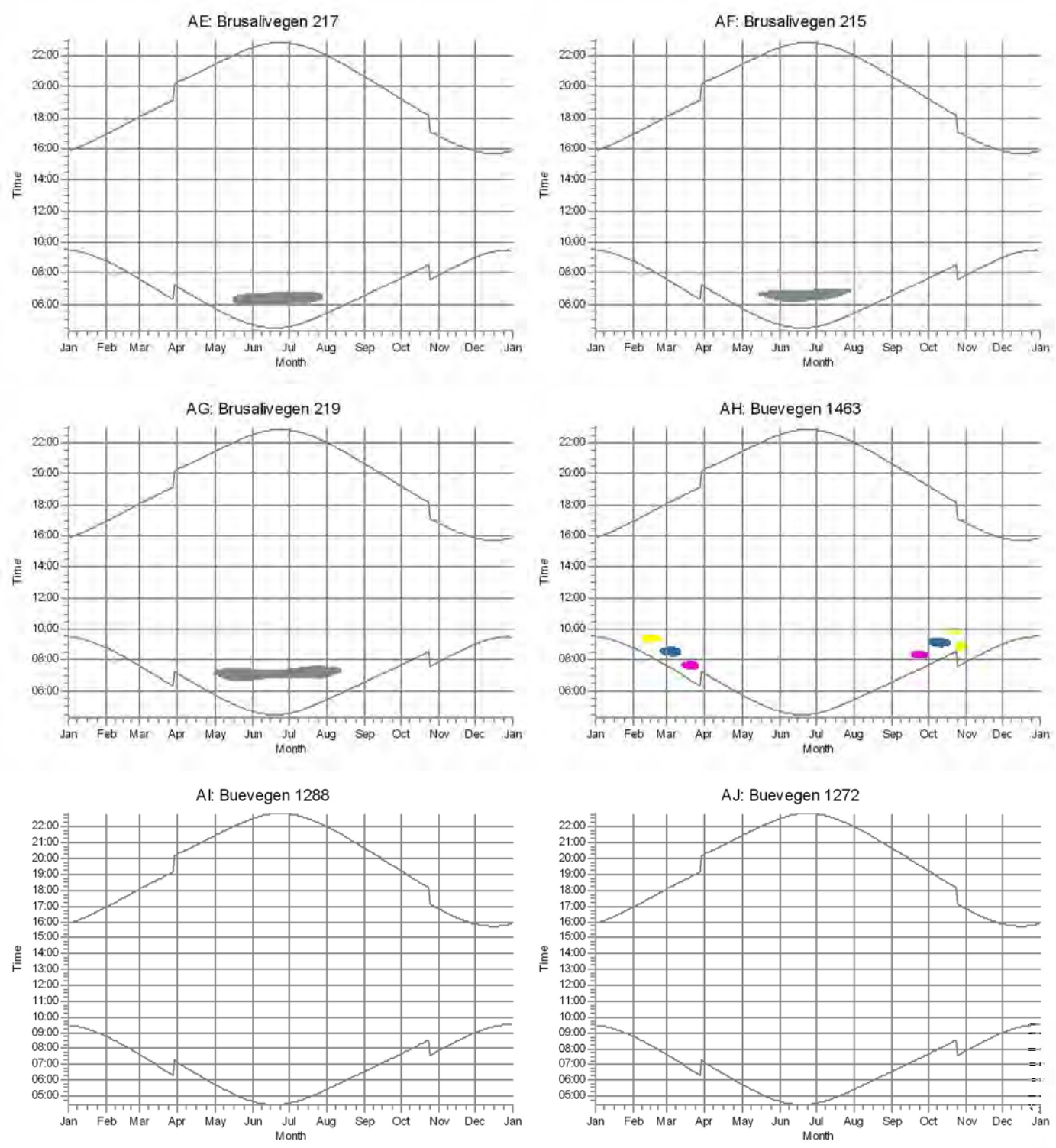
- 1: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544
- 3: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546
- 7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
- 9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552
- 12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
- 13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
- 14: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557
- 17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
- 26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
- 32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
- 35: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
- 36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
- 37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
- 38: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

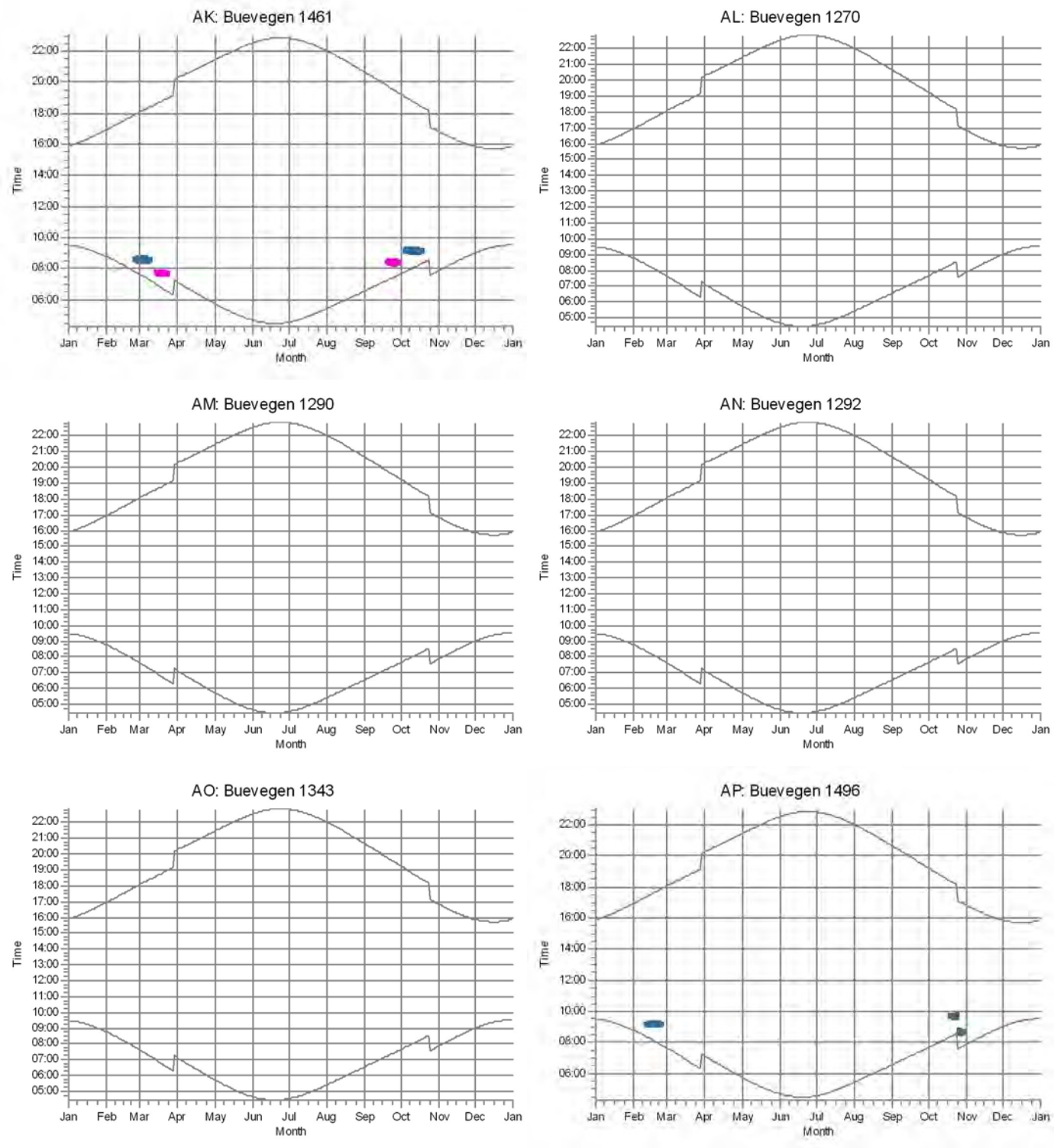


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

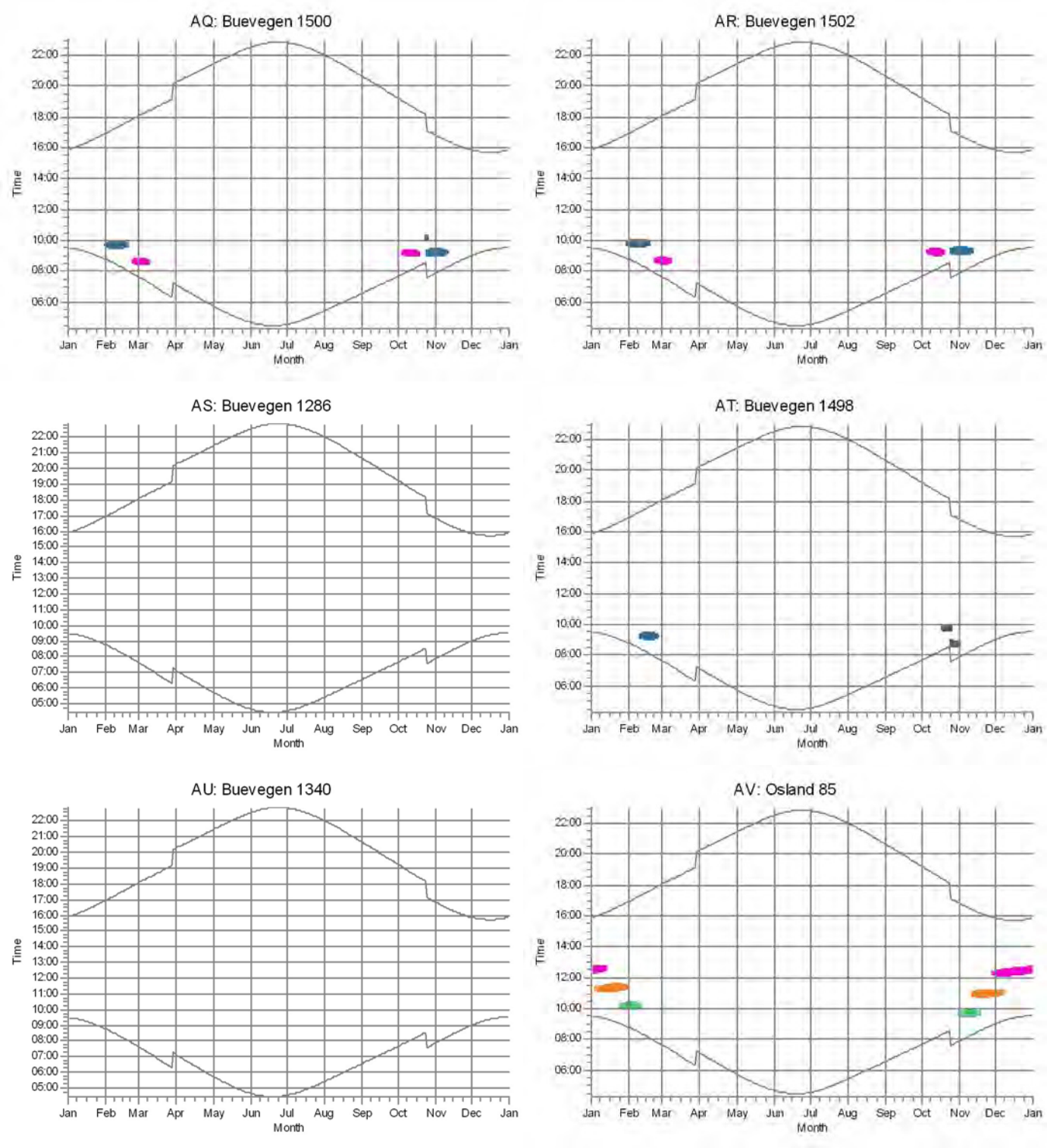


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Calculated:
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SHADOW - Calendar, graphical

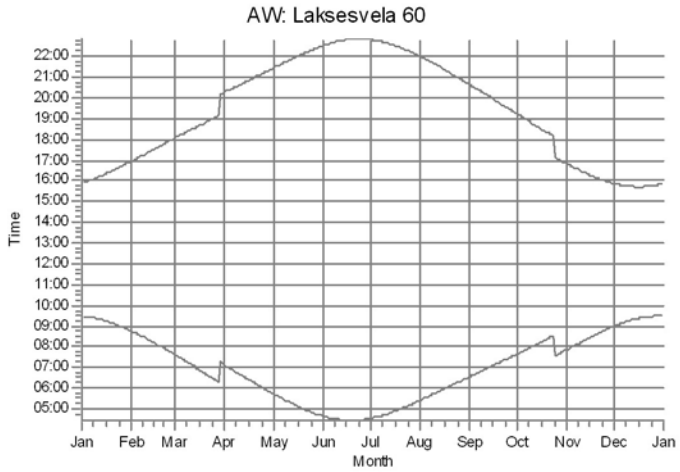
Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

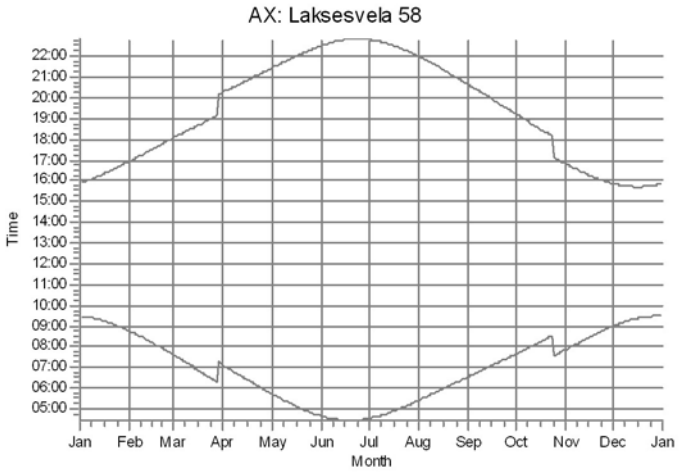


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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere





WTGs

Vedlegg 7.1

Tabell Moifjellet vindkraftverk

Med nærliggende - worst case

Project:

Moifjellet og Mellomstrand vrk

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19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07		05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17		21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04		05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19		21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01		05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21		21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58		05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24		21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55		05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26		21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52		05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28		21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50		05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30		21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47		05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33		21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44		05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35		21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41		05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37		21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38		05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40		21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35		05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42		21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32		05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44		21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30		05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47		21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27		05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49		21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24		05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51		22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21		05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53		22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00		22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10		04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03		22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08		04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05		22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05		04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07		22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02		04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10		22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59		04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12		22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57		04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14		22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54		04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17		22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52		04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19		22:24	22:50
29	08:52		11:15 (33)				07:15			05:49		04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21		22:25	22:50
30	08:50		11:15 (33)				07:12			05:46		04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24		22:27	22:49
31	08:48		11:17 (33)				07:10					04:41	
	16:54	57	13:05 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		421			1966			363					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October		November			December
1	04:32	05:24	06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49	22:01	20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33	05:26	06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48	21:58	20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34	05:28	06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47	21:56	20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35	05:31	06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47	21:54	20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36	05:33	06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46	21:51	20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37	05:35	06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45	21:49	20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39	05:37	06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44	21:47	20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40	05:39	06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43	21:44	20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41	05:42	06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42	21:42	20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43	05:44	06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40	21:39	20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44	05:46	06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39	21:37	20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46	05:48	06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38	21:34	20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47	05:51	07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37	21:31	20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49	05:53	07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35	21:29	20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51	05:55	07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34	21:26	19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52	05:57	07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32	21:24	19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54	06:00	07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30	21:21	19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56	06:02	07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29	21:18	19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58	06:04	07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27	21:16	19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00	06:06	07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25	21:13	19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01	06:08	07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24	21:10	19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03	06:11	07:19			08:27		12:35 (28)	08:41			09:27
	22:22	21:08	19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05	06:13	07:22			08:30		12:35 (28)	08:43			09:27
	22:20	21:05	19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07	06:15	07:24			08:32		12:34 (28)	08:45			09:28
	22:18	21:02	19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09	06:17	07:26			07:35		11:34 (28)	08:47			09:28
	22:16	20:59	19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11	06:20	07:28			07:37		11:33 (28)	08:50			09:28
	22:14	20:56	19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13	06:22	07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12	20:54	19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16	06:24	07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10	20:51	19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18	06:26	07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07	20:48	19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20	06:29	07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05	20:45	19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22	06:31				07:49		11:34 (28)				09:28
	22:03	20:42				16:51	90	15:09 (24)				15:51
Potential sun hours	546	478	386			319			236			199
Total, worst case				57			1700			1022		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07		05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17		21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04		05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19		21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01		05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21		21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58		05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24		21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55		05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26		21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52		05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28		21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50		05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30		21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47		05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33		21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44		05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35		21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41		05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37		21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38		05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40		21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35		05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42		21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33		05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44		21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30		05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47		21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27		05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49		21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24		05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51		22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21		05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53		22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00		22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10		04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03		22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08		04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05		04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07		22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02		04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10		22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00		04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12		22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57		04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14		22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54		04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17		22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52		04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19		22:24	22:50
29	08:52		10:56 (33)				07:15			05:49		04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21		22:25	22:50
30	08:50		10:50 (33)				07:13			05:46		04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24		22:27	22:49
31	08:48		10:44 (33)				07:10					04:41	
	16:54	62	14:05 (23)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		228			2114			237					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		10:30 (28)	09:00
	22:49	22:01	20:40	19:13		16:49	107	15:21 (22)	15:51
2	04:33	05:26	06:35	07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48	21:58	20:37	19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34	05:28	06:37	07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47	21:56	20:34	19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35	05:31	06:40	07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47	21:54	20:31	19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36	05:33	06:42	07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46	21:51	20:28	19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37	05:35	06:44	07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45	21:49	20:25	18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39	05:37	06:46	07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44	21:47	20:22	18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40	05:39	06:49	07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43	21:44	20:20	18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41	05:42	06:51	07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42	21:42	20:17	18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43	05:44	06:53	08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40	21:39	20:14	18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44	05:46	06:55	08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39	21:37	20:11	18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46	05:48	06:57	08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38	21:34	20:08	18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47	05:51	07:00	08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37	21:31	20:05	18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49	05:53	07:02	08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35	21:29	20:02	18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51	05:55	07:04	08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34	21:26	19:59	18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52	05:57	07:06	08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32	21:24	19:56	18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54	06:00	07:08	08:16		11:34 (28)	08:29			09:23
	22:30	21:21	19:54	18:28	36	12:10 (28)	16:13			15:42
18	04:56	06:02	07:11	08:18		11:32 (28)	08:32			09:24
	22:29	21:18	19:51	18:25	55	14:33 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		11:32 (28)	08:34			09:25
	22:27	21:16	19:48	18:22	62	14:36 (23)	16:09			15:42
20	05:00	06:06	07:15	08:23		11:31 (28)	08:36			09:26
	22:25	21:13	19:45	18:20	67	14:37 (23)	16:08			15:43
21	05:01	06:09	07:17	08:25		11:30 (28)	08:39			09:26
	22:24	21:10	19:42	18:17	72	14:39 (23)	16:06			15:43
22	05:03	06:11	07:19	08:27		11:29 (28)	08:41			09:27
	22:22	21:08	19:39	18:14	75	14:40 (23)	16:04			15:43
23	05:05	06:13	07:22	08:30		11:29 (28)	08:43			09:27
	22:20	21:05	19:36	18:12	78	14:41 (23)	16:02			15:44
24	05:07	06:15	07:24	08:32		11:29 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	79	14:41 (23)	16:01			15:45
25	05:09	06:17	07:26	07:35		10:29 (28)	08:47			09:28
	22:16	20:59	19:30	17:07	81	13:42 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		10:29 (28)	08:50			09:28
	22:14	20:57	19:27	17:04	82	13:43 (23)	15:58			15:46
27	05:13	06:22	07:30	07:39		10:29 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	81	13:42 (23)	15:56			15:47
28	05:16	06:24	07:33	07:42		10:29 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	87	14:45 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		10:29 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	95	14:48 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		10:30 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	14:51 (24)	15:52			15:50
31	05:22	06:31		07:49		10:31 (28)				09:28
	22:03	20:42		16:51	99	14:52 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1521			1074		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		08:46		11:39 (28)	07:35	09:25 (15)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (24)	18:05	9 09:34 (15)	20:17	21:26	22:31
2	09:27		08:43		11:39 (28)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (24)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (28)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (24)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (28)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (24)	18:12		20:24	21:33	22:35
5	09:26	12:20 (20)	08:37		11:39 (28)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (20)	17:06	80	15:09 (24)	18:14		20:26	21:35	22:37
6	09:25	12:19 (20)	08:34		11:40 (28)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (20)	17:08	74	15:08 (24)	18:17		20:28	21:37	22:38
7	09:24	12:17 (20)	08:32		11:40 (28)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (20)	17:11	62	14:11 (23)	18:19		20:30	21:40	22:39
8	09:24	12:17 (20)	08:30		11:41 (28)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (20)	17:13	61	14:11 (23)	18:21		20:33	21:42	22:40
9	09:23	12:18 (20)	08:27		11:42 (28)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (20)	17:16	57	14:10 (23)	18:24		20:35	21:44	22:42
10	09:22	11:06 (33)	08:25		11:42 (28)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (20)	17:18	54	14:09 (23)	18:26		20:37	21:46	22:43
11	09:21	11:02 (33)	08:23		11:44 (28)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (20)	17:21	48	14:08 (23)	18:28		20:40	21:49	22:44
12	09:20	11:01 (33)	08:20		11:45 (28)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (20)	17:23	42	14:06 (23)	18:31		20:42	21:51	22:45
13	09:18	11:02 (33)	08:18		11:46 (28)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (20)	17:26	32	14:02 (23)	18:33		20:44	21:53	22:46
14	09:17	11:02 (33)	08:15		11:49 (28)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (20)	17:28	18	12:07 (28)	18:35		20:47	21:55	22:47
15	09:16	11:02 (33)	08:13		11:52 (28)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (20)	17:31	12	12:04 (28)	18:38		20:49	21:58	22:47
16	09:15	11:02 (33)	08:10		09:29 (15)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (20)	17:33	5	09:34 (15)	18:40		20:51	22:00	22:48
17	09:13	11:02 (33)	08:07		09:25 (15)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (20)	17:36	12	09:37 (15)	18:42		20:53	22:02	22:49
18	09:12	11:03 (33)	08:05		09:24 (15)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (23)	17:38	16	09:40 (15)	18:45		20:56	22:04	22:49
19	09:10	11:03 (33)	08:02		09:23 (15)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (23)	17:40	17	09:40 (15)	18:47		20:58	22:06	22:50
20	09:08	11:04 (33)	08:00		09:22 (15)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (23)	17:43	19	09:41 (15)	18:49		21:00	22:08	22:50
21	09:07	11:04 (33)	07:57		09:21 (15)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (23)	17:45	20	09:41 (15)	18:51		21:03	22:10	22:50
22	09:05	11:05 (33)	07:54		09:20 (15)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (23)	17:48	21	09:41 (15)	18:54		21:05	22:12	22:50
23	09:03	11:05 (33)	07:52		09:21 (15)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (23)	17:50	21	09:42 (15)	18:56		21:07	22:14	22:51
24	09:02	11:06 (33)	07:49		09:21 (15)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (23)	17:53	20	09:41 (15)	18:58		21:10	22:16	22:51
25	09:00	11:07 (33)	07:46		09:21 (15)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (24)	17:55	20	09:41 (15)	19:01		21:12	22:18	22:51
26	08:58	11:09 (33)	07:44		09:21 (15)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (24)	17:57	19	09:40 (15)	19:03		21:14	22:20	22:50
27	08:56	11:10 (33)	07:41		09:22 (15)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (24)	18:00	16	09:38 (15)	19:05		21:17	22:22	22:50
28	08:54	11:13 (33)	07:38		09:23 (15)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (24)	18:02	14	09:37 (15)	19:08		21:19	22:24	22:50
29	08:52	11:40 (28)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (24)				20:10		21:21	22:25	22:50
30	08:50	11:39 (28)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (24)				20:12		21:24	22:27	22:49
31	08:48	11:39 (28)				07:10			04:41	
	16:54	88 15:13 (24)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49		22:01		20:40		19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33		05:26		06:35		07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48		21:58		20:37		19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34		05:28		06:37		07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47		21:56		20:34		19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35		05:31		06:40		07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47		21:54		20:31		19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36		05:33		06:42		07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46		21:51		20:28		19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37		05:35		06:44		07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45		21:49		20:25		18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39		05:37		06:46		07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44		21:47		20:22		18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40		05:39		06:49		07:55			08:08		11:09 (28)	09:12		
	22:43		21:44		20:20		18:53			16:32	87	14:42 (24)	15:45		
9	04:41		05:42		06:51		07:57			08:11		11:10 (28)	09:13		
	22:42		21:42		20:17		18:50			16:30	87	14:43 (24)	15:44		
10	04:43		05:44		06:53		08:00			08:13		11:10 (28)	09:15		
	22:41		21:39		20:14		18:47			16:28	88	14:44 (24)	15:43		
11	04:44		05:46		06:55		08:02			08:15		11:10 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	88	14:44 (24)	15:43		
12	04:46		05:48		06:57		08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38		21:34		20:08		18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47		05:51		07:00		08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37		21:32		20:05		18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49		05:53		07:02		08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35		21:29		20:02		18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51		05:55		07:04		08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34		21:26		19:59		18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32		21:24		19:56		18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30		21:21		19:54		18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29		21:18		19:51		18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58		06:04		07:13		08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00		06:06		07:15		08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25		21:13		19:45		18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01		06:08		07:17		08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24		21:10		19:42		18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22		21:08		19:39		18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20		21:05		19:36		18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07		06:15		07:24		08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18		21:02		19:33		18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09		06:17		07:26		07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16		20:59		19:30		17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14		20:57		19:27		17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13		06:22		07:30		07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12		20:54		19:25		17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16		06:24		07:33		07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10		20:51		19:22		16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07		20:48		19:19		16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05		20:45		19:16		16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22		06:31				07:49		11:13 (28)				09:28		
	22:03		20:42				16:51	50	13:38 (23)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								389			2122			106	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46	11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43	11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41	12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39	11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34	12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32	12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30	12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27	12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25	12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23	12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20	12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18	12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15	09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13	09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10	09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07	09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05	09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02	09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00	09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57	09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54	09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52	09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49	09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46	09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44	09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41	09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38	09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)			07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)			20:10	21:21	22:25	22:50
30	08:50		11:58 (28)			07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)			20:12	21:24	22:27	22:49
31	08:48		11:58 (28)			07:10		04:41	
	16:54	88	15:22 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1646			1063				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49	22:01	20:40	19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33	05:26	06:35	07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48	21:58	20:37	19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34	05:28	06:37	07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47	21:56	20:34	19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35	05:31	06:40	07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47	21:54	20:31	19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36	05:33	06:42	07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46	21:51	20:28	19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37	05:35	06:44	07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45	21:49	20:25	18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39	05:37	06:46	07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44	21:47	20:22	18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40	05:39	06:49	07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43	21:44	20:20	18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41	05:42	06:51	07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42	21:42	20:17	18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43	05:44	06:53	08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41	21:39	20:14	18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44	05:46	06:55	08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39	21:37	20:11	18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46	05:48	06:57	08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38	21:34	20:08	18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47	05:51	07:00	08:07			08:20		11:30 (28)	09:19		
	22:37	21:31	20:05	18:39			16:21	83	14:50 (24)	15:42		
14	04:49	05:53	07:02	08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35	21:29	20:02	18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34	21:26	19:59	18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52	05:57	07:06	08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32	21:24	19:56	18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54	06:00	07:08	08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30	21:21	19:54	18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56	06:02	07:11	08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29	21:18	19:51	18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58	06:04	07:13	08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00	06:06	07:15	08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25	21:13	19:45	18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01	06:08	07:17	08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24	21:10	19:42	18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03	06:11	07:19	08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22	21:08	19:39	18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05	06:13	07:22	08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20	21:05	19:36	18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09	06:17	07:26	07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16	20:59	19:30	17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14	20:57	19:27	17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13	06:22	07:30	07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12	20:54	19:25	17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16	06:24	07:33	07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10	20:51	19:22	16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07	20:48	19:19	16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05	20:45	19:16	16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22	06:31		07:49		11:35 (28)				09:28		11:11 (33)
	22:03	20:42		16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					362			2086			298	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (28)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)				20:10	21:21	22:25	22:50
30	08:50		12:23 (28)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)				20:12	21:24	22:27	22:49
31	08:48		12:24 (28)				07:10		04:41	
	16:53	77	15:26 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49	22:01	20:40	19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33	05:26	06:35	07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48	21:58	20:37	19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34	05:28	06:37	07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47	21:56	20:34	19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35	05:31	06:40	07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47	21:54	20:31	19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36	05:33	06:42	07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46	21:51	20:28	19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37	05:35	06:44	07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45	21:49	20:25	18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38	05:37	06:46	07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44	21:47	20:22	18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40	05:39	06:49	07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43	21:44	20:20	18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41	05:42	06:51	07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42	21:42	20:17	18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43	05:44	06:53	08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40	21:39	20:14	18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44	05:46	06:55	08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39	21:37	20:11	18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46	05:48	06:57	08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38	21:34	20:08	18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47	05:51	07:00	08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37	21:31	20:05	18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49	05:53	07:02	08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35	21:29	20:02	18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51	05:55	07:04	08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34	21:26	19:59	18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52	05:57	07:06	08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32	21:24	19:56	18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54	06:00	07:08	08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30	21:21	19:54	18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56	06:02	07:11	08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29	21:18	19:51	18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58	06:04	07:13	08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27	21:16	19:48	18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25	21:13	19:45	18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01	06:08	07:17	08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24	21:10	19:42	18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03	06:11	07:19	08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22	21:08	19:39	18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05	06:13	07:22	08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20	21:05	19:36	18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07	06:15	07:24	08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18	21:02	19:33	18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09	06:17	07:26	07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16	20:59	19:30	17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11	06:20	07:28	07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14	20:56	19:27	17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13	06:22	07:30	07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12	20:54	19:25	17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16	06:24	07:33	07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10	20:51	19:22	16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18	06:26	07:35	07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07	20:48	19:19	16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20	06:29	07:37	07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05	20:45	19:16	16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22	06:31		07:49		12:01 (28)				09:28		11:23 (33)
	22:03	20:42		16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					410			1974			580	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27	12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27	12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27	12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26	12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25	12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24	12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24	12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23	12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22	12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21	12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20	12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18	12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16	11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13	11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12	11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09	11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07	11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05	11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03	11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02	11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00	11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58	11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56	11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54	11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (24)				20:10	21:21	22:25	22:50
30	08:50	11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (24)				20:12	21:24	22:27	22:49
31	08:48	11:26 (28)				07:10		04:41	
	16:54	76 14:52 (24)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49	22:01	20:40	19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33	05:26	06:35	07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48	21:59	20:37	19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34	05:28	06:37	07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47	21:56	20:34	19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35	05:31	06:40	07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47	21:54	20:31	19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36	05:33	06:42	07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46	21:51	20:28	19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37	05:35	06:44	07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45	21:49	20:25	18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39	05:37	06:46	07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44	21:47	20:23	18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40	05:39	06:49	07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43	21:44	20:20	18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41	05:42	06:51	07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42	21:42	20:17	18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43	05:44	06:53	08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41	21:39	20:14	18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44	05:46	06:55	08:02			08:15		10:57 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	76	14:23 (24)	15:43		
12	04:46	05:48	06:57	08:04			08:18		10:57 (28)	09:18		
	22:38	21:34	20:08	18:42			16:23	80	14:25 (24)	15:43		
13	04:47	05:51	07:00	08:07			08:20		10:58 (28)	09:19		
	22:37	21:32	20:05	18:39			16:21	81	14:26 (24)	15:42		
14	04:49	05:53	07:02	08:09			08:22		10:58 (28)	09:20		
	22:35	21:29	20:02	18:36			16:19	82	14:26 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34	21:26	19:59	18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32	21:24	19:56	18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31	21:21	19:54	18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29	21:18	19:51	18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58	06:04	07:13	08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27	21:16	19:48	18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00	06:06	07:15	08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25	21:13	19:45	18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01	06:08	07:17	08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24	21:10	19:42	18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22	21:08	19:39	18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20	21:05	19:36	18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07	06:15	07:24	08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18	21:02	19:33	18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09	06:17	07:26	07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16	20:59	19:30	17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11	06:20	07:28	07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14	20:57	19:27	17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13	06:22	07:30	07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12	20:54	19:25	17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16	06:24	07:33	07:42			08:54		11:48 (20)	09:28		
	22:10	20:51	19:22	16:59			15:55	35	13:18 (23)	15:48		
29	05:18	06:26	07:35	07:44			08:56		11:48 (20)	09:28		
	22:07	20:48	19:19	16:56			15:54	33	13:17 (23)	15:49		
30	05:20	06:29	07:37	07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05	20:45	19:16	16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22	06:31		07:49		11:06 (28)				09:28		
	22:03	20:42		16:51	15	11:21 (28)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					225			1881			154	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:18 (20)	08:46		11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43		11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41		11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39		11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34		12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32			07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27		09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25		09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23		09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20		09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18		09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15		09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13		09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10		09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07		09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05		09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02		09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00		09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57		09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54		09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (28)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)				20:10	21:21	22:25	22:50
30	08:50		11:51 (28)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)				20:12	21:24	22:27	22:49
31	08:48		11:52 (28)				07:10		04:41	
	16:54	55	14:55 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1930			409					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:08 (20)	08:46		11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (20)	16:56	49	13:50 (23)	18:05	20:17	21:26	22:31
2	09:27		12:08 (20)	08:43		11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (20)	16:58	44	13:48 (23)	18:07	20:19	21:28	22:32
3	09:27		12:09 (20)	08:41		11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (20)	17:01	39	13:47 (23)	18:09	20:21	21:31	22:34
4	09:27		12:09 (20)	08:39		11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (20)	17:03	32	13:45 (23)	18:12	20:24	21:33	22:35
5	09:26		12:09 (20)	08:37		11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (20)	17:06	19	12:02 (28)	18:14	20:26	21:35	22:37
6	09:25		12:10 (20)	08:34		11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (23)	17:08	14	12:00 (28)	18:17	20:28	21:37	22:38
7	09:24		11:43 (28)	08:32		11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (23)	17:11	6	11:56 (28)	18:19	20:30	21:40	22:39
8	09:24		11:41 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	41	13:37 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:40 (28)	08:27			07:13	06:44	05:24	04:31
	16:05	47	13:39 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:38 (28)	08:25		09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (23)	17:18	3	09:42 (15)	18:26	20:37	21:46	22:43
11	09:21		11:38 (28)	08:23		09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (23)	17:21	10	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:37 (28)	08:20		09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (24)	17:23	14	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:37 (28)	08:18		09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (24)	17:26	16	09:49 (15)	18:33	20:44	21:53	22:46
14	09:17		11:36 (28)	08:15		09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (24)	17:28	17	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:36 (28)	08:13		09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (24)	17:31	18	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:35 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:36 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:36 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (24)	17:38	19	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:36 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (24)	17:40	18	09:50 (15)	18:47	20:58	22:06	22:50
20	09:09		11:35 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (24)	17:43	17	09:49 (15)	18:49	21:00	22:08	22:50
21	09:07		11:35 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (24)	17:45	15	09:48 (15)	18:51	21:03	22:10	22:50
22	09:05		11:36 (28)	07:54		09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (24)	17:48	12	09:46 (15)	18:54	21:05	22:12	22:50
23	09:03		11:35 (28)	07:52		09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (24)	17:50	6	09:44 (15)	18:56	21:07	22:14	22:51
24	09:02		11:35 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (28)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (24)				20:10	21:21	22:25	22:50
30	08:50		11:37 (28)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (24)				20:12	21:24	22:27	22:49
31	08:48		11:38 (28)				07:10		04:41	
	16:54	51	13:50 (23)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
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SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

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The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28	12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (20)	16:56	45 13:44 (23)	18:05	20:17	21:26	22:31
2	09:27	12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (20)	16:58	40 13:42 (23)	18:07	20:19	21:28	22:32
3	09:27	12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (20)	17:01	34 13:40 (23)	18:09	20:21	21:31	22:34
4	09:27	12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (20)	17:03	20 11:59 (28)	18:12	20:24	21:33	22:35
5	09:26	12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (23)	17:06	16 11:57 (28)	18:14	20:26	21:35	22:37
6	09:25	12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (23)	17:08	11 11:55 (28)	18:17	20:28	21:37	22:38
7	09:24	11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (28)	08:25	09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (24)	17:18	6 09:43 (15)	18:26	20:37	21:46	22:43
11	09:21	11:34 (28)	08:23	09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (24)	17:21	11 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:33 (28)	08:20	09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (24)	17:23	15 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:34 (28)	08:18	09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (24)	17:26	16 09:48 (15)	18:33	20:44	21:53	22:46
14	09:17	11:33 (28)	08:15	09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (24)	17:28	18 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:32 (28)	08:13	09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (24)	17:31	19 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:32 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:32 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (24)	17:38	18 09:50 (15)	18:45	20:56	22:04	22:49
19	09:10	11:32 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (24)	17:40	17 09:49 (15)	18:47	20:58	22:06	22:50
20	09:09	11:32 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (24)	17:43	16 09:48 (15)	18:49	21:00	22:08	22:50
21	09:07	11:32 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (24)	17:45	14 09:47 (15)	18:51	21:03	22:10	22:50
22	09:05	11:32 (28)	07:54	09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (24)	17:48	10 09:45 (15)	18:54	21:05	22:12	22:50
23	09:03	11:31 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (28)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (24)			20:10	21:21	22:25	22:50
30	08:50	11:34 (28)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (23)			20:12	21:24	22:27	22:49
31	08:48	11:35 (28)			07:10		04:41	
	16:54	48 13:44 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49		22:01		20:40		19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33		05:26		06:35		07:42			07:54			09:02		11:18 (28)
	22:48		21:59		20:37		19:10			16:46			15:50	58	14:24 (24)
3	04:34		05:28		06:37		07:44			07:56			09:03		11:19 (28)
	22:47		21:56		20:34		19:07			16:44			15:49	51	13:19 (23)
4	04:35		05:31		06:40		07:46			07:59			09:05		11:21 (28)
	22:47		21:54		20:31		19:04			16:41			15:48	46	13:18 (23)
5	04:36		05:33		06:42		07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46		21:51		20:28		19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37		05:35		06:44		07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45		21:49		20:25		18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38		05:37		06:46		07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44		21:47		20:23		18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40		05:39		06:49		07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43		21:44		20:20		18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41		05:42		06:51		07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42		21:42		20:17		18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43		05:44		06:53		08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41		21:39		20:14		18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44		05:46		06:55		08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39		21:37		20:11		18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46		05:48		06:57		08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38		21:34		20:08		18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47		05:51		07:00		08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37		21:32		20:05		18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49		05:53		07:02		08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35		21:29		20:02		18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51		05:55		07:04		08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34		21:26		19:59		18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52		05:57		07:06		08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32		21:24		19:56		18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54		06:00		07:08		08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31		21:21		19:54		18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56		06:02		07:11		08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29		21:18		19:51		18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58		06:04		07:13		08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27		21:16		19:48		18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00		06:06		07:15		08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25		21:13		19:45		18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01		06:08		07:17		08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24		21:10		19:42		18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03		06:11		07:19		08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22		21:08		19:39		18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05		06:13		07:22		08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20		21:05		19:36		18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18		21:02		19:33		18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09		06:17		07:26		07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16		20:59		19:30		17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14		20:57		19:27		17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13		06:22		07:30		07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12		20:54		19:25		17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16		06:24		07:33		07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10		20:51		19:22		16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18		06:26		07:35		07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07		20:48		19:19		16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20		06:29		07:37		07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05		20:45		19:16		16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22		06:31				07:49		09:05 (15)				09:28		12:04 (20)
	22:03		20:42				16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								197			1686			799	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November			December		
1	09:28		11:58 (20)	08:46		11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56	49	13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43		11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58	47	13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41		11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01	42	13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39		11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03	35	13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37		11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06	23	11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34		11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08	20	11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32		11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11	16	11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30		11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13	11	11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18			18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18			07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45			18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46			06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)				20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)				07:10		04:41		05:22	06:31		07:49				09:28		11:57 (20)
	16:54	53	13:36 (23)				20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (20)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		1841			243											1761			403	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35	08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13		16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42		07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10		16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44		07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07		16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46	09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7 09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48	09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12 09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51	09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15 09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53	09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18 09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55	09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19 09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57	09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20 09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00	09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20 09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02	09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20 09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04	09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19 09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06	09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18 09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09	09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26 10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11	09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29 10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13	09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28 10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16	10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21 10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18	10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23 10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20	10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24 10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23	10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25 10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25	10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37 15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27	10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42 15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30	10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50 15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32	10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63 15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35	09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69 14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37	09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74 14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39	09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82 15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42	09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89 15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44	09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90 15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47	09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90 15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49	12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81 15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319		236			199		
Total, worst case					1111		1317			529	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07		05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17		21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04		05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19		21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01		05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21		21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58		05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23		21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55		05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26		21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52		05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28		21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49		05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30		21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47		05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33		21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44		05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35		21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41		05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37		21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38		05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40		21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35		05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42		21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32		05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44		21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30		05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46		21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27		05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49		21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24		05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51		22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21		05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53		22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18		05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56		22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16		05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58		22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13		05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00		22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10		04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03		22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07		04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05		04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07		22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02		04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10		22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59		04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12		22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57		04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14		22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54		04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17		22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51		04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19		22:24	22:50
29	08:52						07:15			05:49		04:44	04:30
	16:49						20:10			21:21		22:25	22:49
30	08:50		14:16 (33)				07:12			05:46		04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23		22:27	22:49
31	08:48		14:08 (33)				07:10					04:41	
	16:53	21	15:27 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		24			1365			367					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		16:24 (28)	08:45		11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8	16:32 (28)	16:01	30	13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		15:22 (28)	08:47		11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12	15:34 (28)	15:59	20	13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		15:20 (28)	08:49		11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15	15:35 (28)	15:58	11	11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		15:19 (28)	08:52		11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17	15:36 (28)	15:56	10	11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42		09:50 (12)	08:54		11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28	15:37 (28)	15:55	8	11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		09:47 (12)	08:56			09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37	15:37 (28)	15:53			15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		09:46 (12)	08:58			09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49	15:37 (28)	15:52			15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49		09:46 (12)				09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55	15:38 (28)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319			236				199
Total, worst case		793		765									221			1347			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46	10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56 74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49 30	13:49 (15)	15:51
2	09:27		08:43	10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58 73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 45	13:52 (15)	15:50
3	09:27		08:41	10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01 74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44 54	13:54 (15)	15:49
4	09:26		08:39	10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03 71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 61	13:55 (15)	15:48
5	09:26		08:37	10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06 68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39 65	13:56 (15)	15:47
6	09:25		08:34	10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08 64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37 69	13:57 (15)	15:46
7	09:24		08:32	10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11 59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34 72	13:57 (15)	15:45
8	09:24		08:30	10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13 52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32 73	13:57 (15)	15:45
9	09:23		08:27	10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16 43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30 75	13:58 (15)	15:44
10	09:22		08:25	10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18 26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28 72	13:58 (15)	15:43
11	09:21		08:22	12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21 5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25 75	13:58 (15)	15:43
12	09:20		08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23 72	13:58 (15)	15:42
13	09:18	12:39 (9)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13 5	12:44 (9)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21 72	13:58 (15)	15:42
14	09:17	12:39 (9)	08:15		06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15 7	12:46 (9)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 68	13:57 (15)	15:42
15	09:16	12:39 (9)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17 15	12:54 (9)	17:30		18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17 63	13:57 (15)	15:42
16	09:14	12:38 (9)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19 17	12:55 (9)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15 50	13:57 (15)	15:42
17	09:13	12:38 (9)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21 18	12:56 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 45	13:55 (15)	15:42
18	09:12	12:37 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23 19	12:56 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11 42	13:55 (15)	15:42
19	09:10	12:38 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25 20	12:58 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09 39	13:54 (15)	15:42
20	09:08	12:37 (17)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27 22	12:59 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07 33	13:51 (15)	15:42
21	09:07	12:35 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30 23	12:58 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06 23	12:34 (9)	15:43
22	09:05	12:34 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32 33	14:16 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04 22	12:35 (9)	15:43
23	09:03	12:33 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34 39	14:19 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02 20	12:34 (9)	15:44
24	09:01	12:33 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37 42	14:21 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01 20	12:35 (9)	15:44
25	09:00	12:32 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39 45	14:22 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59 18	12:34 (9)	15:45
26	08:58	10:57 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41 50	14:24 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58 17	12:34 (9)	15:46
27	08:56	10:51 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44 64	14:24 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56 15	12:33 (9)	15:47
28	08:54	10:51 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46 69	14:25 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55 7	12:26 (9)	15:48
29	08:52	10:51 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49 70	14:26 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53 5	12:25 (9)	15:49
30	08:50	10:50 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51 72	14:26 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)			07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53 74	14:27 (15)			20:14		22:29		22:03	20:42		16:51 7	12:20 (17)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case	704		609									7		1322		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46	10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51	10:19 (12)	09:00
	15:53		16:56 73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49 43	13:46 (15)	15:51
2	09:27		08:43	10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:18 (12)	09:01
	15:54		16:58 74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 53	13:48 (15)	15:50
3	09:27		08:41	10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:18 (12)	09:03
	15:55		17:01 74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44 59	13:50 (15)	15:49
4	09:26		08:39	10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:16 (12)	09:05
	15:57		17:03 73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 65	13:51 (15)	15:48
5	09:26		08:37	10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:16 (12)	09:07
	15:58		17:06 71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39 70	13:52 (15)	15:47
6	09:25		08:34	10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:16 (12)	09:09
	16:00		17:08 68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37 73	13:53 (15)	15:46
7	09:24		08:32	10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:16 (12)	09:10
	16:02		17:11 65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34 73	13:52 (15)	15:45
8	09:24		08:30	10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:16 (12)	09:12
	16:03		17:13 58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32 73	13:53 (15)	15:45
9	09:23		08:27	10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:16 (12)	09:13
	16:05		17:16 50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30 75	13:53 (15)	15:44
10	09:22		08:25	10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:17 (12)	09:15
	16:07		17:18 40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28 74	13:54 (15)	15:43
11	09:21		08:22	10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:17 (12)	09:16
	16:09		17:21 22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25 69	13:53 (15)	15:43
12	09:20		08:20	12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:18 (12)	09:17
	16:11		17:23 4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23 54	13:53 (15)	15:42
13	09:18		08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:20 (12)	09:19
	16:13		17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21 53	13:53 (15)	15:42
14	09:17		08:15		06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	11:57 (17)	09:20
	16:15		17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 51	13:52 (15)	15:42
15	09:16		08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:58 (17)	09:21
	16:17		17:30		18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17 50	13:52 (15)	15:42
16	09:14		08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:59 (17)	09:22
	16:19		17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15 49	13:52 (15)	15:42
17	09:13	12:33 (9)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:00 (17)	09:23
	16:21 5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 45	13:50 (15)	15:42
18	09:12	12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:01 (17)	09:24
	16:23 18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11 43	13:50 (15)	15:42
19	09:10	12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:03 (17)	09:25
	16:25 19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09 38	13:49 (15)	15:42
20	09:08	12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:04 (17)	09:25
	16:27 20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07 27	13:41 (15)	15:42
21	09:07	12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:07 (17)	09:26
	16:30 22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06 22	12:29 (9)	15:43
22	09:05	12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:10 (9)	09:27
	16:32 27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04 20	12:30 (9)	15:43
23	09:03	12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:10 (9)	09:27
	16:34 38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02 19	12:29 (9)	15:44
24	09:01	12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:11 (9)	09:28
	16:37 43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01 18	12:29 (9)	15:44
25	09:00	12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:11 (9)	09:28
	16:39 45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59 5	12:28 (9)	15:45
26	08:58	12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49		09:28
	16:41 49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58		15:46
27	08:56	12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52		09:28
	16:44 50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56		15:47
28	08:54	12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54		09:28
	16:46 51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55		15:48
29	08:52	10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56		09:28
	16:49 53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53		15:49
30	08:50	10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58		09:28
	16:51 55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54 7	12:13 (17)	15:52		15:50
31	08:48	10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)			09:28
	16:53 69	14:22 (15)			20:14		22:29		22:03	20:42		16:51 25	12:17 (17)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case	564		672									32		1221		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:03 (26)	08:45		14:59 (17)	07:35	07:07	05:44	04:39
	15:52	20	12:23 (26)	16:56	18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27		12:03 (26)	08:43		14:59 (17)	07:32	07:04	05:41	04:38
	15:54	20	12:23 (26)	16:58	19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27		12:03 (26)	08:41		14:58 (17)	07:30	07:01	05:38	04:37
	15:55	20	12:23 (26)	17:01	19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26		12:03 (26)	08:39		14:59 (17)	07:27	06:58	05:36	04:36
	15:57	21	12:24 (26)	17:03	19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26		12:04 (26)	08:37		14:59 (17)	07:24	06:55	05:33	04:34
	15:58	26	13:33 (12)	17:06	19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25		12:04 (26)	08:34		15:00 (17)	07:21	06:52	05:31	04:33
	16:00	29	13:35 (12)	17:08	18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24		12:05 (26)	08:32		15:00 (17)	07:18	06:49	05:29	04:32
	16:01	31	13:37 (12)	17:11	17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23		12:06 (26)	08:30		15:00 (17)	07:16	06:46	05:26	04:31
	16:03	33	13:39 (12)	17:13	16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23		12:06 (26)	08:27		15:02 (17)	07:13	06:44	05:24	04:31
	16:05	33	13:39 (12)	17:15	14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22		12:07 (26)	08:25		15:03 (17)	07:10	06:41	05:21	04:30
	16:07	35	13:41 (12)	17:18	11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21		12:07 (26)	08:22		15:07 (17)	07:07	06:38	05:19	04:29
	16:09	35	13:41 (12)	17:20	5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19		12:08 (26)	08:20			07:04	06:35	05:17	04:29
	16:11	35	13:42 (12)	17:23			18:30	20:42	21:51	22:45
13	09:18		12:09 (26)	08:17			07:01	06:32	05:15	04:28
	16:12	35	13:43 (12)	17:25			18:33	20:44	21:53	22:46
14	09:17		12:10 (26)	08:15			06:58	06:29	05:12	04:28
	16:14	35	13:44 (12)	17:28			18:35	20:46	21:55	22:46
15	09:16		12:11 (26)	08:12			06:56	06:27	05:10	04:27
	16:17	34	13:45 (12)	17:30			18:37	20:49	21:57	22:47
16	09:14		12:12 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	32	13:45 (12)	17:33			18:40	20:51	22:00	22:48
17	09:13		12:14 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	29	13:45 (12)	17:35			18:42	20:53	22:02	22:48
18	09:11		12:16 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	26	13:46 (12)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:25 (12)	08:02			06:44	06:16	05:02	04:26
	16:25	21	13:46 (12)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:25 (12)	07:59			06:41	06:13	05:00	04:26
	16:27	22	13:47 (12)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:26 (12)	07:57			06:38	06:10	04:58	04:26
	16:30	21	13:47 (12)	17:45			18:51	21:03	22:10	22:50
22	09:05		13:26 (12)	07:54			06:35	06:07	04:56	04:27
	16:32	21	13:47 (12)	17:48			18:54	21:05	22:12	22:50
23	09:03		13:27 (12)	07:51			06:33	06:05	04:54	04:27
	16:34	20	13:47 (12)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:28 (12)	07:49			06:30	06:02	04:52	04:27
	16:37	19	13:47 (12)	17:52			18:58	21:09	22:16	22:50
25	09:00		13:29 (12)	07:46			06:27	05:59	04:50	04:28
	16:39	18	13:47 (12)	17:55			19:00	21:12	22:18	22:50
26	08:58		13:30 (12)	07:43			06:24	05:57	04:49	04:28
	16:41	17	13:47 (12)	17:57			19:03	21:14	22:20	22:50
27	08:56		13:30 (12)	07:41			06:21	05:54	04:47	04:29
	16:44	20	15:09 (17)	18:00			19:05	21:16	22:22	22:50
28	08:54		13:32 (12)	07:38			06:18	05:51	04:45	04:29
	16:46	23	15:12 (17)	18:02			19:07	21:19	22:23	22:50
29	08:52		13:35 (12)				07:15	05:49	04:44	04:30
	16:48	21	15:14 (17)				20:10	21:21	22:25	22:49
30	08:50		15:00 (17)				07:12	05:46	04:42	04:31
	16:51	15	15:15 (17)				20:12	21:23	22:27	22:49
31	08:48		15:00 (17)				07:09		04:41	
	16:53	16	15:16 (17)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		783			175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59	12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51 18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01	12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50 19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03	12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49 20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05	12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48 20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07	12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47 20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08	12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46 20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10	12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45 21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12	12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44 20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13	12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44 21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15	12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43 21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16	12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43 21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17	12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42 20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19	12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42 20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20	12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42 21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21	12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42 21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22	12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42 20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23	12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42 20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24	12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42 20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25	12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42 20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25	12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42 20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26	12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43 20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27	12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43 20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27	12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44 20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27	12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44 21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28	12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45 20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28	12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46 20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28	12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47 20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28	12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47 21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28	12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49 20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28	12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50 20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28	12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51 20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case		631		5										419		625

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:45		10:57 (37)	07:35		16:28 (17)	07:06		05:44	04:39
	15:52			16:56	40	13:50 (26)	18:04	11	16:39 (17)	20:16		21:26	22:30
2	09:27			08:43		10:59 (37)	07:32		16:27 (17)	07:04		05:41	04:38
	15:54			16:58	37	13:51 (26)	18:07	13	16:40 (17)	20:19		21:28	22:32
3	09:27			08:41		11:02 (37)	07:30		16:27 (17)	07:01		05:38	04:37
	15:55			17:01	28	13:49 (26)	18:09	14	16:41 (17)	20:21		21:30	22:33
4	09:26			08:39		13:29 (26)	07:27		16:27 (17)	06:58		05:36	04:36
	15:57			17:03	20	13:49 (26)	18:12	17	16:44 (17)	20:23		21:33	22:35
5	09:26			08:37		13:30 (26)	07:24		16:27 (17)	06:55		05:33	04:34
	15:58			17:06	17	13:47 (26)	18:14	19	16:46 (17)	20:26		21:35	22:36
6	09:25			08:34		13:33 (26)	07:21		16:28 (17)	06:52		05:31	04:33
	16:00			17:08	12	13:45 (26)	18:16	17	16:45 (17)	20:28		21:37	22:38
7	09:24			08:32			07:18		16:29 (17)	06:49		05:29	04:32
	16:01			17:11			18:19	15	16:44 (17)	20:30		21:39	22:39
8	09:23			08:30			07:15		16:30 (17)	06:46		05:26	04:32
	16:03			17:13			18:21	12	16:42 (17)	20:32		21:42	22:40
9	09:23			08:27			07:13		16:33 (17)	06:44		05:24	04:31
	16:05			17:15			18:23	6	16:39 (17)	20:35		21:44	22:41
10	09:22			08:25			07:10			06:41		05:21	04:30
	16:07			17:18			18:26			20:37		21:46	22:43
11	09:20			08:22			07:07			06:38		05:19	04:29
	16:09			17:20			18:28			20:39		21:48	22:44
12	09:19			08:20		14:57 (7)	07:04			06:35		05:17	04:29
	16:11			17:23	8	15:05 (7)	18:30			20:42		21:51	22:45
13	09:18			08:17		14:59 (7)	07:01			06:32		05:15	04:28
	16:12			17:25	11	15:10 (7)	18:33			20:44		21:53	22:45
14	09:17		11:05 (37)	08:15		15:02 (7)	06:58			06:29		05:12	04:28
	16:14	3	11:08 (37)	17:28	12	15:14 (12)	18:35			20:46		21:55	22:46
15	09:16		10:59 (37)	08:12		15:06 (12)	06:56			06:27		05:10	04:27
	16:17	10	11:09 (37)	17:30	12	15:18 (12)	18:37			20:49		21:57	22:47
16	09:14		10:52 (37)	08:10		15:06 (12)	06:53			06:24		05:08	04:27
	16:19	18	11:10 (37)	17:33	15	15:21 (12)	18:40			20:51		21:59	22:48
17	09:13		10:51 (37)	08:07		15:05 (12)	06:50			06:21		05:06	04:27
	16:21	19	11:10 (37)	17:35	16	15:21 (12)	18:42			20:53		22:02	22:48
18	09:11		10:51 (37)	08:05		15:05 (12)	06:47			06:18		05:04	04:26
	16:23	20	11:11 (37)	17:38	15	15:20 (12)	18:44			20:56		22:04	22:49
19	09:10		10:51 (37)	08:02		15:06 (12)	06:44			06:16		05:02	04:26
	16:25	21	11:12 (37)	17:40	16	15:22 (12)	18:47			20:58		22:06	22:49
20	09:08		10:51 (37)	07:59		15:07 (12)	06:41			06:13		05:00	04:26
	16:27	22	11:13 (37)	17:43	17	15:24 (12)	18:49			21:00		22:08	22:50
21	09:07		10:51 (37)	07:57		15:07 (12)	06:38			06:10		04:58	04:26
	16:30	22	11:13 (37)	17:45	20	15:27 (12)	18:51			21:02		22:10	22:50
22	09:05		10:51 (37)	07:54		15:08 (12)	06:35			06:07		04:56	04:27
	16:32	27	12:49 (32)	17:47	20	15:28 (12)	18:53			21:05		22:12	22:50
23	09:03		10:51 (37)	07:51		15:09 (12)	06:32			06:05		04:54	04:27
	16:34	39	13:02 (32)	17:50	18	15:27 (12)	18:56			21:07		22:14	22:50
24	09:01		10:52 (37)	07:49		15:12 (12)	06:30			06:02		04:52	04:27
	16:37	40	13:04 (32)	17:52	13	15:25 (12)	18:58			21:09		22:16	22:50
25	08:59		10:52 (37)	07:46		15:16 (12)	06:27			05:59		04:50	04:28
	16:39	39	13:04 (32)	17:55	5	15:21 (12)	19:00			21:12		22:18	22:50
26	08:58		10:52 (37)	07:43			06:24			05:57		04:49	04:28
	16:41	39	13:24 (26)	17:57			19:03			21:14		22:20	22:50
27	08:56		10:53 (37)	07:41			06:21			05:54		04:47	04:29
	16:44	39	13:28 (26)	18:00			19:05			21:16		22:22	22:50
28	08:54		10:53 (37)	07:38		16:32 (17)	06:18			05:51		04:45	04:29
	16:46	41	13:35 (26)	18:02	4	16:36 (17)	19:07			21:19		22:23	22:50
29	08:52		10:54 (37)				07:15			05:49		04:44	04:30
	16:48	41	13:44 (26)				20:10			21:21		22:25	22:49
30	08:50		10:55 (37)				07:12			05:46		04:42	04:31
	16:51	42	13:47 (26)				20:12			21:23		22:27	22:49
31	08:48		10:56 (37)				07:09					04:41	
	16:53	42	13:49 (26)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		524			356			124					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		08:59
	22:48	22:01	20:39	19:13		16:48		15:51
2	04:33	05:26	06:35	07:41		07:54		09:01
	22:48	21:58	20:37	19:10		16:46		15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44		15:49
4	04:35	05:30	06:39	07:46		07:58	13:07 (26)	09:05
	22:46	21:54	20:31	19:04		16:41	4 13:11 (26)	15:48
5	04:36	05:33	06:42	07:48	17:09 (17)	08:01	13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9 17:18 (17)	16:39	13 13:15 (26)	15:47
6	04:37	05:35	06:44	07:50	17:06 (17)	08:03	13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14 17:20 (17)	16:36	17 13:18 (26)	15:46
7	04:38	05:37	06:46	07:53	17:04 (17)	08:06	12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16 17:20 (17)	16:34	21 13:19 (26)	15:45
8	04:40	05:39	06:48	07:55	17:03 (17)	08:08	10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18 17:21 (17)	16:32	29 13:20 (26)	15:44
9	04:41	05:41	06:50	07:57	17:02 (17)	08:10	10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18 17:20 (17)	16:30	37 13:22 (26)	15:44
10	04:42	05:44	06:53	07:59	17:01 (17)	08:13	10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16 17:17 (17)	16:27	40 13:21 (26)	15:43
11	04:44	05:46	06:55	08:02	17:01 (17)	08:15	10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14 17:15 (17)	16:25	41 13:19 (26)	15:43
12	04:45	05:48	06:57	08:04	17:01 (17)	08:18	10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12 17:13 (17)	16:23	42 13:19 (26)	15:42
13	04:47	05:50	06:59	08:06	17:02 (17)	08:20	10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10 17:12 (17)	16:21	41 13:15 (26)	15:42
14	04:49	05:53	07:01	08:09	17:06 (17)	08:22	10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2 17:08 (17)	16:19	41 13:07 (26)	15:42
15	04:50	05:55	07:04	08:11		08:25	10:25 (37)	09:21
	22:33	21:26	19:59	18:33		16:17	40 13:01 (26)	15:42
16	04:52	05:57	07:06	08:13		08:27	10:26 (37)	09:22
	22:32	21:23	19:56	18:30		16:15	39 12:58 (26)	15:42
17	04:54	05:59	07:08	08:16	15:45 (12)	08:29	10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9 15:54 (12)	16:13	39 12:37 (32)	15:42
18	04:56	06:02	07:10	08:18	15:42 (12)	08:32	10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15 15:57 (12)	16:11	40 12:38 (32)	15:42
19	04:57	06:04	07:12	08:20	15:40 (12)	08:34	10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18 15:58 (12)	16:09	39 12:37 (32)	15:42
20	04:59	06:06	07:15	08:23	15:39 (12)	08:36	10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21 16:00 (12)	16:07	28 12:25 (32)	15:42
21	05:01	06:08	07:17	08:25	15:37 (12)	08:38	10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18 15:55 (12)	16:06	22 10:49 (37)	15:43
22	05:03	06:10	07:19	08:27	15:37 (12)	08:41	10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16 15:53 (12)	16:04	22 10:49 (37)	15:43
23	05:05	06:13	07:21	08:30	15:36 (12)	08:43	10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16 15:52 (12)	16:02	21 10:49 (37)	15:44
24	05:07	06:15	07:24	08:32	15:35 (12)	08:45	10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16 15:51 (12)	16:01	20 10:49 (37)	15:44
25	05:09	06:17	07:26	07:34	14:36 (12)	08:47	10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15 14:51 (12)	15:59	19 10:48 (37)	15:45
26	05:11	06:19	07:28	07:37	14:35 (12)	08:49	10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14 14:49 (12)	15:57	18 10:49 (37)	15:46
27	05:13	06:22	07:30	07:39	14:35 (12)	08:51	10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12 14:47 (12)	15:56	10 10:48 (37)	15:47
28	05:15	06:24	07:32	07:41	14:30 (7)	08:53	10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12 14:42 (12)	15:55	3 10:47 (37)	15:48
29	05:17	06:26	07:35	07:44	14:27 (7)	08:55		09:28
	22:07	20:48	19:19	16:56	11 14:38 (7)	15:53		15:49
30	05:20	06:28	07:37	07:46	14:26 (7)	08:57		09:28
	22:05	20:45	19:16	16:53	8 14:34 (7)	15:52		15:50
31	05:22	06:31		07:49				09:28
	22:03	20:42		16:51				15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					330		686	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49
31	08:47		15:29 (8)				07:09						04:41			
	16:53	20	15:49 (8)				20:14						22:28			
Potential sun hours	221			260			365			432			521			547
Total, worst case		77			781			508			1216			65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	04:32	05:24			06:33			18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60		19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35			18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57		19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37			18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54		19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39			18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35		19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42			18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31		19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44			18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28		19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46			18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25		19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48			18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18		19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50			19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11		19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53				07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13				18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55				08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11				18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57				08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08				18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59				08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05				18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01			18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7		18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04			18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13		18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06			18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16		18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08			18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19		18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10			18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20		18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12			18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21		18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15			18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22		18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17			18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22		18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19			18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22		18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21			18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21		18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23			18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19		18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26			18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18		18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28			18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15		18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30			18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11		18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32				07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21				16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34				07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18				16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37				07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16				16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)					07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)					16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319				236			200
Total, worst case			983			565			839				305		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		11:14 (23)	08:46		10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53	31	12:43 (24)	16:56	18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28		11:14 (23)	08:44		10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54	30	12:43 (24)	16:58	17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27		11:13 (23)	08:41		10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55	31	12:43 (24)	17:01	14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27		11:13 (23)	08:39		10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57	30	12:43 (24)	17:03	11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26		11:14 (23)	08:37		10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58	28	12:42 (24)	17:06	7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25		11:14 (23)	08:35			07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:09		11:00 (23)
	16:00	28	12:42 (24)	17:08			18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	7	09:54 (28)	15:46	28	12:28 (24)
7	09:25		11:14 (23)	08:32			07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:45 (28)	09:10		11:01 (23)
	16:02	26	12:41 (24)	17:11			18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	11	09:56 (28)	15:45	29	12:30 (24)
8	09:24		11:14 (23)	08:30			07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:43 (28)	09:12		11:02 (23)
	16:03	21	11:35 (23)	17:13			18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	14	09:57 (28)	15:45	30	12:31 (24)
9	09:23		11:15 (23)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:42 (28)	09:14		11:03 (23)
	16:05	21	11:36 (23)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	17	09:59 (28)	15:44	30	12:32 (24)
10	09:22		11:15 (23)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:42 (28)	09:15		11:03 (23)
	16:07	21	11:36 (23)	17:18			18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	18	10:00 (28)	15:44	30	12:32 (24)
11	09:21		11:15 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:41 (28)	09:16		11:04 (23)
	16:09	22	11:37 (23)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	19	10:00 (28)	15:43	30	12:33 (24)
12	09:20		11:15 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:41 (28)	09:18		11:04 (23)
	16:11	22	11:37 (23)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	19	10:00 (28)	15:43	31	12:34 (24)
13	09:19		11:16 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:41 (28)	09:19		11:05 (23)
	16:13	22	11:38 (23)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	20	10:01 (28)	15:42	31	12:35 (24)
14	09:17		11:16 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:42 (28)	09:20		11:06 (23)
	16:15	22	11:38 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	19	10:01 (28)	15:42	30	12:35 (24)
15	09:16		11:16 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:41 (28)	09:21		11:06 (23)
	16:17	22	11:38 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	20	10:01 (28)	15:42	31	12:36 (24)
16	09:15		11:16 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:42 (28)	09:22		11:08 (23)
	16:19	22	11:38 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	19	10:01 (28)	15:42	30	12:37 (24)
17	09:13		11:18 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:43 (28)	09:23		11:09 (23)
	16:21	21	11:39 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	26	11:08 (23)	15:42	30	12:38 (24)
18	09:12		11:18 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		09:43 (28)	09:24		11:08 (23)
	16:23	21	11:39 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	29	11:10 (23)	15:42	30	12:37 (24)
19	09:10		10:13 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		09:44 (28)	09:25		11:09 (23)
	16:25	27	11:39 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	31	11:12 (23)	15:42	29	12:38 (24)
20	09:09		10:12 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		09:45 (28)	09:26		11:10 (23)
	16:28	30	11:39 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	32	11:13 (23)	15:43	30	12:39 (24)
21	09:07		10:11 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		09:46 (28)	09:26		11:11 (23)
	16:30	32	11:39 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	32	11:14 (23)	15:43	29	12:40 (24)
22	09:05		10:10 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		09:48 (28)	09:27		11:11 (23)
	16:32	32	11:38 (23)	17:48			18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04	29	11:15 (23)	15:43	29	12:40 (24)
23	09:03		10:09 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		09:49 (28)	09:27		11:11 (23)
	16:34	31	11:37 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	27	11:15 (23)	15:44	30	12:40 (24)
24	09:02		10:09 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:55 (23)	09:28		11:12 (23)
	16:37	29	11:36 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	21	11:16 (23)	15:45	30	12:41 (24)
25	09:00		10:09 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:55 (23)	09:28		11:12 (23)
	16:39	26	11:34 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	21	11:16 (23)	15:45	29	12:41 (24)
26	08:58		10:09 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:55 (23)	09:28		11:13 (23)
	16:41	19	10:28 (28)	17:57			19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58	22	11:17 (23)	15:46	30	12:42 (24)
27	08:56		10:09 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:55 (23)	09:28		11:13 (23)
	16:44	20	10:29 (28)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	22	11:17 (23)	15:47	30	12:42 (24)
28	08:54		10:09 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:56 (23)	09:29		11:13 (23)
	16:46	19	10:28 (28)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	22	11:18 (23)	15:48	31	12:43 (24)
29	08:52		10:09 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:56 (23)	09:29		11:13 (23)
	16:49	20	10:29 (28)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	11:18 (23)	15:49	30	12:42 (24)
30	08:50		10:09 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:56 (23)	09:28		11:13 (23)
	16:51	19	10:28 (28)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	22	11:18 (23)	15:50	31	12:43 (24)
31	08:48		10:10 (28)				07:10		04:41		05:22	06:31		07:49				09:28		11:14 (23)
	16:54	19	10:29 (28)				20:14		22:29		22:03	20:43		16:51				15:51	30	12:43 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		764			67											541			888	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May	June	July	August	September	October	November		December	
1	09:28	12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51		09:00	12:38 (12)
	15:52 16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51 20	12:58 (12)
2	09:27	12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01	12:39 (12)
	15:54 16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50 20	12:59 (12)
3	09:27	12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03	12:40 (12)
	15:55 17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49 20	13:00 (12)
4	09:26	12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05	12:40 (12)
	15:57 17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48 20	13:00 (12)
5	09:26	12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07	12:41 (12)
	15:58 18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47 19	13:00 (12)
6	09:25	12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:09	12:41 (12)
	16:00 19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46 19	13:00 (12)
7	09:24	12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10	12:42 (12)
	16:01 20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34		15:45 18	13:00 (12)
8	09:24	12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12	12:43 (12)
	16:03 19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44 18	13:01 (12)
9	09:23	12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10		09:13	12:43 (12)
	16:05 20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30		15:44 17	13:00 (12)
10	09:22	12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13		09:15	12:44 (12)
	16:07 20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27		15:43 17	13:01 (12)
11	09:21	12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:16	12:45 (12)
	16:09 20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25		15:43 16	13:01 (12)
12	09:19	12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18		09:17	12:45 (12)
	16:11 20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23		15:42 16	13:01 (12)
13	09:18	12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20		09:19	12:46 (12)
	16:12 20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21		15:42 16	13:02 (12)
14	09:17	12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22		09:20	12:47 (12)
	16:14 20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19		15:42 14	13:01 (12)
15	09:16	12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25		09:21	12:47 (12)
	16:17 20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17		15:42 14	13:01 (12)
16	09:14	12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		09:22	12:48 (12)
	16:19 20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15		15:42 13	13:01 (12)
17	09:13	12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29		09:23	12:48 (12)
	16:21 19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13		15:42 14	13:02 (12)
18	09:11	12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32		09:24	12:49 (12)
	16:23 19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11		15:42 13	13:02 (12)
19	09:10	13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34	12:41 (12)	09:25	12:50 (12)
	16:25 18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 9	12:50 (12)	15:42 13	13:03 (12)
20	09:08	13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	12:39 (12)	09:25	12:51 (12)
	16:27 16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 12	12:51 (12)	15:42 12	13:03 (12)
21	09:07	13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	12:38 (12)	09:26	12:51 (12)
	16:30 15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 15	12:53 (12)	15:43 12	13:03 (12)
22	09:05	13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41	12:38 (12)	09:27	12:52 (12)
	16:32 12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 16	12:54 (12)	15:43 12	13:04 (12)
23	09:03	13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	12:37 (12)	09:27	12:52 (12)
	16:34 9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 18	12:55 (12)	15:44 12	13:04 (12)
24	09:01		07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	12:38 (12)	09:28	12:52 (12)
	16:37		17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	12:56 (12)	15:44 12	13:04 (12)
25	09:00		07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:37 (12)	09:28	12:53 (12)
	16:39		17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 19	12:56 (12)	15:45 13	13:06 (12)
26	08:58		07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:37 (12)	09:28	12:53 (12)
	16:41		17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 20	12:57 (12)	15:46 13	13:06 (12)
27	08:56		07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	12:37 (12)	09:28	12:54 (12)
	16:44		18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 20	12:57 (12)	15:47 13	13:07 (12)
28	08:54		07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:37 (12)	09:28	12:53 (12)
	16:46		18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55 20	12:57 (12)	15:48 14	13:07 (12)
29	08:52			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:38 (12)	09:28	12:53 (12)
	16:48			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 20	12:58 (12)	15:49 15	13:08 (12)
30	08:50			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:38 (12)	09:28	12:54 (12)
	16:51			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 20	12:58 (12)	15:50 15	13:09 (12)
31	08:48			07:09		04:41		05:22	06:31		07:49			09:28	12:54 (12)
	16:53			20:14		22:29		22:03	20:42		16:51			15:51 15	13:09 (12)
Potential sun hours	221		260	365	432	521	547	546	478	386	319	236		199	
Total, worst case		410											207		475

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February			March	April	May	June	July	August	September	October			November			December
1	09:28		08:45		13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39			07:51		14:48 (12)	08:59
	15:52		16:56	19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13			16:48	19	15:07 (12)	15:51
2	09:27		08:43		13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:53		14:49 (12)	09:01
	15:54		16:58	16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	17	15:06 (12)	15:50
3	09:27		08:41		13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44			07:56		14:49 (12)	09:03
	15:55		17:01	12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07			16:44	15	15:04 (12)	15:49
4	09:26		08:39		14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46			07:58		14:52 (12)	09:05
	15:57		17:03	5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	10	15:02 (12)	15:48
5	09:26		08:37			07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48			08:01		14:56 (12)	09:07
	15:58		17:06			18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01			16:39	2	14:58 (12)	15:47
6	09:25		08:34		15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50			08:03			09:08
	16:00		17:08	4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58			16:36			15:46
7	09:24		08:32		15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53			08:06		13:31 (26)	09:10
	16:01		17:11	11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56			16:34	7	13:38 (26)	15:45
8	09:23		08:30		15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55			08:08		13:28 (26)	09:12
	16:03		17:13	15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53			16:32	13	13:41 (26)	15:44
9	09:23		08:27		15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57			08:10		13:27 (26)	09:13
	16:05		17:15	18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50			16:30	16	13:43 (26)	15:44
10	09:22		08:25		15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59			08:13		13:25 (26)	09:15
	16:07		17:18	19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:27	19	13:44 (26)	15:43
11	09:20		08:22		15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		13:24 (26)	09:16
	16:09		17:20	21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44			16:25	21	13:45 (26)	15:43
12	09:19		08:20		15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04			08:17		13:24 (26)	09:17
	16:10		17:23	22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41			16:23	22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17		15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		13:23 (26)	09:19
	16:12	5 13:58 (26)	17:25	22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39			16:21	23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15		15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09			08:22		13:23 (26)	09:20
	16:14	9 14:00 (26)	17:28	23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12		15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:07 (37)	09:21
	16:17	11 14:01 (26)	17:30	22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33			16:17	33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10		15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:06 (37)	09:22
	16:19	17 14:07 (26)	17:33	22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30			16:15	36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07		15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		11:04 (37)	09:23
	16:21	21 14:10 (26)	17:35	21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05		15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18			08:32		11:03 (37)	09:24
	16:23	27 14:11 (26)	17:38	19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25			16:11	42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02		15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20			08:34		11:03 (37)	09:25
	16:25	32 14:12 (26)	17:40	17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22			16:09	44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59		15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		11:02 (37)	09:25
	16:27	36 14:12 (26)	17:43	14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19			16:07	45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57		15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25		15:53 (12)	08:38		11:05 (37)	09:26
	16:30	42 14:13 (26)	17:45	8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17	10	16:03 (12)	16:06	42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54			06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27		15:51 (12)	08:41		11:08 (37)	09:27
	16:32	45 14:14 (26)	17:47			18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	15	16:06 (12)	16:04	36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51			06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30		15:49 (12)	08:43		11:12 (37)	09:27
	16:34	44 14:14 (26)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	17	16:06 (12)	16:02	32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32		15:48 (12)	08:45		11:16 (37)	09:27
	16:36	42 14:15 (26)	17:52			18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	19	16:07 (12)	16:01	28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		14:48 (12)	08:47		13:27 (26)	09:28
	16:39	40 14:15 (26)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	20	15:08 (12)	15:59	21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43			06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37		14:46 (12)	08:49		13:29 (26)	09:28
	16:41	37 14:15 (26)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	22	15:08 (12)	15:57	17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		14:46 (12)	08:51		13:29 (26)	09:28
	16:44	33 14:15 (26)	18:00			19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01	23	15:09 (12)	15:56	12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41		14:46 (12)	08:53		13:30 (26)	09:28
	16:46	24 14:15 (26)	18:02			19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	22	15:08 (12)	15:55	9	13:39 (26)	15:47
29	08:52	13:51 (26)				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44		14:46 (12)	08:55		13:35 (26)	09:28
	16:48	23 14:14 (26)				20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56	22	15:08 (12)	15:53	5	13:40 (26)	15:49
30	08:50	13:52 (26)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		14:47 (12)	08:57			09:28
	16:51	22 14:14 (26)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	21	15:08 (12)	15:52			15:50
31	08:48	13:54 (26)				07:09		04:41		05:22	06:31		07:49		14:47 (12)				09:28
	16:53	20 14:14 (26)				20:14		22:29		22:03	20:42		16:51	20	15:07 (12)				15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319			236			199
Total, worst case		530		330										211			650		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June
1	09:28		12:11 (32)	08:45		10:15 (13)	07:35		13:26 (26)	07:07		18:42 (17)	05:44		04:39
	15:52	47	14:26 (14)	16:56	119	15:37 (35)	18:04	35	17:05 (9)	20:16	19	19:01 (17)	21:26		22:30
2	09:27		12:11 (32)	08:43		12:16 (32)	07:32		15:45 (7)	07:04		18:43 (17)	05:41		04:38
	15:54	53	14:28 (14)	16:58	114	15:38 (35)	18:07	27	17:09 (9)	20:19	16	18:59 (17)	21:28		22:32
3	09:27		12:10 (32)	08:41		12:17 (32)	07:30		16:34 (12)	07:01		18:46 (17)	05:38		04:37
	15:55	58	14:29 (14)	17:01	113	15:38 (35)	18:09	33	17:12 (9)	20:21	11	18:57 (17)	21:30		22:33
4	09:26		12:10 (32)	08:39		09:39 (37)	07:27		16:31 (12)	06:58			05:36		04:36
	15:57	61	14:29 (14)	17:03	109	15:39 (35)	18:12	43	17:15 (9)	20:23			21:33		22:35
5	09:26		12:10 (32)	08:36		09:39 (37)	07:24		16:29 (12)	06:55			05:34		04:35
	15:58	64	14:30 (14)	17:06	105	15:39 (35)	18:14	46	17:15 (9)	20:26			21:35		22:36
6	09:25		12:09 (32)	08:34		09:40 (37)	07:21		16:26 (12)	06:52			05:31		04:34
	16:00	70	14:31 (14)	17:08	95	15:39 (35)	18:16	49	17:15 (9)	20:28			21:37		22:38
7	09:24		10:10 (13)	08:32		09:40 (37)	07:18		16:25 (12)	06:49			05:29		04:33
	16:01	78	14:32 (14)	17:11	96	15:39 (35)	18:19	50	17:15 (9)	20:30			21:39		22:39
8	09:23		10:10 (13)	08:30		09:38 (37)	07:15		16:23 (12)	06:46			05:26		04:32
	16:03	84	14:33 (14)	17:13	96	15:38 (35)	18:21	52	17:15 (9)	20:32			21:42		22:40
9	09:22		10:10 (13)	08:27		09:36 (37)	07:13		16:22 (12)	06:44			05:24		04:31
	16:05	86	14:33 (14)	17:16	98	15:38 (35)	18:23	53	17:15 (9)	20:35			21:44		22:41
10	09:21		10:11 (13)	08:25		09:33 (37)	07:10		16:20 (12)	06:41			05:21		04:30
	16:07	91	14:34 (14)	17:18	107	15:57 (7)	18:26	54	17:14 (9)	20:37			21:46		22:42
11	09:20		10:10 (13)	08:22		09:29 (37)	07:07		16:19 (12)	06:38			05:19		04:29
	16:09	97	14:34 (14)	17:20	114	16:00 (7)	18:28	54	17:13 (9)	20:39			21:48		22:44
12	09:19		10:09 (13)	08:20		09:27 (37)	07:04		16:18 (12)	06:35			05:17		04:29
	16:11	102	14:35 (14)	17:23	118	16:03 (7)	18:30	54	17:12 (9)	20:42			21:51		22:44
13	09:18		10:09 (13)	08:17		09:24 (37)	07:01		16:18 (12)	06:32			05:15		04:28
	16:13	105	14:35 (14)	17:25	118	16:04 (7)	18:33	52	17:10 (9)	20:44			21:53		22:45
14	09:17		10:10 (13)	08:15		09:21 (37)	06:58		16:17 (12)	06:29			05:12		04:28
	16:15	107	14:36 (14)	17:28	114	16:05 (7)	18:35	51	17:08 (9)	20:46			21:55		22:46
15	09:16		10:10 (13)	08:12		09:18 (37)	06:56		16:17 (12)	06:27			05:10		04:27
	16:17	112	14:37 (14)	17:30	120	16:07 (7)	18:37	47	17:04 (9)	20:49			21:57		22:47
16	09:14		10:02 (13)	08:10		09:13 (37)	06:53		16:17 (12)	06:24			05:08		04:27
	16:19	119	14:37 (14)	17:33	125	16:08 (7)	18:40	46	17:03 (12)	20:51			21:59		22:48
17	09:13		10:02 (13)	08:07		09:13 (37)	06:50		16:17 (12)	06:21			05:06		04:27
	16:21	126	14:37 (14)	17:35	123	16:08 (7)	18:42	46	17:03 (12)	20:53			22:02		22:48
18	09:11		10:02 (13)	08:05		09:13 (37)	06:47		16:16 (12)	06:18			05:04		04:27
	16:23	127	14:37 (14)	17:38	121	16:08 (7)	18:44	46	17:02 (12)	20:56			22:04		22:49
19	09:10		10:02 (13)	08:02		09:15 (37)	06:44		16:16 (12)	06:16			05:02		04:26
	16:25	129	14:37 (14)	17:40	118	16:09 (7)	18:47	56	18:01 (17)	20:58			22:06		22:49
20	09:08		10:02 (13)	07:59		09:16 (37)	06:41		16:16 (12)	06:13			05:00		04:26
	16:27	130	14:37 (14)	17:43	114	16:09 (7)	18:49	60	18:03 (17)	21:00			22:08		22:50
21	09:07		10:03 (13)	07:57		09:17 (37)	06:38		16:16 (12)	06:10			04:58		04:27
	16:30	131	14:37 (14)	17:45	110	16:09 (7)	18:51	64	18:05 (17)	21:02			22:10		22:50
22	09:05		10:03 (13)	07:54		09:18 (37)	06:35		16:17 (12)	06:07			04:56		04:27
	16:32	129	14:36 (14)	17:48	104	16:08 (7)	18:54	63	18:05 (17)	21:05			22:12		22:50
23	09:03		10:04 (13)	07:51		09:20 (37)	06:32		16:17 (12)	06:05			04:54		04:27
	16:34	131	14:36 (14)	17:50	95	16:08 (7)	18:56	64	18:06 (17)	21:07			22:14		22:50
24	09:01		10:04 (13)	07:49		13:09 (26)	06:30		16:18 (12)	06:02			04:52		04:27
	16:37	128	14:35 (14)	17:52	77	16:08 (7)	18:58	64	18:06 (17)	21:09			22:16		22:50
25	08:59		10:05 (13)	07:46		13:11 (26)	06:27		16:18 (12)	05:59			04:50		04:28
	16:39	125	14:34 (14)	17:55	71	16:07 (7)	19:00	62	18:06 (17)	21:12			22:18		22:50
26	08:58		10:05 (13)	07:43		13:13 (26)	06:24		16:20 (12)	05:57			04:49		04:28
	16:41	124	15:28 (35)	17:57	66	16:06 (7)	19:03	61	18:07 (17)	21:14			22:20		22:50
27	08:56		10:06 (13)	07:41		13:16 (26)	06:21		16:22 (12)	05:54			04:47		04:29
	16:44	127	15:30 (35)	18:00	58	16:05 (7)	19:05	57	18:07 (17)	21:16			22:22		22:50
28	08:54		10:07 (13)	07:38		13:19 (26)	06:18		16:23 (12)	05:51			04:45		04:29
	16:46	130	15:33 (35)	18:02	49	16:04 (7)	19:07	54	18:06 (17)	21:19			22:23		22:50
29	08:52		10:08 (13)				07:15		17:26 (12)	05:49			04:44		04:30
	16:48	131	15:35 (35)				20:10	47	19:05 (17)	21:21			22:25		22:49
30	08:50		10:09 (13)				07:12		17:29 (12)	05:46			04:42		04:31
	16:51	129	15:36 (35)				20:12	38	19:04 (17)	21:23			22:27		22:49
31	08:47		10:12 (13)				07:09		18:41 (17)				04:41		
	16:53	126	15:37 (35)				20:14	22	19:03 (17)				22:29		
Potential sun hours	221			260			365			432			521		547
Total, worst case		3257			2867			1550			46				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:39		16:57 (12)	07:51		09:03 (37)	08:59		09:52 (13)
	22:48	22:01	20:39			19:13	53	17:50 (9)	16:49	107	15:26 (7)	15:51	96	14:16 (14)
2	04:33	05:26	06:35			07:41		16:58 (12)	07:53		09:06 (37)	09:01		09:53 (13)
	22:48	21:58	20:37			19:10	54	17:52 (9)	16:46	98	15:08 (35)	15:50	91	14:16 (14)
3	04:34	05:28	06:37			07:44		16:58 (12)	07:56		09:08 (37)	09:03		09:54 (13)
	22:47	21:56	20:34			19:07	54	17:52 (9)	16:44	96	15:08 (35)	15:49	88	14:17 (14)
4	04:35	05:30	06:39			07:46		16:58 (12)	07:58		09:10 (37)	09:05		09:54 (13)
	22:46	21:54	20:31			19:04	54	17:52 (9)	16:41	94	15:08 (35)	15:48	83	14:17 (14)
5	04:36	05:33	06:42			07:48		17:00 (12)	08:01		09:10 (37)	09:07		09:55 (13)
	22:45	21:51	20:28			19:01	52	17:52 (9)	16:39	95	15:09 (35)	15:47	77	14:17 (14)
6	04:37	05:35	06:44			07:50		17:00 (12)	08:03		09:10 (37)	09:08		09:57 (13)
	22:45	21:49	20:25			18:58	52	17:52 (9)	16:37	105	15:09 (35)	15:46	71	14:17 (14)
7	04:38	05:37	06:46			07:53		17:01 (12)	08:06		09:08 (37)	09:10		11:57 (32)
	22:44	21:46	20:22			18:56	50	17:51 (9)	16:34	111	15:09 (35)	15:45	64	14:17 (14)
8	04:40	05:39	06:48			07:55		17:03 (12)	08:08		11:48 (32)	09:12		11:57 (32)
	22:43	21:44	20:19			18:53	48	17:51 (9)	16:32	112	15:09 (35)	15:44	62	14:17 (14)
9	04:41	05:41	06:51		18:40 (17)	07:57		17:04 (12)	08:10		11:47 (32)	09:13		11:59 (32)
	22:41	21:41	20:16	10	18:50 (17)	18:50	46	17:50 (9)	16:30	113	15:09 (35)	15:44	57	14:17 (14)
10	04:42	05:44	06:53		18:37 (17)	07:59		17:06 (12)	08:13		09:45 (13)	09:15		12:00 (32)
	22:40	21:39	20:14	15	18:52 (17)	18:47	40	17:48 (9)	16:27	121	15:08 (35)	15:43	53	14:17 (14)
11	04:44	05:46	06:55		18:35 (17)	08:02		16:22 (7)	08:15		09:42 (13)	09:16		12:01 (32)
	22:39	21:36	20:11	19	18:54 (17)	18:44	36	17:45 (9)	16:25	127	15:08 (35)	15:43	47	14:16 (14)
12	04:45	05:48	06:57		18:34 (17)	08:04		16:18 (7)	08:17		09:41 (13)	09:17		12:03 (32)
	22:38	21:34	20:08	21	18:55 (17)	18:42	25	17:41 (9)	16:23	130	15:08 (35)	15:42	44	14:17 (14)
13	04:47	05:50	06:59		17:21 (12)	08:06		13:56 (26)	08:20		09:39 (13)	09:19		12:04 (32)
	22:36	21:31	20:05	37	18:55 (17)	18:39	42	17:38 (9)	16:21	131	15:06 (35)	15:42	39	14:17 (14)
14	04:49	05:53	07:02		17:17 (12)	08:09		13:50 (26)	08:22		09:39 (13)	09:20		12:07 (32)
	22:35	21:29	20:02	45	18:55 (17)	18:36	53	16:37 (7)	16:19	131	15:05 (35)	15:42	34	14:17 (14)
15	04:50	05:55	07:04		17:13 (12)	08:11		13:46 (26)	08:25		09:39 (13)	09:21		13:06 (26)
	22:33	21:26	19:59	52	18:55 (17)	18:33	62	16:37 (7)	16:17	128	15:03 (35)	15:42	26	14:16 (14)
16	04:52	05:57	07:06		17:11 (12)	08:13		13:44 (26)	08:27		09:39 (13)	09:22		13:08 (26)
	22:32	21:23	19:56	56	18:55 (17)	18:30	69	16:39 (7)	16:15	124	15:02 (35)	15:42	22	14:15 (14)
17	04:54	05:59	07:08		17:08 (12)	08:16		13:41 (26)	08:29		09:38 (13)	09:23		13:10 (26)
	22:30	21:21	19:53	59	18:54 (17)	18:28	75	16:39 (7)	16:13	125	14:07 (14)	15:42	18	14:15 (14)
18	04:56	06:02	07:10		17:07 (12)	08:18		09:55 (37)	08:32		09:38 (13)	09:24		13:12 (26)
	22:29	21:18	19:50	63	18:55 (17)	18:25	86	16:39 (7)	16:11	129	14:09 (14)	15:42	16	14:15 (14)
19	04:58	06:04	07:12		17:06 (12)	08:20		09:51 (37)	08:34		09:39 (13)	09:25		13:16 (3)
	22:27	21:15	19:47	63	18:54 (17)	18:22	98	16:39 (7)	16:09	131	14:11 (14)	15:42	11	14:15 (14)
20	04:59	06:06	07:15		17:04 (12)	08:23		09:49 (37)	08:36		09:38 (13)	09:25		13:16 (3)
	22:25	21:13	19:45	65	18:53 (17)	18:20	106	16:40 (7)	16:07	129	14:11 (14)	15:42	9	14:14 (14)
21	05:01	06:08	07:17		17:03 (12)	08:25		09:46 (37)	08:38		09:39 (13)	09:26		13:17 (3)
	22:23	21:10	19:42	64	18:51 (17)	18:17	113	16:39 (7)	16:06	131	14:13 (14)	15:43	9	14:15 (14)
22	05:03	06:11	07:19		17:01 (12)	08:27		09:45 (37)	08:41		09:38 (13)	09:26		13:18 (3)
	22:21	21:07	19:39	64	18:50 (17)	18:14	116	16:39 (7)	16:04	131	14:13 (14)	15:43	9	14:16 (14)
23	05:05	06:13	07:21		17:00 (12)	08:30		09:44 (37)	08:43		09:39 (13)	09:27		13:18 (3)
	22:19	21:05	19:36	62	18:48 (17)	18:12	119	16:38 (7)	16:02	128	14:14 (14)	15:44	9	14:16 (14)
24	05:07	06:15	07:24		17:00 (12)	08:32		09:43 (37)	08:45		09:39 (13)	09:27		13:18 (3)
	22:18	21:02	19:33	58	18:46 (17)	18:09	122	16:38 (7)	16:01	127	14:14 (14)	15:44	11	14:17 (14)
25	05:09	06:17	07:26		16:59 (12)	07:34		08:43 (37)	08:47		09:40 (13)	09:28		13:15 (26)
	22:16	20:59	19:30	46	17:45 (12)	17:06	123	15:38 (7)	15:59	124	14:15 (14)	15:45	14	14:17 (14)
26	05:11	06:19	07:28		16:58 (12)	07:37		08:44 (37)	08:49		09:40 (13)	09:28		13:14 (26)
	22:14	20:56	19:27	47	17:45 (12)	17:04	122	15:37 (7)	15:58	119	14:15 (14)	15:46	17	14:18 (14)
27	05:13	06:22	07:30		16:58 (12)	07:39		08:48 (37)	08:51		09:49 (13)	09:28		13:13 (26)
	22:11	20:53	19:24	46	17:44 (12)	17:01	118	15:36 (7)	15:56	112	14:16 (14)	15:47	20	14:19 (14)
28	05:15	06:24	07:32		16:58 (12)	07:41		08:51 (37)	08:53		09:49 (13)	09:28		13:12 (26)
	22:09	20:51	19:21	46	17:44 (12)	16:59	115	15:35 (7)	15:55	109	14:16 (14)	15:48	24	14:21 (14)
29	05:17	06:26	07:35		16:58 (12)	07:44		08:54 (37)	08:55		09:50 (13)	09:28		12:14 (32)
	22:07	20:48	19:19	50	17:48 (9)	16:56	119	15:34 (7)	15:53	106	14:16 (14)	15:49	31	14:23 (14)
30	05:20	06:28	07:37		16:57 (12)	07:46		08:57 (37)	08:57		09:50 (13)	09:28		12:13 (32)
	22:05	20:45	19:16	52	17:49 (9)	16:53	117	15:32 (7)	15:52	103	14:16 (14)	15:50	37	14:25 (14)
31	05:22	06:31				07:49		08:59 (37)				09:28		12:12 (32)
	22:03	20:42				16:51	115	15:29 (7)				15:51	41	14:25 (14)
Potential sun hours	546	478	386			319			236			199		
Total, worst case				1040			2454			3527			1230	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case							34		1					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44		04:40		20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25		22:30	8	20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41		04:38		20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28		22:31	11	20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39		04:37		20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30		22:33	12	20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36		04:36		20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32		22:34	12	20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34		04:35		20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35		22:36	13	20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31		04:34		20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37		22:37	13	20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29		04:33		20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39		22:38	14	20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26		04:32		20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41		22:40	14	20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24		04:31		20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44		22:41	14	20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22		04:30		20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46		22:42	14	20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19		04:29		20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48		22:43	16	20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17		04:29		20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50		22:44	16	20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15		04:28		20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53		22:45	16	20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12		04:28		20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55		22:46	17	20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10		04:27		20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57		22:47	17	20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08		04:27		20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59		22:47	17	20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06		04:27		20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01		22:48	18	20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04		04:27		20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03		22:48	17	20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02		04:27		20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05		22:49	18	20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00		04:27		20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07		22:49	18	20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58		04:27		20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10		22:49	18	20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56		04:27		20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12		22:50	18	20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54		04:27		20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14		22:50	18	20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52		04:27		20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15		22:50	17	20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51		04:28		20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17		22:50	17	20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49		04:28		20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19		22:50	18	20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47		04:29		20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21		22:49	17	20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46		04:30		20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23		22:49	17	20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44		04:30		20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25		22:49	17	20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1)	04:31		20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1)	22:48	17	20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)				05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)				22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						5		469			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (82)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13	09:01 (85)	16:49	15:52
2	09:27	08:43		07:33	08:13 (85)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (82)	07:54	09:01
	15:54	16:59		18:07	6 08:19 (85)	20:19	21:28	22:32	22:48	21:58	20:37		19:10	25 09:01 (85)	16:47	15:50
3	09:27	08:41		07:30	08:10 (85)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (82)	07:56	09:03
	15:56	17:01		18:10	12 08:22 (85)	20:21	21:30	22:33	22:47	21:56	20:34		19:07	26 09:01 (85)	16:44	15:49
4	09:26	08:39		07:27	08:07 (85)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (82)	07:59	09:05
	15:57	17:04		18:12	16 08:23 (85)	20:24	21:33	22:35	22:46	21:54	20:31		19:05	28 09:02 (85)	16:42	15:48
5	09:26	08:37		07:24	08:00 (82)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (82)	08:01	09:07
	15:59	17:06		18:14	24 08:24 (85)	20:26	21:35	22:36	22:45	21:51	20:28		19:02	28 09:02 (85)	16:39	15:47
6	09:25	08:34		07:21	07:58 (82)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (82)	08:03	09:08
	16:00	17:09		18:17	26 08:24 (85)	20:28	21:37	22:38	22:45	21:49	20:25		18:59	28 09:01 (85)	16:37	15:47
7	09:24	08:32		07:19	07:57 (82)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (82)	08:06	09:10
	16:02	17:11		18:19	28 08:25 (85)	20:30	21:40	22:39	22:44	21:47	20:23		18:56	27 09:01 (85)	16:35	15:46
8	09:23	08:30		07:16	07:56 (82)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (82)	08:08	09:12
	16:04	17:14		18:21	28 08:24 (85)	20:33	21:42	22:40	22:43	21:44	20:20		18:53	25 09:00 (85)	16:32	15:45
9	09:23	08:27		07:13	07:56 (82)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (82)	08:11	09:13
	16:06	17:16		18:24	28 08:24 (85)	20:35	21:44	22:41	22:41	21:42	20:17		18:50	22 08:58 (85)	16:30	15:44
10	09:22	08:25		07:10	07:56 (82)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (85)	08:13	09:15
	16:07	17:18		18:26	27 08:23 (85)	20:37	21:46	22:43	22:40	21:39	20:14		18:48	14 08:57 (85)	16:28	15:44
11	09:21	08:23		07:07	07:58 (82)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (85)	08:15	09:16
	16:09	17:21		18:28	26 08:24 (85)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	10 08:54 (85)	16:26	15:43
12	09:19	08:20		07:04	07:59 (82)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31	23 08:22 (85)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (81)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (84)	08:07		08:20	09:19
	16:13	17:26		18:33	20 08:21 (85)	20:44	21:53	22:45	22:36	21:31	20:05	8 08:21 (84)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (81)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (84)	08:09		08:22	09:20
	16:15	17:28		18:35	20 08:18 (85)	20:47	21:55	22:46	22:35	21:29	20:02	13 08:23 (84)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (81)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (84)	08:11		08:25	09:21
	16:17	17:31		18:38	14 08:14 (85)	20:49	21:57	22:47	22:33	21:26	19:59	16 08:24 (84)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (81)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (84)	08:13	09:01 (83)	08:27	09:22
	16:19	17:33		18:40	12 07:44 (81)	20:51	22:00	22:48	22:32	21:24	19:57	17 08:25 (84)	18:31	9 09:10 (83)	16:15	15:42
17	09:13	08:07		06:50	07:32 (81)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (84)	08:16	09:00 (83)	08:29	09:23
	16:21	17:36		18:42	12 07:44 (81)	20:53	22:02	22:48	22:30	21:21	19:54	18 08:25 (84)	18:28	12 09:12 (83)	16:13	15:42
18	09:12	08:05	08:36 (83)	06:47	07:32 (81)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (84)	08:18	08:59 (83)	08:32	09:24
	16:24	17:38	3 08:39 (83)	18:45	11 07:43 (81)	20:56	22:04	22:49	22:29	21:18	19:51	19 08:25 (84)	18:25	13 09:12 (83)	16:12	15:42
19	09:10	08:02	08:33 (83)	06:44	07:26 (84)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (84)	08:20	08:59 (83)	08:34	09:25
	16:26	17:41	7 08:40 (83)	18:47	16 07:42 (81)	20:58	22:06	22:49	22:27	21:16	19:48	19 08:24 (84)	18:23	14 09:13 (83)	16:10	15:43
20	09:08	08:00	08:30 (83)	06:42	07:23 (84)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (84)	08:23	08:58 (83)	08:36	09:25
	16:28	17:43	11 08:41 (83)	18:49	17 07:40 (81)	21:00	22:08	22:50	22:25	21:13	19:45	19 08:24 (84)	18:20	14 09:12 (83)	16:08	15:43
21	09:07	07:57	08:27 (83)	06:39	07:21 (84)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (84)	08:25	08:58 (83)	08:39	09:26
	16:30	17:46	14 08:41 (83)	18:52	15 07:36 (84)	21:03	22:10	22:50	22:23	21:10	19:42	17 08:22 (84)	18:17	14 09:12 (83)	16:06	15:43
22	09:05	07:54	08:27 (83)	06:36	07:20 (84)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (84)	08:27	09:01 (83)	08:41	09:27
	16:32	17:48	14 08:41 (83)	18:54	18 07:38 (84)	21:05	22:12	22:50	22:22	21:08	19:39	16 08:22 (84)	18:15	10 09:11 (83)	16:04	15:44
23	09:03	07:52	08:28 (83)	06:33	07:19 (84)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (84)	08:30	09:04 (83)	08:43	09:27
	16:35	17:50	13 08:41 (83)	18:56	19 07:38 (84)	21:07	22:14	22:50	22:20	21:05	19:36	17 08:24 (81)	18:12	6 09:10 (83)	16:03	15:44
24	09:01	07:49	08:28 (83)	06:30	07:19 (84)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (84)	08:32	09:06 (83)	08:45	09:27
	16:37	17:53	13 08:41 (83)	18:58	19 07:38 (84)	21:10	22:16	22:50	22:18	21:02	19:33	16 08:25 (81)	18:09	2 09:08 (83)	16:01	15:45
25	09:00	07:46	08:29 (83)	06:27	07:18 (84)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (81)	07:35		08:47	09:28
	16:39	17:55	10 08:39 (83)	19:01	19 07:37 (84)	21:12	22:18	22:50	22:16	20:59	19:30	11 08:26 (81)	17:07		16:00	15:46
26	08:58	07:44	08:30 (83)	06:24	07:18 (84)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (81)	07:37		08:49	09:28
	16:42	17:58	7 08:37 (83)	19:03	19 07:37 (84)	21:14	22:20	22:50	22:14	20:57	19:28	12 08:26 (81)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (84)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (81)	07:39		08:52	09:28
	16:44	18:00		19:05	18 07:36 (84)	21:17	22:22	22:50	22:12	20:54	19:25	12 08:26 (81)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (84)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (81)	07:42		08:54	09:28
	16:47	18:02		19:08	16 07:34 (84)	21:19	22:23	22:50	22:09	20:51	19:22	12 08:26 (81)	16:59		15:55	15:48
29	08:52			07:16	08:19 (84)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (81)	07:44		08:56	09:28
	16:49			20:10	14 08:33 (84)	21:21	22:25	22:49	22:07	20:48	19:19	19 08:57 (85)	16:56		15:54	15:49
30	08:50			07:13	08:21 (84)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (81)	07:47		08:58	09:28
	16:51			20:12	9 08:30 (84)	21:24	22:27	22:49	22:05	20:45	19:16	21 08:59 (85)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April		May		June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (38)	04:40	06:17 (36)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (38)	22:30	23 06:40 (36)
2	09:27	08:43		07:33	07:04		05:42		07:32 (38)	04:39	06:16 (36)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (38)	22:32	24 06:40 (36)
3	09:27	08:41		07:30	07:01		05:39		07:32 (38)	04:37	06:16 (36)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (38)	22:34	25 06:41 (36)
4	09:26	08:39		07:27	06:58		05:36		07:34 (38)	04:36	06:16 (36)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (38)	22:35	26 06:42 (36)
5	09:26	08:37		07:24	06:55		05:34		07:36 (38)	04:35	06:16 (36)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (38)	22:36	27 06:43 (36)
6	09:25	08:34		07:21	06:53		05:32		07:38 (38)	04:34	06:16 (36)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (38)	22:38	27 06:43 (36)
7	09:24	08:32		07:19	06:50		05:29		07:40 (38)	04:33	06:16 (36)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (38)	22:39	27 06:43 (36)
8	09:24	08:30	09:03 (85)	07:16	06:47		05:27			04:32	06:15 (36)
	16:04	17:14	2 09:05 (85)	18:21	20:33		21:42			22:40	29 06:44 (36)
9	09:23	08:27	09:00 (85)	07:13	06:44		05:24			04:31	06:16 (36)
	16:06	17:16	7 09:07 (85)	18:24	20:35		21:44			22:42	29 06:45 (36)
10	09:22	08:25	08:58 (85)	07:10	06:41	07:48 (38)	05:22			04:31	06:15 (36)
	16:07	17:18	10 09:08 (85)	18:26	20:37	10 07:58 (38)	21:46			22:43	30 06:45 (36)
11	09:21	08:23	08:56 (85)	07:07	06:38	07:45 (38)	05:20			04:30	06:16 (36)
	16:09	17:21	13 09:09 (85)	18:28	20:40	17 08:02 (38)	21:49			22:44	29 06:45 (36)
12	09:20	08:20	08:55 (85)	07:04	06:36	07:41 (38)	05:17			04:29	06:15 (36)
	16:11	17:23	14 09:09 (85)	18:31	20:42	22 08:03 (38)	21:51			22:45	30 06:45 (36)
13	09:18	08:18	08:55 (85)	07:02	06:33	07:37 (38)	05:15			04:29	06:16 (36)
	16:13	17:26	14 09:09 (85)	18:33	20:44	27 08:04 (38)	21:53			22:46	30 06:46 (36)
14	09:17	08:15	08:56 (85)	06:59	06:30	07:35 (38)	05:13			04:28	06:16 (36)
	16:15	17:28	13 09:09 (85)	18:35	20:47	30 08:05 (38)	21:55			22:46	30 06:46 (36)
15	09:16	08:13	08:56 (85)	06:56	06:27	07:34 (38)	05:11			04:28	06:15 (36)
	16:17	17:31	13 09:09 (85)	18:38	20:49	33 08:07 (38)	21:57			22:47	31 06:46 (36)
16	09:14	08:10	08:56 (85)	06:53	06:24	07:33 (38)	05:09			04:28	06:16 (36)
	16:19	17:33	11 09:07 (85)	18:40	20:51	34 08:07 (38)	22:00			22:48	30 06:46 (36)
17	09:13	08:07	08:58 (85)	06:50	06:22	07:32 (38)	05:06			04:27	06:16 (36)
	16:21	17:36	7 09:05 (85)	18:42	20:54	35 08:07 (38)	22:02			22:48	31 06:47 (36)
18	09:12	08:05		06:47	06:19	07:31 (38)	05:04			04:27	06:16 (36)
	16:24	17:38		18:45	20:56	37 08:08 (38)	22:04			22:49	31 06:47 (36)
19	09:10	08:02		06:44	06:16	07:30 (38)	05:02			04:27	06:16 (36)
	16:26	17:41		18:47	20:58	38 08:08 (38)	22:06			22:49	31 06:47 (36)
20	09:08	08:00		06:42	06:13	07:30 (38)	05:00			04:27	06:16 (36)
	16:28	17:43		18:49	21:00	39 08:09 (38)	22:08			22:50	31 06:47 (36)
21	09:07	07:57		06:39	06:11	07:30 (38)	04:58			04:27	06:16 (36)
	16:30	17:46		18:52	21:03	38 08:08 (38)	22:10			22:50	31 06:47 (36)
22	09:05	07:54		06:36	06:08	07:29 (38)	04:56			04:27	06:17 (36)
	16:32	17:48		18:54	21:05	39 08:08 (38)	22:12			22:50	31 06:48 (36)
23	09:03	07:52		06:33	06:05	07:29 (38)	04:55			04:28	06:17 (36)
	16:35	17:50		18:56	21:07	39 08:08 (38)	22:14			22:50	31 06:48 (36)
24	09:02	07:49		06:30	06:02	07:29 (38)	04:53			04:28	06:17 (36)
	16:37	17:53		18:58	21:10	38 08:07 (38)	22:16			22:50	31 06:48 (36)
25	09:00	07:46		06:27	06:00	07:29 (38)	04:51			04:28	06:18 (36)
	16:39	17:55		19:01	21:12	38 08:07 (38)	22:18			22:50	31 06:49 (36)
26	08:58	07:44		06:24	05:57	07:29 (38)	04:49		06:24 (36)	04:29	06:18 (36)
	16:42	17:58		19:03	21:14	37 08:06 (38)	22:20	8	06:32 (36)	22:50	31 06:49 (36)
27	08:56	07:41		06:21	05:54	07:29 (38)	04:48		06:21 (36)	04:29	06:19 (36)
	16:44	18:00		19:05	21:17	37 08:06 (38)	22:22	13	06:34 (36)	22:50	30 06:49 (36)
28	08:54	07:38		06:18	05:52	07:29 (38)	04:46		06:20 (36)	04:30	06:18 (36)
	16:47	18:02		19:08	21:19	36 08:05 (38)	22:24	16	06:36 (36)	22:50	31 06:49 (36)
29	08:52			07:16	05:49	07:30 (38)	04:44		06:19 (36)	04:31	06:19 (36)
	16:49			20:10	21:21	34 08:04 (38)	22:25	18	06:37 (36)	22:49	30 06:49 (36)
30	08:50			07:13	05:47	07:30 (38)	04:43		06:19 (36)	04:31	06:19 (36)
	16:51			20:12	21:24	33 08:03 (38)	22:27	20	06:39 (36)	22:49	30 06:49 (36)
31	08:48			07:10			04:41		06:17 (36)		
	16:54			20:14			22:29	22	06:39 (36)		
Potential sun hours	221	260		365	432		521			547	
Total, worst case			104			691		254			878

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October		November		December
1	04:32		06:20 (36)	05:24		06:33		07:44 (38)	07:39		08:28 (85)	09:00
	22:48	30	06:50 (36)	22:01		20:40	17	08:01 (38)	19:13		16:49	9	08:37 (85)	15:51
2	04:33		06:20 (36)	05:27		06:35		07:47 (38)	07:42		08:30 (85)	09:01
	22:48	30	06:50 (36)	21:58		20:37	10	07:57 (38)	19:10		16:47	6	08:36 (85)	15:50
3	04:34		06:20 (36)	05:29		06:38			07:44		07:56		08:33 (85)	09:03
	22:47	29	06:49 (36)	21:56		20:34			19:07		16:44	1	08:34 (85)	15:49
4	04:35		06:20 (36)	05:31		06:40			07:46		07:59			09:05
	22:46	29	06:49 (36)	21:54		20:31			19:05		16:42			15:48
5	04:36		06:21 (36)	05:33		06:42			07:48		08:01			09:07
	22:46	28	06:49 (36)	21:51		20:28			19:02		16:39			15:47
6	04:38		06:21 (36)	05:35	07:49 (38)	06:44			07:51		08:03			09:09
	22:45	28	06:49 (36)	21:49	13 08:02 (38)	20:25			18:59		16:37			15:47
7	04:39		06:23 (36)	05:38	07:46 (38)	06:47			07:53		08:06			09:10
	22:44	27	06:50 (36)	21:47	18 08:04 (38)	20:23			18:56		16:35			15:46
8	04:40		06:23 (36)	05:40	07:44 (38)	06:49			07:55		08:08			09:12
	22:43	26	06:49 (36)	21:44	22 08:06 (38)	20:20			18:53		16:32			15:45
9	04:42		06:23 (36)	05:42	07:43 (38)	06:51			07:57		08:11			09:13
	22:42	26	06:49 (36)	21:42	25 08:08 (38)	20:17			18:50		16:30			15:44
10	04:43		06:24 (36)	05:44	07:41 (38)	06:53			08:00		08:13			09:15
	22:40	24	06:48 (36)	21:39	28 08:09 (38)	20:14			18:48		16:28			15:44
11	04:45		06:25 (36)	05:46	07:40 (38)	06:55			08:02		08:15			09:16
	22:39	23	06:48 (36)	21:37	30 08:10 (38)	20:11			18:45		16:26			15:43
12	04:46		06:25 (36)	05:49	07:39 (38)	06:58			08:04		08:18			09:17
	22:38	23	06:48 (36)	21:34	32 08:11 (38)	20:08			18:42		16:24			15:43
13	04:48		06:26 (36)	05:51	07:38 (38)	07:00			08:07		08:20			09:19
	22:36	21	06:47 (36)	21:32	33 08:11 (38)	20:05			18:39		16:22			15:43
14	04:49		06:28 (36)	05:53	07:37 (38)	07:02			08:09		08:22			09:20
	22:35	18	06:46 (36)	21:29	35 08:12 (38)	20:02			18:36		16:19			15:43
15	04:51		06:28 (36)	05:55	07:36 (38)	07:04			08:11		08:25			09:21
	22:34	17	06:45 (36)	21:26	36 08:12 (38)	19:59			18:34		16:17			15:42
16	04:53		06:30 (36)	05:58	07:36 (38)	07:06			08:14		08:27			09:22
	22:32	14	06:44 (36)	21:24	37 08:13 (38)	19:57			18:31		16:15			15:42
17	04:54		06:31 (36)	06:00	07:35 (38)	07:09			08:16		08:29			09:23
	22:30	11	06:42 (36)	21:21	38 08:13 (38)	19:54			18:28		16:13			15:42
18	04:56		06:35 (36)	06:02	07:36 (38)	07:11			08:18		08:32			09:24
	22:29	5	06:40 (36)	21:18	38 08:14 (38)	19:51			18:25		16:12			15:42
19	04:58			06:04	07:35 (38)	07:13			08:21		08:34			09:25
	22:27			21:16	39 08:14 (38)	19:48			18:23		16:10			15:43
20	05:00			06:07	07:35 (38)	07:15			08:23		08:36			09:25
	22:25			21:13	38 08:13 (38)	19:45			18:20		16:08			15:43
21	05:02			06:09	07:34 (38)	07:17			08:25		08:39			09:26
	22:23			21:10	39 08:13 (38)	19:42			18:17		16:06			15:43
22	05:04			06:11	07:34 (38)	07:20			08:28		08:41			09:27
	22:22			21:08	39 08:13 (38)	19:39			18:15		16:04			15:44
23	05:06			06:13	07:34 (38)	07:22			08:30		08:43			09:27
	22:20			21:05	38 08:12 (38)	19:36			18:12		16:03			15:44
24	05:08			06:15	07:34 (38)	07:24			08:32		09:30 (85)	08:45		09:28
	22:18			21:02	37 08:11 (38)	19:33			18:09	3	09:33 (85)	16:01		15:45
25	05:10			06:18	07:34 (38)	07:26			07:35		08:28 (85)	08:47		09:28
	22:16			20:59	37 08:11 (38)	19:30			17:07	8	08:36 (85)	16:00		15:46
26	05:12			06:20	07:34 (38)	07:28			07:37		08:27 (85)	08:50		09:28
	22:14			20:57	36 08:10 (38)	19:28			17:04	11	08:38 (85)	15:58		15:46
27	05:14			06:22	07:35 (38)	07:31			07:39		08:25 (85)	08:52		09:28
	22:12			20:54	34 08:09 (38)	19:25			17:02	13	08:38 (85)	15:57		15:47
28	05:16			06:24	07:35 (38)	07:33			07:42		08:25 (85)	08:54		09:28
	22:10			20:51	32 08:07 (38)	19:22			16:59	14	08:39 (85)	15:55		15:48
29	05:18			06:27	07:36 (38)	07:35			07:44		08:24 (85)	08:56		09:28
	22:07			20:48	30 08:06 (38)	19:19			16:56	14	08:38 (85)	15:54		15:49
30	05:20			06:29	07:38 (38)	07:37			07:47		08:25 (85)	08:58		09:28
	22:05			20:45	27 08:05 (38)	19:16			16:54	13	08:38 (85)	15:53		15:50
31	05:22			06:31	07:41 (38)				07:49		08:26 (85)			09:28
	22:03			20:43	22 08:03 (38)				16:51	12	08:38 (85)			15:51
Potential sun hours	545			478		386			319			236		200
Total, worst case		409			833		27			88			16	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:16 (85)	07:07	05:44			04:40		06:01 (38)
	15:53	16:56		18:05	15	08:31 (85)	20:17	21:26			22:30	34	06:35 (38)
2	09:27	08:43		07:33		08:17 (85)	07:04	05:42			04:39		06:01 (38)
	15:54	16:59		18:07	13	08:30 (85)	20:19	21:28			22:32	35	06:36 (38)
3	09:27	08:41		07:30		08:18 (85)	07:01	05:39			04:38		06:01 (38)
	15:56	17:01		18:10	10	08:28 (85)	20:21	21:30			22:33	35	06:36 (38)
4	09:26	08:39		07:27		08:20 (85)	06:58	05:37			04:36		06:00 (38)
	15:57	17:04		18:12	5	08:25 (85)	20:24	21:33			22:35	36	06:36 (38)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:01 (38)
	15:59	17:06		18:14			20:26	21:35			22:36	36	06:37 (38)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:01 (38)
	16:00	17:09		18:17			20:28	21:37			22:38	36	06:37 (38)
7	09:24	08:32		07:19			06:50	05:29			04:33		06:01 (38)
	16:02	17:11		18:19			20:31	21:40			22:39	36	06:37 (38)
8	09:24	08:30		07:16		07:46 (84)	06:47	05:27			04:32		06:01 (38)
	16:04	17:14		18:21	7	07:53 (84)	20:33	21:42			22:40	36	06:37 (38)
9	09:23	08:27		07:13		07:44 (84)	06:44	05:24			04:31		06:02 (38)
	16:06	17:16		18:24	10	07:54 (84)	20:35	21:44			22:41	36	06:38 (38)
10	09:22	08:25		07:10		07:43 (84)	06:41	05:22			04:31		06:01 (38)
	16:07	17:19		18:26	13	07:56 (84)	20:37	21:46			22:43	37	06:38 (38)
11	09:21	08:23		07:07		07:42 (84)	06:38	05:20			04:30		06:02 (38)
	16:09	17:21		18:28	14	07:56 (84)	20:40	21:49			22:44	37	06:39 (38)
12	09:20	08:20		07:04		07:42 (84)	06:36	05:17			04:29		06:02 (38)
	16:11	17:23		18:31	14	07:56 (84)	20:42	21:51			22:45	36	06:38 (38)
13	09:18	08:18		07:02		07:41 (84)	06:33	05:15			04:29		06:02 (38)
	16:13	17:26		18:33	15	07:56 (84)	20:44	21:53			22:46	37	06:39 (38)
14	09:17	08:15		06:59		07:42 (84)	06:30	05:13			04:28		06:03 (38)
	16:15	17:28		18:35	13	07:55 (84)	20:47	21:55			22:46	36	06:39 (38)
15	09:16	08:13		06:56		07:42 (84)	06:27	05:11			04:28		06:02 (38)
	16:17	17:31		18:38	11	07:53 (84)	20:49	21:57			22:47	37	06:39 (38)
16	09:14	08:10		06:53		07:44 (84)	06:24	05:09			04:28		06:02 (38)
	16:19	17:33		18:40	7	07:51 (84)	20:51	22:00			22:48	37	06:39 (38)
17	09:13	08:07		06:50			06:22	05:06		06:12 (38)	04:27		06:03 (38)
	16:21	17:36		18:42			20:54	22:02	10	06:22 (38)	22:48	37	06:40 (38)
18	09:12	08:05		06:47			06:19	05:04		06:11 (38)	04:27		06:03 (38)
	16:24	17:38		18:45			20:56	22:04	14	06:25 (38)	22:49	37	06:40 (38)
19	09:10	08:02		06:44			06:16	05:02		06:09 (38)	04:27		06:03 (38)
	16:26	17:41		18:47			20:58	22:06	18	06:27 (38)	22:49	37	06:40 (38)
20	09:08	08:00		06:42			06:13	05:00		06:08 (38)	04:27		06:03 (38)
	16:28	17:43		18:49			21:00	22:08	20	06:28 (38)	22:50	37	06:40 (38)
21	09:07	07:57		06:39			06:11	04:58		06:06 (38)	04:27		06:03 (38)
	16:30	17:46		18:52			21:03	22:10	23	06:29 (38)	22:50	37	06:40 (38)
22	09:05	07:54		06:36			06:08	04:56		06:05 (38)	04:27		06:04 (38)
	16:32	17:48		18:54			21:05	22:12	25	06:30 (38)	22:50	37	06:41 (38)
23	09:03	07:52		06:33			06:05	04:55		06:03 (38)	04:28		06:04 (38)
	16:35	17:50	8	08:29 (85)	18:56			21:07	22:14	28	06:31 (38)	22:50	37	06:41 (38)
24	09:02	07:49		08:18 (85)	06:30			06:02	04:53		06:03 (38)	04:28		06:04 (38)
	16:37	17:53	12	08:30 (85)	18:58			21:10	22:16	29	06:32 (38)	22:50	37	06:41 (38)
25	09:00	07:46		08:17 (85)	06:27			06:00	04:51		06:02 (38)	04:28		06:05 (38)
	16:39	17:55	14	08:31 (85)	19:01			21:12	22:18	30	06:32 (38)	22:50	37	06:42 (38)
26	08:58	07:44		08:16 (85)	06:24			05:57	04:49		06:02 (38)	04:29		06:05 (38)
	16:42	17:58	15	08:31 (85)	19:03			21:14	22:20	31	06:33 (38)	22:50	36	06:41 (38)
27	08:56	07:41		08:15 (85)	06:21			05:54	04:48		06:01 (38)	04:29		06:05 (38)
	16:44	18:00	16	08:31 (85)	19:05			21:17	22:22	32	06:33 (38)	22:50	37	06:42 (38)
28	08:54	07:38		08:15 (85)	06:18			05:52	04:46		06:01 (38)	04:30		06:05 (38)
	16:47	18:02	15	08:30 (85)	19:08			21:19	22:24	33	06:34 (38)	22:50	37	06:42 (38)
29	08:52				07:16			05:49	04:44		06:01 (38)	04:31		06:05 (38)
	16:49				20:10			21:21	22:25	34	06:35 (38)	22:49	37	06:42 (38)
30	08:50				07:13			05:47	04:43		06:01 (38)	04:32		06:06 (38)
	16:51				20:12			21:24	22:27	34	06:35 (38)	22:49	37	06:43 (38)
31	08:48				07:10				04:41		06:01 (38)			
	16:54				20:14				22:29	34	06:35 (38)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			80			147				395			1094	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September			October			November	December
1	04:32		06:06 (38)	05:24	06:33			07:39		08:21 (84)	07:51	09:00
	22:48	37	06:43 (38)	22:01	20:40			19:13	14	08:35 (84)	16:49	15:52
2	04:33		06:07 (38)	05:27	06:35			07:42		08:20 (84)	07:54	09:01
	22:48	36	06:43 (38)	21:58	20:37			19:10	15	08:35 (84)	16:47	15:50
3	04:34		06:06 (38)	05:29	06:38			07:44		08:20 (84)	07:56	09:03
	22:47	37	06:43 (38)	21:56	20:34			19:07	13	08:33 (84)	16:44	15:49
4	04:35		06:06 (38)	05:31	06:40			07:46		08:21 (84)	07:59	09:05
	22:46	37	06:43 (38)	21:54	20:31			19:05	12	08:33 (84)	16:42	15:48
5	04:37		06:06 (38)	05:33	06:42			07:48		08:22 (84)	08:01	09:07
	22:46	37	06:43 (38)	21:51	20:28			19:02	9	08:31 (84)	16:39	15:47
6	04:38		06:08 (38)	05:35	06:44			07:51			08:03	09:09
	22:45	36	06:44 (38)	21:49	20:25			18:59			16:37	15:47
7	04:39		06:08 (38)	05:38	06:47			07:53			08:06	09:10
	22:44	36	06:44 (38)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:08 (38)	05:40	06:49			07:55			08:08	09:12
	22:43	36	06:44 (38)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:08 (38)	05:42	06:51			07:57			08:11	09:13
	22:42	36	06:44 (38)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:08 (38)	05:44	06:53			08:00		08:54 (85)	08:13	09:15
	22:40	35	06:43 (38)	21:39	20:14			18:48	7	09:01 (85)	16:28	15:44
11	04:45		06:09 (38)	05:46	06:55			08:02		08:51 (85)	08:15	09:16
	22:39	35	06:44 (38)	21:37	20:11			18:45	11	09:02 (85)	16:26	15:43
12	04:46		06:09 (38)	05:49	06:58			08:04		08:49 (85)	08:18	09:17
	22:38	35	06:44 (38)	21:34	20:08			18:42	14	09:03 (85)	16:24	15:43
13	04:48		06:09 (38)	05:51	07:00			08:07		08:49 (85)	08:20	09:19
	22:36	34	06:43 (38)	21:31	20:05			18:39	15	09:04 (85)	16:22	15:43
14	04:49		06:10 (38)	05:53	07:02			08:09		08:48 (85)	08:22	09:20
	22:35	33	06:43 (38)	21:29	20:02			18:36	15	09:03 (85)	16:19	15:43
15	04:51		06:10 (38)	05:55	07:04			08:11		08:48 (85)	08:25	09:21
	22:34	33	06:43 (38)	21:26	19:59			18:34	16	09:04 (85)	16:17	15:42
16	04:53		06:11 (38)	05:58	07:06			08:14		08:48 (85)	08:27	09:22
	22:32	32	06:43 (38)	21:24	19:57			18:31	15	09:03 (85)	16:15	15:42
17	04:54		06:11 (38)	06:00	07:09			08:16		08:49 (85)	08:29	09:23
	22:30	31	06:42 (38)	21:21	19:54			18:28	13	09:02 (85)	16:14	15:42
18	04:56		06:12 (38)	06:02	07:11			08:18		08:50 (85)	08:32	09:24
	22:29	30	06:42 (38)	21:18	19:51			18:25	11	09:01 (85)	16:12	15:42
19	04:58		06:13 (38)	06:04	07:13			08:20		08:53 (85)	08:34	09:25
	22:27	29	06:42 (38)	21:16	19:48			18:23	6	08:59 (85)	16:10	15:43
20	05:00		06:13 (38)	06:07	07:15			08:23			08:36	09:25
	22:25	28	06:41 (38)	21:13	19:45			18:20			16:08	15:43
21	05:02		06:14 (38)	06:09	07:17			08:25			08:39	09:26
	22:23	27	06:41 (38)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:16 (38)	06:11	07:20			08:28			08:41	09:27
	22:22	24	06:40 (38)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:17 (38)	06:13	07:22			08:30			08:43	09:27
	22:20	21	06:38 (38)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:18 (38)	06:15	07:24			08:32			08:45	09:28
	22:18	19	06:37 (38)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:20 (38)	06:18	07:26			07:35			08:47	09:28
	22:16	16	06:36 (38)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:22 (38)	06:20	07:28			07:37			08:49	09:28
	22:14	12	06:34 (38)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:25 (38)	06:22	07:31		08:27 (84)	07:39			08:52	09:28
	22:12	6	06:31 (38)	20:54	19:25	5	08:32 (84)	17:02			15:57	15:47
28	05:16			06:24	07:33		08:24 (84)	07:42			08:54	09:28
	22:10			20:51	19:22	10	08:34 (84)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:22 (84)	07:44			08:56	09:28
	22:07			20:48	19:19	12	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:21 (84)	07:47			08:58	09:28
	22:05			20:45	19:16	14	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		808				41			186			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:18 (85)	07:07	05:44			04:40		06:18 (38)
	15:53	16:56		18:05	13	08:31 (85)	20:17	21:26			22:30	28	06:46 (38)
2	09:27	08:43		07:33		08:19 (85)	07:04	05:42			04:39		06:18 (38)
	15:54	16:59		18:07	10	08:29 (85)	20:19	21:28			22:32	28	06:46 (38)
3	09:27	08:41		07:30		08:21 (85)	07:01	05:39			04:38		06:17 (38)
	15:56	17:01		18:10	5	08:26 (85)	20:21	21:31			22:33	29	06:46 (38)
4	09:26	08:39		07:27			06:58	05:37			04:36		06:16 (38)
	15:57	17:04		18:12			20:24	21:33			22:35	30	06:46 (38)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:16 (38)
	15:59	17:06		18:14			20:26	21:35			22:36	31	06:47 (38)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:15 (38)
	16:00	17:09		18:17			20:28	21:37			22:38	32	06:47 (38)
7	09:24	08:32		07:19		07:48 (84)	06:50	05:29			04:33		06:14 (38)
	16:02	17:11		18:19	6	07:54 (84)	20:31	21:40			22:39	32	06:46 (38)
8	09:24	08:30		07:16		07:46 (84)	06:47	05:27			04:32		06:13 (38)
	16:04	17:14		18:21	10	07:56 (84)	20:33	21:42			22:40	33	06:46 (38)
9	09:23	08:27		07:13		07:44 (84)	06:44	05:24			04:31		06:14 (38)
	16:06	17:16		18:24	13	07:57 (84)	20:35	21:44			22:41	33	06:47 (38)
10	09:22	08:25		07:10		07:44 (84)	06:41	05:22			04:31		06:13 (38)
	16:07	17:19		18:26	14	07:58 (84)	20:37	21:46			22:43	33	06:46 (38)
11	09:21	08:23		07:07		07:44 (84)	06:38	05:20			04:30		06:14 (38)
	16:09	17:21		18:28	14	07:58 (84)	20:40	21:49			22:44	33	06:47 (38)
12	09:20	08:20		07:04		07:44 (84)	06:36	05:17			04:29		06:14 (38)
	16:11	17:23		18:31	13	07:57 (84)	20:42	21:51			22:45	32	06:46 (38)
13	09:18	08:18		07:02		07:44 (84)	06:33	05:15			04:29		06:14 (38)
	16:13	17:26		18:33	12	07:56 (84)	20:44	21:53			22:46	33	06:47 (38)
14	09:17	08:15		06:59		07:45 (84)	06:30	05:13			04:28		06:15 (38)
	16:15	17:28		18:35	10	07:55 (84)	20:47	21:55			22:46	32	06:47 (38)
15	09:16	08:13		06:56		07:46 (84)	06:27	05:11			04:28		06:15 (38)
	16:17	17:31		18:38	6	07:52 (84)	20:49	21:57			22:47	32	06:47 (38)
16	09:14	08:10		06:53			06:24	05:09		06:39 (38)	04:28		06:15 (38)
	16:19	17:33		18:40			20:51	22:00	2	06:41 (38)	22:48	32	06:47 (38)
17	09:13	08:07		06:50			06:22	05:06		06:37 (38)	04:27		06:15 (38)
	16:21	17:36		18:42			20:54	22:02	4	06:41 (38)	22:48	32	06:47 (38)
18	09:12	08:05		06:47			06:19	05:04		06:36 (38)	04:27		06:16 (38)
	16:24	17:38		18:45			20:56	22:04	7	06:43 (38)	22:49	31	06:47 (38)
19	09:10	08:02		06:44			06:16	05:02		06:35 (38)	04:27		06:16 (38)
	16:26	17:41		18:47			20:58	22:06	8	06:43 (38)	22:49	31	06:47 (38)
20	09:08	08:00		06:42			06:13	05:00		06:33 (38)	04:27		06:16 (38)
	16:28	17:43		18:49			21:00	22:08	10	06:43 (38)	22:50	31	06:47 (38)
21	09:07	07:57		06:39			06:11	04:58		06:31 (38)	04:27		06:16 (38)
	16:30	17:46		18:52			21:03	22:10	12	06:43 (38)	22:50	31	06:47 (38)
22	09:05	07:54		06:36			06:08	04:56		06:30 (38)	04:27		06:17 (38)
	16:32	17:48	5	08:28 (85)	18:54			21:05	22:12	14	06:44 (38)	22:50	31	06:48 (38)
23	09:03	07:52		08:21 (85)	06:33			06:05	04:55		06:29 (38)	04:28		06:17 (38)
	16:35	17:50	10	08:31 (85)	18:56			21:07	22:14	15	06:44 (38)	22:50	31	06:48 (38)
24	09:02	07:49		08:18 (85)	06:30			06:02	04:53		06:28 (38)	04:28		06:17 (38)
	16:37	17:53	13	08:31 (85)	18:58			21:10	22:16	17	06:45 (38)	22:50	31	06:48 (38)
25	09:00	07:46		08:17 (85)	06:27			06:00	04:51		06:26 (38)	04:28		06:18 (38)
	16:39	17:55	15	08:32 (85)	19:01			21:12	22:18	19	06:45 (38)	22:50	31	06:49 (38)
26	08:58	07:44		08:17 (85)	06:24			05:57	04:49		06:25 (38)	04:29		06:17 (38)
	16:42	17:58	15	08:32 (85)	19:03			21:14	22:20	20	06:45 (38)	22:50	32	06:49 (38)
27	08:56	07:41		08:17 (85)	06:21			05:54	04:48		06:23 (38)	04:29		06:18 (38)
	16:44	18:00	14	08:31 (85)	19:05			21:17	22:22	22	06:45 (38)	22:50	32	06:50 (38)
28	08:54	07:38		08:17 (85)	06:18			05:52	04:46		06:23 (38)	04:30		06:17 (38)
	16:47	18:02	14	08:31 (85)	19:08			21:19	22:24	22	06:45 (38)	22:50	32	06:49 (38)
29	08:52				07:16			05:49	04:44		06:22 (38)	04:31		06:18 (38)
	16:49				20:10			21:21	22:25	24	06:46 (38)	22:49	32	06:50 (38)
30	08:50				07:13			05:47	04:43		06:21 (38)	04:32		06:18 (38)
	16:51				20:12			21:24	22:27	25	06:46 (38)	22:49	33	06:51 (38)
31	08:48				07:10				04:41		06:19 (38)			
	16:54				20:14				22:29	26	06:45 (38)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			86			126			247			944	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September			October		November	December
1	04:32		06:18 (38)	05:24	06:33			07:39		08:23 (84)	07:51	09:00
	22:48	33	06:51 (38)	22:01	20:40			19:13	13	08:36 (84)	16:49	15:52
2	04:33		06:19 (38)	05:27	06:35			07:42		08:22 (84)	07:54	09:01
	22:48	33	06:52 (38)	21:58	20:37			19:10	14	08:36 (84)	16:47	15:50
3	04:34		06:18 (38)	05:29	06:38			07:44		08:21 (84)	07:56	09:03
	22:47	33	06:51 (38)	21:56	20:34			19:07	14	08:35 (84)	16:44	15:49
4	04:35		06:18 (38)	05:31	06:40			07:46		08:22 (84)	07:59	09:05
	22:46	33	06:51 (38)	21:54	20:31			19:05	13	08:35 (84)	16:42	15:48
5	04:37		06:19 (38)	05:33	06:42			07:48		08:22 (84)	08:01	09:07
	22:46	33	06:52 (38)	21:51	20:28			19:02	12	08:34 (84)	16:39	15:47
6	04:38		06:21 (38)	05:35	06:44			07:51		08:23 (84)	08:03	09:09
	22:45	32	06:53 (38)	21:49	20:25			18:59	9	08:32 (84)	16:37	15:47
7	04:39		06:22 (38)	05:38	06:47			07:53			08:06	09:10
	22:44	31	06:53 (38)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:23 (38)	05:40	06:49			07:55			08:08	09:12
	22:43	30	06:53 (38)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:24 (38)	05:42	06:51			07:57			08:11	09:13
	22:42	29	06:53 (38)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:25 (38)	05:44	06:53			08:00			08:13	09:15
	22:40	28	06:53 (38)	21:39	20:14			18:48			16:28	15:44
11	04:45		06:26 (38)	05:46	06:55			08:02		08:54 (85)	08:15	09:16
	22:39	28	06:54 (38)	21:37	20:11			18:45	7	09:01 (85)	16:26	15:43
12	04:46		06:27 (38)	05:49	06:58			08:04		08:51 (85)	08:18	09:17
	22:38	27	06:54 (38)	21:34	20:08			18:42	12	09:03 (85)	16:24	15:43
13	04:48		06:28 (38)	05:51	07:00			08:07		08:51 (85)	08:20	09:19
	22:36	26	06:54 (38)	21:32	20:05			18:39	13	09:04 (85)	16:22	15:43
14	04:49		06:30 (38)	05:53	07:02			08:09		08:49 (85)	08:22	09:20
	22:35	24	06:54 (38)	21:29	20:02			18:36	15	09:04 (85)	16:19	15:43
15	04:51		06:31 (38)	05:55	07:04			08:11		08:49 (85)	08:25	09:21
	22:34	23	06:54 (38)	21:26	19:59			18:34	15	09:04 (85)	16:17	15:42
16	04:53		06:33 (38)	05:58	07:06			08:14		08:49 (85)	08:27	09:22
	22:32	22	06:55 (38)	21:24	19:57			18:31	15	09:04 (85)	16:15	15:42
17	04:54		06:33 (38)	06:00	07:09			08:16		08:50 (85)	08:29	09:23
	22:30	21	06:54 (38)	21:21	19:54			18:28	14	09:04 (85)	16:14	15:42
18	04:56		06:35 (38)	06:02	07:11			08:18		08:50 (85)	08:32	09:24
	22:29	20	06:55 (38)	21:18	19:51			18:25	12	09:02 (85)	16:12	15:42
19	04:58		06:37 (38)	06:04	07:13			08:21		08:53 (85)	08:34	09:25
	22:27	18	06:55 (38)	21:16	19:48			18:23	8	09:01 (85)	16:10	15:43
20	05:00		06:38 (38)	06:07	07:15			08:23		08:55 (85)	08:36	09:25
	22:25	16	06:54 (38)	21:13	19:45			18:20	3	08:58 (85)	16:08	15:43
21	05:02		06:39 (38)	06:09	07:17			08:25			08:39	09:26
	22:23	15	06:54 (38)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:41 (38)	06:11	07:20			08:28			08:41	09:27
	22:22	13	06:54 (38)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:42 (38)	06:13	07:22			08:30			08:43	09:27
	22:20	11	06:53 (38)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:44 (38)	06:15	07:24			08:32			08:45	09:28
	22:18	9	06:53 (38)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:45 (38)	06:18	07:26			07:35			08:47	09:28
	22:16	8	06:53 (38)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:47 (38)	06:20	07:28			07:37			08:49	09:28
	22:14	6	06:53 (38)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:49 (38)	06:22	07:31			07:39			08:52	09:28
	22:12	3	06:52 (38)	20:54	19:25			17:02			15:57	15:47
28	05:16		06:51 (38)	06:24	07:33		08:29 (84)	07:42			08:54	09:28
	22:10	1	06:52 (38)	20:51	19:22	3	08:32 (84)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:25 (84)	07:44			08:56	09:28
	22:07			20:48	19:19	9	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:23 (84)	07:47			08:58	09:28
	22:05			20:45	19:16	12	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		606				24			189			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May		June	
1	09:28	08:46		07:35	08:11 (84)	07:07	05:44	07:08 (38)	04:40	06:45 (38)
	15:53	16:56		18:05	6 08:17 (84)	20:17	21:26	1 07:09 (38)	22:30	32 07:17 (38)
2	09:27	08:43		07:33	08:08 (84)	07:04	05:42	07:06 (38)	04:39	06:46 (38)
	15:54	16:59		18:07	11 08:19 (84)	20:19	21:28	6 07:12 (38)	22:32	31 07:17 (38)
3	09:27	08:41		07:30	08:06 (84)	07:01	05:39	07:04 (38)	04:38	06:46 (38)
	15:56	17:01		18:10	13 08:19 (84)	20:21	21:31	9 07:13 (38)	22:33	31 07:17 (38)
4	09:26	08:39		07:27	08:05 (84)	06:58	05:37	07:02 (38)	04:36	06:47 (38)
	15:57	17:04		18:12	14 08:19 (84)	20:24	21:33	13 07:15 (38)	22:35	29 07:16 (38)
5	09:26	08:37		07:24	08:05 (84)	06:55	05:34	07:00 (38)	04:35	06:48 (38)
	15:59	17:06		18:14	14 08:19 (84)	20:26	21:35	16 07:16 (38)	22:36	29 07:17 (38)
6	09:25	08:34		07:21	08:05 (84)	06:53	05:32	06:58 (38)	04:34	06:49 (38)
	16:00	17:09		18:17	13 08:18 (84)	20:28	21:37	19 07:17 (38)	22:38	27 07:16 (38)
7	09:24	08:32		07:19	08:05 (84)	06:50	05:29	06:55 (38)	04:33	06:49 (38)
	16:02	17:11		18:19	12 08:17 (84)	20:31	21:40	22 07:17 (38)	22:39	27 07:16 (38)
8	09:24	08:30		07:16	08:06 (84)	06:47	05:27	06:54 (38)	04:32	06:49 (38)
	16:04	17:14		18:21	10 08:16 (84)	20:33	21:42	24 07:18 (38)	22:40	26 07:15 (38)
9	09:23	08:27		07:13	08:08 (84)	06:44	05:24	06:52 (38)	04:31	06:50 (38)
	16:06	17:16		18:24	5 08:13 (84)	20:35	21:44	27 07:19 (38)	22:42	26 07:16 (38)
10	09:22	08:25		07:10		06:41	05:22	06:50 (38)	04:31	06:51 (38)
	16:07	17:18		18:26		20:37	21:46	29 07:19 (38)	22:43	24 07:15 (38)
11	09:21	08:23		07:07		06:38	05:20	06:48 (38)	04:30	06:52 (38)
	16:09	17:21		18:28		20:40	21:49	32 07:20 (38)	22:44	23 07:15 (38)
12	09:20	08:20		07:04		06:36	05:17	06:46 (38)	04:29	06:52 (38)
	16:11	17:23		18:31		20:42	21:51	34 07:20 (38)	22:45	22 07:14 (38)
13	09:18	08:18		07:02		06:33	05:15	06:45 (38)	04:29	06:53 (38)
	16:13	17:26		18:33		20:44	21:53	35 07:20 (38)	22:46	21 07:14 (38)
14	09:17	08:15		06:59		06:30	05:13	06:43 (38)	04:28	06:53 (38)
	16:15	17:28		18:35		20:47	21:55	37 07:20 (38)	22:46	22 07:15 (38)
15	09:16	08:13	08:44 (85)	06:56		06:27	05:11	06:41 (38)	04:28	06:53 (38)
	16:17	17:31	6 08:50 (85)	18:38		20:49	21:57	39 07:20 (38)	22:47	21 07:14 (38)
16	09:14	08:10	08:42 (85)	06:53		06:24	05:09	06:41 (38)	04:28	06:54 (38)
	16:19	17:33	10 08:52 (85)	18:40		20:51	22:00	39 07:20 (38)	22:48	20 07:14 (38)
17	09:13	08:07	08:40 (85)	06:50		06:22	05:06	06:40 (38)	04:27	06:54 (38)
	16:21	17:36	13 08:53 (85)	18:42		20:54	22:02	40 07:20 (38)	22:48	20 07:14 (38)
18	09:12	08:05	08:40 (85)	06:47		06:19	05:04	06:41 (38)	04:27	06:55 (38)
	16:24	17:38	14 08:54 (85)	18:45		20:56	22:04	40 07:21 (38)	22:49	19 07:14 (38)
19	09:10	08:02	08:39 (85)	06:44		06:16	05:02	06:41 (38)	04:27	06:55 (38)
	16:26	17:41	15 08:54 (85)	18:47		20:58	22:06	40 07:21 (38)	22:49	19 07:14 (38)
20	09:08	08:00	08:39 (85)	06:42		06:13	05:00	06:41 (38)	04:27	06:55 (38)
	16:28	17:43	15 08:54 (85)	18:49		21:00	22:08	39 07:20 (38)	22:50	19 07:14 (38)
21	09:07	07:57	08:39 (85)	06:39		06:11	04:58	06:41 (38)	04:27	06:55 (38)
	16:30	17:46	14 08:53 (85)	18:52		21:03	22:10	39 07:20 (38)	22:50	19 07:14 (38)
22	09:05	07:54	08:39 (85)	06:36		06:08	04:56	06:41 (38)	04:27	06:56 (38)
	16:32	17:48	13 08:52 (85)	18:54		21:05	22:12	39 07:20 (38)	22:50	19 07:15 (38)
23	09:03	07:52	08:41 (85)	06:33		06:05	04:55	06:41 (38)	04:28	06:56 (38)
	16:35	17:50	11 08:52 (85)	18:56		21:07	22:14	39 07:20 (38)	22:50	19 07:15 (38)
24	09:02	07:49	08:42 (85)	06:30		06:02	04:53	06:42 (38)	04:28	06:56 (38)
	16:37	17:53	8 08:50 (85)	18:58		21:10	22:16	38 07:20 (38)	22:50	19 07:15 (38)
25	09:00	07:46		06:27		06:00	04:51	06:42 (38)	04:28	06:57 (38)
	16:39	17:55		19:01		21:12	22:18	37 07:19 (38)	22:50	19 07:16 (38)
26	08:58	07:44		06:24		05:57	04:49	06:43 (38)	04:29	06:56 (38)
	16:42	17:58		19:03		21:14	22:20	37 07:20 (38)	22:50	20 07:16 (38)
27	08:56	07:41		06:21		05:54	04:48	06:43 (38)	04:29	06:56 (38)
	16:44	18:00		19:05		21:17	22:22	36 07:19 (38)	22:50	21 07:17 (38)
28	08:54	07:38		06:18		05:52	04:46	06:43 (38)	04:30	06:56 (38)
	16:47	18:02		19:08		21:19	22:24	36 07:19 (38)	22:50	21 07:17 (38)
29	08:52			07:16		05:49	04:44	06:44 (38)	04:31	06:56 (38)
	16:49			20:10		21:21	22:25	35 07:19 (38)	22:49	21 07:17 (38)
30	08:50			07:13		05:47	04:43	06:45 (38)	04:32	06:56 (38)
	16:51			20:12		21:24	22:27	34 07:19 (38)	22:49	22 07:18 (38)
31	08:48			07:10			04:41	06:44 (38)		
	16:54			20:14			22:29	34 07:18 (38)		
Potential sun hours	221	260		365		432	521		547	
Total, worst case			119		98			945		688

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September	October		November	December
1	04:32		06:56 (38)	05:24	06:57 (38)	06:33	07:39		07:51	09:00
	22:48	23	07:19 (38)	22:01	33	07:30 (38)	20:40	19:13		16:49	15:52
2	04:33		06:56 (38)	05:27	06:59 (38)	06:35	07:42		07:54	09:01
	22:48	24	07:20 (38)	21:58	31	07:30 (38)	20:37	19:10		16:47	15:50
3	04:34		06:55 (38)	05:29	07:01 (38)	06:38	07:44		07:56	09:03
	22:47	25	07:20 (38)	21:56	28	07:29 (38)	20:34	19:07		16:44	15:49
4	04:35		06:55 (38)	05:31	07:03 (38)	06:40	07:46		07:59	09:05
	22:46	25	07:20 (38)	21:54	26	07:29 (38)	20:31	19:05		16:42	15:48
5	04:37		06:54 (38)	05:33	07:05 (38)	06:42	07:48	08:44 (84)	08:01	09:07
	22:46	27	07:21 (38)	21:51	23	07:28 (38)	20:28	19:02	8	08:52 (84)	16:39	15:47
6	04:38		06:55 (38)	05:35	07:06 (38)	06:44	07:51	08:42 (84)	08:03	09:09
	22:45	28	07:23 (38)	21:49	21	07:27 (38)	20:25	18:59	11	08:53 (84)	16:37	15:47
7	04:39		06:55 (38)	05:38	07:08 (38)	06:47	07:53	08:41 (84)	08:06	09:10
	22:44	28	07:23 (38)	21:47	18	07:26 (38)	20:23	18:56	13	08:54 (84)	16:35	15:46
8	04:40		06:54 (38)	05:40	07:10 (38)	06:49	07:55	08:40 (84)	08:08	09:12
	22:43	30	07:24 (38)	21:44	15	07:25 (38)	20:20	18:53	14	08:54 (84)	16:32	15:45
9	04:42		06:54 (38)	05:42	07:12 (38)	06:51	07:57	08:39 (84)	08:11	09:13
	22:42	30	07:24 (38)	21:42	12	07:24 (38)	20:17	18:50	15	08:54 (84)	16:30	15:44
10	04:43		06:53 (38)	05:44	07:13 (38)	06:53	08:00	08:40 (84)	08:13	09:15
	22:40	31	07:24 (38)	21:39	9	07:22 (38)	20:14	18:48	14	08:54 (84)	16:28	15:44
11	04:45		06:54 (38)	05:46	07:15 (38)	06:55	08:02	08:40 (84)	08:15	09:16
	22:39	32	07:26 (38)	21:37	5	07:20 (38)	20:11	18:45	13	08:53 (84)	16:26	15:43
12	04:46		06:53 (38)	05:49			06:58	08:04	08:42 (84)	08:18	09:17
	22:38	33	07:26 (38)	21:34			20:08	18:42	9	08:51 (84)	16:24	15:43
13	04:48		06:53 (38)	05:51			07:00	08:07	08:45 (84)	08:20	09:19
	22:36	33	07:26 (38)	21:32			20:05	18:39	4	08:49 (84)	16:22	15:43
14	04:49		06:53 (38)	05:53			07:02	08:09		08:22	09:20
	22:35	34	07:27 (38)	21:29			20:02	18:36		16:19	15:43
15	04:51		06:52 (38)	05:55			07:04	08:11		08:25	09:21
	22:34	35	07:27 (38)	21:26			19:59	18:34		16:17	15:42
16	04:53		06:52 (38)	05:58			07:06	08:14		08:27	09:22
	22:32	36	07:28 (38)	21:24			19:57	18:31		16:15	15:42
17	04:54		06:52 (38)	06:00			07:09	08:16	09:17 (85)	08:29	09:23
	22:30	36	07:28 (38)	21:21			19:54	18:28	2	09:19 (85)	16:13	15:42
18	04:56		06:52 (38)	06:02			07:11	08:18	09:13 (85)	08:32	09:24
	22:29	37	07:29 (38)	21:18			19:51	18:25	9	09:22 (85)	16:12	15:42
19	04:58		06:52 (38)	06:04			07:13	08:21	09:12 (85)	08:34	09:25
	22:27	38	07:30 (38)	21:16			19:48	18:23	12	09:24 (85)	16:10	15:43
20	05:00		06:51 (38)	06:07			07:15	08:23	09:10 (85)	08:36	09:25
	22:25	38	07:29 (38)	21:13			19:45	18:20	14	09:24 (85)	16:08	15:43
21	05:02		06:51 (38)	06:09			07:17	08:25	09:10 (85)	08:39	09:26
	22:23	39	07:30 (38)	21:10			19:42	18:17	15	09:25 (85)	16:06	15:43
22	05:04		06:52 (38)	06:11			07:19	08:28	09:09 (85)	08:41	09:27
	22:22	39	07:31 (38)	21:08			19:39	18:15	15	09:24 (85)	16:04	15:44
23	05:06		06:51 (38)	06:13			07:22	08:30	09:09 (85)	08:43	09:27
	22:20	39	07:30 (38)	21:05			19:36	18:12	15	09:24 (85)	16:03	15:44
24	05:08		06:51 (38)	06:15			07:24	08:32	09:09 (85)	08:45	09:28
	22:18	40	07:31 (38)	21:02			19:33	18:09	14	09:23 (85)	16:01	15:45
25	05:10		06:51 (38)	06:18			07:26	07:35	08:10 (85)	08:47	09:28
	22:16	40	07:31 (38)	20:59			19:30	17:07	13	08:23 (85)	16:00	15:46
26	05:12		06:51 (38)	06:20			07:28	07:37	08:13 (85)	08:49	09:28
	22:14	40	07:31 (38)	20:57			19:28	17:04	9	08:22 (85)	15:58	15:46
27	05:14		06:52 (38)	06:22			07:31	07:39	08:14 (85)	08:52	09:28
	22:12	39	07:31 (38)	20:54			19:25	17:02	5	08:19 (85)	15:57	15:47
28	05:16		06:52 (38)	06:24			07:33	07:42		08:54	09:28
	22:10	39	07:31 (38)	20:51			19:22	16:59		15:55	15:48
29	05:18		06:52 (38)	06:27			07:35	07:44		08:56	09:28
	22:07	38	07:30 (38)	20:48			19:19	16:56		15:54	15:49
30	05:20		06:54 (38)	06:29			07:37	07:47		08:58	09:28
	22:05	36	07:30 (38)	20:45			19:16	16:54		15:53	15:50
31	05:22		06:55 (38)	06:31				07:49			09:28
	22:03	35	07:30 (38)	20:43				16:51			15:51
Potential sun hours	545			478			386	319		236	200
Total, worst case		1047			221				224		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	04:32	05:24	06:33			07:40			07:52		08:47 (2)	09:00
	22:49	22:01	20:40			19:13			16:49	9	08:56 (2)	15:51
2	04:33	05:26	06:35			07:42		09:06 (22)	07:54			09:02
	22:48	21:59	20:37			19:10	6	09:12 (22)	16:46			15:50
3	04:34	05:29	06:38			07:44		09:02 (22)	07:56			09:04
	22:47	21:56	20:34			19:07	13	09:15 (22)	16:44			15:49
4	04:35	05:31	06:40			07:46		09:00 (22)	07:59			09:05
	22:47	21:54	20:31			19:05	17	09:17 (22)	16:42			15:48
5	04:36	05:33	06:42			07:48		08:58 (22)	08:01			09:07
	22:46	21:52	20:28			19:02	20	09:18 (22)	16:39			15:47
6	04:38	05:35	06:44			07:51		08:57 (22)	08:04			09:09
	22:45	21:49	20:26			18:59	22	09:19 (22)	16:37			15:46
7	04:39	05:37	06:47			07:53		08:57 (22)	08:06			09:10
	22:44	21:47	20:23			18:56	23	09:20 (22)	16:35			15:46
8	04:40	05:40	06:49			07:55		08:55 (22)	08:08			09:12
	22:43	21:44	20:20			18:53	24	09:19 (22)	16:32			15:45
9	04:41	05:42	06:51			07:58		08:55 (22)	08:11			09:14
	22:42	21:42	20:17			18:50	24	09:19 (22)	16:30			15:44
10	04:43	05:44	06:53			08:00		08:55 (22)	08:13			09:15
	22:41	21:39	20:14			18:48	24	09:19 (22)	16:28			15:44
11	04:44	05:46	06:55			08:02		08:54 (22)	08:16			09:16
	22:39	21:37	20:11			18:45	25	09:19 (22)	16:26			15:43
12	04:46	05:49	06:58			08:04		08:55 (22)	08:18			09:18
	22:38	21:34	20:08			18:42	23	09:18 (22)	16:24			15:43
13	04:48	05:51	07:00			08:07		08:55 (22)	08:20			09:19
	22:37	21:32	20:05			18:39	22	09:17 (22)	16:21			15:43
14	04:49	05:53	07:02			08:09		08:55 (22)	08:23			09:20
	22:35	21:29	20:02			18:36	21	09:16 (22)	16:19			15:42
15	04:51	05:55	07:04			08:11		08:57 (22)	08:25			09:21
	22:34	21:26	20:00			18:34	18	09:15 (22)	16:17			15:42
16	04:53	05:58	07:06			08:14		08:58 (22)	08:27			09:22
	22:32	21:24	19:57			18:31	15	09:13 (22)	16:15			15:42
17	04:54	06:00	07:09			08:16		09:01 (22)	08:30			09:23
	22:31	21:21	19:54			18:28	10	09:11 (22)	16:13			15:42
18	04:56	06:02	07:11		08:19 (24)	08:18			08:32			09:24
	22:29	21:19	19:51	9	08:28 (24)	18:25			16:11			15:42
19	04:58	06:04	07:13		08:16 (24)	08:21			08:34			09:25
	22:27	21:16	19:48	13	08:29 (24)	18:23			16:10			15:43
20	05:00	06:06	07:15		08:14 (24)	08:23		09:48 (2)	08:37			09:26
	22:25	21:13	19:45	16	08:30 (24)	18:20	9	09:57 (2)	16:08			15:43
21	05:02	06:09	07:17		08:14 (24)	08:25		09:46 (2)	08:39			09:26
	22:24	21:10	19:42	17	08:31 (24)	18:17	13	09:59 (2)	16:06			15:43
22	05:04	06:11	07:20		08:13 (24)	08:28		09:44 (2)	08:41			09:27
	22:22	21:08	19:39	18	08:31 (24)	18:15	16	10:00 (2)	16:04			15:44
23	05:06	06:13	07:22		08:12 (24)	08:30		09:44 (2)	08:43			09:27
	22:20	21:05	19:36	19	08:31 (24)	18:12	17	10:01 (2)	16:03			15:44
24	05:08	06:15	07:24		08:12 (24)	08:32		09:42 (2)	08:45			09:28
	22:18	21:02	19:33	19	08:31 (24)	18:09	19	10:01 (2)	16:01			15:45
25	05:10	06:18	07:26		08:11 (24)	07:35		08:42 (2)	08:48			09:28
	22:16	20:59	19:31	19	08:30 (24)	17:07	19	09:01 (2)	15:59			15:45
26	05:12	06:20	07:28		08:12 (24)	07:37		08:43 (2)	08:50			09:28
	22:14	20:57	19:28	17	08:29 (24)	17:04	19	09:02 (2)	15:58			15:46
27	05:14	06:22	07:31		08:13 (24)	07:40		08:42 (2)	08:52			09:28
	22:12	20:54	19:25	15	08:28 (24)	17:02	19	09:01 (2)	15:57			15:47
28	05:16	06:24	07:33		08:14 (24)	07:42		08:43 (2)	08:54			09:29
	22:10	20:51	19:22	12	08:26 (24)	16:59	18	09:01 (2)	15:55			15:48
29	05:18	06:27	07:35		08:15 (24)	07:44		08:44 (2)	08:56			09:29
	22:08	20:48	19:19	8	08:23 (24)	16:56	17	09:01 (2)	15:54			15:49
30	05:20	06:29	07:37			07:47		08:44 (2)	08:58			09:28
	22:05	20:45	19:16			16:54	15	08:59 (2)	15:53			15:50
31	05:22	06:31				07:49		08:45 (2)				09:28
	22:03	20:43				16:51	13	08:58 (2)				15:51
Potential sun hours	545	478	386			319			236			200
Total, worst case				182			501			9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56		18:05	23 08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40		19:13		16:49	15:51
2	09:28	08:44		07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35		07:42		07:54	09:02
	15:54	16:59		18:07	24 08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:46	15:50
3	09:27	08:41		07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01		18:10	24 08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34		19:07		16:44	15:49
4	09:27	08:39		07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	09:05 (22)	07:59	09:05
	15:57	17:04		18:12	23 08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	11 09:16 (22)	16:42	15:48
5	09:26	08:37		07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42		07:48	09:02 (22)	08:01	09:07
	15:59	17:06		18:14	22 08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	16 09:18 (22)	16:39	15:47
6	09:25	08:35		07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44		07:51	09:00 (22)	08:04	09:09
	16:00	17:09		18:17	22 08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	19 09:19 (22)	16:37	15:46
7	09:25	08:32		07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47		07:53	09:00 (22)	08:06	09:10
	16:02	17:11		18:19	19 08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	20 09:20 (22)	16:35	15:46
8	09:24	08:30		07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:58 (22)	08:08	09:12
	16:04	17:13		18:21	18 08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	23 09:21 (22)	16:32	15:45
9	09:23	08:28		07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51		07:58	08:57 (22)	08:11	09:14
	16:05	17:16		18:24	13 08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	23 09:20 (22)	16:30	15:44
10	09:22	08:25		07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53		08:00	08:57 (22)	08:13	09:15
	16:07	17:18		18:26	7 08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	24 09:21 (22)	16:28	15:44
11	09:21	08:23		07:07		06:38	05:20	04:30	04:44	05:46	06:55		08:02	08:57 (22)	08:16	09:16
	16:09	17:21		18:28		20:40	21:49	22:44	22:39	21:37	20:11		18:45	23 09:20 (22)	16:26	15:43
12	09:20	08:20		07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:04	08:57 (22)	08:18	09:18
	16:11	17:23		18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	24 09:21 (22)	16:24	15:43
13	09:19	08:18		07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:57 (22)	08:20	09:19
	16:13	17:26		18:33	5 07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05		18:39	23 09:20 (22)	16:21	15:43
14	09:17	08:15		06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:57 (22)	08:23	09:20
	16:15	17:28		18:35	11 07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02		18:36	21 09:18 (22)	16:19	15:42
15	09:16	08:13		06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:58 (22)	08:25	09:21
	16:17	17:31		18:38	15 07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00		18:34	20 09:18 (22)	16:17	15:42
16	09:15	08:10		06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06		08:14	08:58 (22)	08:27	09:22
	16:19	17:33		18:40	16 07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	18 09:16 (22)	16:15	15:42
17	09:13	08:08		06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	09:00 (22)	08:30	09:23
	16:21	17:36		18:42	18 07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	15 09:15 (22)	16:13	15:42
18	09:12	08:05		06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11		08:18	09:02 (22)	08:32	09:24
	16:23	17:38		18:45	19 07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51		18:25	10 09:12 (22)	16:11	15:42
19	09:10	08:02		06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13	08:22 (24)	08:21		08:34	09:25
	16:26	17:41		18:47	18 07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48	7 08:29 (24)	18:23		16:10	15:43
20	09:09	08:00		06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15	08:19 (24)	08:23		08:37	09:26
	16:28	17:43		18:49	19 07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45	12 08:31 (24)	18:20		16:08	15:43
21	09:07	07:57		06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17	08:18 (24)	08:25		08:39	09:26
	16:30	17:46		18:52	17 07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42	15 08:33 (24)	18:17		16:06	15:43
22	09:05	07:54		06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20	08:16 (24)	08:28		08:41	09:27
	16:32	17:48		18:54	15 07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39	17 08:33 (24)	18:15		16:04	15:44
23	09:04	07:52		06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22	08:15 (24)	08:30		08:43	09:27
	16:35	17:50		18:56	13 07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36	18 08:33 (24)	18:12		16:03	15:44
24	09:02	07:49	08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24	08:14 (24)	08:32		08:45	09:28
	16:37	17:53	12 08:42 (22)	18:59	8 07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33	19 08:33 (24)	18:09		16:01	15:45
25	09:00	07:46	08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	08:14 (24)	07:35		08:48	09:28
	16:39	17:55	15 08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31	18 08:32 (24)	17:07		15:59	15:45
26	08:58	07:44	08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:14 (24)	07:37		08:50	09:28
	16:42	17:58	19 08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28	19 08:33 (24)	17:04		15:58	15:46
27	08:56	07:41	08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	08:14 (24)	07:40		08:52	09:28
	16:44	18:00	20 08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	18 08:32 (24)	17:02		15:57	15:47
28	08:54	07:38	08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	08:15 (24)	07:42		08:54	09:29
	16:46	18:02	22 08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	15 08:30 (24)	16:59		15:55	15:48
29	08:52			07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:15 (24)	07:44		08:56	09:29
	16:49			20:10		21:21	22:26	22:50	22:08	20:48	19:19	13 08:28 (24)	16:56		15:54	15:49
30	08:50			07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:18 (24)	07:47		08:58	09:28
	16:51			20:12		21:24	22:27	22:49	22:05	20:45	19:16	8 08:26 (24)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:15			22:29		22:03	20:43			16:51			15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			88		369							179		290		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
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14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
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15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
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16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
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9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
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22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
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29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
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Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
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	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
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	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
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	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February			March			April		May		June		July		August		September		October			November			December
1	09:28		08:46		09:41 (22)	07:35		08:28 (24)	07:07		05:44		04:40		04:32		05:24		06:33		07:39			07:52		09:00 (22)	09:00
	15:53		16:56	3	09:44 (22)	18:05	19	08:47 (24)	20:17		21:26		22:31		22:49		22:01		20:40		19:13			16:49	24	09:24 (22)	15:51
2	09:28		08:44		09:37 (22)	07:33		08:27 (24)	07:04		05:41		04:39		04:33		05:26		06:35		07:42			07:54		09:01 (22)	09:02
	15:54		16:59	10	09:47 (22)	18:07	20	08:47 (24)	20:19		21:28		22:32		22:48		21:59		20:37		19:10			16:46	23	09:24 (22)	15:50
3	09:27		08:41		09:35 (22)	07:30		08:27 (24)	07:01		05:39		04:37		04:34		05:29		06:38		07:44			07:56		09:01 (22)	09:04
	15:56		17:01	15	09:50 (22)	18:10	20	08:47 (24)	20:21		21:31		22:34		22:47		21:56		20:34		19:07			16:44	23	09:24 (22)	15:49
4	09:27		08:39		09:34 (22)	07:27		08:27 (24)	06:58		05:36		04:36		04:35		05:31		06:40		07:46			07:59		09:02 (22)	09:05
	15:57		17:04	17	09:51 (22)	18:12	19	08:46 (24)	20:24		21:33		22:35		22:47		21:54		20:31		19:05			16:42	22	09:24 (22)	15:48
5	09:26		08:37		09:33 (22)	07:24		08:28 (24)	06:55		05:34		04:35		04:36		05:33		06:42		07:48		09:11 (24)	08:01		09:02 (22)	09:07
	15:59		17:06	20	09:53 (22)	18:14	17	08:45 (24)	20:26		21:35		22:37		22:46		21:52		20:28		19:02	3	09:14 (24)	16:39	21	09:23 (22)	15:47
6	09:25		08:35		09:32 (22)	07:22		08:28 (24)	06:53		05:31		04:34		04:37		05:35		06:44		07:51		09:06 (24)	08:04		09:03 (22)	09:09
	16:00		17:08	21	09:53 (22)	18:17	16	08:44 (24)	20:28		21:38		22:38		22:45		21:49		20:26		18:59	11	09:17 (24)	16:37	19	09:22 (22)	15:46
7	09:25		08:32		09:31 (22)	07:19		08:29 (24)	06:50		05:29		04:33		04:39		05:37		06:47		07:53		09:05 (24)	08:06		09:05 (22)	09:10
	16:02		17:11	22	09:53 (22)	18:19	13	08:42 (24)	20:31		21:40		22:39		22:44		21:47		20:23		18:56	15	09:20 (24)	16:35	17	09:22 (22)	15:46
8	09:24		08:30		09:32 (22)	07:16		08:31 (24)	06:47		05:27		04:32		04:40		05:40		06:49		07:55		09:03 (24)	08:08		09:05 (22)	09:12
	16:04		17:13	22	09:54 (22)	18:21	8	08:39 (24)	20:33		21:42		22:41		22:43		21:44		20:20		18:53	17	09:20 (24)	16:32	15	09:20 (22)	15:45
9	09:23		08:28		09:31 (22)	07:13			06:44		05:24		04:31		04:41		05:42		06:51		07:58		09:02 (24)	08:11		09:08 (22)	09:14
	16:05		17:16	23	09:54 (22)	18:24			20:35		21:44		22:42		22:42		21:42		20:17		18:50	18	09:20 (24)	16:30	10	09:18 (22)	15:44
10	09:22		08:25		09:32 (22)	07:10			06:41		05:22		04:30		04:43		05:44		06:53		08:00		09:02 (24)	08:13		09:13 (22)	09:15
	16:07		17:18	23	09:55 (22)	18:26			20:38		21:47		22:43		22:41		21:39		20:14		18:48	19	09:21 (24)	16:28	1	09:14 (22)	15:44
11	09:21		08:23		09:31 (22)	07:07			06:38		05:20		04:30		04:44		05:46		06:55		08:02		09:01 (24)	08:16			09:16
	16:09		17:21	24	09:55 (22)	18:28			20:40		21:49		22:44		22:39		21:37		20:11		18:45	20	09:21 (24)	16:26			15:43
12	09:20		08:20		09:31 (22)	07:05			06:36		05:17		04:29		04:46		05:49		06:58		08:04		09:01 (24)	08:18			09:18
	16:11		17:23	23	09:54 (22)	18:31			20:42		21:51		22:45		22:38		21:34		20:08		18:42	20	09:21 (24)	16:24			15:43
13	09:19		08:18		09:31 (22)	07:02			06:33		05:15		04:28		04:47		05:51		07:00		08:07		09:01 (24)	08:20			09:19
	16:13		17:26	23	09:54 (22)	18:33			20:44		21:53		22:46		22:37		21:32		20:05		18:39	19	09:20 (24)	16:21			15:43
14	09:17		08:15		09:33 (22)	06:59			06:30		05:13		04:28		04:49		05:53		07:02		08:09		09:01 (24)	08:23			09:20
	16:15		17:28	21	09:54 (22)	18:35			20:47		21:55		22:47		22:35		21:29		20:02		18:36	18	09:19 (24)	16:19			15:42
15	09:16		08:13		09:33 (22)	06:56			06:27		05:11		04:28		04:51		05:55		07:04		08:11		09:02 (24)	08:25			09:21
	16:17		17:31	20	09:53 (22)	18:38			20:49		21:58		22:47		22:34		21:26		20:00		18:34	16	09:18 (24)	16:17			15:42
16	09:15		08:10		09:34 (22)	06:53			06:24		05:08		04:27		04:53		05:57		07:06		08:14		09:03 (24)	08:27			09:22
	16:19		17:33	17	09:51 (22)	18:40			20:51		22:00		22:48		22:32		21:24		19:57		18:31	13	09:16 (24)	16:15			15:42
17	09:13		08:08		09:36 (22)	06:50			06:22		05:06		04:27		04:54		06:00		07:09		08:16		09:05 (24)	08:30			09:23
	16:21		17:36	14	09:50 (22)	18:42			20:54		22:02		22:49		22:31		21:21		19:54		18:28	10	09:15 (24)	16:13			15:42
18	09:12		08:05		09:39 (22)	06:47			06:19		05:04		04:27		04:56		06:02		07:11		08:18			08:32			09:24
	16:23		17:38	8	09:47 (22)	18:45			20:56		22:04		22:49		22:29		21:19		19:51		18:25			16:11			15:42
19	09:10		08:02			06:44			06:16		05:02		04:27		04:58		06:04		07:13		08:21			08:34			09:25
	16:26		17:41			18:47			20:58		22:06		22:50		22:27		21:16		19:48		18:23			16:10			15:42
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	16:30		17:45			18:52			21:03		22:10		22:50		22:24		21:10		19:42		18:17			16:06			15:43
22	09:05		07:54			06:36			06:08		04:56		04:27		05:04		06:11		07:20		08:28			08:41			09:27
	16:32		17:48			18:54			21:05		22:12		22:51		22:22		21:08		19:39		18:15			16:04			15:44
23	09:04		07:52			06:33			06:05		04:54		04:27		05:06		06:13		07:22		08:30			08:43			09:27
	16:35		17:50			18:56			21:08		22:14		22:51		22:20		21:05		19:36		18:12			16:03			15:44
24	09:02		07:49		08:36 (24)	06:30			06:02		04:53		04:28		05:08		06:15		07:24		08:32		10:07 (22)	08:45			09:28
	16:37		17:53	5	08:41 (24)	18:59			21:10		22:16		22:51		22:18		21:02		19:33		18:09	10	10:17 (22)	16:01			15:45
25	09:00		07:46		08:32 (24)	06:27			06:00		04:51		04:28		05:10		06:18		07:26		07:35		09:05 (22)	08:48			09:28
	16:39		17:55	12	08:44 (24)	19:01			21:12		22:18		22:51		22:16		20:59		19:30		17:07	15	09:20 (22)	15:59			15:45
26	08:58		07:44		08:30 (24)	06:24			05:57		04:49		04:29		05:12		06:20		07:28		07:37		09:04 (22)	08:50			09:28
	16:42		17:58	15	08:45 (24)	19:03			21:14		22:20		22:51		22:14		20:57		19:28		17:04	18	09:22 (22)	15:58			15:46
27	08:56		07:41		08:29 (24)	06:21			05:54		04:47		04:29		05:14		06:22		07:31		07:40		09:02 (22)	08:52			09:28
	16:44		18:00	17	08:46 (24)	19:05			21:17		22:22		22:50		22:12		20:54		19:25		17:02	20	09:22 (22)	15:56			15:47
28	08:54		07:38		08:29 (24)	06:18			05:52		04:46		04:30		05:16		06:24		07:33		07:42		09:02 (22)	08:54			09:29
	16:46		18:02	18	08:47 (24)	19:08			21:19		22:24		22:50		22:10		20:51		19:22		16:59	21	09:23 (22)	15:55			15:48
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	16:49					20:10			21:21		22:26		22:50		22:08		20:48		19:19		16:56	22	09:24 (22)	15:54			15:49
30	08:50					07:13			05:47		04:43		04:31		05:20		06:29		07:37		07:47		09:01 (22)	08:58			09:28
	16:51					20:12			21:24		22:27		22:49		22:05		20:45		19:16		16:54	23	09:24 (22)	15:53			15:50
31	08:48					07:10					04:41				05:22		06:31				07:49		09:01 (22)				09:28
	16:54					20:15					22:29				22:03		20:43				16:51	23	09:24 (22)				15:51
Potential sun hours	221		260			365			432		521		547		546		478		386		319			236			199
Total, worst case				393			132															351			175		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		09:41 (22)	07:35		08:31 (24)	07:07	05:44	04:40
	15:53			16:56	14	09:55 (22)	18:05	20	08:51 (24)	20:17	21:26	22:31
2	09:28			08:44		09:40 (22)	07:33		08:31 (24)	07:04	05:41	04:39
	15:54			16:59	16	09:56 (22)	18:07	20	08:51 (24)	20:19	21:28	22:32
3	09:27			08:41		09:39 (22)	07:30		08:31 (24)	07:01	05:39	04:37
	15:56			17:01	19	09:58 (22)	18:10	19	08:50 (24)	20:21	21:31	22:34
4	09:27			08:39		09:38 (22)	07:27		08:31 (24)	06:58	05:36	04:36
	15:57			17:04	20	09:58 (22)	18:12	19	08:50 (24)	20:24	21:33	22:35
5	09:26			08:37		09:38 (22)	07:24		08:32 (24)	06:55	05:34	04:35
	15:59			17:06	22	10:00 (22)	18:14	16	08:48 (24)	20:26	21:35	22:37
6	09:25			08:35		09:37 (22)	07:22		08:33 (24)	06:53	05:31	04:34
	16:00			17:08	23	10:00 (22)	18:17	14	08:47 (24)	20:28	21:38	22:38
7	09:25			08:32		09:36 (22)	07:19		08:35 (24)	06:50	05:29	04:33
	16:02			17:11	24	10:00 (22)	18:19	9	08:44 (24)	20:31	21:40	22:39
8	09:24			08:30		09:37 (22)	07:16			06:47	05:27	04:32
	16:04			17:13	24	10:01 (22)	18:21			20:33	21:42	22:41
9	09:23			08:28		09:36 (22)	07:13			06:44	05:24	04:31
	16:05			17:16	24	10:00 (22)	18:24			20:35	21:44	22:42
10	09:22			08:25		09:37 (22)	07:10			06:41	05:22	04:30
	16:07			17:18	24	10:01 (22)	18:26			20:38	21:47	22:43
11	09:21			08:23		09:37 (22)	07:07			06:38	05:20	04:30
	16:09			17:21	23	10:00 (22)	18:28			20:40	21:49	22:44
12	09:20			08:20		09:37 (22)	07:05			06:36	05:17	04:29
	16:11			17:23	23	10:00 (22)	18:31			20:42	21:51	22:45
13	09:19			08:18		09:38 (22)	07:02			06:33	05:15	04:28
	16:13			17:26	21	09:59 (22)	18:33			20:44	21:53	22:46
14	09:17			08:15		09:39 (22)	06:59			06:30	05:13	04:28
	16:15			17:28	20	09:59 (22)	18:35			20:47	21:55	22:47
15	09:16			08:13		09:40 (22)	06:56			06:27	05:11	04:28
	16:17			17:31	17	09:57 (22)	18:38			20:49	21:58	22:47
16	09:15			08:10		09:42 (22)	06:53			06:24	05:08	04:27
	16:19			17:33	13	09:55 (22)	18:40			20:51	22:00	22:48
17	09:13			08:08		09:45 (22)	06:50			06:21	05:06	04:27
	16:21			17:36	8	09:53 (22)	18:42			20:54	22:02	22:49
18	09:12			08:05			06:47			06:19	05:04	04:27
	16:23			17:38			18:45			20:56	22:04	22:49
19	09:10			08:02			06:44			06:16	05:02	04:27
	16:26			17:41			18:47			20:58	22:06	22:50
20	09:09			08:00			06:42			06:13	05:00	04:27
	16:28			17:43			18:49			21:01	22:08	22:50
21	09:07			07:57			06:39			06:10	04:58	04:27
	16:30			17:45			18:52			21:03	22:10	22:50
22	09:05			07:54			06:36			06:08	04:56	04:27
	16:32			17:48			18:54			21:05	22:12	22:51
23	09:04			07:52		08:40 (24)	06:33			06:05	04:54	04:27
	16:35			17:50	5	08:45 (24)	18:56			21:08	22:14	22:51
24	09:02			07:49		08:36 (24)	06:30			06:02	04:53	04:28
	16:37			17:53	12	08:48 (24)	18:59			21:10	22:16	22:51
25	09:00			07:46		08:34 (24)	06:27			06:00	04:51	04:28
	16:39			17:55	15	08:49 (24)	19:01			21:12	22:18	22:51
26	08:58			07:44		08:33 (24)	06:24			05:57	04:49	04:29
	16:42			17:58	17	08:50 (24)	19:03			21:14	22:20	22:51
27	08:56			07:41		08:32 (24)	06:21			05:54	04:47	04:29
	16:44			18:00	18	08:50 (24)	19:05			21:17	22:22	22:50
28	08:54			07:38		08:32 (24)	06:18			05:52	04:46	04:30
	16:46			18:02	19	08:51 (24)	19:08			21:19	22:24	22:50
29	08:52						07:16			05:49	04:44	04:30
	16:49						20:10			21:21	22:26	22:50
30	08:50						07:13			05:47	04:43	04:31
	16:51						20:12			21:24	22:27	22:49
31	08:48		09:43 (22)				07:10				04:41	
	16:54	9	09:52 (22)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		9			421			117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51	09:06 (22)	09:00
	22:49	22:01	20:40	19:13		16:49	24 09:30 (22)	15:51
2	04:33	05:26	06:35	07:42		07:54	09:06 (22)	09:02
	22:48	21:59	20:37	19:10		16:46	24 09:30 (22)	15:50
3	04:34	05:29	06:38	07:44		07:56	09:06 (22)	09:04
	22:47	21:56	20:34	19:07		16:44	24 09:30 (22)	15:49
4	04:35	05:31	06:40	07:46		07:59	09:07 (22)	09:05
	22:47	21:54	20:31	19:05		16:42	23 09:30 (22)	15:48
5	04:36	05:33	06:42	07:48		08:01	09:07 (22)	09:07
	22:46	21:52	20:28	19:02		16:39	22 09:29 (22)	15:47
6	04:37	05:35	06:44	07:51	09:12 (24)	08:04	09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7 09:19 (24)	16:37	21 09:29 (22)	15:46
7	04:39	05:37	06:47	07:53	09:10 (24)	08:06	09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12 09:22 (24)	16:35	20 09:29 (22)	15:46
8	04:40	05:40	06:49	07:55	09:08 (24)	08:08	09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15 09:23 (24)	16:32	18 09:27 (22)	15:45
9	04:41	05:42	06:51	07:58	09:06 (24)	08:11	09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18 09:24 (24)	16:30	17 09:27 (22)	15:44
10	04:43	05:44	06:53	08:00	09:06 (24)	08:13	09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19 09:25 (24)	16:28	13 09:25 (22)	15:44
11	04:44	05:46	06:55	08:02	09:05 (24)	08:16	09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19 09:24 (24)	16:26	9 09:23 (22)	15:43
12	04:46	05:49	06:58	08:04	09:05 (24)	08:18		09:18
	22:38	21:34	20:08	18:42	20 09:25 (24)	16:24		15:43
13	04:47	05:51	07:00	08:07	09:04 (24)	08:20		09:19
	22:37	21:32	20:05	18:39	20 09:24 (24)	16:21		15:43
14	04:49	05:53	07:02	08:09	09:04 (24)	08:23		09:20
	22:35	21:29	20:02	18:36	19 09:23 (24)	16:19		15:42
15	04:51	05:55	07:04	08:11	09:05 (24)	08:25		09:21
	22:34	21:26	20:00	18:34	18 09:23 (24)	16:17		15:42
16	04:53	05:57	07:06	08:14	09:05 (24)	08:27		09:22
	22:32	21:24	19:57	18:31	16 09:21 (24)	16:15		15:42
17	04:54	06:00	07:09	08:16	09:07 (24)	08:30		09:23
	22:31	21:21	19:54	18:28	14 09:21 (24)	16:13		15:42
18	04:56	06:02	07:11	08:18	09:08 (24)	08:32		09:24
	22:29	21:19	19:51	18:25	10 09:18 (24)	16:11		15:42
19	04:58	06:04	07:13	08:21		08:34		09:25
	22:27	21:16	19:48	18:23		16:10		15:42
20	05:00	06:06	07:15	08:23		08:37		09:26
	22:25	21:13	19:45	18:20		16:08		15:43
21	05:02	06:09	07:17	08:25		08:39		09:26
	22:24	21:10	19:42	18:17		16:06		15:43
22	05:04	06:11	07:20	08:28		08:41		09:27
	22:22	21:08	19:39	18:15		16:04		15:44
23	05:06	06:13	07:22	08:30		08:43		09:27
	22:20	21:05	19:36	18:12		16:03		15:44
24	05:08	06:15	07:24	08:32		08:45		09:28
	22:18	21:02	19:33	18:09		16:01		15:45
25	05:10	06:18	07:26	07:35	09:13 (22)	08:48		09:28
	22:16	20:59	19:30	17:07	10 09:23 (22)	15:59		15:45
26	05:12	06:20	07:28	07:37	09:11 (22)	08:50		09:28
	22:14	20:57	19:28	17:04	15 09:26 (22)	15:58		15:46
27	05:14	06:22	07:31	07:40	09:09 (22)	08:52		09:28
	22:12	20:54	19:25	17:01	18 09:27 (22)	15:56		15:47
28	05:16	06:24	07:33	07:42	09:08 (22)	08:54		09:29
	22:10	20:51	19:22	16:59	20 09:28 (22)	15:55		15:48
29	05:18	06:27	07:35	07:44	09:08 (22)	08:56		09:29
	22:08	20:48	19:19	16:56	21 09:29 (22)	15:54		15:49
30	05:20	06:29	07:37	07:47	09:07 (22)	08:58		09:28
	22:05	20:45	19:16	16:54	22 09:29 (22)	15:53		15:50
31	05:22	06:31		07:49	09:07 (22)			09:28
	22:03	20:43		16:51	23 09:30 (22)			15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case				336		215		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		12:21 (24)	08:46		10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:36 (28)	09:00	10:51 (23)
	15:53	20	12:41 (24)	16:56	20	10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6	09:42 (28)	15:51	28 12:23 (24)
2	09:28		12:22 (24)	08:44		09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:34 (28)	09:02	10:51 (23)
	15:54	19	12:41 (24)	16:58	21	10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11	09:45 (28)	15:50	30 12:24 (24)
3	09:27		12:22 (24)	08:41		10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:33 (28)	09:04	10:52 (23)
	15:55	19	12:41 (24)	17:01	20	10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14	09:47 (28)	15:49	29 12:25 (24)
4	09:27		11:12 (23)	08:39		10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:31 (28)	09:05	10:53 (23)
	15:57	22	12:41 (24)	17:03	20	10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	09:48 (28)	15:48	30 12:26 (24)
5	09:26		11:11 (23)	08:37		10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:31 (28)	09:07	10:54 (23)
	15:58	26	12:42 (24)	17:06	19	10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18	09:49 (28)	15:47	29 12:27 (24)
6	09:25		11:10 (23)	08:35		10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:30 (28)	09:09	10:56 (23)
	16:00	28	12:42 (24)	17:08	18	10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20	09:50 (28)	15:46	28 12:28 (24)
7	09:25		11:09 (23)	08:32		10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:30 (28)	09:10	10:58 (23)
	16:02	29	12:42 (24)	17:11	17	10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20	09:50 (28)	15:45	26 12:29 (24)
8	09:24		11:09 (23)	08:30		10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:30 (28)	09:12	11:00 (23)
	16:03	30	12:42 (24)	17:13	15	10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20	09:50 (28)	15:45	23 12:30 (24)
9	09:23		11:09 (23)	08:27		10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:30 (28)	09:13	12:11 (24)
	16:05	30	12:42 (24)	17:16	12	10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20	09:50 (28)	15:44	19 12:30 (24)
10	09:22		11:08 (23)	08:25		10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:31 (28)	09:15	12:11 (24)
	16:07	30	12:41 (24)	17:18	5	10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20	09:51 (28)	15:44	19 12:30 (24)
11	09:21		11:09 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:30 (28)	09:16	12:11 (24)
	16:09	28	12:41 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20	09:50 (28)	15:43	20 12:31 (24)
12	09:20		11:08 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:31 (28)	09:18	12:11 (24)
	16:11	27	12:40 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27	10:58 (23)	15:43	20 12:31 (24)
13	09:19		11:08 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:32 (28)	09:19	12:12 (24)
	16:13	25	12:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31	11:01 (23)	15:42	21 12:33 (24)
14	09:17		11:08 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:33 (28)	09:20	12:12 (24)
	16:15	20	11:28 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32	11:03 (23)	15:42	21 12:33 (24)
15	09:16		11:08 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:34 (28)	09:21	12:12 (24)
	16:17	21	11:29 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31	11:03 (23)	15:42	21 12:33 (24)
16	09:15		11:08 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:36 (28)	09:22	12:13 (24)
	16:19	21	11:29 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31	11:05 (23)	15:42	20 12:33 (24)
17	09:13		11:09 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:38 (28)	09:23	12:14 (24)
	16:21	22	11:31 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28	11:06 (23)	15:42	21 12:35 (24)
18	09:12		11:09 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:44 (23)	09:24	12:14 (24)
	16:23	22	11:31 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22	11:06 (23)	15:42	21 12:35 (24)
19	09:10		11:09 (23)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		10:45 (23)	09:25	12:14 (24)
	16:25	22	11:31 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22	11:07 (23)	15:42	21 12:35 (24)
20	09:09		11:09 (23)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:45 (23)	09:26	12:15 (24)
	16:28	23	11:32 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22	11:07 (23)	15:43	21 12:36 (24)
21	09:07		11:09 (23)	07:57			06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39		10:45 (23)	09:26	12:16 (24)
	16:30	23	11:32 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	11:07 (23)	15:43	21 12:37 (24)
22	09:05		11:10 (23)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		10:45 (23)	09:27	12:16 (24)
	16:32	22	11:32 (23)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	11:08 (23)	15:43	21 12:37 (24)
23	09:03		11:10 (23)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:45 (23)	09:27	12:16 (24)
	16:34	22	11:32 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	11:08 (23)	15:44	21 12:37 (24)
24	09:02		11:10 (23)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:46 (23)	09:28	12:17 (24)
	16:37	22	11:32 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22	11:08 (23)	15:45	21 12:38 (24)
25	09:00		10:04 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:46 (23)	09:28	12:17 (24)
	16:39	28	11:32 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22	11:08 (23)	15:45	21 12:38 (24)
26	08:58		10:03 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:47 (23)	09:28	12:18 (24)
	16:42	31	11:32 (23)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21	11:08 (23)	15:46	21 12:39 (24)
27	08:56		10:02 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:47 (23)	09:28	12:18 (24)
	16:44	31	11:31 (23)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21	11:08 (23)	15:47	21 12:39 (24)
28	08:54		10:00 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:48 (23)	09:29	12:19 (24)
	16:46	32	11:30 (23)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21	11:09 (23)	15:48	21 12:40 (24)
29	08:52		10:00 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:49 (23)	09:29	12:19 (24)
	16:49	31	11:29 (23)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	12:18 (24)	15:49	21 12:40 (24)
30	08:50		09:59 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:49 (23)	09:28	12:20 (24)
	16:51	27	11:26 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28	12:21 (24)	15:50	20 12:40 (24)
31	08:48		09:59 (28)				07:10		04:41		05:22	06:31		07:49				09:28	12:21 (24)
	16:54	20	10:19 (28)				20:14		22:29		22:03	20:43		16:51				15:51	20 12:41 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199	
Total, worst case		773			167											657			697

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April			May	June
1	09:27	08:45		07:35			07:06			05:44	04:40
	15:53	16:56		18:04			20:16			21:25	22:30
2	09:27	08:43		07:32			07:04			05:41	04:38
	15:54	16:58		18:07			20:19			21:28	22:31
3	09:26	08:41		07:29			07:01			05:39	04:37
	15:55	17:01		18:09			20:21			21:30	22:33
4	09:26	08:39		07:27			06:58		19:38 (63)	05:36	04:36
	15:57	17:03		18:12			20:23	2	19:40 (63)	21:32	22:34
5	09:25	08:36		07:24			06:55		19:34 (63)	05:34	04:35
	15:58	17:06		18:14			20:25	8	19:42 (63)	21:35	22:36
6	09:25	08:34		07:21			06:52		19:32 (63)	05:31	04:34
	16:00	17:08		18:16			20:28	11	19:43 (63)	21:37	22:37
7	09:24	08:32		07:18			06:49		19:31 (63)	05:29	04:33
	16:02	17:11		18:19			20:30	12	19:43 (63)	21:39	22:39
8	09:23	08:29		07:15			06:46		19:31 (63)	05:26	04:32
	16:03	17:13		18:21			20:32	13	19:44 (63)	21:41	22:40
9	09:22	08:27		07:13			06:44		19:31 (63)	05:24	04:31
	16:05	17:16		18:23			20:35	12	19:43 (63)	21:44	22:41
10	09:21	08:24		07:10			06:41		19:31 (63)	05:22	04:30
	16:07	17:18		18:26			20:37	11	19:42 (63)	21:46	22:42
11	09:20	08:22		07:07			06:38		19:32 (63)	05:19	04:30
	16:09	17:21		18:28			20:39	8	19:40 (63)	21:48	22:43
12	09:19	08:20		07:04			06:35		19:34 (63)	05:17	04:29
	16:11	17:23		18:30			20:42	4	19:38 (63)	21:50	22:44
13	09:18	08:17		07:01			06:32			05:15	04:28
	16:13	17:25		18:33			20:44			21:53	22:45
14	09:17	08:15		06:58			06:29			05:13	04:28
	16:15	17:28		18:35			20:46			21:55	22:46
15	09:15	08:12		06:55			06:27		19:48 (62)	05:10	04:27
	16:17	17:30		18:37			20:48	9	19:57 (62)	21:57	22:47
16	09:14	08:10	16:48 (66)	06:53			06:24		19:47 (62)	05:08	04:27
	16:19	17:33	1 16:49 (66)	18:40			20:51	13	20:00 (62)	21:59	22:47
17	09:13	08:07	16:44 (66)	06:50			06:21		19:45 (62)	05:06	04:27
	16:21	17:35	8 16:52 (66)	18:42			20:53	15	20:00 (62)	22:01	22:48
18	09:11	08:04	16:42 (66)	06:47			06:18		19:44 (62)	05:04	04:27
	16:23	17:38	12 16:54 (66)	18:44			20:55	16	20:00 (62)	22:03	22:48
19	09:09	08:02	16:41 (66)	06:44			06:16		19:44 (62)	05:02	04:27
	16:25	17:40	13 16:54 (66)	18:47			20:58	17	20:01 (62)	22:05	22:49
20	09:08	07:59	16:42 (66)	06:41			06:13		19:43 (62)	05:00	04:27
	16:28	17:43	13 16:55 (66)	18:49			21:00	18	20:01 (62)	22:08	22:49
21	09:06	07:57	16:41 (66)	06:38		18:02 (65)	06:10		19:42 (62)	04:58	04:27
	16:30	17:45	14 16:55 (66)	18:51	2	18:04 (65)	21:02	18	20:00 (62)	22:10	22:49
22	09:05	07:54	16:41 (66)	06:35		17:58 (65)	06:07		19:43 (62)	04:56	04:27
	16:32	17:48	13 16:54 (66)	18:53	9	18:07 (65)	21:05	17	20:00 (62)	22:12	22:50
23	09:03	07:51	16:42 (66)	06:32		17:56 (65)	06:05		19:43 (62)	04:54	04:27
	16:34	17:50	11 16:53 (66)	18:56	12	18:08 (65)	21:07	16	19:59 (62)	22:14	22:50
24	09:01	07:49	16:43 (66)	06:30		17:55 (65)	06:02		19:44 (62)	04:52	04:28
	16:37	17:52	9 16:52 (66)	18:58	14	18:09 (65)	21:09	15	19:59 (62)	22:16	22:50
25	08:59	07:46	16:45 (66)	06:27		17:54 (65)	05:59		19:45 (62)	04:51	04:28
	16:39	17:55	4 16:49 (66)	19:00	15	18:09 (65)	21:12	12	19:57 (62)	22:17	22:50
26	08:57	07:43		06:24		17:53 (65)	05:57		19:47 (62)	04:49	04:28
	16:41	17:57		19:03	15	18:08 (65)	21:14	8	19:55 (62)	22:19	22:50
27	08:55	07:40		06:21		17:54 (65)	05:54			04:47	04:29
	16:44	18:00		19:05	15	18:09 (65)	21:16			22:21	22:49
28	08:53	07:38		06:18		17:55 (65)	05:51			04:46	04:30
	16:46	18:02		19:07	13	18:08 (65)	21:18			22:23	22:49
29	08:51			07:15		18:55 (65)	05:49			04:44	04:30
	16:49			20:09	11	19:06 (65)	21:21			22:25	22:49
30	08:49			07:12		18:57 (65)	05:46			04:43	04:31
	16:51			20:12	6	19:03 (65)	21:23			22:26	22:48
31	08:47			07:09						04:41	
	16:53			20:14						22:28	
Potential sun hours	222	260		365			432			521	547
Total, worst case			98		112			255			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:31 (63)	07:39			07:51	08:59
	22:48	22:00			20:39	8	19:39 (63)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:29 (63)	07:41			07:53	09:01
	22:47	21:58			20:36	11	19:40 (63)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:29 (63)	07:43			07:56	09:03
	22:47	21:56			20:34	12	19:41 (63)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:28 (63)	07:46			07:58	09:05
	22:46	21:53			20:31	13	19:41 (63)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:28 (63)	07:48			08:00	09:06
	22:45	21:51			20:28	12	19:40 (63)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:28 (63)	07:50			08:03	09:08
	22:44	21:48			20:25	11	19:39 (63)	18:58			16:37	15:46
7	04:39	05:37			06:46		19:29 (63)	07:52			08:05	09:10
	22:43	21:46			20:22	8	19:37 (63)	18:56			16:34	15:45
8	04:40	05:39			06:48		19:31 (63)	07:55			08:08	09:11
	22:42	21:44			20:19	3	19:34 (63)	18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55			08:02			08:15	09:16
	22:39	21:36			20:11			18:44			16:25	15:43
12	04:46	05:48			06:57			08:04			08:17	09:17
	22:37	21:34			20:08			18:42			16:23	15:43
13	04:47	05:50			06:59		18:49 (65)	08:06			08:20	09:18
	22:36	21:31			20:05	5	18:54 (65)	18:39			16:21	15:42
14	04:49	05:53			07:01		18:46 (65)	08:08			08:22	09:19
	22:34	21:28			20:02	10	18:56 (65)	18:36			16:19	15:42
15	04:51	05:55			07:04		18:44 (65)	08:11			08:24	09:20
	22:33	21:26			19:59	13	18:57 (65)	18:33			16:17	15:42
16	04:52	05:57		19:56 (62)	07:06		18:43 (65)	08:13			08:27	09:21
	22:31	21:23	4	20:00 (62)	19:56	14	18:57 (65)	18:30			16:15	15:42
17	04:54	05:59		19:53 (62)	07:08		18:42 (65)	08:15		17:16 (66)	08:29	09:22
	22:30	21:21	9	20:02 (62)	19:53	15	18:57 (65)	18:28	6	17:22 (66)	16:13	15:42
18	04:56	06:02		19:51 (62)	07:10		18:41 (65)	08:18		17:14 (66)	08:31	09:23
	22:28	21:18	13	20:04 (62)	19:50	15	18:56 (65)	18:25	10	17:24 (66)	16:11	15:42
19	04:58	06:04		19:49 (62)	07:12		18:42 (65)	08:20		17:13 (66)	08:34	09:24
	22:26	21:15	15	20:04 (62)	19:47	14	18:56 (65)	18:22	12	17:25 (66)	16:09	15:42
20	05:00	06:06		19:48 (62)	07:15		18:42 (65)	08:22		17:12 (66)	08:36	09:25
	22:25	21:12	17	20:05 (62)	19:44	13	18:55 (65)	18:20	14	17:26 (66)	16:08	15:43
21	05:01	06:08		19:48 (62)	07:17		18:43 (65)	08:25		17:12 (66)	08:38	09:26
	22:23	21:10	17	20:05 (62)	19:42	10	18:53 (65)	18:17	13	17:25 (66)	16:06	15:43
22	05:03	06:11		19:47 (62)	07:19		18:45 (65)	08:27		17:12 (66)	08:40	09:26
	22:21	21:07	18	20:05 (62)	19:39	5	18:50 (65)	18:14	13	17:25 (66)	16:04	15:43
23	05:05	06:13		19:48 (62)	07:21			08:29		17:12 (66)	08:43	09:27
	22:19	21:04	18	20:06 (62)	19:36			18:12	12	17:24 (66)	16:02	15:44
24	05:07	06:15		19:48 (62)	07:23			08:32		17:13 (66)	08:45	09:27
	22:17	21:02	17	20:05 (62)	19:33			18:09	10	17:23 (66)	16:01	15:45
25	05:09	06:17		19:48 (62)	07:26			07:34		16:14 (66)	08:47	09:27
	22:15	20:59	16	20:04 (62)	19:30			17:06	7	16:21 (66)	15:59	15:45
26	05:11	06:20		19:48 (62)	07:28			07:37			08:49	09:28
	22:13	20:56	15	20:03 (62)	19:27			17:04			15:58	15:46
27	05:13	06:22		19:49 (62)	07:30			07:39			08:51	09:28
	22:11	20:53	12	20:01 (62)	19:24			17:01			15:56	15:47
28	05:16	06:24		19:50 (62)	07:32			07:41			08:53	09:28
	22:09	20:50	9	19:59 (62)	19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28			07:37			07:46			08:57	09:28
	22:05	20:45			19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (63)				07:48				09:27
	22:02	20:42	5	19:38 (63)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			185			192			97			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April		May	June
1	09:27	08:45		07:35			07:06		19:00 (65)	05:44	04:40
	15:53	16:56		18:04			20:16	4	19:04 (65)	21:25	22:30
2	09:27	08:43		07:32			07:04			05:41	04:38
	15:54	16:58		18:07			20:19			21:28	22:31
3	09:26	08:41		07:29			07:01			05:39	04:37
	15:55	17:01		18:09			20:21			21:30	22:33
4	09:26	08:39		07:27			06:58			05:36	04:36
	15:57	17:03		18:12			20:23			21:32	22:34
5	09:25	08:36		07:24			06:55			05:34	04:35
	15:58	17:06		18:14			20:25			21:35	22:36
6	09:25	08:34		07:21			06:52		19:37 (63)	05:31	04:34
	16:00	17:08		18:16			20:28	6	19:43 (63)	21:37	22:37
7	09:24	08:32		07:18			06:49		19:35 (63)	05:29	04:33
	16:02	17:11		18:19			20:30	10	19:45 (63)	21:39	22:39
8	09:23	08:29		07:15			06:46		19:34 (63)	05:26	04:32
	16:03	17:13		18:21			20:32	12	19:46 (63)	21:41	22:40
9	09:22	08:27		07:13			06:44		19:33 (63)	05:24	04:31
	16:05	17:16		18:23			20:35	13	19:46 (63)	21:44	22:41
10	09:21	08:24		07:10			06:41		19:33 (63)	05:22	04:30
	16:07	17:18		18:26			20:37	12	19:45 (63)	21:46	22:42
11	09:20	08:22		07:07			06:38		19:33 (63)	05:19	04:30
	16:09	17:21		18:28			20:39	11	19:44 (63)	21:48	22:43
12	09:19	08:20		07:04			06:35		19:33 (63)	05:17	04:29
	16:11	17:23		18:30			20:42	10	19:43 (63)	21:50	22:44
13	09:18	08:17		07:01			06:32		19:35 (63)	05:15	04:28
	16:13	17:25		18:33			20:44	7	19:42 (63)	21:53	22:45
14	09:17	08:15		06:58			06:29			05:13	04:28
	16:15	17:28		18:35			20:46			21:55	22:46
15	09:15	08:12		06:55			06:27			05:10	04:27
	16:17	17:30		18:37			20:48			21:57	22:47
16	09:14	08:10		06:53			06:24			05:08	04:27
	16:19	17:33		18:40			20:51			21:59	22:47
17	09:13	08:07		06:50			06:21		19:53 (62)	05:06	04:27
	16:21	17:35		18:42			20:53	8	20:01 (62)	22:01	22:48
18	09:11	08:04		16:45 (66)	06:47			06:18	19:50 (62)	05:04	04:27
	16:23	17:38	8	16:53 (66)	18:44			20:55	12	20:02 (62)	22:03	22:48
19	09:09	08:02		16:43 (66)	06:44			06:16		19:49 (62)	05:02	04:27
	16:25	17:40	12	16:55 (66)	18:47			20:58	15	20:04 (62)	22:05	22:49
20	09:08	07:59		16:43 (66)	06:41			06:13		19:48 (62)	05:00	04:27
	16:28	17:43	13	16:56 (66)	18:49			21:00	16	20:04 (62)	22:08	22:49
21	09:06	07:57		16:43 (66)	06:38			06:10		19:46 (62)	04:58	04:27
	16:30	17:45	13	16:56 (66)	18:51			21:02	18	20:04 (62)	22:10	22:49
22	09:05	07:54		16:42 (66)	06:35			06:07		19:47 (62)	04:56	04:27
	16:32	17:48	14	16:56 (66)	18:53			21:05	17	20:04 (62)	22:12	22:50
23	09:03	07:51		16:42 (66)	06:32		18:01 (65)	06:05		19:46 (62)	04:54	04:27
	16:34	17:50	13	16:55 (66)	18:56	7	18:08 (65)	21:07	18	20:04 (62)	22:14	22:50
24	09:01	07:49		16:43 (66)	06:30		17:59 (65)	06:02		19:46 (62)	04:52	04:28
	16:37	17:52	11	16:54 (66)	18:58	11	18:10 (65)	21:09	18	20:04 (62)	22:16	22:50
25	08:59	07:46		16:44 (66)	06:27		17:57 (65)	05:59		19:46 (62)	04:51	04:28
	16:39	17:55	9	16:53 (66)	19:00	14	18:11 (65)	21:12	17	20:03 (62)	22:17	22:50
26	08:57	07:43		16:47 (66)	06:24		17:56 (65)	05:57		19:47 (62)	04:49	04:28
	16:41	17:57	4	16:51 (66)	19:03	15	18:11 (65)	21:14	16	20:03 (62)	22:19	22:50
27	08:55	07:40			06:21		17:56 (65)	05:54		19:47 (62)	04:47	04:29
	16:44	18:00			19:05	16	18:12 (65)	21:16	14	20:01 (62)	22:21	22:49
28	08:53	07:38			06:18		17:56 (65)	05:51		19:49 (62)	04:46	04:30
	16:46	18:02			19:07	15	18:11 (65)	21:18	11	20:00 (62)	22:23	22:49
29	08:51				07:15		18:56 (65)	05:49		19:50 (62)	04:44	04:30
	16:49				20:09	14	19:10 (65)	21:21	7	19:57 (62)	22:25	22:49
30	08:49				07:12		18:56 (65)	05:46			04:43	04:31
	16:51				20:12	13	19:09 (65)	21:23			22:26	22:48
31	08:47				07:09		18:57 (65)				04:41	
	16:53				20:14	10	19:07 (65)				22:28	
Potential sun hours	222	260			365			432			521	547
Total, worst case			97			115			272			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:32 (63)	07:39			07:51	08:59
	22:48	22:00			20:39	11	19:43 (63)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:31 (63)	07:41			07:53	09:01
	22:47	21:58			20:36	12	19:43 (63)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:31 (63)	07:43			07:56	09:03
	22:47	21:56			20:34	13	19:44 (63)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:31 (63)	07:46			07:58	09:05
	22:46	21:53			20:31	12	19:43 (63)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:32 (63)	07:48			08:00	09:06
	22:45	21:51			20:28	10	19:42 (63)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:33 (63)	07:50			08:03	09:08
	22:44	21:48			20:25	7	19:40 (63)	18:58			16:37	15:46
7	04:39	05:37			06:46			07:52			08:05	09:10
	22:43	21:46			20:22			18:56			16:34	15:45
8	04:40	05:39			06:48			07:55			08:08	09:11
	22:42	21:44			20:19			18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55		18:54 (65)	08:02			08:15	09:16
	22:39	21:36			20:11	1	18:55 (65)	18:44			16:25	15:43
12	04:46	05:48			06:57		18:50 (65)	08:04			08:17	09:17
	22:37	21:34			20:08	9	18:59 (65)	18:42			16:23	15:43
13	04:47	05:50			06:59		18:48 (65)	08:06			08:20	09:18
	22:36	21:31			20:05	12	19:00 (65)	18:39			16:21	15:42
14	04:49	05:53		19:58 (62)	07:01		18:47 (65)	08:08			08:22	09:19
	22:34	21:28	8	20:06 (62)	20:02	14	19:01 (65)	18:36			16:19	15:42
15	04:51	05:55		19:56 (62)	07:04		18:46 (65)	08:11			08:24	09:20
	22:33	21:26	12	20:08 (62)	19:59	15	19:01 (65)	18:33			16:17	15:42
16	04:52	05:57		19:54 (62)	07:06		18:45 (65)	08:13		17:18 (66)	08:27	09:21
	22:31	21:23	15	20:09 (62)	19:56	15	19:00 (65)	18:30	7	17:25 (66)	16:15	15:42
17	04:54	05:59		19:53 (62)	07:08		18:45 (65)	08:15		17:15 (66)	08:29	09:22
	22:30	21:21	16	20:09 (62)	19:53	14	18:59 (65)	18:28	11	17:26 (66)	16:13	15:42
18	04:56	06:02		19:52 (62)	07:10		18:45 (65)	08:18		17:14 (66)	08:31	09:23
	22:28	21:18	18	20:10 (62)	19:50	13	18:58 (65)	18:25	13	17:27 (66)	16:11	15:42
19	04:58	06:04		19:52 (62)	07:12		18:46 (65)	08:20		17:13 (66)	08:34	09:24
	22:26	21:15	18	20:10 (62)	19:47	12	18:58 (65)	18:22	14	17:27 (66)	16:09	15:42
20	05:00	06:06		19:51 (62)	07:15		18:47 (65)	08:22		17:13 (66)	08:36	09:25
	22:25	21:12	18	20:09 (62)	19:44	8	18:55 (65)	18:20	14	17:27 (66)	16:08	15:43
21	05:01	06:08		19:51 (62)	07:17			08:25		17:13 (66)	08:38	09:26
	22:23	21:10	18	20:09 (62)	19:42			18:17	13	17:26 (66)	16:06	15:43
22	05:03	06:11		19:51 (62)	07:19			08:27		17:14 (66)	08:40	09:26
	22:21	21:07	17	20:08 (62)	19:39			18:14	12	17:26 (66)	16:04	15:43
23	05:05	06:13		19:52 (62)	07:21			08:29		17:14 (66)	08:43	09:27
	22:19	21:04	17	20:09 (62)	19:36			18:12	10	17:24 (66)	16:02	15:44
24	05:07	06:15		19:53 (62)	07:23			08:32		17:16 (66)	08:45	09:27
	22:17	21:02	14	20:07 (62)	19:33			18:09	7	17:23 (66)	16:01	15:45
25	05:09	06:17		19:54 (62)	07:26			07:34			08:47	09:27
	22:15	20:59	12	20:06 (62)	19:30			17:06			15:59	15:45
26	05:11	06:20		19:56 (62)	07:28			07:37			08:49	09:28
	22:13	20:56	7	20:03 (62)	19:27			17:04			15:58	15:46
27	05:13	06:22			07:30			07:39			08:51	09:28
	22:11	20:53			19:24			17:01			15:56	15:47
28	05:16	06:24			07:32			07:41			08:53	09:28
	22:09	20:50			19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28		19:35 (63)	07:37			07:46			08:57	09:28
	22:05	20:45	7	19:42 (63)	19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (63)				07:48				09:27
	22:02	20:42	10	19:43 (63)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			207			178			101			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 7.2

Grafisk Moifjellet vindkraftverk

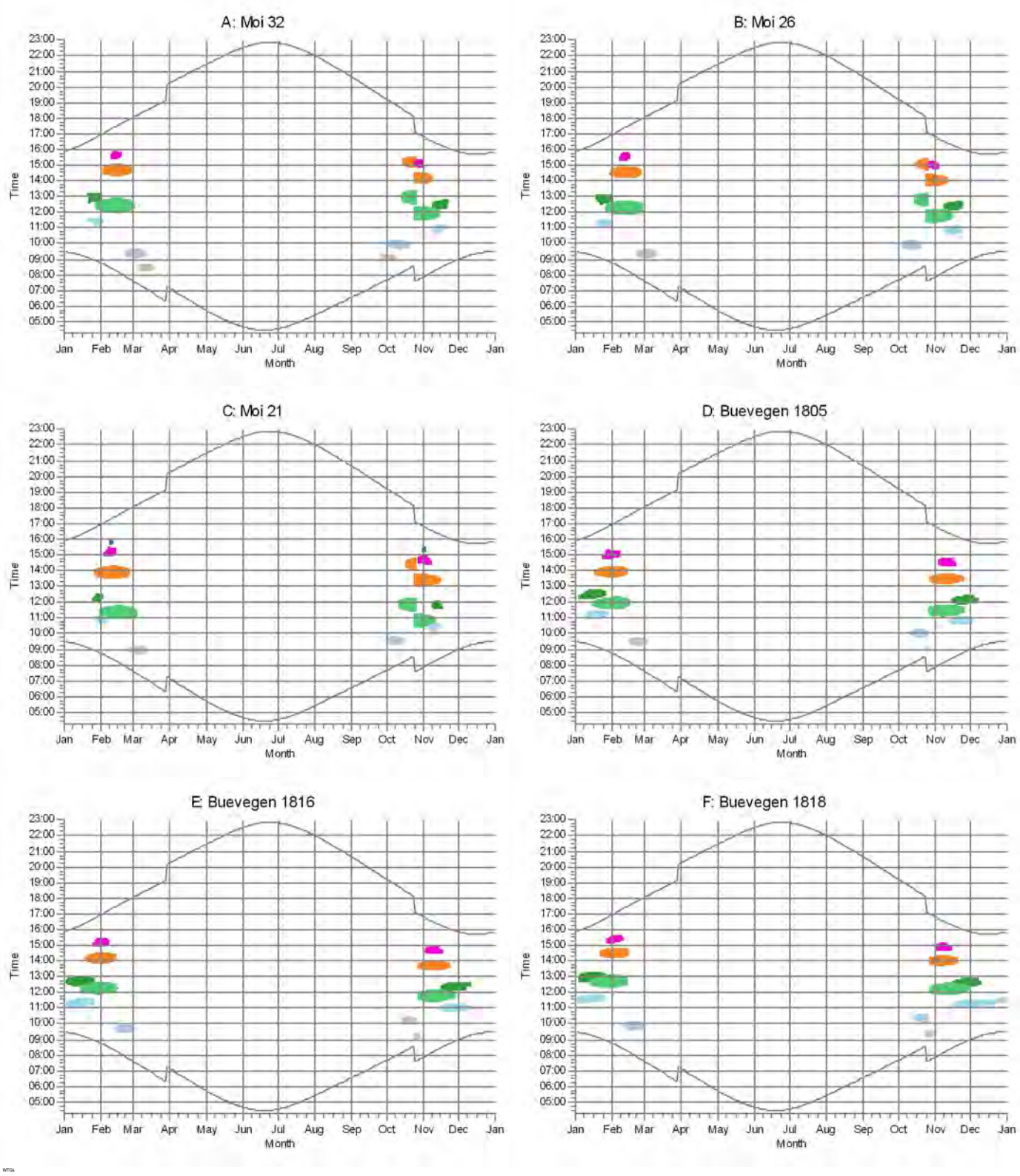
Med nærliggende - worst case

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

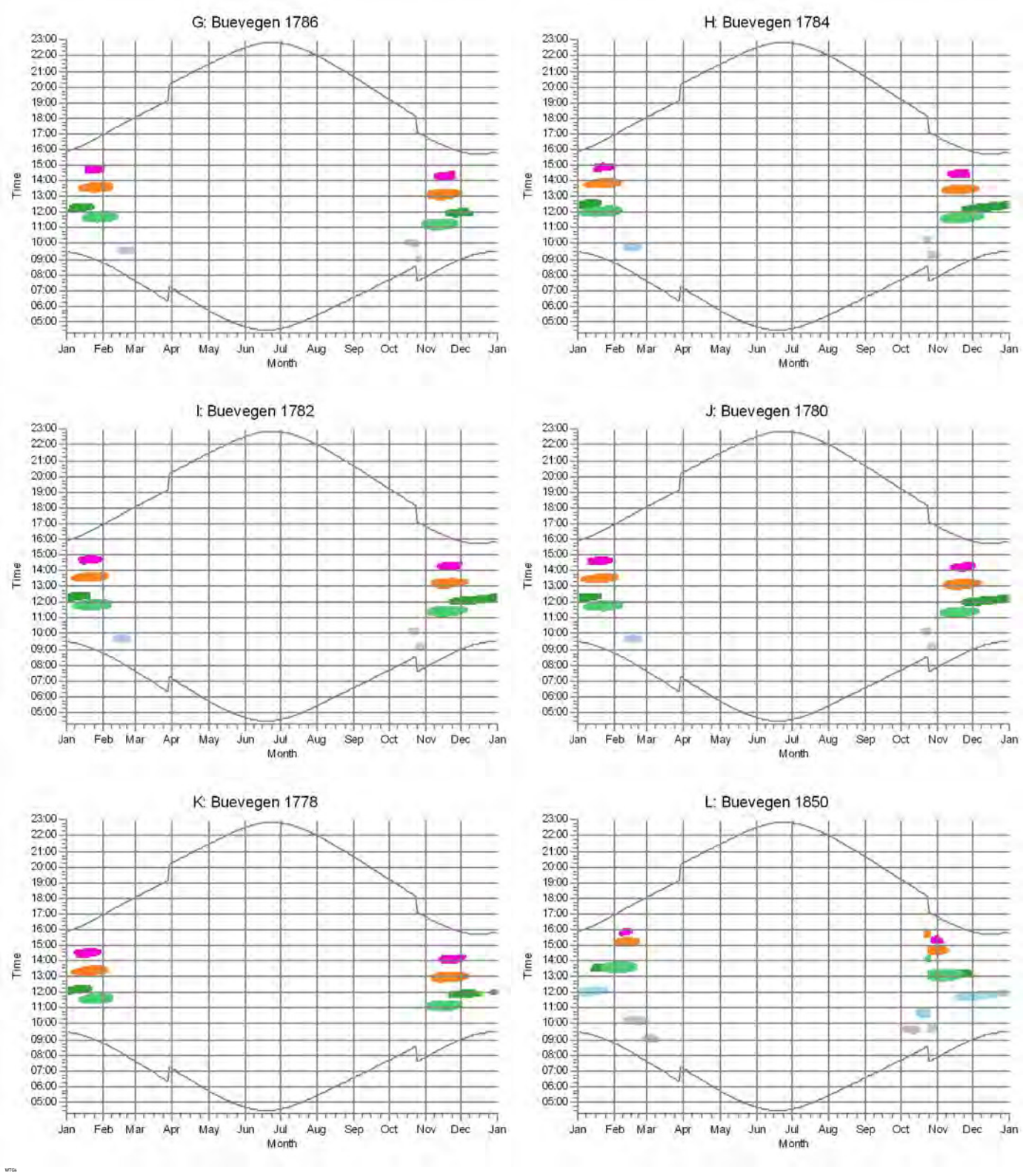


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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

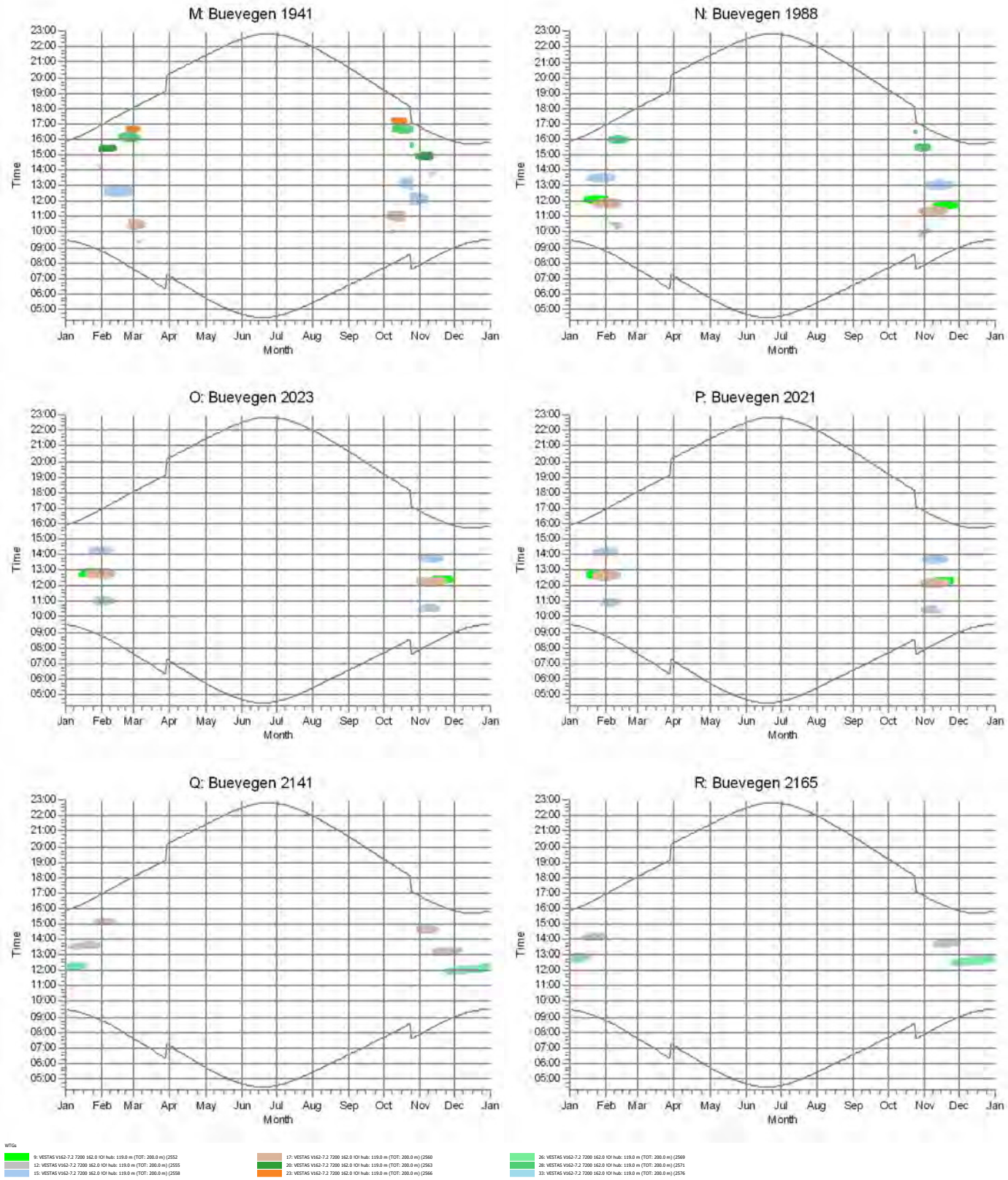


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

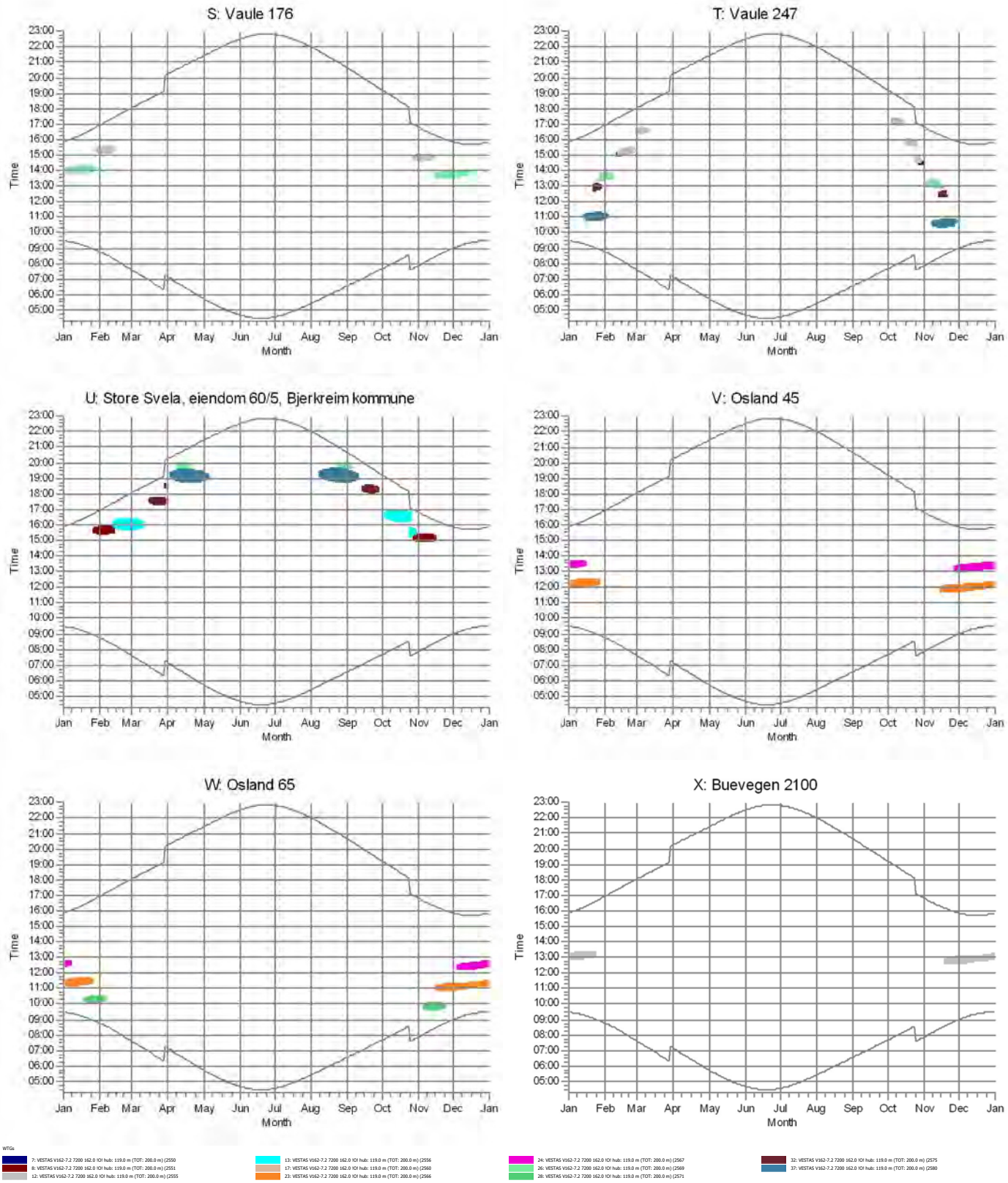


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SHADOW - Calendar, graphical

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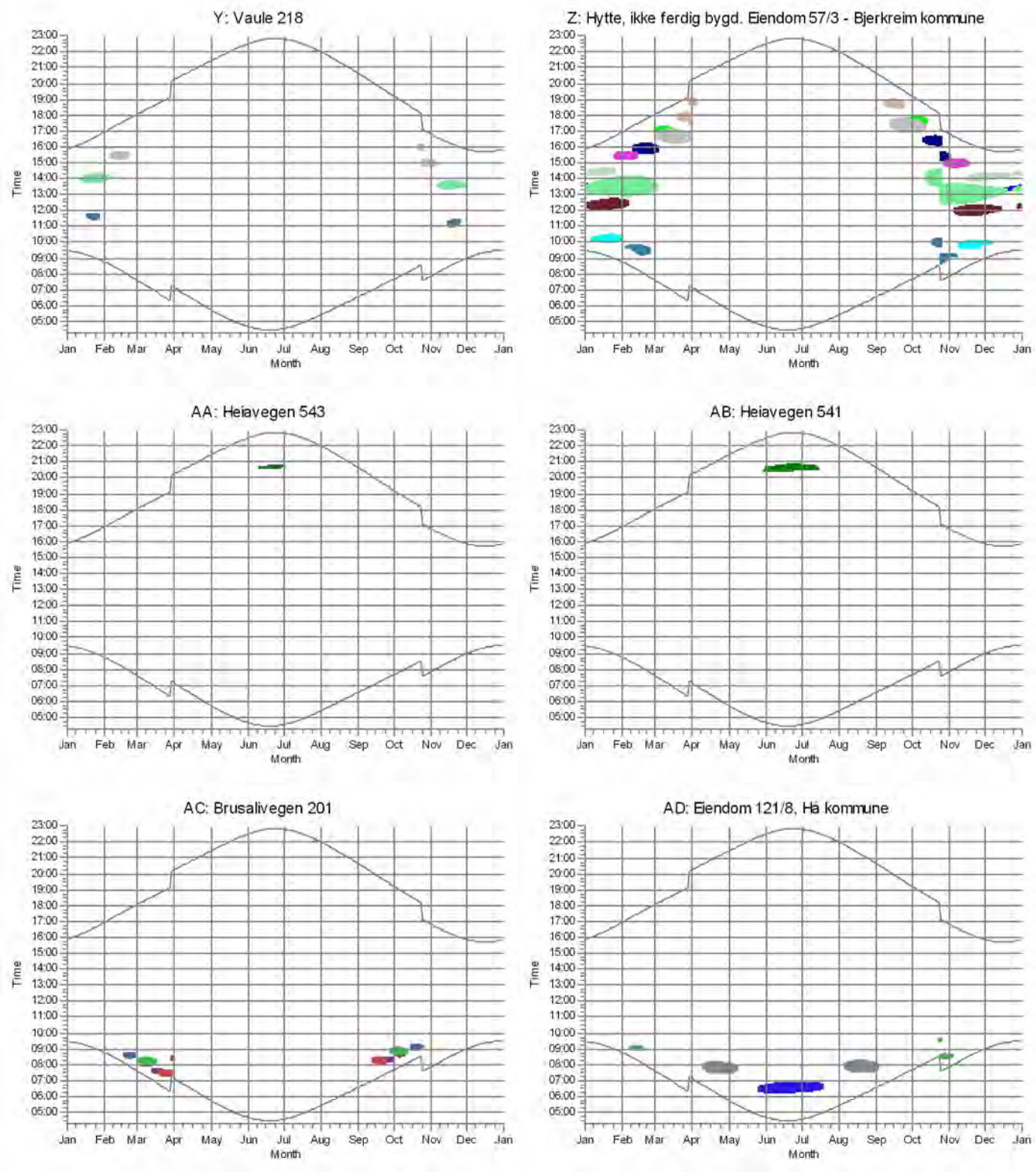


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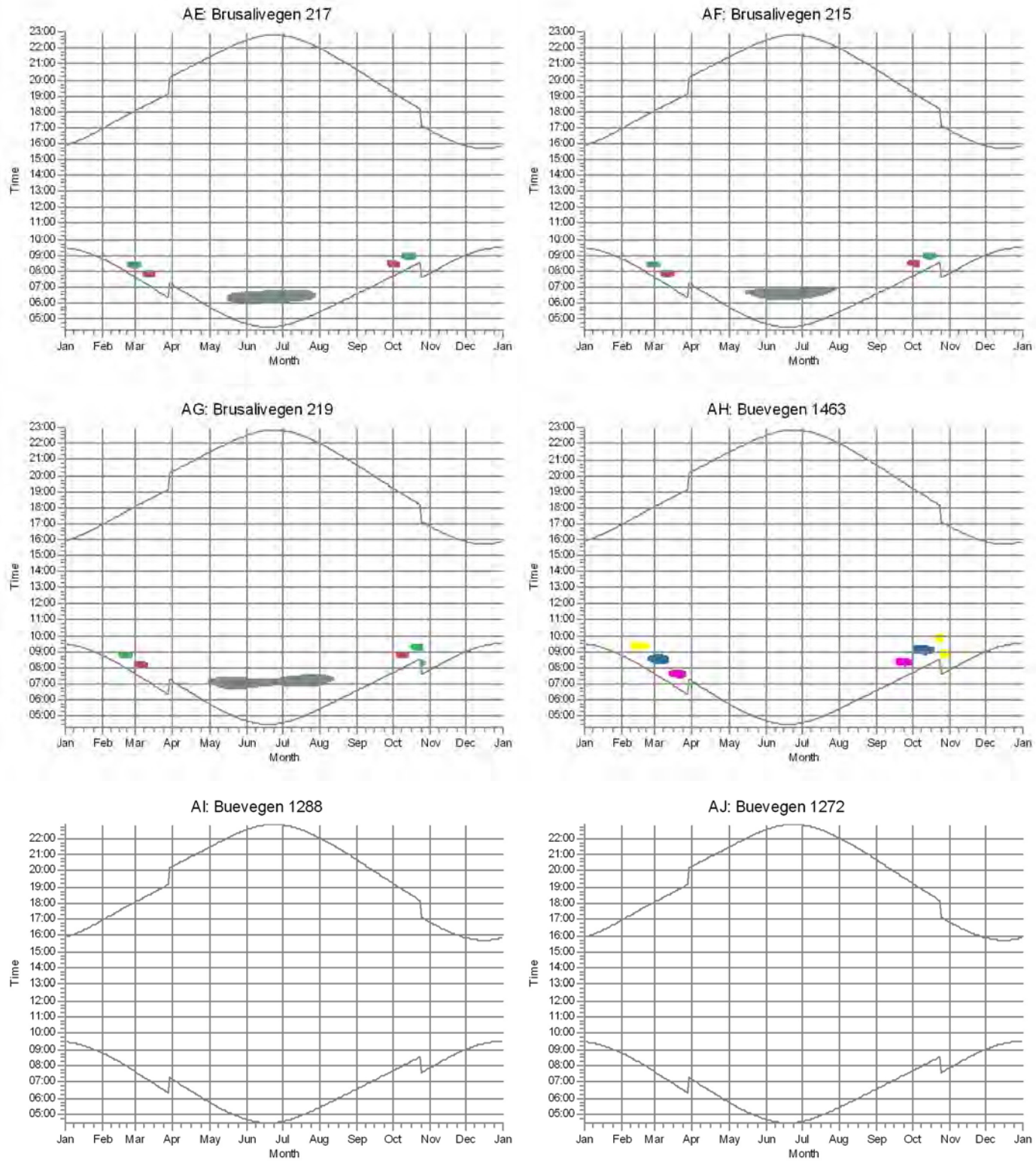


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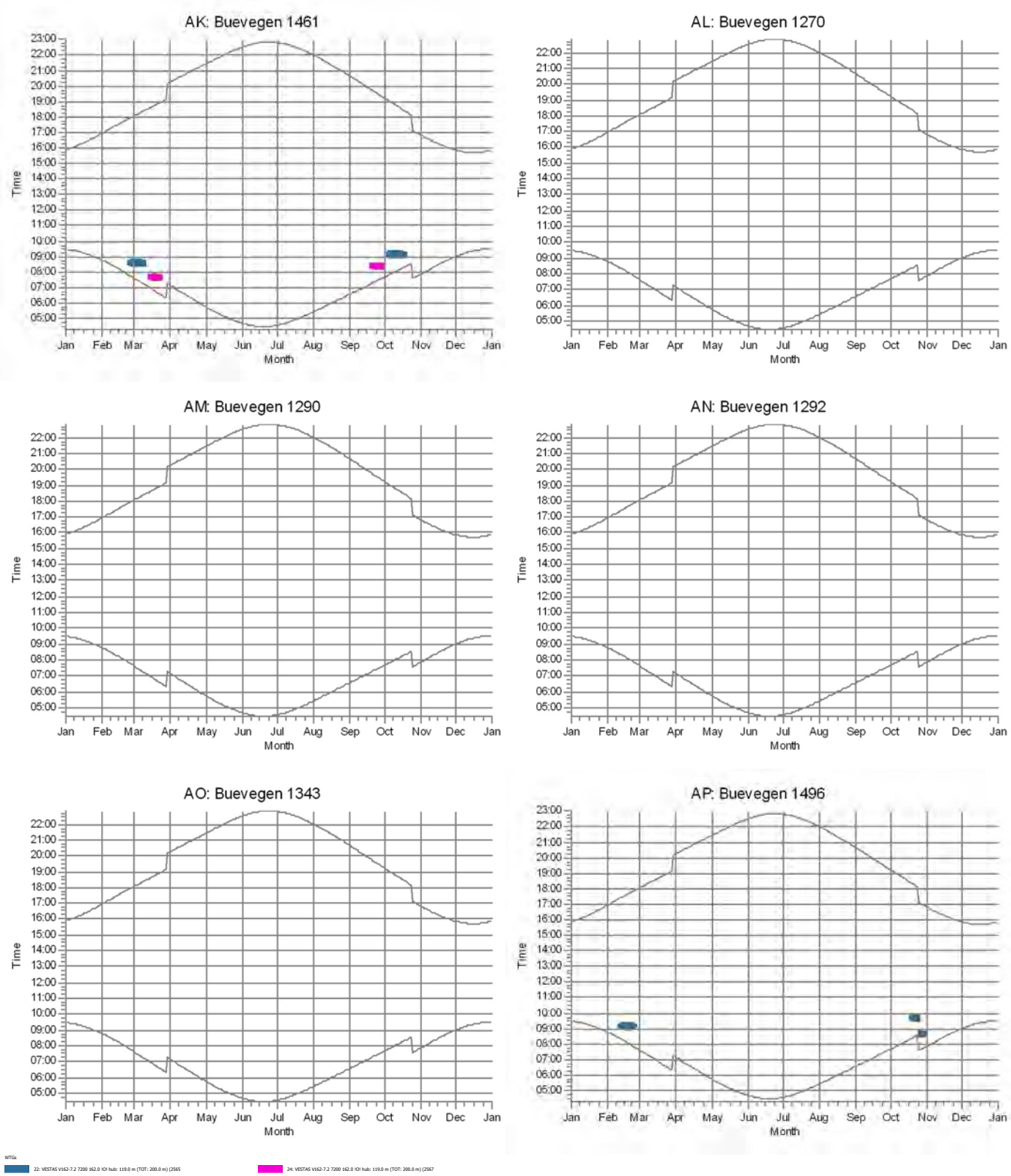


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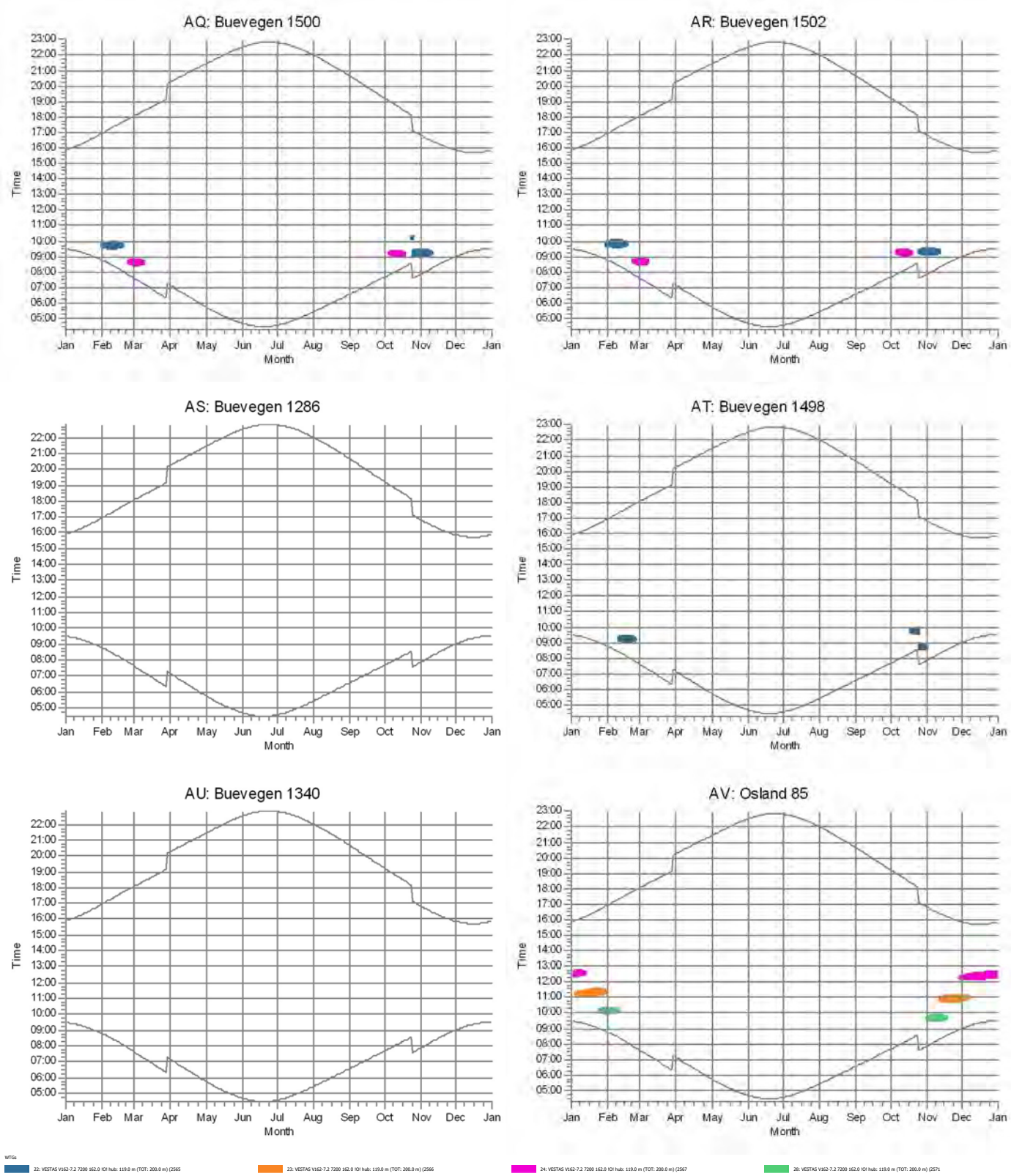


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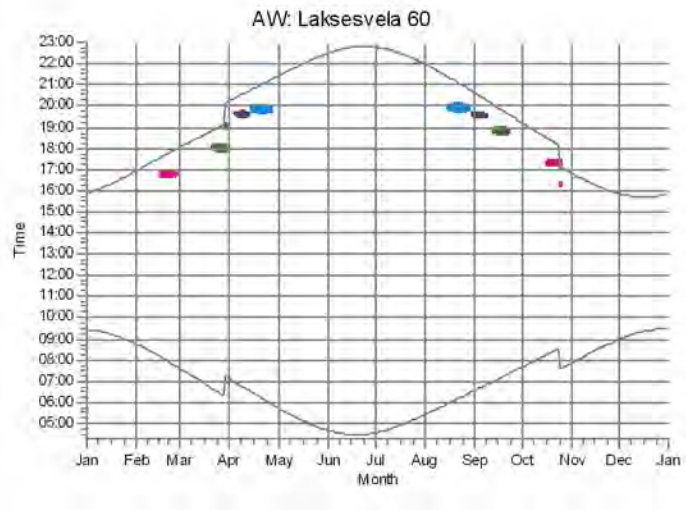


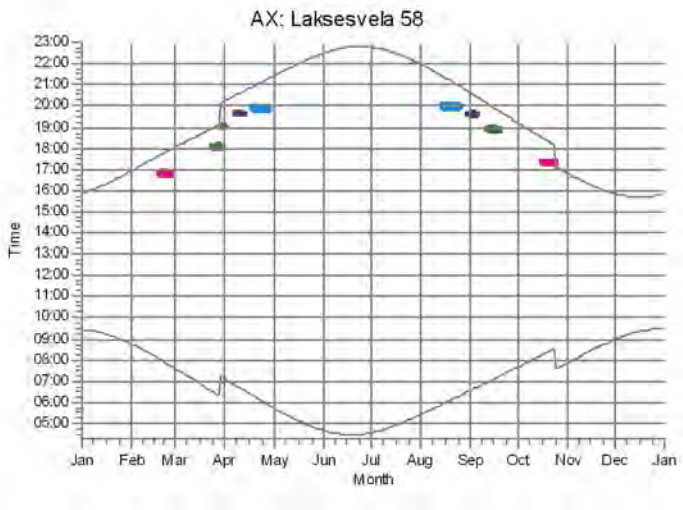
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19.11.2025 15:12/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere







Vedlegg 8.1

Tabell Moifjellet vindkraftverk

Med nærliggende - realistic case

Project:

Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17	21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19	21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21	21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24	21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26	21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28	21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30	21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33	21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35	21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37	21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40	21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42	21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44	21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47	21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49	21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51	22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53	22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00	22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03	22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05	22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07	22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10	22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12	22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14	22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17	22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19	22:24	22:50
29	08:52		11:15 (33)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21	22:25	22:50
30	08:50		11:15 (33)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24	22:27	22:49
31	08:48		11:17 (33)				07:10				04:41	
	16:54	57	13:05 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Moifjellet og Mellomstrand vrk

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SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33		05:26		06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34		05:28		06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35		05:31		06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36		05:33		06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37		05:35		06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39		05:37		06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40		05:39		06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41		05:42		06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43		05:44		06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44		05:46		06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46		05:48		06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47		05:51		07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49		05:53		07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51		05:55		07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52		05:57		07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54		06:00		07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56		06:02		07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58		06:04		07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00		06:06		07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01		06:08		07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03		06:11		07:19			08:27		12:35 (28)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (28)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (28)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (28)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (28)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13		06:22		07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16		06:24		07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18		06:26		07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20		06:29		07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22		06:31					07:49		11:34 (28)				09:28
	22:03		20:42					16:51	90	15:09 (24)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17	21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19	21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21	21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24	21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26	21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28	21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30	21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33	21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35	21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37	21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40	21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12	22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14	22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17	22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19	22:24	22:50
29	08:52		10:56 (33)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21	22:25	22:50
30	08:50		10:50 (33)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24	22:27	22:49
31	08:48		10:44 (33)				07:10				04:41	
	16:54	62	14:05 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (28)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (22)	15:51
2	04:33		05:26		06:35		07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34		05:28		06:37		07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35		05:31		06:40		07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36		05:33		06:42		07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37		05:35		06:44		07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39		05:37		06:46		07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40		05:39		06:49		07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41		05:42		06:51		07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43		05:44		06:53		08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44		05:46		06:55		08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46		05:48		06:57		08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47		05:51		07:00		08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49		05:53		07:02		08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51		05:55		07:04		08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52		05:57		07:06		08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54		06:00		07:08		08:16		11:34 (28)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (28)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (28)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (23)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (28)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (23)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (28)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (23)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (28)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (23)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (28)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (23)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (28)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (23)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (28)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (23)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (28)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (23)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (28)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (23)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (28)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (23)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (28)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (24)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (28)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (24)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (28)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (24)	15:52			15:50
31	05:22		06:31				07:49		10:31 (28)				09:28
	22:03		20:42				16:51	99	14:52 (24)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April		May	June
1	09:28			08:46			11:39 (28)	07:35		09:25 (15)		07:07	05:44	04:40
	15:53			16:56	88		15:12 (24)	18:05	9	09:34 (15)		20:17	21:26	22:31
2	09:27			08:43			11:39 (28)	07:33				07:04	05:41	04:38
	15:54			16:58	88		15:13 (24)	18:07				20:19	21:28	22:32
3	09:27			08:41			11:40 (28)	07:30				07:01	05:39	04:37
	15:55			17:01	85		15:12 (24)	18:09				20:21	21:31	22:34
4	09:27			08:39			11:39 (28)	07:27				06:58	05:36	04:36
	15:57			17:03	83		15:11 (24)	18:12				20:24	21:33	22:35
5	09:26		12:20 (20)	08:37			11:39 (28)	07:24				06:55	05:34	04:35
	15:58	1	12:21 (20)	17:06	80		15:09 (24)	18:14				20:26	21:35	22:37
6	09:25		12:19 (20)	08:34			11:40 (28)	07:21				06:52	05:31	04:34
	16:00	5	12:24 (20)	17:08	74		15:08 (24)	18:17				20:28	21:37	22:38
7	09:24		12:17 (20)	08:32			11:40 (28)	07:19				06:50	05:29	04:33
	16:02	11	12:28 (20)	17:11	62		14:11 (23)	18:19				20:30	21:40	22:39
8	09:24		12:17 (20)	08:30			11:41 (28)	07:16				06:47	05:26	04:32
	16:03	13	12:30 (20)	17:13	61		14:11 (23)	18:21				20:33	21:42	22:40
9	09:23		12:18 (20)	08:27			11:42 (28)	07:13				06:44	05:24	04:31
	16:05	16	12:34 (20)	17:16	57		14:10 (23)	18:24				20:35	21:44	22:42
10	09:22		11:06 (33)	08:25			11:42 (28)	07:10				06:41	05:22	04:30
	16:07	25	12:39 (20)	17:18	54		14:09 (23)	18:26				20:37	21:46	22:43
11	09:21		11:02 (33)	08:23			11:44 (28)	07:07				06:38	05:19	04:29
	16:09	31	12:41 (20)	17:21	48		14:08 (23)	18:28				20:40	21:49	22:44
12	09:20		11:01 (33)	08:20			11:45 (28)	07:04				06:35	05:17	04:29
	16:11	40	12:41 (20)	17:23	42		14:06 (23)	18:31				20:42	21:51	22:45
13	09:18		11:02 (33)	08:18			11:46 (28)	07:02				06:32	05:15	04:28
	16:13	42	12:42 (20)	17:26	32		14:02 (23)	18:33				20:44	21:53	22:46
14	09:17		11:02 (33)	08:15			11:49 (28)	06:59				06:30	05:13	04:28
	16:15	42	12:42 (20)	17:28	18		12:07 (28)	18:35				20:47	21:55	22:47
15	09:16		11:02 (33)	08:13			11:52 (28)	06:56				06:27	05:10	04:27
	16:17	43	12:42 (20)	17:31	12		12:04 (28)	18:38				20:49	21:58	22:47
16	09:15		11:02 (33)	08:10			09:29 (15)	06:53				06:24	05:08	04:27
	16:19	43	12:42 (20)	17:33	5		09:34 (15)	18:40				20:51	22:00	22:48
17	09:13		11:02 (33)	08:07			09:25 (15)	06:50				06:21	05:06	04:27
	16:21	45	12:42 (20)	17:36	12		09:37 (15)	18:42				20:53	22:02	22:49
18	09:12		11:03 (33)	08:05			09:24 (15)	06:47				06:19	05:04	04:27
	16:23	57	13:55 (23)	17:38	16		09:40 (15)	18:45				20:56	22:04	22:49
19	09:10		11:03 (33)	08:02			09:23 (15)	06:44				06:16	05:02	04:27
	16:25	70	13:59 (23)	17:40	17		09:40 (15)	18:47				20:58	22:06	22:50
20	09:08		11:04 (33)	08:00			09:22 (15)	06:41				06:13	05:00	04:27
	16:28	75	14:01 (23)	17:43	19		09:41 (15)	18:49				21:00	22:08	22:50
21	09:07		11:04 (33)	07:57			09:21 (15)	06:39				06:10	04:58	04:27
	16:30	80	14:03 (23)	17:45	20		09:41 (15)	18:51				21:03	22:10	22:50
22	09:05		11:05 (33)	07:54			09:20 (15)	06:36				06:08	04:56	04:27
	16:32	82	14:05 (23)	17:48	21		09:41 (15)	18:54				21:05	22:12	22:50
23	09:03		11:05 (33)	07:52			09:21 (15)	06:33				06:05	04:54	04:27
	16:34	83	14:05 (23)	17:50	21		09:42 (15)	18:56				21:07	22:14	22:51
24	09:02		11:06 (33)	07:49			09:21 (15)	06:30				06:02	04:52	04:27
	16:37	84	14:07 (23)	17:53	20		09:41 (15)	18:58				21:10	22:16	22:51
25	09:00		11:07 (33)	07:46			09:21 (15)	06:27				05:59	04:51	04:28
	16:39	84	14:52 (24)	17:55	20		09:41 (15)	19:01				21:12	22:18	22:51
26	08:58		11:09 (33)	07:44			09:21 (15)	06:24				05:57	04:49	04:28
	16:41	79	14:57 (24)	17:57	19		09:40 (15)	19:03				21:14	22:20	22:50
27	08:56		11:10 (33)	07:41			09:22 (15)	06:21				05:54	04:47	04:29
	16:44	86	15:12 (24)	18:00	16		09:38 (15)	19:05				21:17	22:22	22:50
28	08:54		11:13 (33)	07:38			09:23 (15)	06:18				05:52	04:46	04:30
	16:46	90	15:13 (24)	18:02	14		09:37 (15)	19:08				21:19	22:24	22:50
29	08:52		11:40 (28)					07:15				05:49	04:44	04:30
	16:49	88	15:14 (24)					20:10				21:21	22:25	22:50
30	08:50		11:39 (28)					07:12				05:46	04:42	04:31
	16:51	88	15:13 (24)					20:12				21:24	22:27	22:49
31	08:48		11:39 (28)					07:10					04:41	
	16:54	88	15:13 (24)					20:14					22:29	
Potential sun hours	221			260			365			432		521	547	
Total, worst case		1491			1104			9						
Sun reduction		0,50			0,50			0,50						
Oper. time red.		0,80			0,80			0,80						
Wind dir. red.		0,62			0,63			0,73						
Total reduction		0,25			0,25			0,29						
Total, real		371			276			3						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33	05:26	06:35	07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34	05:28	06:37	07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35	05:31	06:40	07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36	05:33	06:42	07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37	05:35	06:44	07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39	05:37	06:46	07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40	05:39	06:49	07:55			08:08		11:09 (28)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (24)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (24)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (24)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (24)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22	06:31		07:49		11:13 (28)				09:28		
	22:03	20:42		16:51	50	13:38 (23)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46		11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43		11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41		12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39		11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34		12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32		12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30		12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27		12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25		12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23		12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20		12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18		12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15		09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13		09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10		09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07		09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05		09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02		09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00		09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57		09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54		09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52		09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49		09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46		09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44		09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41		09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38		09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)				20:10	21:21	22:25	22:50
30	08:50		11:58 (28)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)				20:12	21:24	22:27	22:49
31	08:48		11:58 (28)				07:10		04:41	
	16:54	88	15:22 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33		05:26		06:35		07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34		05:28		06:37		07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35		05:31		06:40		07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36		05:33		06:42		07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37		05:35		06:44		07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39		05:37		06:46		07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40		05:39		06:49		07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41		05:42		06:51		07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43		05:44		06:53		08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44		05:46		06:55		08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46		05:48		06:57		08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47		05:51		07:00		08:07			08:20		11:30 (28)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (24)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22		06:31				07:49		11:35 (28)				09:28		11:11 (33)
	22:03		20:42				16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53 17	11:40 (33)	16:56 82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27	11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54 17	11:40 (33)	16:58 86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27	11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55 18	11:41 (33)	17:01 84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26	11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57 23	12:52 (20)	17:03 85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26	11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58 25	12:53 (20)	17:06 82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25	11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00 31	13:06 (20)	17:08 79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24	11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02 34	13:07 (20)	17:11 74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24	11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03 41	13:07 (20)	17:13 68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23	11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05 42	13:07 (20)	17:16 60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22	11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07 42	13:08 (20)	17:18 51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21	11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09 43	13:09 (20)	17:21 45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20	11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11 44	13:09 (20)	17:23 45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18	11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13 44	13:10 (20)	17:26 43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17	11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15 54	13:10 (20)	17:28 27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16	11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17 57	13:10 (20)	17:31 18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15	11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19 60	13:10 (20)	17:33 20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13	11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21 63	13:10 (20)	17:35 21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12	11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23 64	13:11 (20)	17:38 22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25 63	13:11 (20)	17:40 23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08	11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28 63	13:11 (20)	17:43 23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07	11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30 62	13:11 (20)	17:45 22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05	11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32 60	13:09 (20)	17:48 22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03	11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34 66	14:33 (23)	17:50 20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02	11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37 67	14:36 (23)	17:53 18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00	11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39 58	14:38 (23)	17:55 16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58	12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41 55	14:40 (23)	17:57 11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56	12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44 57	14:40 (23)	18:00 2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54	12:23 (28)	07:38		06:18	05:52	04:46	04:30
	16:46 61	15:15 (24)	18:02		19:07	21:19	22:24	22:50
29	08:52	12:24 (28)			07:15	05:49	04:44	04:30
	16:49 67	15:19 (24)			20:10	21:21	22:25	22:50
30	08:50	12:23 (28)			07:12	05:46	04:42	04:31
	16:51 74	15:23 (24)			20:12	21:24	22:27	22:49
31	08:48	12:24 (28)			07:10		04:41	
	16:53 77	15:26 (24)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case	1549		1149					
Sun reduction	0,50		0,50					
Oper. time red.	0,80		0,80					
Wind dir. red.	0,62		0,62					
Total reduction	0,25		0,25					
Total, real	386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27	12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27	12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27	12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26	12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25	12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24	12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24	12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23	12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22	12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21	12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20	12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18	12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16	11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13	11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12	11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09	11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07	11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05	11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03	11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02	11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00	11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58	11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56	11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54	11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (24)				20:10	21:21	22:25	22:50
30	08:50	11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (24)				20:12	21:24	22:27	22:49
31	08:48	11:26 (28)				07:10		04:41	
	16:54	76 14:52 (24)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,66					
Total reduction		0,24		0,26					
Total, real		382		180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33		05:26		06:35		07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34		05:28		06:37		07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35		05:31		06:40		07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36		05:33		06:42		07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37		05:35		06:44		07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39		05:37		06:46		07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40		05:39		06:49		07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41		05:42		06:51		07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43		05:44		06:53		08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44		05:46		06:55		08:02			08:15		10:57 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (24)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (28)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (24)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (28)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (24)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (28)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (20)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (23)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (20)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (23)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22		06:31				07:49		11:06 (28)				09:28		
	22:03		20:42				16:51	15	11:21 (28)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46	11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43	11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41	11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39	11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34	12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27	09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25	09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23	09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20	09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18	09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15	09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13	09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10	09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07	09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05	09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02	09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00	09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57	09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54	09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (28)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)			20:10	21:21	22:25	22:50
30	08:50		11:51 (28)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)			20:12	21:24	22:27	22:49
31	08:48		11:52 (28)			07:10		04:41	
	16:54	55	14:55 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:08 (20)	08:46	11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:29 (20)	16:56	49 13:50 (23)	18:05	20:17	21:26	22:31
2	09:27	12:08 (20)	08:43	11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21 12:29 (20)	16:58	44 13:48 (23)	18:07	20:19	21:28	22:32
3	09:27	12:09 (20)	08:41	11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:29 (20)	17:01	39 13:47 (23)	18:09	20:21	21:31	22:34
4	09:27	12:09 (20)	08:39	11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:30 (20)	17:03	32 13:45 (23)	18:12	20:24	21:33	22:35
5	09:26	12:09 (20)	08:37	11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21 12:30 (20)	17:06	19 12:02 (28)	18:14	20:26	21:35	22:37
6	09:25	12:10 (20)	08:34	11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25 13:32 (23)	17:08	14 12:00 (28)	18:17	20:28	21:37	22:38
7	09:24	11:43 (28)	08:32	11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33 13:35 (23)	17:11	6 11:56 (28)	18:19	20:30	21:40	22:39
8	09:24	11:41 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	41 13:37 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:40 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	47 13:39 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:38 (28)	08:25	09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51 13:40 (23)	17:18	3 09:42 (15)	18:26	20:37	21:46	22:43
11	09:21	11:38 (28)	08:23	09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55 13:42 (23)	17:21	10 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:37 (28)	08:20	09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60 14:46 (24)	17:23	14 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:37 (28)	08:18	09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72 14:49 (24)	17:26	16 09:49 (15)	18:33	20:44	21:53	22:46
14	09:17	11:36 (28)	08:15	09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83 14:49 (24)	17:28	17 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:36 (28)	08:13	09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87 14:50 (24)	17:31	18 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:35 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86 14:50 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:36 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:51 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:36 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89 14:52 (24)	17:38	19 09:51 (15)	18:45	20:56	22:04	22:49
19	09:10	11:36 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87 14:52 (24)	17:40	18 09:50 (15)	18:47	20:58	22:06	22:50
20	09:09	11:35 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85 14:53 (24)	17:43	17 09:49 (15)	18:49	21:00	22:08	22:50
21	09:07	11:35 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79 14:53 (24)	17:45	15 09:48 (15)	18:51	21:03	22:10	22:50
22	09:05	11:36 (28)	07:54	09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:53 (24)	17:48	12 09:46 (15)	18:54	21:05	22:12	22:50
23	09:03	11:35 (28)	07:52	09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79 14:52 (24)	17:50	6 09:44 (15)	18:56	21:07	22:14	22:51
24	09:02	11:35 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	79 14:52 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:35 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	78 14:52 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:36 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	77 14:52 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:36 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	74 14:51 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:36 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	71 14:50 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:37 (28)			07:15	05:49	04:44	04:30
	16:49	66 14:49 (24)			20:10	21:21	22:25	22:50
30	08:50	11:37 (28)			07:13	05:46	04:42	04:31
	16:51	56 14:45 (24)			20:12	21:24	22:27	22:49
31	08:48	11:38 (28)			07:10		04:41	
	16:54	51 13:50 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1881		406				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,68				
Total reduction		0,24		0,27				
Total, real		457		110				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:26 (20)	16:56	45	13:44 (23)	18:05	20:17	21:26	22:31
2	09:27		12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20	12:26 (20)	16:58	40	13:42 (23)	18:07	20:19	21:28	22:32
3	09:27		12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:26 (20)	17:01	34	13:40 (23)	18:09	20:21	21:31	22:34
4	09:27		12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:27 (20)	17:03	20	11:59 (28)	18:12	20:24	21:33	22:35
5	09:26		12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28	13:28 (23)	17:06	16	11:57 (28)	18:14	20:26	21:35	22:37
6	09:25		12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32	13:31 (23)	17:08	11	11:55 (28)	18:17	20:28	21:37	22:38
7	09:24		11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38	13:32 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46	13:34 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50	13:36 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:35 (28)	08:25		09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58	14:41 (24)	17:18	6	09:43 (15)	18:26	20:37	21:46	22:43
11	09:21		11:34 (28)	08:23		09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71	14:43 (24)	17:21	11	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:33 (28)	08:20		09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79	14:44 (24)	17:23	15	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:34 (28)	08:18		09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81	14:45 (24)	17:26	16	09:48 (15)	18:33	20:44	21:53	22:46
14	09:17		11:33 (28)	08:15		09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84	14:45 (24)	17:28	18	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:32 (28)	08:13		09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86	14:46 (24)	17:31	19	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87	14:46 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:32 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:47 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:32 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88	14:48 (24)	17:38	18	09:50 (15)	18:45	20:56	22:04	22:49
19	09:10		11:32 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86	14:48 (24)	17:40	17	09:49 (15)	18:47	20:58	22:06	22:50
20	09:09		11:32 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79	14:48 (24)	17:43	16	09:48 (15)	18:49	21:00	22:08	22:50
21	09:07		11:32 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77	14:48 (24)	17:45	14	09:47 (15)	18:51	21:03	22:10	22:50
22	09:05		11:32 (28)	07:54		09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:49 (24)	17:48	10	09:45 (15)	18:54	21:05	22:12	22:50
23	09:03		11:31 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	78	14:48 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:32 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	77	14:48 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:32 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	75	14:47 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:33 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	73	14:47 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:32 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	70	14:45 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:33 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	66	14:44 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:34 (28)				07:15	05:49	04:44	04:30
	16:49	57	14:41 (24)				20:10	21:21	22:25	22:50
30	08:50		11:34 (28)				07:13	05:46	04:42	04:31
	16:51	52	13:45 (23)				20:12	21:24	22:27	22:49
31	08:48		11:35 (28)				07:10		04:41	
	16:54	48	13:44 (23)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1914		364					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,69					
Total reduction		0,24		0,27					
Total, real		467		100					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49		22:01		20:40		19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33		05:26		06:35		07:42			07:54			09:02		11:18 (28)
	22:48		21:59		20:37		19:10			16:46			15:50	58	14:24 (24)
3	04:34		05:28		06:37		07:44			07:56			09:03		11:19 (28)
	22:47		21:56		20:34		19:07			16:44			15:49	51	13:19 (23)
4	04:35		05:31		06:40		07:46			07:59			09:05		11:21 (28)
	22:47		21:54		20:31		19:04			16:41			15:48	46	13:18 (23)
5	04:36		05:33		06:42		07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46		21:51		20:28		19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37		05:35		06:44		07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45		21:49		20:25		18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38		05:37		06:46		07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44		21:47		20:23		18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40		05:39		06:49		07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43		21:44		20:20		18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41		05:42		06:51		07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42		21:42		20:17		18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43		05:44		06:53		08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41		21:39		20:14		18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44		05:46		06:55		08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39		21:37		20:11		18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46		05:48		06:57		08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38		21:34		20:08		18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47		05:51		07:00		08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37		21:32		20:05		18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49		05:53		07:02		08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35		21:29		20:02		18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51		05:55		07:04		08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34		21:26		19:59		18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52		05:57		07:06		08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32		21:24		19:56		18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54		06:00		07:08		08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31		21:21		19:54		18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56		06:02		07:11		08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29		21:18		19:51		18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58		06:04		07:13		08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27		21:16		19:48		18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00		06:06		07:15		08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25		21:13		19:45		18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01		06:08		07:17		08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24		21:10		19:42		18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03		06:11		07:19		08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22		21:08		19:39		18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05		06:13		07:22		08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20		21:05		19:36		18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18		21:02		19:33		18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09		06:17		07:26		07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16		20:59		19:30		17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14		20:57		19:27		17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13		06:22		07:30		07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12		20:54		19:25		17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16		06:24		07:33		07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10		20:51		19:22		16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18		06:26		07:35		07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07		20:48		19:19		16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20		06:29		07:37		07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05		20:45		19:16		16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22		06:31				07:49		09:05 (15)				09:28		12:04 (20)
	22:03		20:42				16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								197			1686			799	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,63	
Total reduction								0,29			0,24			0,25	
Total, real								57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28		08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56 49 13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43 11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58 47 13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41 11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01 42 13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44 12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39 11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03 35 13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41 17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37 11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06 23 11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39 20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34 11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08 20 11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32 11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11 16 11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34 37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30 11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13 11 11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18	18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28 51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25 52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18	07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09 77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08 77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57	06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04 86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59 86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58 85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)		20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54 73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)		07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)		07:10		04:41		05:22	06:31		07:49			09:28		11:57 (20)
	16:54	53	13:36 (23)		20:14		22:29		22:03	20:42		16:51			15:51	11	12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		1841		243										1761		403	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,65										0,62		0,62	
Total reduction		0,25		0,26										0,25		0,25	
Total, real		452		63										435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35		08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13			16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42			07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10			16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44			07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07			16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46		09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7	09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48		09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12	09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51		09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15	09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53		09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18	09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55		09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19	09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57		09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20	09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00		09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20	09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02		09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20	09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04		09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19	09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06		09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18	09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09		09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26	10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11		09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29	10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13		09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28	10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16		10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21	10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18		10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23	10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20		10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24	10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23		10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25	10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25		10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37	15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27		10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42	15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30		10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50	15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32		10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63	15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35		09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69	14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37		09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74	14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39		09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82	15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42		09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89	15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44		09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90	15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47		09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90	15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49		12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81	15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					1111			1317			529	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,64			0,59			0,64	
Total reduction					0,26			0,23			0,26	
Total, real					286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17	21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19	21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21	21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23	21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26	21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28	21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30	21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33	21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35	21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (33)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23	22:27	22:49
31	08:48		14:08 (33)				07:10				04:41	
	16:53	21	15:27 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51	09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56 15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51 15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55 15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56 15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58 15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55 15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49 13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50 13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10	11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60 13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61 13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63 13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66 13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65 13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66 13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64 13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62 13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61 13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60 13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55 13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47 13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39 13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36 13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33 13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:24 (28)	16:01	30 13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47	11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20 13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49	11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11 11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52	11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10 11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54	11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8 11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56		09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53		15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58		09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52		15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49	09:46 (12)			09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55 15:38 (28)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319			236		199
Total, worst case		793		765									221		1347		
Sun reduction		0,50		0,50									0,50		0,50		
Oper. time red.		0,80		0,80									0,80		0,80		
Wind dir. red.		0,62		0,61									0,60		0,62		
Total reduction		0,25		0,24									0,24		0,25		
Total, real		197		187									53		334		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56	74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (15)	15:51
2	09:27		08:43		10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58	73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (15)	15:50
3	09:27		08:41		10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01	74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (15)	15:49
4	09:26		08:39		10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03	71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (15)	15:48
5	09:26		08:37		10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06	68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (15)	15:47
6	09:25		08:34		10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08	64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (15)	15:46
7	09:24		08:32		10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11	59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (15)	15:45
8	09:24		08:30		10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13	52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (15)	15:45
9	09:23		08:27		10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16	43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (15)	15:44
10	09:22		08:25		10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18	26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (15)	15:43
11	09:21		08:22		12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21	5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (15)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (15)	15:42
13	09:18	12:39 (9)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13	5 12:44 (9)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (15)	15:42
14	09:17	12:39 (9)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15	7 12:46 (9)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (15)	15:42
15	09:16	12:39 (9)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17	15 12:54 (9)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (15)	15:42
16	09:14	12:38 (9)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19	17 12:55 (9)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (15)	15:42
17	09:13	12:38 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21	18 12:56 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (15)	15:42
18	09:12	12:37 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23	19 12:56 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (15)	15:42
19	09:10	12:38 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25	20 12:58 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (15)	15:42
20	09:08	12:37 (17)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27	22 12:59 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (15)	15:42
21	09:07	12:35 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30	23 12:58 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (9)	15:43
22	09:05	12:34 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32	33 14:16 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (9)	15:43
23	09:03	12:33 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34	39 14:19 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (9)	15:44
24	09:01	12:33 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37	42 14:21 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (9)	15:44
25	09:00	12:32 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39	45 14:22 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (9)	15:45
26	08:58	10:57 (12)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41	50 14:24 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (9)	15:46
27	08:56	10:51 (12)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44	64 14:24 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (9)	15:47
28	08:54	10:51 (12)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46	69 14:25 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (9)	15:48
29	08:52	10:51 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49	70 14:26 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (9)	15:49
30	08:50	10:50 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)				07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53	74 14:27 (15)				20:14		22:29		22:03	20:42		16:51	7 12:20 (17)			15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319		236		199
Total, worst case		704		609										7		1322	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,63										0,63		0,62	
Total reduction		0,25		0,25										0,25		0,25	
Total, real		174		153										2		328	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (12)	09:00
	15:53		16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (15)	15:51
2	09:27		08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (12)	09:01
	15:54		16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (15)	15:50
3	09:27		08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (12)	09:03
	15:55		17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (15)	15:49
4	09:26		08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (12)	09:05
	15:57		17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (15)	15:48
5	09:26		08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (12)	09:07
	15:58		17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (15)	15:47
6	09:25		08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (12)	09:09
	16:00		17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (15)	15:46
7	09:24		08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (12)	09:10
	16:02		17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (15)	15:45
8	09:24		08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (12)	09:12
	16:03		17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (15)	15:45
9	09:23		08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (12)	09:13
	16:05		17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (15)	15:44
10	09:22		08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (12)	09:15
	16:07		17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (15)	15:43
11	09:21		08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (12)	09:16
	16:09		17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (15)	15:43
12	09:20		08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (12)	09:17
	16:11		17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (15)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (12)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (15)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (17)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (15)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (17)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (15)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (17)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (15)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (17)	15:52			15:50
31	08:48		10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)				09:28
	16:53	69	14:22 (15)			20:14		22:29		22:03	20:42		16:51	25 12:17 (17)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (26)	08:45	14:59 (17)	07:35	07:07	05:44	04:39
	15:52	20 12:23 (26)	16:56	18 15:17 (17)	18:04	20:16	21:26	22:30
2	09:27	12:03 (26)	08:43	14:59 (17)	07:32	07:04	05:41	04:38
	15:54	20 12:23 (26)	16:58	19 15:18 (17)	18:07	20:19	21:28	22:32
3	09:27	12:03 (26)	08:41	14:58 (17)	07:30	07:01	05:38	04:37
	15:55	20 12:23 (26)	17:01	19 15:17 (17)	18:09	20:21	21:30	22:33
4	09:26	12:03 (26)	08:39	14:59 (17)	07:27	06:58	05:36	04:36
	15:57	21 12:24 (26)	17:03	19 15:18 (17)	18:12	20:23	21:33	22:35
5	09:26	12:04 (26)	08:37	14:59 (17)	07:24	06:55	05:33	04:34
	15:58	26 13:33 (12)	17:06	19 15:18 (17)	18:14	20:26	21:35	22:36
6	09:25	12:04 (26)	08:34	15:00 (17)	07:21	06:52	05:31	04:33
	16:00	29 13:35 (12)	17:08	18 15:18 (17)	18:16	20:28	21:37	22:38
7	09:24	12:05 (26)	08:32	15:00 (17)	07:18	06:49	05:29	04:32
	16:01	31 13:37 (12)	17:11	17 15:17 (17)	18:19	20:30	21:39	22:39
8	09:23	12:06 (26)	08:30	15:00 (17)	07:16	06:46	05:26	04:31
	16:03	33 13:39 (12)	17:13	16 15:16 (17)	18:21	20:33	21:42	22:40
9	09:23	12:06 (26)	08:27	15:02 (17)	07:13	06:44	05:24	04:31
	16:05	33 13:39 (12)	17:15	14 15:16 (17)	18:23	20:35	21:44	22:42
10	09:22	12:07 (26)	08:25	15:03 (17)	07:10	06:41	05:21	04:30
	16:07	35 13:41 (12)	17:18	11 15:14 (17)	18:26	20:37	21:46	22:43
11	09:21	12:07 (26)	08:22	15:07 (17)	07:07	06:38	05:19	04:29
	16:09	35 13:41 (12)	17:20	5 15:12 (17)	18:28	20:39	21:49	22:44
12	09:19	12:08 (26)	08:20		07:04	06:35	05:17	04:29
	16:11	35 13:42 (12)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (26)	08:17		07:01	06:32	05:15	04:28
	16:12	35 13:43 (12)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (26)	08:15		06:58	06:29	05:12	04:28
	16:14	35 13:44 (12)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (26)	08:12		06:56	06:27	05:10	04:27
	16:17	34 13:45 (12)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (26)	08:10		06:53	06:24	05:08	04:27
	16:19	32 13:45 (12)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (26)	08:07		06:50	06:21	05:06	04:27
	16:21	29 13:45 (12)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (26)	08:05		06:47	06:18	05:04	04:26
	16:23	26 13:46 (12)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (12)	08:02		06:44	06:16	05:02	04:26
	16:25	21 13:46 (12)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (12)	07:59		06:41	06:13	05:00	04:26
	16:27	22 13:47 (12)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (12)	07:57		06:38	06:10	04:58	04:26
	16:30	21 13:47 (12)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (12)	07:54		06:35	06:07	04:56	04:27
	16:32	21 13:47 (12)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (12)	07:51		06:33	06:05	04:54	04:27
	16:34	20 13:47 (12)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (12)	07:49		06:30	06:02	04:52	04:27
	16:37	19 13:47 (12)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (12)	07:46		06:27	05:59	04:50	04:28
	16:39	18 13:47 (12)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (12)	07:43		06:24	05:57	04:49	04:28
	16:41	17 13:47 (12)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (12)	07:41		06:21	05:54	04:47	04:29
	16:44	20 15:09 (17)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (12)	07:38		06:18	05:51	04:45	04:29
	16:46	23 15:12 (17)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (12)			07:15	05:49	04:44	04:30
	16:48	21 15:14 (17)			20:10	21:21	22:25	22:49
30	08:50	15:00 (17)			07:12	05:46	04:42	04:31
	16:51	15 15:15 (17)			20:12	21:23	22:27	22:49
31	08:48	15:00 (17)			07:09		04:41	
	16:53	16 15:16 (17)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15		12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43	21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16		12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43	21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17		12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42	20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19		12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42	20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20		12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42	21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21		12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42	21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22		12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42	20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23		12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42	20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24		12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42	20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25		12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42	20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25		12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42	20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26		12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43	20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27		12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43	20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27		12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44	20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27		12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44	21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28		12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45	20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28		12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46	20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28		12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47	20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28		12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47	21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28		12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49	20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28		12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50	20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,55			0,55	
Total reduction					0,22			0,22			0,22	
Total, real					7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:45		10:57 (37)	07:35		16:28 (17)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (26)	18:04	11	16:39 (17)	20:16	21:26	22:30
2	09:27			08:43		10:59 (37)	07:32		16:27 (17)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (26)	18:07	13	16:40 (17)	20:19	21:28	22:32
3	09:27			08:41		11:02 (37)	07:30		16:27 (17)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (26)	18:09	14	16:41 (17)	20:21	21:30	22:33
4	09:26			08:39		13:29 (26)	07:27		16:27 (17)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (26)	18:12	17	16:44 (17)	20:23	21:33	22:35
5	09:26			08:37		13:30 (26)	07:24		16:27 (17)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (26)	18:14	19	16:46 (17)	20:26	21:35	22:36
6	09:25			08:34		13:33 (26)	07:21		16:28 (17)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (26)	18:16	17	16:45 (17)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (17)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (17)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (17)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (17)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (17)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (17)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (7)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (7)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (7)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (7)	18:33			20:44	21:53	22:45
14	09:17		11:05 (37)	08:15		15:02 (7)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (37)	17:28	12	15:14 (12)	18:35			20:46	21:55	22:46
15	09:16		10:59 (37)	08:12		15:06 (12)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (37)	17:30	12	15:18 (12)	18:37			20:49	21:57	22:47
16	09:14		10:52 (37)	08:10		15:06 (12)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (37)	17:33	15	15:21 (12)	18:40			20:51	21:59	22:48
17	09:13		10:51 (37)	08:07		15:05 (12)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (37)	17:35	16	15:21 (12)	18:42			20:53	22:02	22:48
18	09:11		10:51 (37)	08:05		15:05 (12)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (37)	17:38	15	15:20 (12)	18:44			20:56	22:04	22:49
19	09:10		10:51 (37)	08:02		15:06 (12)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (37)	17:40	16	15:22 (12)	18:47			20:58	22:06	22:49
20	09:08		10:51 (37)	07:59		15:07 (12)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (37)	17:43	17	15:24 (12)	18:49			21:00	22:08	22:50
21	09:07		10:51 (37)	07:57		15:07 (12)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (37)	17:45	20	15:27 (12)	18:51			21:02	22:10	22:50
22	09:05		10:51 (37)	07:54		15:08 (12)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (32)	17:47	20	15:28 (12)	18:53			21:05	22:12	22:50
23	09:03		10:51 (37)	07:51		15:09 (12)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (32)	17:50	18	15:27 (12)	18:56			21:07	22:14	22:50
24	09:01		10:52 (37)	07:49		15:12 (12)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (32)	17:52	13	15:25 (12)	18:58			21:09	22:16	22:50
25	08:59		10:52 (37)	07:46		15:16 (12)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (32)	17:55	5	15:21 (12)	19:00			21:12	22:18	22:50
26	08:58		10:52 (37)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (26)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (37)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (26)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (37)	07:38		16:32 (17)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (26)	18:02	4	16:36 (17)	19:07			21:19	22:23	22:50
29	08:52		10:54 (37)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (26)				20:10			21:21	22:25	22:49
30	08:50		10:55 (37)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (26)				20:12			21:23	22:27	22:49
31	08:48		10:56 (37)				07:09				04:41	
	16:53	42	13:49 (26)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,67			0,57			0,57				
Total reduction		0,27			0,23			0,23				
Total, real		139			81			28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (26)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (26)	15:48
5	04:36	05:33	06:42	07:48		17:09 (17)	08:01		13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (17)	16:39	13	13:15 (26)	15:47
6	04:37	05:35	06:44	07:50		17:06 (17)	08:03		13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (17)	16:36	17	13:18 (26)	15:46
7	04:38	05:37	06:46	07:53		17:04 (17)	08:06		12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (17)	16:34	21	13:19 (26)	15:45
8	04:40	05:39	06:48	07:55		17:03 (17)	08:08		10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (17)	16:32	29	13:20 (26)	15:44
9	04:41	05:41	06:50	07:57		17:02 (17)	08:10		10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (17)	16:30	37	13:22 (26)	15:44
10	04:42	05:44	06:53	07:59		17:01 (17)	08:13		10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (17)	16:27	40	13:21 (26)	15:43
11	04:44	05:46	06:55	08:02		17:01 (17)	08:15		10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (17)	16:25	41	13:19 (26)	15:43
12	04:45	05:48	06:57	08:04		17:01 (17)	08:18		10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (17)	16:23	42	13:19 (26)	15:42
13	04:47	05:50	06:59	08:06		17:02 (17)	08:20		10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (17)	16:21	41	13:15 (26)	15:42
14	04:49	05:53	07:01	08:09		17:06 (17)	08:22		10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (17)	16:19	41	13:07 (26)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (37)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (26)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (37)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (26)	15:42
17	04:54	05:59	07:08	08:16		15:45 (12)	08:29		10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (12)	16:13	39	12:37 (32)	15:42
18	04:56	06:02	07:10	08:18		15:42 (12)	08:32		10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (12)	16:11	40	12:38 (32)	15:42
19	04:57	06:04	07:12	08:20		15:40 (12)	08:34		10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (12)	16:09	39	12:37 (32)	15:42
20	04:59	06:06	07:15	08:23		15:39 (12)	08:36		10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (12)	16:07	28	12:25 (32)	15:42
21	05:01	06:08	07:17	08:25		15:37 (12)	08:38		10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (12)	16:06	22	10:49 (37)	15:43
22	05:03	06:10	07:19	08:27		15:37 (12)	08:41		10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (12)	16:04	22	10:49 (37)	15:43
23	05:05	06:13	07:21	08:30		15:36 (12)	08:43		10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (12)	16:02	21	10:49 (37)	15:44
24	05:07	06:15	07:24	08:32		15:35 (12)	08:45		10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (12)	16:01	20	10:49 (37)	15:44
25	05:09	06:17	07:26	07:34		14:36 (12)	08:47		10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (12)	15:59	19	10:48 (37)	15:45
26	05:11	06:19	07:28	07:37		14:35 (12)	08:49		10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (12)	15:57	18	10:49 (37)	15:46
27	05:13	06:22	07:30	07:39		14:35 (12)	08:51		10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (12)	15:56	10	10:48 (37)	15:47
28	05:15	06:24	07:32	07:41		14:30 (7)	08:53		10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (12)	15:55	3	10:47 (37)	15:48
29	05:17	06:26	07:35	07:44		14:27 (7)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (7)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (7)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (7)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39		
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30		
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38		
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32		
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37		
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33		
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36		
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35		
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35		
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36		
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33		
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37		
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32		
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39		
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32		
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40		
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31		
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41		
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30		
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42		
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29		
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43		
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29		
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44		
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28		
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45		
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28		
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46		
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27		
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47		
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27		
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47		
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27		
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48		
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26		
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49		
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26		
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49		
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26		
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49		
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26		
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50		
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27		
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50		
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27		
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50		
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27		
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50		
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28		
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50		
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28		
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50		
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29		
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50		
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29		
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49		
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30		
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49		
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31		
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49		
31	08:47		15:29 (8)				07:09						04:41					
	16:53	20	15:49 (8)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				
Sun reduction		0,50			0,50			0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80			0,80			0,80				
Wind dir. red.		0,53			0,54			0,58			0,68			0,68				
Total reduction		0,21			0,22			0,23			0,27			0,27				
Total, real		16			169			118			331			18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60	19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35		18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57	19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37		18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54	19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39		18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35	19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42		18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31	19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44		18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28	19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46		18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25	19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48		18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18	19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50		19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11	19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53			07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13			18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55			08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11			18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57			08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08			18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59			08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05			18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01		18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7	18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04		18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13	18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06		18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16	18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08		18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19	18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10		18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20	18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12		18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21	18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15		18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22	18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17		18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22	18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19		18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22	18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21		18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21	18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23		18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19	18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26		18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18	18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28		18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15	18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30		18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11	18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32			07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21			16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34			07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18			16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37			07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16			16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)				07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)				16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (23)	08:46	10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53 31	12:43 (24)	16:56 18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28	11:14 (23)	08:44	10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54 30	12:43 (24)	16:58 17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27	11:13 (23)	08:41	10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55 31	12:43 (24)	17:01 14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27	11:13 (23)	08:39	10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57 30	12:43 (24)	17:03 11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26	11:14 (23)	08:37	10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58 28	12:42 (24)	17:06 7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25	11:14 (23)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (28)	09:09		11:00 (23)
	16:00 28	12:42 (24)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (28)	15:46	28	12:28 (24)
7	09:25	11:14 (23)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (28)	09:10		11:01 (23)
	16:02 26	12:41 (24)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (28)	15:45	29	12:30 (24)
8	09:24	11:14 (23)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (28)	09:12		11:02 (23)
	16:03 21	11:35 (23)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (28)	15:45	30	12:31 (24)
9	09:23	11:15 (23)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (28)	09:14		11:03 (23)
	16:05 21	11:36 (23)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (28)	15:44	30	12:32 (24)
10	09:22	11:15 (23)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (28)	09:15		11:03 (23)
	16:07 21	11:36 (23)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (28)	15:44	30	12:32 (24)
11	09:21	11:15 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (28)	09:16		11:04 (23)
	16:09 22	11:37 (23)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (28)	15:43	30	12:33 (24)
12	09:20	11:15 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (28)	09:18		11:04 (23)
	16:11 22	11:37 (23)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (28)	15:43	31	12:34 (24)
13	09:19	11:16 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (28)	09:19		11:05 (23)
	16:13 22	11:38 (23)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (28)	15:42	31	12:35 (24)
14	09:17	11:16 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (28)	09:20		11:06 (23)
	16:15 22	11:38 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (28)	15:42	30	12:35 (24)
15	09:16	11:16 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (28)	09:21		11:06 (23)
	16:17 22	11:38 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (28)	15:42	31	12:36 (24)
16	09:15	11:16 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (28)	09:22		11:08 (23)
	16:19 22	11:38 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (28)	15:42	30	12:37 (24)
17	09:13	11:18 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (28)	09:23		11:09 (23)
	16:21 21	11:39 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (23)	15:42	30	12:38 (24)
18	09:12	11:18 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (28)	09:24		11:08 (23)
	16:23 21	11:39 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (23)	15:42	30	12:37 (24)
19	09:10	10:13 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (28)	09:25		11:09 (23)
	16:25 27	11:39 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (23)	15:42	29	12:38 (24)
20	09:09	10:12 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (28)	09:26		11:10 (23)
	16:28 30	11:39 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (23)	15:43	30	12:39 (24)
21	09:07	10:11 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (28)	09:26		11:11 (23)
	16:30 32	11:39 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (23)	15:43	29	12:40 (24)
22	09:05	10:10 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (28)	09:27		11:11 (23)
	16:32 32	11:38 (23)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (23)	15:43	29	12:40 (24)
23	09:03	10:09 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (28)	09:27		11:11 (23)
	16:34 31	11:37 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (23)	15:44	30	12:40 (24)
24	09:02	10:09 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (23)	09:28		11:12 (23)
	16:37 29	11:36 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (23)	15:45	30	12:41 (24)
25	09:00	10:09 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (23)	09:28		11:12 (23)
	16:39 26	11:34 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (23)	15:45	29	12:41 (24)
26	08:58	10:09 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (23)	09:28		11:13 (23)
	16:41 19	10:28 (28)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (23)	15:46	30	12:42 (24)
27	08:56	10:09 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (23)	09:28		11:13 (23)
	16:44 20	10:29 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (23)	15:47	30	12:42 (24)
28	08:54	10:09 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (23)	09:29		11:13 (23)
	16:46 19	10:28 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (23)	15:48	31	12:43 (24)
29	08:52	10:09 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (23)	09:29		11:13 (23)
	16:49 20	10:29 (28)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (23)	15:49	30	12:42 (24)
30	08:50	10:09 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (23)	09:28		11:13 (23)
	16:51 19	10:28 (28)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (23)	15:50	31	12:43 (24)
31	08:48	10:10 (28)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (23)
	16:54 19	10:29 (28)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (12)
	15:52	16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (12)
2	09:27		12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (12)
	15:54	16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (12)
3	09:27		12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (12)
	15:55	17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (12)
4	09:26		12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (12)
	15:57	17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (12)
5	09:26		12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (12)
	15:58	18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (12)
6	09:25		12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (12)
	16:00	19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (12)
7	09:24		12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (12)
	16:01	20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (12)
8	09:24		12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (12)
	16:03	19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (12)
9	09:23		12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (12)
	16:05	20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (12)
10	09:22		12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (12)
	16:07	20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (12)
11	09:21		12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (12)
	16:09	20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (12)
12	09:19		12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (12)
	16:11	20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (12)
13	09:18		12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (12)
	16:12	20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (12)
14	09:17		12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (12)
	16:14	20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (12)
15	09:16		12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (12)
	16:17	20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (12)
16	09:14		12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (12)
	16:19	20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (12)
17	09:13		12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (12)
	16:21	19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (12)
18	09:11		12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (12)
	16:23	19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (12)
19	09:10		13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (12)	09:25		12:50 (12)
	16:25	18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (12)	15:42	13	13:03 (12)
20	09:08		13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (12)	09:25		12:51 (12)
	16:27	16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (12)	15:42	12	13:03 (12)
21	09:07		13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (12)	09:26		12:51 (12)
	16:30	15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (12)	15:43	12	13:03 (12)
22	09:05		13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (12)	09:27		12:52 (12)
	16:32	12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (12)	15:43	12	13:04 (12)
23	09:03		13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (12)	09:27		12:52 (12)
	16:34	9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (12)	15:44	12	13:04 (12)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (12)	09:28		12:52 (12)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (12)	15:44	12	13:04 (12)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (12)	09:28		12:53 (12)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (12)	15:45	13	13:06 (12)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (12)	09:28		12:53 (12)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (12)	15:46	13	13:06 (12)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (12)	09:28		12:54 (12)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (12)	15:47	13	13:07 (12)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (12)	09:28		12:53 (12)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (12)	15:48	14	13:07 (12)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (12)	09:28		12:53 (12)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (12)	15:49	15	13:08 (12)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (12)	09:28		12:54 (12)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (12)	15:50	15	13:09 (12)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (12)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (12)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (12)	08:59
	15:52		16:56 19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (12)	15:51
2	09:27		08:43	13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (12)	09:01
	15:54		16:58 16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (12)	15:50
3	09:27		08:41	13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (12)	09:03
	15:55		17:01 12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (12)	15:49
4	09:26		08:39	14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (12)	09:05
	15:57		17:03 5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (12)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (12)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (12)	15:47
6	09:25		08:34	15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (26)	09:10
	16:01		17:11 11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (26)	15:45
8	09:23		08:30	15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (26)	09:12
	16:03		17:13 15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (26)	15:44
9	09:23		08:27	15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (26)	09:13
	16:05		17:15 18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (26)	15:44
10	09:22		08:25	15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (26)	09:15
	16:07		17:18 19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (26)	15:43
11	09:20		08:22	15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (26)	09:16
	16:09		17:20 21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (26)	15:43
12	09:19		08:20	15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (26)	09:17
	16:10		17:23 22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17	15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (26)	09:19
	16:12 5	13:58 (26)	17:25 22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15	15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (26)	09:20
	16:14 9	14:00 (26)	17:28 23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12	15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (37)	09:21
	16:17 11	14:01 (26)	17:30 22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10	15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (37)	09:22
	16:19 17	14:07 (26)	17:33 22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07	15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (37)	09:23
	16:21 21	14:10 (26)	17:35 21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05	15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (37)	09:24
	16:23 27	14:11 (26)	17:38 19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02	15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (37)	09:25
	16:25 32	14:12 (26)	17:40 17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59	15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (37)	09:25
	16:27 36	14:12 (26)	17:43 14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57	15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (12)	08:38	11:05 (37)	09:26
	16:30 42	14:13 (26)	17:45 8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (12)	16:06 42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (12)	08:41	11:08 (37)	09:27
	16:32 45	14:14 (26)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (12)	16:04 36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (12)	08:43	11:12 (37)	09:27
	16:34 44	14:14 (26)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (12)	16:02 32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (12)	08:45	11:16 (37)	09:27
	16:36 42	14:15 (26)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (12)	16:01 28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (12)	08:47	13:27 (26)	09:28
	16:39 40	14:15 (26)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (12)	15:59 21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (12)	08:49	13:29 (26)	09:28
	16:41 37	14:15 (26)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (12)	15:57 17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (12)	08:51	13:29 (26)	09:28
	16:44 33	14:15 (26)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (12)	15:56 12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (12)	08:53	13:30 (26)	09:28
	16:46 24	14:15 (26)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (12)	15:55 9	13:39 (26)	15:47
29	08:52	13:51 (26)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (12)	08:55	13:35 (26)	09:28
	16:48 23	14:14 (26)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (12)	15:53 5	13:40 (26)	15:49
30	08:50	13:52 (26)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (12)	08:57		09:28
	16:51 22	14:14 (26)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (12)	15:52		15:50
31	08:48	13:54 (26)			07:09		04:41		05:22	06:31		07:49	14:47 (12)			09:28
	16:53 20	14:14 (26)			20:14		22:29		22:03	20:42		16:51 20	15:07 (12)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (32) | 08:45		10:15 (13) | 07:35		13:26 (26) | 07:07		18:42 (17) | 05:44	| 04:39
	15:52	47	14:26 (14) | 16:56	119	15:37 (35) | 18:04	35	17:05 (9) | 20:16	19	19:01 (17) | 21:26	| 22:30
2	09:27		12:11 (32) | 08:43		12:16 (32) | 07:32		15:45 (7) | 07:04		18:43 (17) | 05:41	| 04:38
	15:54	53	14:28 (14) | 16:58	114	15:38 (35) | 18:07	27	17:09 (9) | 20:19	16	18:59 (17) | 21:28	| 22:32
3	09:27		12:10 (32) | 08:41		12:17 (32) | 07:30		16:34 (12) | 07:01		18:46 (17) | 05:38	| 04:37
	15:55	58	14:29 (14) | 17:01	113	15:38 (35) | 18:09	33	17:12 (9) | 20:21	11	18:57 (17) | 21:30	| 22:33
4	09:26		12:10 (32) | 08:39		09:39 (37) | 07:27		16:31 (12) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (14) | 17:03	109	15:39 (35) | 18:12	43	17:15 (9) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (32) | 08:36		09:39 (37) | 07:24		16:29 (12) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (14) | 17:06	105	15:39 (35) | 18:14	46	17:15 (9) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (32) | 08:34		09:40 (37) | 07:21		16:26 (12) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (14) | 17:08	95	15:39 (35) | 18:16	49	17:15 (9) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (13) | 08:32		09:40 (37) | 07:18		16:25 (12) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (14) | 17:11	96	15:39 (35) | 18:19	50	17:15 (9) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (13) | 08:30		09:38 (37) | 07:15		16:23 (12) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (14) | 17:13	96	15:38 (35) | 18:21	52	17:15 (9) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (13) | 08:27		09:36 (37) | 07:13		16:22 (12) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (14) | 17:16	98	15:38 (35) | 18:23	53	17:15 (9) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (13) | 08:25		09:33 (37) | 07:10		16:20 (12) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (14) | 17:18	107	15:57 (7) | 18:26	54	17:14 (9) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (13) | 08:22		09:29 (37) | 07:07		16:19 (12) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (14) | 17:20	114	16:00 (7) | 18:28	54	17:13 (9) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (13) | 08:20		09:27 (37) | 07:04		16:18 (12) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (14) | 17:23	118	16:03 (7) | 18:30	54	17:12 (9) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (13) | 08:17		09:24 (37) | 07:01		16:18 (12) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (14) | 17:25	118	16:04 (7) | 18:33	52	17:10 (9) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (13) | 08:15		09:21 (37) | 06:58		16:17 (12) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (14) | 17:28	114	16:05 (7) | 18:35	51	17:08 (9) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (13) | 08:12		09:18 (37) | 06:56		16:17 (12) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (14) | 17:30	120	16:07 (7) | 18:37	47	17:04 (9) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (13) | 08:10		09:13 (37) | 06:53		16:17 (12) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (14) | 17:33	125	16:08 (7) | 18:40	46	17:03 (12) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (13) | 08:07		09:13 (37) | 06:50		16:17 (12) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (14) | 17:35	123	16:08 (7) | 18:42	46	17:03 (12) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (13) | 08:05		09:13 (37) | 06:47		16:16 (12) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (14) | 17:38	121	16:08 (7) | 18:44	46	17:02 (12) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (13) | 08:02		09:15 (37) | 06:44		16:16 (12) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (14) | 17:40	118	16:09 (7) | 18:47	56	18:01 (17) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (13) | 07:59		09:16 (37) | 06:41		16:16 (12) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (14) | 17:43	114	16:09 (7) | 18:49	60	18:03 (17) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (13) | 07:57		09:17 (37) | 06:38		16:16 (12) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (14) | 17:45	110	16:09 (7) | 18:51	64	18:05 (17) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (13) | 07:54		09:18 (37) | 06:35		16:17 (12) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (14) | 17:48	104	16:08 (7) | 18:54	63	18:05 (17) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (13) | 07:51		09:20 (37) | 06:32		16:17 (12) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (14) | 17:50	95	16:08 (7) | 18:56	64	18:06 (17) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (13) | 07:49		13:09 (26) | 06:30		16:18 (12) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (14) | 17:52	77	16:08 (7) | 18:58	64	18:06 (17) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (13) | 07:46		13:11 (26) | 06:27		16:18 (12) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (14) | 17:55	71	16:07 (7) | 19:00	62	18:06 (17) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (13) | 07:43		13:13 (26) | 06:24		16:20 (12) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (35) | 17:57	66	16:06 (7) | 19:03	61	18:07 (17) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (13) | 07:41		13:16 (26) | 06:21		16:22 (12) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (35) | 18:00	58	16:05 (7) | 19:05	57	18:07 (17) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (13) | 07:38		13:19 (26) | 06:18		16:23 (12) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (35) | 18:02	49	16:04 (7) | 19:07	54	18:06 (17) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (13) |		| 07:15		17:26 (12) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (35) |		| 20:10	47	19:05 (17) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (13) |		| 07:12		17:29 (12) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (35) |		| 20:12	38	19:04 (17) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (13) |		| 07:09		18:41 (17) |			| 04:41	|
	16:53	126	15:37 (35) |		| 20:14	22	19:03 (17) |			| 22:29	|
Potential sun hours	221		| 260		| 365		| 432		| 521	| 547
Total, worst case	| 3257		| 2867		| 1550		| 46		|	|
Sun reduction	| 0,50		| 0,50		| 0,50		| 0,50		|	|
Oper. time red.	| 0,80		| 0,80		| 0,80		| 0,80		|	|
Wind dir. red.	| 0,60		| 0,59		| 0,58		| 0,62		|	|
Total reduction	| 0,24		| 0,24		| 0,23		| 0,25		|	|
Total, real	| 786		| 675		| 361		| 11		|	|

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December		
1	04:32	05:24	06:33		07:39		16:57 (12)	07:51	09:03 (37)	08:59	09:52 (13)
	22:48	22:01	20:39		19:13	53	17:50 (9)	16:49 107	15:26 (7)	15:51 96	14:16 (14)
2	04:33	05:26	06:35		07:41		16:58 (12)	07:53	09:06 (37)	09:01	09:53 (13)
	22:48	21:58	20:37		19:10	54	17:52 (9)	16:46 98	15:08 (35)	15:50 91	14:16 (14)
3	04:34	05:28	06:37		07:44		16:58 (12)	07:56	09:08 (37)	09:03	09:54 (13)
	22:47	21:56	20:34		19:07	54	17:52 (9)	16:44 96	15:08 (35)	15:49 88	14:17 (14)
4	04:35	05:30	06:39		07:46		16:58 (12)	07:58	09:10 (37)	09:05	09:54 (13)
	22:46	21:54	20:31		19:04	54	17:52 (9)	16:41 94	15:08 (35)	15:48 83	14:17 (14)
5	04:36	05:33	06:42		07:48		17:00 (12)	08:01	09:10 (37)	09:07	09:55 (13)
	22:45	21:51	20:28		19:01	52	17:52 (9)	16:39 95	15:09 (35)	15:47 77	14:17 (14)
6	04:37	05:35	06:44		07:50		17:00 (12)	08:03	09:10 (37)	09:08	09:57 (13)
	22:45	21:49	20:25		18:58	52	17:52 (9)	16:37 105	15:09 (35)	15:46 71	14:17 (14)
7	04:38	05:37	06:46		07:53		17:01 (12)	08:06	09:08 (37)	09:10	11:57 (32)
	22:44	21:46	20:22		18:56	50	17:51 (9)	16:34 111	15:09 (35)	15:45 64	14:17 (14)
8	04:40	05:39	06:48		07:55		17:03 (12)	08:08	11:48 (32)	09:12	11:57 (32)
	22:43	21:44	20:19		18:53	48	17:51 (9)	16:32 112	15:09 (35)	15:44 62	14:17 (14)
9	04:41	05:41	06:51	18:40 (17)	07:57		17:04 (12)	08:10	11:47 (32)	09:13	11:59 (32)
	22:41	21:41	20:16 10	18:50 (17)	18:50	46	17:50 (9)	16:30 113	15:09 (35)	15:44 57	14:17 (14)
10	04:42	05:44	06:53	18:37 (17)	07:59		17:06 (12)	08:13	09:45 (13)	09:15	12:00 (32)
	22:40	21:39	20:14 15	18:52 (17)	18:47	40	17:48 (9)	16:27 121	15:08 (35)	15:43 53	14:17 (14)
11	04:44	05:46	06:55	18:35 (17)	08:02		16:22 (7)	08:15	09:42 (13)	09:16	12:01 (32)
	22:39	21:36	20:11 19	18:54 (17)	18:44	36	17:45 (9)	16:25 127	15:08 (35)	15:43 47	14:16 (14)
12	04:45	05:48	06:57	18:34 (17)	08:04		16:18 (7)	08:17	09:41 (13)	09:17	12:03 (32)
	22:38	21:34	20:08 21	18:55 (17)	18:42	25	17:41 (9)	16:23 130	15:08 (35)	15:42 44	14:17 (14)
13	04:47	05:50	06:59	17:21 (12)	08:06		13:56 (26)	08:20	09:39 (13)	09:19	12:04 (32)
	22:36	21:31	20:05 37	18:55 (17)	18:39	42	17:38 (9)	16:21 131	15:06 (35)	15:42 39	14:17 (14)
14	04:49	05:53	07:02	17:17 (12)	08:09		13:50 (26)	08:22	09:39 (13)	09:20	12:07 (32)
	22:35	21:29	20:02 45	18:55 (17)	18:36	53	16:37 (7)	16:19 131	15:05 (35)	15:42 34	14:17 (14)
15	04:50	05:55	07:04	17:13 (12)	08:11		13:46 (26)	08:25	09:39 (13)	09:21	13:06 (26)
	22:33	21:26	19:59 52	18:55 (17)	18:33	62	16:37 (7)	16:17 128	15:03 (35)	15:42 26	14:16 (14)
16	04:52	05:57	07:06	17:11 (12)	08:13		13:44 (26)	08:27	09:39 (13)	09:22	13:08 (26)
	22:32	21:23	19:56 56	18:55 (17)	18:30	69	16:39 (7)	16:15 124	15:02 (35)	15:42 22	14:15 (14)
17	04:54	05:59	07:08	17:08 (12)	08:16		13:41 (26)	08:29	09:38 (13)	09:23	13:10 (26)
	22:30	21:21	19:53 59	18:54 (17)	18:28	75	16:39 (7)	16:13 125	14:07 (14)	15:42 18	14:15 (14)
18	04:56	06:02	07:10	17:07 (12)	08:18		09:55 (37)	08:32	09:38 (13)	09:24	13:12 (26)
	22:29	21:18	19:50 63	18:55 (17)	18:25	86	16:39 (7)	16:11 129	14:09 (14)	15:42 16	14:15 (14)
19	04:58	06:04	07:12	17:06 (12)	08:20		09:51 (37)	08:34	09:39 (13)	09:25	13:16 (3)
	22:27	21:15	19:47 63	18:54 (17)	18:22	98	16:39 (7)	16:09 131	14:11 (14)	15:42 11	14:15 (14)
20	04:59	06:06	07:15	17:04 (12)	08:23		09:49 (37)	08:36	09:38 (13)	09:25	13:16 (3)
	22:25	21:13	19:45 65	18:53 (17)	18:20	106	16:40 (7)	16:07 129	14:11 (14)	15:42 9	14:14 (14)
21	05:01	06:08	07:17	17:03 (12)	08:25		09:46 (37)	08:38	09:39 (13)	09:26	13:17 (3)
	22:23	21:10	19:42 64	18:51 (17)	18:17	113	16:39 (7)	16:06 131	14:13 (14)	15:43 9	14:15 (14)
22	05:03	06:11	07:19	17:01 (12)	08:27		09:45 (37)	08:41	09:38 (13)	09:26	13:18 (3)
	22:21	21:07	19:39 64	18:50 (17)	18:14	116	16:39 (7)	16:04 131	14:13 (14)	15:43 9	14:16 (14)
23	05:05	06:13	07:21	17:00 (12)	08:30		09:44 (37)	08:43	09:39 (13)	09:27	13:18 (3)
	22:19	21:05	19:36 62	18:48 (17)	18:12	119	16:38 (7)	16:02 128	14:14 (14)	15:44 9	14:16 (14)
24	05:07	06:15	07:24	17:00 (12)	08:32		09:43 (37)	08:45	09:39 (13)	09:27	13:18 (3)
	22:18	21:02	19:33 58	18:46 (17)	18:09	122	16:38 (7)	16:01 127	14:14 (14)	15:44 11	14:17 (14)
25	05:09	06:17	07:26	16:59 (12)	07:34		08:43 (37)	08:47	09:40 (13)	09:28	13:15 (26)
	22:16	20:59	19:30 46	17:45 (12)	17:06	123	15:38 (7)	15:59 124	14:15 (14)	15:45 14	14:17 (14)
26	05:11	06:19	07:28	16:58 (12)	07:37		08:44 (37)	08:49	09:40 (13)	09:28	13:14 (26)
	22:14	20:56	19:27 47	17:45 (12)	17:04	122	15:37 (7)	15:58 119	14:15 (14)	15:46 17	14:18 (14)
27	05:13	06:22	07:30	16:58 (12)	07:39		08:48 (37)	08:51	09:49 (13)	09:28	13:13 (26)
	22:11	20:53	19:24 46	17:44 (12)	17:01	118	15:36 (7)	15:56 112	14:16 (14)	15:47 20	14:19 (14)
28	05:15	06:24	07:32	16:58 (12)	07:41		08:51 (37)	08:53	09:49 (13)	09:28	13:12 (26)
	22:09	20:51	19:21 46	17:44 (12)	16:59	115	15:35 (7)	15:55 109	14:16 (14)	15:48 24	14:21 (14)
29	05:17	06:26	07:35	16:58 (12)	07:44		08:54 (37)	08:55	09:50 (13)	09:28	12:14 (32)
	22:07	20:48	19:19 50	17:48 (9)	16:56	119	15:34 (7)	15:53 106	14:16 (14)	15:49 31	14:23 (14)
30	05:20	06:28	07:37	16:57 (12)	07:46		08:57 (37)	08:57	09:50 (13)	09:28	12:13 (32)
	22:05	20:45	19:16 52	17:49 (9)	16:53	117	15:32 (7)	15:52 103	14:16 (14)	15:50 37	14:25 (14)
31	05:22	06:31			07:49		08:59 (37)			09:28	12:12 (32)
	22:03	20:42			16:51	115	15:29 (7)			15:51 41	14:25 (14)
Potential sun hours	546	478	386		319			236		199	
Total, worst case				1040		2454		3527		1230	
Sun reduction				0,50		0,50		0,50		0,50	
Oper. time red.				0,80		0,80		0,80		0,80	
Wind dir. red.				0,59		0,59		0,60		0,59	
Total reduction				0,24		0,24		0,24		0,24	
Total, real				245		577		846		289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
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9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
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	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
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19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
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20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
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	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1) 04:31	20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1) 22:48	17 20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)		05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)		22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545		478	386	319	236	200
Total, worst case					5	469	150						
Sun reduction					0,50	0,50	0,50						
Oper. time red.					0,80	0,80	0,80						
Wind dir. red.					0,73	0,73	0,73						
Total reduction					0,29	0,29	0,29						
Total, real					1	138	44						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (82)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13 22	09:01 (85)	16:49	15:52
2	09:27	08:43		07:33	08:13 (85)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (82)	07:54	09:01
	15:54	16:59		18:07 6	08:19 (85)	20:19	21:28	22:32	22:48	21:58	20:37		19:10 25	09:01 (85)	16:47	15:50
3	09:27	08:41		07:30	08:10 (85)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (82)	07:56	09:03
	15:56	17:01		18:10 12	08:22 (85)	20:21	21:30	22:33	22:47	21:56	20:34		19:07 26	09:01 (85)	16:44	15:49
4	09:26	08:39		07:27	08:07 (85)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (82)	07:59	09:05
	15:57	17:04		18:12 16	08:23 (85)	20:24	21:33	22:35	22:46	21:54	20:31		19:05 28	09:02 (85)	16:42	15:48
5	09:26	08:37		07:24	08:00 (82)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (82)	08:01	09:07
	15:59	17:06		18:14 24	08:24 (85)	20:26	21:35	22:36	22:45	21:51	20:28		19:02 28	09:02 (85)	16:39	15:47
6	09:25	08:34		07:21	07:58 (82)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (82)	08:03	09:08
	16:00	17:09		18:17 26	08:24 (85)	20:28	21:37	22:38	22:45	21:49	20:25		18:59 28	09:01 (85)	16:37	15:47
7	09:24	08:32		07:19	07:57 (82)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (82)	08:06	09:10
	16:02	17:11		18:19 28	08:25 (85)	20:30	21:40	22:39	22:44	21:47	20:23		18:56 27	09:01 (85)	16:35	15:46
8	09:23	08:30		07:16	07:56 (82)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (82)	08:08	09:12
	16:04	17:14		18:21 28	08:24 (85)	20:33	21:42	22:40	22:43	21:44	20:20		18:53 25	09:00 (85)	16:32	15:45
9	09:23	08:27		07:13	07:56 (82)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (82)	08:11	09:13
	16:06	17:16		18:24 28	08:24 (85)	20:35	21:44	22:41	22:41	21:42	20:17		18:50 22	08:58 (85)	16:30	15:44
10	09:22	08:25		07:10	07:56 (82)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (85)	08:13	09:15
	16:07	17:18		18:26 27	08:23 (85)	20:37	21:46	22:43	22:40	21:39	20:14		18:48 14	08:57 (85)	16:28	15:44
11	09:21	08:23		07:07	07:58 (82)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (85)	08:15	09:16
	16:09	17:21		18:28 26	08:24 (85)	20:40	21:49	22:44	22:39	21:37	20:11		18:45 10	08:54 (85)	16:26	15:43
12	09:19	08:20		07:04	07:59 (82)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31 23	08:22 (85)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (81)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (84)	08:07		08:20	09:19
	16:13	17:26		18:33 20	08:21 (85)	20:44	21:53	22:45	22:36	21:31	20:05 8	08:21 (84)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (81)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (84)	08:09		08:22	09:20
	16:15	17:28		18:35 20	08:18 (85)	20:47	21:55	22:46	22:35	21:29	20:02 13	08:23 (84)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (81)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (84)	08:11		08:25	09:21
	16:17	17:31		18:38 14	08:14 (85)	20:49	21:57	22:47	22:33	21:26	19:59 16	08:24 (84)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (81)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (84)	08:13	09:01 (83)	08:27	09:22
	16:19	17:33		18:40 12	07:44 (81)	20:51	22:00	22:48	22:32	21:24	19:57 17	08:25 (84)	18:31 9	09:10 (83)	16:15	15:42
17	09:13	08:07		06:50	07:32 (81)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (84)	08:16	09:00 (83)	08:29	09:23
	16:21	17:36		18:42 12	07:44 (81)	20:53	22:02	22:48	22:30	21:21	19:54 18	08:25 (84)	18:28 12	09:12 (83)	16:13	15:42
18	09:12	08:05	08:36 (83)	06:47	07:32 (81)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (84)	08:18	08:59 (83)	08:32	09:24
	16:24	17:38 3	08:39 (83)	18:45 11	07:43 (81)	20:56	22:04	22:49	22:29	21:18	19:51 19	08:25 (84)	18:25 13	09:12 (83)	16:12	15:42
19	09:10	08:02	08:33 (83)	06:44	07:26 (84)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (84)	08:20	08:59 (83)	08:34	09:25
	16:26	17:41 7	08:40 (83)	18:47 16	07:42 (81)	20:58	22:06	22:49	22:27	21:16	19:48 19	08:24 (84)	18:23 14	09:13 (83)	16:10	15:43
20	09:08	08:00	08:30 (83)	06:42	07:23 (84)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (84)	08:23	08:58 (83)	08:36	09:25
	16:28	17:43 11	08:41 (83)	18:49 17	07:40 (81)	21:00	22:08	22:50	22:25	21:13	19:45 19	08:24 (84)	18:20 14	09:12 (83)	16:08	15:43
21	09:07	07:57	08:27 (83)	06:39	07:21 (84)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (84)	08:25	08:58 (83)	08:39	09:26
	16:30	17:46 14	08:41 (83)	18:52 15	07:36 (84)	21:03	22:10	22:50	22:23	21:10	19:42 17	08:22 (84)	18:17 14	09:12 (83)	16:06	15:43
22	09:05	07:54	08:27 (83)	06:36	07:20 (84)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (84)	08:27	09:01 (83)	08:41	09:27
	16:32	17:48 14	08:41 (83)	18:54 18	07:38 (84)	21:05	22:12	22:50	22:22	21:08	19:39 16	08:22 (84)	18:15 10	09:11 (83)	16:04	15:44
23	09:03	07:52	08:28 (83)	06:33	07:19 (84)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (84)	08:30	09:04 (83)	08:43	09:27
	16:35	17:50 13	08:41 (83)	18:56 19	07:38 (84)	21:07	22:14	22:50	22:20	21:05	19:36 17	08:24 (81)	18:12 6	09:10 (83)	16:03	15:44
24	09:01	07:49	08:28 (83)	06:30	07:19 (84)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (84)	08:32	09:06 (83)	08:45	09:27
	16:37	17:53 13	08:41 (83)	18:58 19	07:38 (84)	21:10	22:16	22:50	22:18	21:02	19:33 16	08:25 (81)	18:09 2	09:08 (83)	16:01	15:45
25	09:00	07:46	08:29 (83)	06:27	07:18 (84)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (81)	07:35		08:47	09:28
	16:39	17:55 10	08:39 (83)	19:01 19	07:37 (84)	21:12	22:18	22:50	22:16	20:59	19:30 11	08:26 (81)	17:07		16:00	15:46
26	08:58	07:44	08:30 (83)	06:24	07:18 (84)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (81)	07:37		08:49	09:28
	16:42	17:58 7	08:37 (83)	19:03 19	07:37 (84)	21:14	22:20	22:50	22:14	20:57	19:28 12	08:26 (81)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (84)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (81)	07:39		08:52	09:28
	16:44	18:00		19:05 18	07:36 (84)	21:17	22:22	22:50	22:12	20:54	19:25 12	08:26 (81)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (84)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (81)	07:42		08:54	09:28
	16:47	18:02		19:08 16	07:34 (84)	21:19	22:23	22:50	22:09	20:51	19:22 12	08:26 (81)	16:59		15:55	15:48
29	08:52			07:16	08:19 (84)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (81)	07:44		08:56	09:28
	16:49			20:10 14	08:33 (84)	21:21	22:25	22:49	22:07	20:48	19:19 19	08:57 (85)	16:56		15:54	15:49
30	08:50			07:13	08:21 (84)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (81)	07:47		08:58	09:28
	16:51			20:12 9	08:30 (84)	21:24	22:27	22:49	22:05	20:45	19:16 21	08:59 (85)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		
Sun reduction			0,50		0,50							0,50		0,50		
Oper. time red.			0,80		0,80							0,80		0,80		
Wind dir. red.			0,73		0,70							0,69		0,72		
Total reduction			0,29		0,28							0,28		0,29		
Total, real			27		149							78		100		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April		May			June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43		07:33	07:04		05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41		07:30	07:01		05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39		07:27	06:58		05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37		07:24	06:55		05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34		07:21	06:53		05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32		07:19	06:50		05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	09:03 (85)	07:16	06:47		05:27			04:32		06:15 (36)
	16:04	17:14	2 09:05 (85)	18:21	20:33		21:42			22:40	29	06:44 (36)
9	09:23	08:27	09:00 (85)	07:13	06:44		05:24			04:31		06:16 (36)
	16:06	17:16	7 09:07 (85)	18:24	20:35		21:44			22:42	29	06:45 (36)
10	09:22	08:25	08:58 (85)	07:10	06:41		07:48 (38)	05:22		04:31		06:15 (36)
	16:07	17:18	10 09:08 (85)	18:26	20:37	10	07:58 (38)	21:46		22:43	30	06:45 (36)
11	09:21	08:23	08:56 (85)	07:07	06:38		07:45 (38)	05:20		04:30		06:16 (36)
	16:09	17:21	13 09:09 (85)	18:28	20:40	17	08:02 (38)	21:49		22:44	29	06:45 (36)
12	09:20	08:20	08:55 (85)	07:04	06:36		07:41 (38)	05:17		04:29		06:15 (36)
	16:11	17:23	14 09:09 (85)	18:31	20:42	22	08:03 (38)	21:51		22:45	30	06:45 (36)
13	09:18	08:18	08:55 (85)	07:02	06:33		07:37 (38)	05:15		04:29		06:16 (36)
	16:13	17:26	14 09:09 (85)	18:33	20:44	27	08:04 (38)	21:53		22:46	30	06:46 (36)
14	09:17	08:15	08:56 (85)	06:59	06:30		07:35 (38)	05:13		04:28		06:16 (36)
	16:15	17:28	13 09:09 (85)	18:35	20:47	30	08:05 (38)	21:55		22:46	30	06:46 (36)
15	09:16	08:13	08:56 (85)	06:56	06:27		07:34 (38)	05:11		04:28		06:15 (36)
	16:17	17:31	13 09:09 (85)	18:38	20:49	33	08:07 (38)	21:57		22:47	31	06:46 (36)
16	09:14	08:10	08:56 (85)	06:53	06:24		07:33 (38)	05:09		04:28		06:16 (36)
	16:19	17:33	11 09:07 (85)	18:40	20:51	34	08:07 (38)	22:00		22:48	30	06:46 (36)
17	09:13	08:07	08:58 (85)	06:50	06:22		07:32 (38)	05:06		04:27		06:16 (36)
	16:21	17:36	7 09:05 (85)	18:42	20:54	35	08:07 (38)	22:02		22:48	31	06:47 (36)
18	09:12	08:05		06:47	06:19		07:31 (38)	05:04		04:27		06:16 (36)
	16:24	17:38		18:45	20:56	37	08:08 (38)	22:04		22:49	31	06:47 (36)
19	09:10	08:02		06:44	06:16		07:30 (38)	05:02		04:27		06:16 (36)
	16:26	17:41		18:47	20:58	38	08:08 (38)	22:06		22:49	31	06:47 (36)
20	09:08	08:00		06:42	06:13		07:30 (38)	05:00		04:27		06:16 (36)
	16:28	17:43		18:49	21:00	39	08:09 (38)	22:08		22:50	31	06:47 (36)
21	09:07	07:57		06:39	06:11		07:30 (38)	04:58		04:27		06:16 (36)
	16:30	17:46		18:52	21:03	38	08:08 (38)	22:10		22:50	31	06:47 (36)
22	09:05	07:54		06:36	06:08		07:29 (38)	04:56		04:27		06:17 (36)
	16:32	17:48		18:54	21:05	39	08:08 (38)	22:12		22:50	31	06:48 (36)
23	09:03	07:52		06:33	06:05		07:29 (38)	04:55		04:28		06:17 (36)
	16:35	17:50		18:56	21:07	39	08:08 (38)	22:14		22:50	31	06:48 (36)
24	09:02	07:49		06:30	06:02		07:29 (38)	04:53		04:28		06:17 (36)
	16:37	17:53		18:58	21:10	38	08:07 (38)	22:16		22:50	31	06:48 (36)
25	09:00	07:46		06:27	06:00		07:29 (38)	04:51		04:28		06:18 (36)
	16:39	17:55		19:01	21:12	38	08:07 (38)	22:18		22:50	31	06:49 (36)
26	08:58	07:44		06:24	05:57		07:29 (38)	04:49	06:24 (36)	04:29		06:18 (36)
	16:42	17:58		19:03	21:14	37	08:06 (38)	22:20	8 06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41		06:21	05:54		07:29 (38)	04:48	06:21 (36)	04:29		06:19 (36)
	16:44	18:00		19:05	21:17	37	08:06 (38)	22:22	13 06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38		06:18	05:52		07:29 (38)	04:46	06:20 (36)	04:30		06:18 (36)
	16:47	18:02		19:08	21:19	36	08:05 (38)	22:24	16 06:36 (36)	22:50	31	06:49 (36)
29	08:52			07:16	05:49		07:30 (38)	04:44	06:19 (36)	04:31		06:19 (36)
	16:49			20:10	21:21	34	08:04 (38)	22:25	18 06:37 (36)	22:49	30	06:49 (36)
30	08:50			07:13	05:47		07:30 (38)	04:43	06:19 (36)	04:31		06:19 (36)
	16:51			20:12	21:24	33	08:03 (38)	22:27	20 06:39 (36)	22:49	30	06:49 (36)
31	08:48			07:10				04:41	06:17 (36)			
	16:54			20:14				22:29	22 06:39 (36)			
Potential sun hours	221	260		365	432			521		547		
Total, worst case			104			691			254		878	
Sun reduction			0,50			0,50			0,50		0,50	
Oper. time red.			0,80			0,80			0,80		0,80	
Wind dir. red.			0,74			0,65			0,62		0,58	
Total reduction			0,29			0,26			0,25		0,23	
Total, real			31			178			63		204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October			November			December
1	04:32		06:20 (36)	05:24			06:33		07:44 (38)	07:39			07:51		08:28 (85)	09:00
	22:48	30	06:50 (36)	22:01			20:40	17	08:01 (38)	19:13			16:49	9	08:37 (85)	15:51
2	04:33		06:20 (36)	05:27			06:35		07:47 (38)	07:42			07:54		08:30 (85)	09:01
	22:48	30	06:50 (36)	21:58			20:37	10	07:57 (38)	19:10			16:47	6	08:36 (85)	15:50
3	04:34		06:20 (36)	05:29			06:38			07:44			07:56		08:33 (85)	09:03
	22:47	29	06:49 (36)	21:56			20:34			19:07			16:44	1	08:34 (85)	15:49
4	04:35		06:20 (36)	05:31			06:40			07:46			07:59			09:05
	22:46	29	06:49 (36)	21:54			20:31			19:05			16:42			15:48
5	04:36		06:21 (36)	05:33			06:42			07:48			08:01			09:07
	22:46	28	06:49 (36)	21:51			20:28			19:02			16:39			15:47
6	04:38		06:21 (36)	05:35		07:49 (38)	06:44			07:51			08:03			09:09
	22:45	28	06:49 (36)	21:49	13	08:02 (38)	20:25			18:59			16:37			15:47
7	04:39		06:23 (36)	05:38		07:46 (38)	06:47			07:53			08:06			09:10
	22:44	27	06:50 (36)	21:47	18	08:04 (38)	20:23			18:56			16:35			15:46
8	04:40		06:23 (36)	05:40		07:44 (38)	06:49			07:55			08:08			09:12
	22:43	26	06:49 (36)	21:44	22	08:06 (38)	20:20			18:53			16:32			15:45
9	04:42		06:23 (36)	05:42		07:43 (38)	06:51			07:57			08:11			09:13
	22:42	26	06:49 (36)	21:42	25	08:08 (38)	20:17			18:50			16:30			15:44
10	04:43		06:24 (36)	05:44		07:41 (38)	06:53			08:00			08:13			09:15
	22:40	24	06:48 (36)	21:39	28	08:09 (38)	20:14			18:48			16:28			15:44
11	04:45		06:25 (36)	05:46		07:40 (38)	06:55			08:02			08:15			09:16
	22:39	23	06:48 (36)	21:37	30	08:10 (38)	20:11			18:45			16:26			15:43
12	04:46		06:25 (36)	05:49		07:39 (38)	06:58			08:04			08:18			09:17
	22:38	23	06:48 (36)	21:34	32	08:11 (38)	20:08			18:42			16:24			15:43
13	04:48		06:26 (36)	05:51		07:38 (38)	07:00			08:07			08:20			09:19
	22:36	21	06:47 (36)	21:32	33	08:11 (38)	20:05			18:39			16:22			15:43
14	04:49		06:28 (36)	05:53		07:37 (38)	07:02			08:09			08:22			09:20
	22:35	18	06:46 (36)	21:29	35	08:12 (38)	20:02			18:36			16:19			15:43
15	04:51		06:28 (36)	05:55		07:36 (38)	07:04			08:11			08:25			09:21
	22:34	17	06:45 (36)	21:26	36	08:12 (38)	19:59			18:34			16:17			15:42
16	04:53		06:30 (36)	05:58		07:36 (38)	07:06			08:14			08:27			09:22
	22:32	14	06:44 (36)	21:24	37	08:13 (38)	19:57			18:31			16:15			15:42
17	04:54		06:31 (36)	06:00		07:35 (38)	07:09			08:16			08:29			09:23
	22:30	11	06:42 (36)	21:21	38	08:13 (38)	19:54			18:28			16:13			15:42
18	04:56		06:35 (36)	06:02		07:36 (38)	07:11			08:18			08:32			09:24
	22:29	5	06:40 (36)	21:18	38	08:14 (38)	19:51			18:25			16:12			15:42
19	04:58			06:04		07:35 (38)	07:13			08:21			08:34			09:25
	22:27			21:16	39	08:14 (38)	19:48			18:23			16:10			15:43
20	05:00			06:07		07:35 (38)	07:15			08:23			08:36			09:25
	22:25			21:13	38	08:13 (38)	19:45			18:20			16:08			15:43
21	05:02			06:09		07:34 (38)	07:17			08:25			08:39			09:26
	22:23			21:10	39	08:13 (38)	19:42			18:17			16:06			15:43
22	05:04			06:11		07:34 (38)	07:20			08:28			08:41			09:27
	22:22			21:08	39	08:13 (38)	19:39			18:15			16:04			15:44
23	05:06			06:13		07:34 (38)	07:22			08:30			08:43			09:27
	22:20			21:05	38	08:12 (38)	19:36			18:12			16:03			15:44
24	05:08			06:15		07:34 (38)	07:24			08:32		09:30 (85)	08:45			09:28
	22:18			21:02	37	08:11 (38)	19:33			18:09	3	09:33 (85)	16:01			15:45
25	05:10			06:18		07:34 (38)	07:26			07:35		08:28 (85)	08:47			09:28
	22:16			20:59	37	08:11 (38)	19:30			17:07	8	08:36 (85)	16:00			15:46
26	05:12			06:20		07:34 (38)	07:28			07:37		08:27 (85)	08:50			09:28
	22:14			20:57	36	08:10 (38)	19:28			17:04	11	08:38 (85)	15:58			15:46
27	05:14			06:22		07:35 (38)	07:31			07:39		08:25 (85)	08:52			09:28
	22:12			20:54	34	08:09 (38)	19:25			17:02	13	08:38 (85)	15:57			15:47
28	05:16			06:24		07:35 (38)	07:33			07:42		08:25 (85)	08:54			09:28
	22:10			20:51	32	08:07 (38)	19:22			16:59	14	08:39 (85)	15:55			15:48
29	05:18			06:27		07:36 (38)	07:35			07:44		08:24 (85)	08:56			09:28
	22:07			20:48	30	08:06 (38)	19:19			16:56	14	08:38 (85)	15:54			15:49
30	05:20			06:29		07:38 (38)	07:37			07:47		08:25 (85)	08:58			09:28
	22:05			20:45	27	08:05 (38)	19:16			16:54	13	08:38 (85)	15:53			15:50
31	05:22			06:31		07:41 (38)				07:49		08:26 (85)				09:28
	22:03			20:43	22	08:03 (38)				16:51	12	08:38 (85)				15:51
Potential sun hours	545			478			386			319			236			200
Total, worst case		409			833			27			88			16		
Sun reduction		0,50			0,50			0,50			0,50			0,50		
Oper. time red.		0,80			0,80			0,80			0,80			0,80		
Wind dir. red.		0,58			0,65			0,65			0,74			0,74		
Total reduction		0,23			0,26			0,26			0,29			0,29		
Total, real		95			215			7			26			5		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April		May			June		
1	09:28		08:46			07:35		08:16 (85)	07:07		05:44			04:40		06:01 (38)
	15:53		16:56			18:05	15	08:31 (85)	20:17		21:26			22:30	34	06:35 (38)
2	09:27		08:43			07:33		08:17 (85)	07:04		05:42			04:39		06:01 (38)
	15:54		16:59			18:07	13	08:30 (85)	20:19		21:28			22:32	35	06:36 (38)
3	09:27		08:41			07:30		08:18 (85)	07:01		05:39			04:38		06:01 (38)
	15:56		17:01			18:10	10	08:28 (85)	20:21		21:30			22:33	35	06:36 (38)
4	09:26		08:39			07:27		08:20 (85)	06:58		05:37			04:36		06:00 (38)
	15:57		17:04			18:12	5	08:25 (85)	20:24		21:33			22:35	36	06:36 (38)
5	09:26		08:37			07:24			06:55		05:34			04:35		06:01 (38)
	15:59		17:06			18:14			20:26		21:35			22:36	36	06:37 (38)
6	09:25		08:34			07:21			06:53		05:32			04:34		06:01 (38)
	16:00		17:09			18:17			20:28		21:37			22:38	36	06:37 (38)
7	09:24		08:32			07:19			06:50		05:29			04:33		06:01 (38)
	16:02		17:11			18:19			20:31		21:40			22:39	36	06:37 (38)
8	09:24		08:30			07:16		07:46 (84)	06:47		05:27			04:32		06:01 (38)
	16:04		17:14			18:21	7	07:53 (84)	20:33		21:42			22:40	36	06:37 (38)
9	09:23		08:27			07:13		07:44 (84)	06:44		05:24			04:31		06:02 (38)
	16:06		17:16			18:24	10	07:54 (84)	20:35		21:44			22:41	36	06:38 (38)
10	09:22		08:25			07:10		07:43 (84)	06:41		05:22			04:31		06:01 (38)
	16:07		17:19			18:26	13	07:56 (84)	20:37		21:46			22:43	37	06:38 (38)
11	09:21		08:23			07:07		07:42 (84)	06:38		05:20			04:30		06:02 (38)
	16:09		17:21			18:28	14	07:56 (84)	20:40		21:49			22:44	37	06:39 (38)
12	09:20		08:20			07:04		07:42 (84)	06:36		05:17			04:29		06:02 (38)
	16:11		17:23			18:31	14	07:56 (84)	20:42		21:51			22:45	36	06:38 (38)
13	09:18		08:18			07:02		07:41 (84)	06:33		05:15			04:29		06:02 (38)
	16:13		17:26			18:33	15	07:56 (84)	20:44		21:53			22:46	37	06:39 (38)
14	09:17		08:15			06:59		07:42 (84)	06:30		05:13			04:28		06:03 (38)
	16:15		17:28			18:35	13	07:55 (84)	20:47		21:55			22:46	36	06:39 (38)
15	09:16		08:13			06:56		07:42 (84)	06:27		05:11			04:28		06:02 (38)
	16:17		17:31			18:38	11	07:53 (84)	20:49		21:57			22:47	37	06:39 (38)
16	09:14		08:10			06:53		07:44 (84)	06:24		05:09			04:28		06:02 (38)
	16:19		17:33			18:40	7	07:51 (84)	20:51		22:00			22:48	37	06:39 (38)
17	09:13		08:07			06:50			06:22		05:06		06:12 (38)	04:27		06:03 (38)
	16:21		17:36			18:42			20:54		22:02	10	06:22 (38)	22:48	37	06:40 (38)
18	09:12		08:05			06:47			06:19		05:04		06:11 (38)	04:27		06:03 (38)
	16:24		17:38			18:45			20:56		22:04	14	06:25 (38)	22:49	37	06:40 (38)
19	09:10		08:02			06:44			06:16		05:02		06:09 (38)	04:27		06:03 (38)
	16:26		17:41			18:47			20:58		22:06	18	06:27 (38)	22:49	37	06:40 (38)
20	09:08		08:00			06:42			06:13		05:00		06:08 (38)	04:27		06:03 (38)
	16:28		17:43			18:49			21:00		22:08	20	06:28 (38)	22:50	37	06:40 (38)
21	09:07		07:57			06:39			06:11		04:58		06:06 (38)	04:27		06:03 (38)
	16:30		17:46			18:52			21:03		22:10	23	06:29 (38)	22:50	37	06:40 (38)
22	09:05		07:54			06:36			06:08		04:56		06:05 (38)	04:27		06:04 (38)
	16:32		17:48			18:54			21:05		22:12	25	06:30 (38)	22:50	37	06:41 (38)
23	09:03		07:52		08:21 (85)	06:33			06:05		04:55		06:03 (38)	04:28		06:04 (38)
	16:35		17:50	8	08:29 (85)	18:56			21:07		22:14	28	06:31 (38)	22:50	37	06:41 (38)
24	09:02		07:49		08:18 (85)	06:30			06:02		04:53		06:03 (38)	04:28		06:04 (38)
	16:37		17:53	12	08:30 (85)	18:58			21:10		22:16	29	06:32 (38)	22:50	37	06:41 (38)
25	09:00		07:46		08:17 (85)	06:27			06:00		04:51		06:02 (38)	04:28		06:05 (38)
	16:39		17:55	14	08:31 (85)	19:01			21:12		22:18	30	06:32 (38)	22:50	37	06:42 (38)
26	08:58		07:44		08:16 (85)	06:24			05:57		04:49		06:02 (38)	04:29		06:05 (38)
	16:42		17:58	15	08:31 (85)	19:03			21:14		22:20	31	06:33 (38)	22:50	36	06:41 (38)
27	08:56		07:41		08:15 (85)	06:21			05:54		04:48		06:01 (38)	04:29		06:05 (38)
	16:44		18:00	16	08:31 (85)	19:05			21:17		22:22	32	06:33 (38)	22:50	37	06:42 (38)
28	08:54		07:38		08:15 (85)	06:18			05:52		04:46		06:01 (38)	04:30		06:05 (38)
	16:47		18:02	15	08:30 (85)	19:08			21:19		22:24	33	06:34 (38)	22:50	37	06:42 (38)
29	08:52					07:16			05:49		04:44		06:01 (38)	04:31		06:05 (38)
	16:49					20:10			21:21		22:25	34	06:35 (38)	22:49	37	06:42 (38)
30	08:50					07:13			05:47		04:43		06:01 (38)	04:32		06:06 (38)
	16:51					20:12			21:24		22:27	34	06:35 (38)	22:49	37	06:43 (38)
31	08:48					07:10					04:41		06:01 (38)			
	16:54					20:14					22:29	34	06:35 (38)			
Potential sun hours	221		260			365			432		521			547		
Total, worst case				80			147					395			1094	
Sun reduction				0,50			0,50					0,50			0,50	
Oper. time red.				0,80			0,80					0,80			0,80	
Wind dir. red.				0,72			0,71					0,58			0,58	
Total reduction				0,29			0,28					0,23			0,23	
Total, real				23			42					91			252	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August	September			October			November	December
1	04:32		06:06 (38)	05:24	06:33			07:39		08:21 (84)	07:51	09:00
	22:48	37	06:43 (38)	22:01	20:40			19:13	14	08:35 (84)	16:49	15:52
2	04:33		06:07 (38)	05:27	06:35			07:42		08:20 (84)	07:54	09:01
	22:48	36	06:43 (38)	21:58	20:37			19:10	15	08:35 (84)	16:47	15:50
3	04:34		06:06 (38)	05:29	06:38			07:44		08:20 (84)	07:56	09:03
	22:47	37	06:43 (38)	21:56	20:34			19:07	13	08:33 (84)	16:44	15:49
4	04:35		06:06 (38)	05:31	06:40			07:46		08:21 (84)	07:59	09:05
	22:46	37	06:43 (38)	21:54	20:31			19:05	12	08:33 (84)	16:42	15:48
5	04:37		06:06 (38)	05:33	06:42			07:48		08:22 (84)	08:01	09:07
	22:46	37	06:43 (38)	21:51	20:28			19:02	9	08:31 (84)	16:39	15:47
6	04:38		06:08 (38)	05:35	06:44			07:51			08:03	09:09
	22:45	36	06:44 (38)	21:49	20:25			18:59			16:37	15:47
7	04:39		06:08 (38)	05:38	06:47			07:53			08:06	09:10
	22:44	36	06:44 (38)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:08 (38)	05:40	06:49			07:55			08:08	09:12
	22:43	36	06:44 (38)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:08 (38)	05:42	06:51			07:57			08:11	09:13
	22:42	36	06:44 (38)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:08 (38)	05:44	06:53			08:00		08:54 (85)	08:13	09:15
	22:40	35	06:43 (38)	21:39	20:14			18:48	7	09:01 (85)	16:28	15:44
11	04:45		06:09 (38)	05:46	06:55			08:02		08:51 (85)	08:15	09:16
	22:39	35	06:44 (38)	21:37	20:11			18:45	11	09:02 (85)	16:26	15:43
12	04:46		06:09 (38)	05:49	06:58			08:04		08:49 (85)	08:18	09:17
	22:38	35	06:44 (38)	21:34	20:08			18:42	14	09:03 (85)	16:24	15:43
13	04:48		06:09 (38)	05:51	07:00			08:07		08:49 (85)	08:20	09:19
	22:36	34	06:43 (38)	21:31	20:05			18:39	15	09:04 (85)	16:22	15:43
14	04:49		06:10 (38)	05:53	07:02			08:09		08:48 (85)	08:22	09:20
	22:35	33	06:43 (38)	21:29	20:02			18:36	15	09:03 (85)	16:19	15:43
15	04:51		06:10 (38)	05:55	07:04			08:11		08:48 (85)	08:25	09:21
	22:34	33	06:43 (38)	21:26	19:59			18:34	16	09:04 (85)	16:17	15:42
16	04:53		06:11 (38)	05:58	07:06			08:14		08:48 (85)	08:27	09:22
	22:32	32	06:43 (38)	21:24	19:57			18:31	15	09:03 (85)	16:15	15:42
17	04:54		06:11 (38)	06:00	07:09			08:16		08:49 (85)	08:29	09:23
	22:30	31	06:42 (38)	21:21	19:54			18:28	13	09:02 (85)	16:14	15:42
18	04:56		06:12 (38)	06:02	07:11			08:18		08:50 (85)	08:32	09:24
	22:29	30	06:42 (38)	21:18	19:51			18:25	11	09:01 (85)	16:12	15:42
19	04:58		06:13 (38)	06:04	07:13			08:20		08:53 (85)	08:34	09:25
	22:27	29	06:42 (38)	21:16	19:48			18:23	6	08:59 (85)	16:10	15:43
20	05:00		06:13 (38)	06:07	07:15			08:23			08:36	09:25
	22:25	28	06:41 (38)	21:13	19:45			18:20			16:08	15:43
21	05:02		06:14 (38)	06:09	07:17			08:25			08:39	09:26
	22:23	27	06:41 (38)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:16 (38)	06:11	07:20			08:28			08:41	09:27
	22:22	24	06:40 (38)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:17 (38)	06:13	07:22			08:30			08:43	09:27
	22:20	21	06:38 (38)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:18 (38)	06:15	07:24			08:32			08:45	09:28
	22:18	19	06:37 (38)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:20 (38)	06:18	07:26			07:35			08:47	09:28
	22:16	16	06:36 (38)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:22 (38)	06:20	07:28			07:37			08:49	09:28
	22:14	12	06:34 (38)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:25 (38)	06:22	07:31		08:27 (84)	07:39			08:52	09:28
	22:12	6	06:31 (38)	20:54	19:25	5	08:32 (84)	17:02			15:57	15:47
28	05:16			06:24	07:33		08:24 (84)	07:42			08:54	09:28
	22:10			20:51	19:22	10	08:34 (84)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:22 (84)	07:44			08:56	09:28
	22:07			20:48	19:19	12	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:21 (84)	07:47			08:58	09:28
	22:05			20:45	19:16	14	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		808				41			186			
Sun reduction		0,50				0,50			0,50			
Oper. time red.		0,80				0,80			0,80			
Wind dir. red.		0,58				0,70			0,72			
Total reduction		0,23				0,28			0,29			
Total, real		186				11			53			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April		May			June		
1	09:28		08:46			07:35		08:18 (85)	07:07		05:44			04:40		06:18 (38)
	15:53		16:56			18:05	13	08:31 (85)	20:17		21:26			22:30	28	06:46 (38)
2	09:27		08:43			07:33		08:19 (85)	07:04		05:42			04:39		06:18 (38)
	15:54		16:59			18:07	10	08:29 (85)	20:19		21:28			22:32	28	06:46 (38)
3	09:27		08:41			07:30		08:21 (85)	07:01		05:39			04:38		06:17 (38)
	15:56		17:01			18:10	5	08:26 (85)	20:21		21:31			22:33	29	06:46 (38)
4	09:26		08:39			07:27			06:58		05:37			04:36		06:16 (38)
	15:57		17:04			18:12			20:24		21:33			22:35	30	06:46 (38)
5	09:26		08:37			07:24			06:55		05:34			04:35		06:16 (38)
	15:59		17:06			18:14			20:26		21:35			22:36	31	06:47 (38)
6	09:25		08:34			07:21			06:53		05:32			04:34		06:15 (38)
	16:00		17:09			18:17			20:28		21:37			22:38	32	06:47 (38)
7	09:24		08:32			07:19		07:48 (84)	06:50		05:29			04:33		06:14 (38)
	16:02		17:11			18:19	6	07:54 (84)	20:31		21:40			22:39	32	06:46 (38)
8	09:24		08:30			07:16		07:46 (84)	06:47		05:27			04:32		06:13 (38)
	16:04		17:14			18:21	10	07:56 (84)	20:33		21:42			22:40	33	06:46 (38)
9	09:23		08:27			07:13		07:44 (84)	06:44		05:24			04:31		06:14 (38)
	16:06		17:16			18:24	13	07:57 (84)	20:35		21:44			22:41	33	06:47 (38)
10	09:22		08:25			07:10		07:44 (84)	06:41		05:22			04:31		06:13 (38)
	16:07		17:19			18:26	14	07:58 (84)	20:37		21:46			22:43	33	06:46 (38)
11	09:21		08:23			07:07		07:44 (84)	06:38		05:20			04:30		06:14 (38)
	16:09		17:21			18:28	14	07:58 (84)	20:40		21:49			22:44	33	06:47 (38)
12	09:20		08:20			07:04		07:44 (84)	06:36		05:17			04:29		06:14 (38)
	16:11		17:23			18:31	13	07:57 (84)	20:42		21:51			22:45	32	06:46 (38)
13	09:18		08:18			07:02		07:44 (84)	06:33		05:15			04:29		06:14 (38)
	16:13		17:26			18:33	12	07:56 (84)	20:44		21:53			22:46	33	06:47 (38)
14	09:17		08:15			06:59		07:45 (84)	06:30		05:13			04:28		06:15 (38)
	16:15		17:28			18:35	10	07:55 (84)	20:47		21:55			22:46	32	06:47 (38)
15	09:16		08:13			06:56		07:46 (84)	06:27		05:11			04:28		06:15 (38)
	16:17		17:31			18:38	6	07:52 (84)	20:49		21:57			22:47	32	06:47 (38)
16	09:14		08:10			06:53			06:24		05:09		06:39 (38)	04:28		06:15 (38)
	16:19		17:33			18:40			20:51		22:00	2	06:41 (38)	22:48	32	06:47 (38)
17	09:13		08:07			06:50			06:22		05:06		06:37 (38)	04:27		06:15 (38)
	16:21		17:36			18:42			20:54		22:02	4	06:41 (38)	22:48	32	06:47 (38)
18	09:12		08:05			06:47			06:19		05:04		06:36 (38)	04:27		06:16 (38)
	16:24		17:38			18:45			20:56		22:04	7	06:43 (38)	22:49	31	06:47 (38)
19	09:10		08:02			06:44			06:16		05:02		06:35 (38)	04:27		06:16 (38)
	16:26		17:41			18:47			20:58		22:06	8	06:43 (38)	22:49	31	06:47 (38)
20	09:08		08:00			06:42			06:13		05:00		06:33 (38)	04:27		06:16 (38)
	16:28		17:43			18:49			21:00		22:08	10	06:43 (38)	22:50	31	06:47 (38)
21	09:07		07:57			06:39			06:11		04:58		06:31 (38)	04:27		06:16 (38)
	16:30		17:46			18:52			21:03		22:10	12	06:43 (38)	22:50	31	06:47 (38)
22	09:05		07:54		08:23 (85)	06:36			06:08		04:56		06:30 (38)	04:27		06:17 (38)
	16:32		17:48	5	08:28 (85)	18:54			21:05		22:12	14	06:44 (38)	22:50	31	06:48 (38)
23	09:03		07:52		08:21 (85)	06:33			06:05		04:55		06:29 (38)	04:28		06:17 (38)
	16:35		17:50	10	08:31 (85)	18:56			21:07		22:14	15	06:44 (38)	22:50	31	06:48 (38)
24	09:02		07:49		08:18 (85)	06:30			06:02		04:53		06:28 (38)	04:28		06:17 (38)
	16:37		17:53	13	08:31 (85)	18:58			21:10		22:16	17	06:45 (38)	22:50	31	06:48 (38)
25	09:00		07:46		08:17 (85)	06:27			06:00		04:51		06:26 (38)	04:28		06:18 (38)
	16:39		17:55	15	08:32 (85)	19:01			21:12		22:18	19	06:45 (38)	22:50	31	06:49 (38)
26	08:58		07:44		08:17 (85)	06:24			05:57		04:49		06:25 (38)	04:29		06:17 (38)
	16:42		17:58	15	08:32 (85)	19:03			21:14		22:20	20	06:45 (38)	22:50	32	06:49 (38)
27	08:56		07:41		08:17 (85)	06:21			05:54		04:48		06:23 (38)	04:29		06:18 (38)
	16:44		18:00	14	08:31 (85)	19:05			21:17		22:22	22	06:45 (38)	22:50	32	06:50 (38)
28	08:54		07:38		08:17 (85)	06:18			05:52		04:46		06:23 (38)	04:30		06:17 (38)
	16:47		18:02	14	08:31 (85)	19:08			21:19		22:24	22	06:45 (38)	22:50	32	06:49 (38)
29	08:52					07:16			05:49		04:44		06:22 (38)	04:31		06:18 (38)
	16:49					20:10			21:21		22:25	24	06:46 (38)	22:49	32	06:50 (38)
30	08:50					07:13			05:47		04:43		06:21 (38)	04:32		06:18 (38)
	16:51					20:12			21:24		22:27	25	06:46 (38)	22:49	33	06:51 (38)
31	08:48					07:10					04:41		06:19 (38)			
	16:54					20:14					22:29	26	06:45 (38)			
Potential sun hours	221		260			365			432		521			547		
Total, worst case				86			126					247			944	
Sun reduction				0,50			0,50					0,50			0,50	
Oper. time red.				0,80			0,80					0,80			0,80	
Wind dir. red.				0,73			0,71					0,58			0,58	
Total reduction				0,29			0,28					0,23			0,23	
Total, real				25			36					58			220	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August		September			October			November	December
1	04:32		06:18 (38)	05:24		06:33			07:39		08:23 (84)	07:51	09:00
	22:48	33	06:51 (38)	22:01		20:40			19:13	13	08:36 (84)	16:49	15:52
2	04:33		06:19 (38)	05:27		06:35			07:42		08:22 (84)	07:54	09:01
	22:48	33	06:52 (38)	21:58		20:37			19:10	14	08:36 (84)	16:47	15:50
3	04:34		06:18 (38)	05:29		06:38			07:44		08:21 (84)	07:56	09:03
	22:47	33	06:51 (38)	21:56		20:34			19:07	14	08:35 (84)	16:44	15:49
4	04:35		06:18 (38)	05:31		06:40			07:46		08:22 (84)	07:59	09:05
	22:46	33	06:51 (38)	21:54		20:31			19:05	13	08:35 (84)	16:42	15:48
5	04:37		06:19 (38)	05:33		06:42			07:48		08:22 (84)	08:01	09:07
	22:46	33	06:52 (38)	21:51		20:28			19:02	12	08:34 (84)	16:39	15:47
6	04:38		06:21 (38)	05:35		06:44			07:51		08:23 (84)	08:03	09:09
	22:45	32	06:53 (38)	21:49		20:25			18:59	9	08:32 (84)	16:37	15:47
7	04:39		06:22 (38)	05:38		06:47			07:53			08:06	09:10
	22:44	31	06:53 (38)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:23 (38)	05:40		06:49			07:55			08:08	09:12
	22:43	30	06:53 (38)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:24 (38)	05:42		06:51			07:57			08:11	09:13
	22:42	29	06:53 (38)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:25 (38)	05:44		06:53			08:00			08:13	09:15
	22:40	28	06:53 (38)	21:39		20:14			18:48			16:28	15:44
11	04:45		06:26 (38)	05:46		06:55			08:02		08:54 (85)	08:15	09:16
	22:39	28	06:54 (38)	21:37		20:11			18:45	7	09:01 (85)	16:26	15:43
12	04:46		06:27 (38)	05:49		06:58			08:04		08:51 (85)	08:18	09:17
	22:38	27	06:54 (38)	21:34		20:08			18:42	12	09:03 (85)	16:24	15:43
13	04:48		06:28 (38)	05:51		07:00			08:07		08:51 (85)	08:20	09:19
	22:36	26	06:54 (38)	21:32		20:05			18:39	13	09:04 (85)	16:22	15:43
14	04:49		06:30 (38)	05:53		07:02			08:09		08:49 (85)	08:22	09:20
	22:35	24	06:54 (38)	21:29		20:02			18:36	15	09:04 (85)	16:19	15:43
15	04:51		06:31 (38)	05:55		07:04			08:11		08:49 (85)	08:25	09:21
	22:34	23	06:54 (38)	21:26		19:59			18:34	15	09:04 (85)	16:17	15:42
16	04:53		06:33 (38)	05:58		07:06			08:14		08:49 (85)	08:27	09:22
	22:32	22	06:55 (38)	21:24		19:57			18:31	15	09:04 (85)	16:15	15:42
17	04:54		06:33 (38)	06:00		07:09			08:16		08:50 (85)	08:29	09:23
	22:30	21	06:54 (38)	21:21		19:54			18:28	14	09:04 (85)	16:14	15:42
18	04:56		06:35 (38)	06:02		07:11			08:18		08:50 (85)	08:32	09:24
	22:29	20	06:55 (38)	21:18		19:51			18:25	12	09:02 (85)	16:12	15:42
19	04:58		06:37 (38)	06:04		07:13			08:21		08:53 (85)	08:34	09:25
	22:27	18	06:55 (38)	21:16		19:48			18:23	8	09:01 (85)	16:10	15:43
20	05:00		06:38 (38)	06:07		07:15			08:23		08:55 (85)	08:36	09:25
	22:25	16	06:54 (38)	21:13		19:45			18:20	3	08:58 (85)	16:08	15:43
21	05:02		06:39 (38)	06:09		07:17			08:25			08:39	09:26
	22:23	15	06:54 (38)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:41 (38)	06:11		07:20			08:28			08:41	09:27
	22:22	13	06:54 (38)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:42 (38)	06:13		07:22			08:30			08:43	09:27
	22:20	11	06:53 (38)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:44 (38)	06:15		07:24			08:32			08:45	09:28
	22:18	9	06:53 (38)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:45 (38)	06:18		07:26			07:35			08:47	09:28
	22:16	8	06:53 (38)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:47 (38)	06:20		07:28			07:37			08:49	09:28
	22:14	6	06:53 (38)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:49 (38)	06:22		07:31			07:39			08:52	09:28
	22:12	3	06:52 (38)	20:54		19:25			17:02			15:57	15:47
28	05:16		06:51 (38)	06:24		07:33		08:29 (84)	07:42			08:54	09:28
	22:10	1	06:52 (38)	20:51		19:22	3	08:32 (84)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:25 (84)	07:44			08:56	09:28
	22:07			20:48		19:19	9	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:23 (84)	07:47			08:58	09:28
	22:05			20:45		19:16	12	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		606					24			189			
Sun reduction		0,50					0,50			0,50			
Oper. time red.		0,80					0,80			0,80			
Wind dir. red.		0,58					0,70			0,72			
Total reduction		0,23					0,28			0,29			
Total, real		141					7			54			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May		June	
1	09:28	08:46		07:35	08:11 (84)	07:07	05:44	07:08 (38)	04:40	06:45 (38)
	15:53	16:56		18:05	6 08:17 (84)	20:17	21:26	1 07:09 (38)	22:30	32 07:17 (38)
2	09:27	08:43		07:33	08:08 (84)	07:04	05:42	07:06 (38)	04:39	06:46 (38)
	15:54	16:59		18:07	11 08:19 (84)	20:19	21:28	6 07:12 (38)	22:32	31 07:17 (38)
3	09:27	08:41		07:30	08:06 (84)	07:01	05:39	07:04 (38)	04:38	06:46 (38)
	15:56	17:01		18:10	13 08:19 (84)	20:21	21:31	9 07:13 (38)	22:33	31 07:17 (38)
4	09:26	08:39		07:27	08:05 (84)	06:58	05:37	07:02 (38)	04:36	06:47 (38)
	15:57	17:04		18:12	14 08:19 (84)	20:24	21:33	13 07:15 (38)	22:35	29 07:16 (38)
5	09:26	08:37		07:24	08:05 (84)	06:55	05:34	07:00 (38)	04:35	06:48 (38)
	15:59	17:06		18:14	14 08:19 (84)	20:26	21:35	16 07:16 (38)	22:36	29 07:17 (38)
6	09:25	08:34		07:21	08:05 (84)	06:53	05:32	06:58 (38)	04:34	06:49 (38)
	16:00	17:09		18:17	13 08:18 (84)	20:28	21:37	19 07:17 (38)	22:38	27 07:16 (38)
7	09:24	08:32		07:19	08:05 (84)	06:50	05:29	06:55 (38)	04:33	06:49 (38)
	16:02	17:11		18:19	12 08:17 (84)	20:31	21:40	22 07:17 (38)	22:39	27 07:16 (38)
8	09:24	08:30		07:16	08:06 (84)	06:47	05:27	06:54 (38)	04:32	06:49 (38)
	16:04	17:14		18:21	10 08:16 (84)	20:33	21:42	24 07:18 (38)	22:40	26 07:15 (38)
9	09:23	08:27		07:13	08:08 (84)	06:44	05:24	06:52 (38)	04:31	06:50 (38)
	16:06	17:16		18:24	5 08:13 (84)	20:35	21:44	27 07:19 (38)	22:42	26 07:16 (38)
10	09:22	08:25		07:10		06:41	05:22	06:50 (38)	04:31	06:51 (38)
	16:07	17:18		18:26		20:37	21:46	29 07:19 (38)	22:43	24 07:15 (38)
11	09:21	08:23		07:07		06:38	05:20	06:48 (38)	04:30	06:52 (38)
	16:09	17:21		18:28		20:40	21:49	32 07:20 (38)	22:44	23 07:15 (38)
12	09:20	08:20		07:04		06:36	05:17	06:46 (38)	04:29	06:52 (38)
	16:11	17:23		18:31		20:42	21:51	34 07:20 (38)	22:45	22 07:14 (38)
13	09:18	08:18		07:02		06:33	05:15	06:45 (38)	04:29	06:53 (38)
	16:13	17:26		18:33		20:44	21:53	35 07:20 (38)	22:46	21 07:14 (38)
14	09:17	08:15		06:59		06:30	05:13	06:43 (38)	04:28	06:53 (38)
	16:15	17:28		18:35		20:47	21:55	37 07:20 (38)	22:46	22 07:15 (38)
15	09:16	08:13	08:44 (85)	06:56		06:27	05:11	06:41 (38)	04:28	06:53 (38)
	16:17	17:31	6 08:50 (85)	18:38		20:49	21:57	39 07:20 (38)	22:47	21 07:14 (38)
16	09:14	08:10	08:42 (85)	06:53		06:24	05:09	06:41 (38)	04:28	06:54 (38)
	16:19	17:33	10 08:52 (85)	18:40		20:51	22:00	39 07:20 (38)	22:48	20 07:14 (38)
17	09:13	08:07	08:40 (85)	06:50		06:22	05:06	06:40 (38)	04:27	06:54 (38)
	16:21	17:36	13 08:53 (85)	18:42		20:54	22:02	40 07:20 (38)	22:48	20 07:14 (38)
18	09:12	08:05	08:40 (85)	06:47		06:19	05:04	06:41 (38)	04:27	06:55 (38)
	16:24	17:38	14 08:54 (85)	18:45		20:56	22:04	40 07:21 (38)	22:49	19 07:14 (38)
19	09:10	08:02	08:39 (85)	06:44		06:16	05:02	06:41 (38)	04:27	06:55 (38)
	16:26	17:41	15 08:54 (85)	18:47		20:58	22:06	40 07:21 (38)	22:49	19 07:14 (38)
20	09:08	08:00	08:39 (85)	06:42		06:13	05:00	06:41 (38)	04:27	06:55 (38)
	16:28	17:43	15 08:54 (85)	18:49		21:00	22:08	39 07:20 (38)	22:50	19 07:14 (38)
21	09:07	07:57	08:39 (85)	06:39		06:11	04:58	06:41 (38)	04:27	06:55 (38)
	16:30	17:46	14 08:53 (85)	18:52		21:03	22:10	39 07:20 (38)	22:50	19 07:14 (38)
22	09:05	07:54	08:39 (85)	06:36		06:08	04:56	06:41 (38)	04:27	06:56 (38)
	16:32	17:48	13 08:52 (85)	18:54		21:05	22:12	39 07:20 (38)	22:50	19 07:15 (38)
23	09:03	07:52	08:41 (85)	06:33		06:05	04:55	06:41 (38)	04:28	06:56 (38)
	16:35	17:50	11 08:52 (85)	18:56		21:07	22:14	39 07:20 (38)	22:50	19 07:15 (38)
24	09:02	07:49	08:42 (85)	06:30		06:02	04:53	06:42 (38)	04:28	06:56 (38)
	16:37	17:53	8 08:50 (85)	18:58		21:10	22:16	38 07:20 (38)	22:50	19 07:15 (38)
25	09:00	07:46		06:27		06:00	04:51	06:42 (38)	04:28	06:57 (38)
	16:39	17:55		19:01		21:12	22:18	37 07:19 (38)	22:50	19 07:16 (38)
26	08:58	07:44		06:24		05:57	04:49	06:43 (38)	04:29	06:56 (38)
	16:42	17:58		19:03		21:14	22:20	37 07:20 (38)	22:50	20 07:16 (38)
27	08:56	07:41		06:21		05:54	04:48	06:43 (38)	04:29	06:56 (38)
	16:44	18:00		19:05		21:17	22:22	36 07:19 (38)	22:50	21 07:17 (38)
28	08:54	07:38		06:18		05:52	04:46	06:43 (38)	04:30	06:56 (38)
	16:47	18:02		19:08		21:19	22:24	36 07:19 (38)	22:50	21 07:17 (38)
29	08:52			07:16		05:49	04:44	06:44 (38)	04:31	06:56 (38)
	16:49			20:10		21:21	22:25	35 07:19 (38)	22:49	21 07:17 (38)
30	08:50			07:13		05:47	04:43	06:45 (38)	04:32	06:56 (38)
	16:51			20:12		21:24	22:27	34 07:19 (38)	22:49	22 07:18 (38)
31	08:48			07:10			04:41	06:44 (38)		
	16:54			20:14			22:29	34 07:18 (38)		
Potential sun hours	221	260		365		432	521		547	
Total, worst case			119		98			945		688
Sun reduction			0,50		0,50			0,50		0,50
Oper. time red.			0,80		0,80			0,80		0,80
Wind dir. red.			0,74		0,72			0,59		0,59
Total reduction			0,29		0,29			0,24		0,24
Total, real			35		28			224		163

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September	October		November	December
1	04:32	06:56 (38)	05:24	06:57 (38)	06:33	07:39		07:51	09:00
	22:48	23 07:19 (38)	22:01	33 07:30 (38)	20:40	19:13		16:49	15:52
2	04:33	06:56 (38)	05:27	06:59 (38)	06:35	07:42		07:54	09:01
	22:48	24 07:20 (38)	21:58	31 07:30 (38)	20:37	19:10		16:47	15:50
3	04:34	06:55 (38)	05:29	07:01 (38)	06:38	07:44		07:56	09:03
	22:47	25 07:20 (38)	21:56	28 07:29 (38)	20:34	19:07		16:44	15:49
4	04:35	06:55 (38)	05:31	07:03 (38)	06:40	07:46		07:59	09:05
	22:46	25 07:20 (38)	21:54	26 07:29 (38)	20:31	19:05		16:42	15:48
5	04:37	06:54 (38)	05:33	07:05 (38)	06:42	07:48	08:44 (84)	08:01	09:07
	22:46	27 07:21 (38)	21:51	23 07:28 (38)	20:28	19:02	8 08:52 (84)	16:39	15:47
6	04:38	06:55 (38)	05:35	07:06 (38)	06:44	07:51	08:42 (84)	08:03	09:09
	22:45	28 07:23 (38)	21:49	21 07:27 (38)	20:25	18:59	11 08:53 (84)	16:37	15:47
7	04:39	06:55 (38)	05:38	07:08 (38)	06:47	07:53	08:41 (84)	08:06	09:10
	22:44	28 07:23 (38)	21:47	18 07:26 (38)	20:23	18:56	13 08:54 (84)	16:35	15:46
8	04:40	06:54 (38)	05:40	07:10 (38)	06:49	07:55	08:40 (84)	08:08	09:12
	22:43	30 07:24 (38)	21:44	15 07:25 (38)	20:20	18:53	14 08:54 (84)	16:32	15:45
9	04:42	06:54 (38)	05:42	07:12 (38)	06:51	07:57	08:39 (84)	08:11	09:13
	22:42	30 07:24 (38)	21:42	12 07:24 (38)	20:17	18:50	15 08:54 (84)	16:30	15:44
10	04:43	06:53 (38)	05:44	07:13 (38)	06:53	08:00	08:40 (84)	08:13	09:15
	22:40	31 07:24 (38)	21:39	9 07:22 (38)	20:14	18:48	14 08:54 (84)	16:28	15:44
11	04:45	06:54 (38)	05:46	07:15 (38)	06:55	08:02	08:40 (84)	08:15	09:16
	22:39	32 07:26 (38)	21:37	5 07:20 (38)	20:11	18:45	13 08:53 (84)	16:26	15:43
12	04:46	06:53 (38)	05:49		06:58	08:04	08:42 (84)	08:18	09:17
	22:38	33 07:26 (38)	21:34		20:08	18:42	9 08:51 (84)	16:24	15:43
13	04:48	06:53 (38)	05:51		07:00	08:07	08:45 (84)	08:20	09:19
	22:36	33 07:26 (38)	21:32		20:05	18:39	4 08:49 (84)	16:22	15:43
14	04:49	06:53 (38)	05:53		07:02	08:09		08:22	09:20
	22:35	34 07:27 (38)	21:29		20:02	18:36		16:19	15:43
15	04:51	06:52 (38)	05:55		07:04	08:11		08:25	09:21
	22:34	35 07:27 (38)	21:26		19:59	18:34		16:17	15:42
16	04:53	06:52 (38)	05:58		07:06	08:14		08:27	09:22
	22:32	36 07:28 (38)	21:24		19:57	18:31		16:15	15:42
17	04:54	06:52 (38)	06:00		07:09	08:16	09:17 (85)	08:29	09:23
	22:30	36 07:28 (38)	21:21		19:54	18:28	2 09:19 (85)	16:13	15:42
18	04:56	06:52 (38)	06:02		07:11	08:18	09:13 (85)	08:32	09:24
	22:29	37 07:29 (38)	21:18		19:51	18:25	9 09:22 (85)	16:12	15:42
19	04:58	06:52 (38)	06:04		07:13	08:21	09:12 (85)	08:34	09:25
	22:27	38 07:30 (38)	21:16		19:48	18:23	12 09:24 (85)	16:10	15:43
20	05:00	06:51 (38)	06:07		07:15	08:23	09:10 (85)	08:36	09:25
	22:25	38 07:29 (38)	21:13		19:45	18:20	14 09:24 (85)	16:08	15:43
21	05:02	06:51 (38)	06:09		07:17	08:25	09:10 (85)	08:39	09:26
	22:23	39 07:30 (38)	21:10		19:42	18:17	15 09:25 (85)	16:06	15:43
22	05:04	06:52 (38)	06:11		07:19	08:28	09:09 (85)	08:41	09:27
	22:22	39 07:31 (38)	21:08		19:39	18:15	15 09:24 (85)	16:04	15:44
23	05:06	06:51 (38)	06:13		07:22	08:30	09:09 (85)	08:43	09:27
	22:20	39 07:30 (38)	21:05		19:36	18:12	15 09:24 (85)	16:03	15:44
24	05:08	06:51 (38)	06:15		07:24	08:32	09:09 (85)	08:45	09:28
	22:18	40 07:31 (38)	21:02		19:33	18:09	14 09:23 (85)	16:01	15:45
25	05:10	06:51 (38)	06:18		07:26	07:35	08:10 (85)	08:47	09:28
	22:16	40 07:31 (38)	20:59		19:30	17:07	13 08:23 (85)	16:00	15:46
26	05:12	06:51 (38)	06:20		07:28	07:37	08:13 (85)	08:49	09:28
	22:14	40 07:31 (38)	20:57		19:28	17:04	9 08:22 (85)	15:58	15:46
27	05:14	06:52 (38)	06:22		07:31	07:39	08:14 (85)	08:52	09:28
	22:12	39 07:31 (38)	20:54		19:25	17:02	5 08:19 (85)	15:57	15:47
28	05:16	06:52 (38)	06:24		07:33	07:42		08:54	09:28
	22:10	39 07:31 (38)	20:51		19:22	16:59		15:55	15:48
29	05:18	06:52 (38)	06:27		07:35	07:44		08:56	09:28
	22:07	38 07:30 (38)	20:48		19:19	16:56		15:54	15:49
30	05:20	06:54 (38)	06:29		07:37	07:47		08:58	09:28
	22:05	36 07:30 (38)	20:45		19:16	16:54		15:53	15:50
31	05:22	06:55 (38)	06:31			07:49			09:28
	22:03	35 07:30 (38)	20:43			16:51			15:51
Potential sun hours	545		478		386	319		236	200
Total, worst case		1047		221			224		
Sun reduction		0,50		0,50			0,50		
Oper. time red.		0,80		0,80			0,80		
Wind dir. red.		0,59		0,59			0,73		
Total reduction		0,24		0,24			0,29		
Total, real		248		52			65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				
Sun reduction			0,50		0,50				
Oper. time red.			0,80		0,80				
Wind dir. red.			0,73		0,71				
Total reduction			0,29		0,28				
Total, real			80		117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October			November			December	
1	04:32		05:24		06:33			07:40			07:52		08:47 (2)	09:00	
	22:49		22:01		20:40			19:13			16:49	9	08:56 (2)	15:51	
2	04:33		05:26		06:35			07:42		09:06 (22)	07:54			09:02	
	22:48		21:59		20:37			19:10	6	09:12 (22)	16:46			15:50	
3	04:34		05:29		06:38			07:44		09:02 (22)	07:56			09:04	
	22:47		21:56		20:34			19:07	13	09:15 (22)	16:44			15:49	
4	04:35		05:31		06:40			07:46		09:00 (22)	07:59			09:05	
	22:47		21:54		20:31			19:05	17	09:17 (22)	16:42			15:48	
5	04:36		05:33		06:42			07:48		08:58 (22)	08:01			09:07	
	22:46		21:52		20:28			19:02	20	09:18 (22)	16:39			15:47	
6	04:38		05:35		06:44			07:51		08:57 (22)	08:04			09:09	
	22:45		21:49		20:26			18:59	22	09:19 (22)	16:37			15:46	
7	04:39		05:37		06:47			07:53		08:57 (22)	08:06			09:10	
	22:44		21:47		20:23			18:56	23	09:20 (22)	16:35			15:46	
8	04:40		05:40		06:49			07:55		08:55 (22)	08:08			09:12	
	22:43		21:44		20:20			18:53	24	09:19 (22)	16:32			15:45	
9	04:41		05:42		06:51			07:58		08:55 (22)	08:11			09:14	
	22:42		21:42		20:17			18:50	24	09:19 (22)	16:30			15:44	
10	04:43		05:44		06:53			08:00		08:55 (22)	08:13			09:15	
	22:41		21:39		20:14			18:48	24	09:19 (22)	16:28			15:44	
11	04:44		05:46		06:55			08:02		08:54 (22)	08:16			09:16	
	22:39		21:37		20:11			18:45	25	09:19 (22)	16:26			15:43	
12	04:46		05:49		06:58			08:04		08:55 (22)	08:18			09:18	
	22:38		21:34		20:08			18:42	23	09:18 (22)	16:24			15:43	
13	04:48		05:51		07:00			08:07		08:55 (22)	08:20			09:19	
	22:37		21:32		20:05			18:39	22	09:17 (22)	16:21			15:43	
14	04:49		05:53		07:02			08:09		08:55 (22)	08:23			09:20	
	22:35		21:29		20:02			18:36	21	09:16 (22)	16:19			15:42	
15	04:51		05:55		07:04			08:11		08:57 (22)	08:25			09:21	
	22:34		21:26		20:00			18:34	18	09:15 (22)	16:17			15:42	
16	04:53		05:58		07:06			08:14		08:58 (22)	08:27			09:22	
	22:32		21:24		19:57			18:31	15	09:13 (22)	16:15			15:42	
17	04:54		06:00		07:09			08:16		09:01 (22)	08:30			09:23	
	22:31		21:21		19:54			18:28	10	09:11 (22)	16:13			15:42	
18	04:56		06:02		07:11		08:19 (24)	08:18			08:32			09:24	
	22:29		21:19		19:51	9	08:28 (24)	18:25			16:11			15:42	
19	04:58		06:04		07:13		08:16 (24)	08:21			08:34			09:25	
	22:27		21:16		19:48	13	08:29 (24)	18:23			16:10			15:43	
20	05:00		06:06		07:15		08:14 (24)	08:23		09:48 (2)	08:37			09:26	
	22:25		21:13		19:45	16	08:30 (24)	18:20	9	09:57 (2)	16:08			15:43	
21	05:02		06:09		07:17		08:14 (24)	08:25		09:46 (2)	08:39			09:26	
	22:24		21:10		19:42	17	08:31 (24)	18:17	13	09:59 (2)	16:06			15:43	
22	05:04		06:11		07:20		08:13 (24)	08:28		09:44 (2)	08:41			09:27	
	22:22		21:08		19:39	18	08:31 (24)	18:15	16	10:00 (2)	16:04			15:44	
23	05:06		06:13		07:22		08:12 (24)	08:30		09:44 (2)	08:43			09:27	
	22:20		21:05		19:36	19	08:31 (24)	18:12	17	10:01 (2)	16:03			15:44	
24	05:08		06:15		07:24		08:12 (24)	08:32		09:42 (2)	08:45			09:28	
	22:18		21:02		19:33	19	08:31 (24)	18:09	19	10:01 (2)	16:01			15:45	
25	05:10		06:18		07:26		08:11 (24)	07:35		08:42 (2)	08:48			09:28	
	22:16		20:59		19:31	19	08:30 (24)	17:07	19	09:01 (2)	15:59			15:45	
26	05:12		06:20		07:28		08:12 (24)	07:37		08:43 (2)	08:50			09:28	
	22:14		20:57		19:28	17	08:29 (24)	17:04	19	09:02 (2)	15:58			15:46	
27	05:14		06:22		07:31		08:13 (24)	07:40		08:42 (2)	08:52			09:28	
	22:12		20:54		19:25	15	08:28 (24)	17:02	19	09:01 (2)	15:57			15:47	
28	05:16		06:24		07:33		08:14 (24)	07:42		08:43 (2)	08:54			09:29	
	22:10		20:51		19:22	12	08:26 (24)	16:59	18	09:01 (2)	15:55			15:48	
29	05:18		06:27		07:35		08:15 (24)	07:44		08:44 (2)	08:56			09:29	
	22:08		20:48		19:19	8	08:23 (24)	16:56	17	09:01 (2)	15:54			15:49	
30	05:20		06:29		07:37			07:47		08:44 (2)	08:58			09:28	
	22:05		20:45		19:16			16:54	15	08:59 (2)	15:53			15:50	
31	05:22		06:31					07:49		08:45 (2)				09:28	
	22:03		20:43					16:51	13	08:58 (2)				15:51	
Potential sun hours	545		478		386			319			236			200	
Total, worst case						182			501			9			
Sun reduction						0,50			0,50			0,50			
Oper. time red.						0,80			0,80			0,80			
Wind dir. red.						0,70			0,73			0,74			
Total reduction						0,28			0,29			0,29			
Total, real						51			146			3			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
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	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05 23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35	07:42	07:54	09:02
	15:54	16:59	18:07 24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	15:50
3	09:27	08:41	07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10 24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	15:49
4	09:27	08:39	07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40	07:46 09:05 (22)	07:59	09:05
	15:57	17:04	18:12 23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31	19:05 11 09:16 (22)	16:42	15:48
5	09:26	08:37	07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42	07:48 09:02 (22)	08:01	09:07
	15:59	17:06	18:14 22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28	19:02 16 09:18 (22)	16:39	15:47
6	09:25	08:35	07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44	07:51 09:00 (22)	08:04	09:09
	16:00	17:09	18:17 22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26	18:59 19 09:19 (22)	16:37	15:46
7	09:25	08:32	07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47	07:53 09:00 (22)	08:06	09:10
	16:02	17:11	18:19 19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23	18:56 20 09:20 (22)	16:35	15:46
8	09:24	08:30	07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49	07:55 08:58 (22)	08:08	09:12
	16:04	17:13	18:21 18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20	18:53 23 09:21 (22)	16:32	15:45
9	09:23	08:28	07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51	07:58 08:57 (22)	08:11	09:14
	16:05	17:16	18:24 13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17	18:50 23 09:20 (22)	16:30	15:44
10	09:22	08:25	07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53	08:00 08:57 (22)	08:13	09:15
	16:07	17:18	18:26 7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14	18:48 24 09:21 (22)	16:28	15:44
11	09:21	08:23	07:07		06:38	05:20	04:30	04:44	05:46	06:55	08:02 08:57 (22)	08:16	09:16
	16:09	17:21	18:28		20:40	21:49	22:44	22:39	21:37	20:11	18:45 23 09:20 (22)	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58	08:04 08:57 (22)	08:18	09:18
	16:11	17:23	18:31		20:42	21:51	22:45	22:38	21:34	20:08	18:42 24 09:21 (22)	16:24	15:43
13	09:19	08:18	07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00	08:07 08:57 (22)	08:20	09:19
	16:13	17:26	18:33 5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05	18:39 23 09:20 (22)	16:21	15:43
14	09:17	08:15	06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02	08:09 08:57 (22)	08:23	09:20
	16:15	17:28	18:35 11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02	18:36 21 09:18 (22)	16:19	15:42
15	09:16	08:13	06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04	08:11 08:58 (22)	08:25	09:21
	16:17	17:31	18:38 15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00	18:34 20 09:18 (22)	16:17	15:42
16	09:15	08:10	06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06	08:14 08:58 (22)	08:27	09:22
	16:19	17:33	18:40 16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57	18:31 18 09:16 (22)	16:15	15:42
17	09:13	08:08	06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09	08:16 09:00 (22)	08:30	09:23
	16:21	17:36	18:42 18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54	18:28 15 09:15 (22)	16:13	15:42
18	09:12	08:05	06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 09:02 (22)	08:32	09:24
	16:23	17:38	18:45 19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51	18:25 10 09:12 (22)	16:11	15:42
19	09:10	08:02	06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13 08:22 (24)	08:21	08:34	09:25
	16:26	17:41	18:47 18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48 7 08:29 (24)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15 08:19 (24)	08:23	08:37	09:26
	16:28	17:43	18:49 19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45 12 08:31 (24)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17 08:18 (24)	08:25	08:39	09:26
	16:30	17:46	18:52 17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42 15 08:33 (24)	18:17	16:06	15:43
22	09:05	07:54	06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20 08:16 (24)	08:28	08:41	09:27
	16:32	17:48	18:54 15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39 17 08:33 (24)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22 08:15 (24)	08:30	08:43	09:27
	16:35	17:50	18:56 13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36 18 08:33 (24)	18:12	16:03	15:44
24	09:02	07:49 08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24 08:14 (24)	08:32	08:45	09:28
	16:37	17:53 12 08:42 (22)	18:59 8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33 19 08:33 (24)	18:09	16:01	15:45
25	09:00	07:46 08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26 08:14 (24)	07:35	08:48	09:28
	16:39	17:55 15 08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31 18 08:32 (24)	17:07	15:59	15:45
26	08:58	07:44 08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28 08:14 (24)	07:37	08:50	09:28
	16:42	17:58 19 08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28 19 08:33 (24)	17:04	15:58	15:46
27	08:56	07:41 08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31 08:14 (24)	07:40	08:52	09:28
	16:44	18:00 20 08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25 18 08:32 (24)	17:02	15:57	15:47
28	08:54	07:38 08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33 08:15 (24)	07:42	08:54	09:29
	16:46	18:02 22 08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 15 08:30 (24)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35 08:15 (24)	07:44	08:56	09:29
	16:49		20:10		21:21	22:26	22:50	22:08	20:48	19:19 13 08:28 (24)	16:56	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37 08:18 (24)	07:47	08:58	09:28
	16:51		20:12		21:24	22:27	22:49	22:05	20:45	19:16 8 08:26 (24)	16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31		07:49		09:28
	16:54		20:15			22:29		22:03	20:43		16:51		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200	
Total, worst case		88	369						179	290			
Sun reduction		0,50	0,50						0,50	0,50			
Oper. time red.		0,80	0,80						0,80	0,80			
Wind dir. red.		0,73	0,71						0,70	0,73			
Total reduction		0,29	0,29						0,28	0,29			
Total, real		26	105						50	84			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		
Sun reduction			0,50									0,50		
Oper. time red.			0,80									0,80		
Wind dir. red.			0,74									0,74		
Total reduction			0,29									0,29		
Total, real			66									67		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September	October		November		December
1	09:28	08:46		09:41 (22)		08:28 (24)	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:52		09:00 (22)	09:00
	15:53	16:56	3	09:44 (22)	19	08:47 (24)	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	24	09:24 (22)	15:51
2	09:28	08:44		09:37 (22)		08:27 (24)	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:01 (22)	09:02
	15:54	16:59	10	09:47 (22)	20	08:47 (24)	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	23	09:24 (22)	15:50
3	09:27	08:41		09:35 (22)		08:27 (24)	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:01 (22)	09:04
	15:56	17:01	15	09:50 (22)	20	08:47 (24)	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	23	09:24 (22)	15:49
4	09:27	08:39		09:34 (22)		08:27 (24)	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:02 (22)	09:05
	15:57	17:04	17	09:51 (22)	19	08:46 (24)	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	22	09:24 (22)	15:48
5	09:26	08:37		09:33 (22)		08:28 (24)	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:02 (22)	09:07
	15:59	17:06	20	09:53 (22)	17	08:45 (24)	20:26	21:35	22:37	22:46	21:52	20:28	19:02	3	09:14 (24)	21	09:23 (22)	15:47
6	09:25	08:35		09:32 (22)		08:28 (24)	06:53	05:31	04:34	04:37	05:35	06:44	07:51		09:06 (24)		09:03 (22)	09:09
	16:00	17:08	21	09:53 (22)	16	08:44 (24)	20:28	21:38	22:38	22:45	21:49	20:26	18:59	11	09:17 (24)	19	09:22 (22)	15:46
7	09:25	08:32		09:31 (22)		08:29 (24)	06:50	05:29	04:33	04:39	05:37	06:47	07:53		09:05 (24)		09:05 (22)	09:10
	16:02	17:11	22	09:53 (22)	13	08:42 (24)	20:31	21:40	22:39	22:44	21:47	20:23	18:56	15	09:20 (24)	17	09:22 (22)	15:46
8	09:24	08:30		09:32 (22)		08:31 (24)	06:47	05:27	04:32	04:40	05:40	06:49	07:55		09:03 (24)		09:05 (22)	09:12
	16:04	17:13	22	09:54 (22)	8	08:39 (24)	20:33	21:42	22:41	22:43	21:44	20:20	18:53	17	09:20 (24)	15	09:20 (22)	15:45
9	09:23	08:28		09:31 (22)			06:44	05:24	04:31	04:41	05:42	06:51	07:58		09:02 (24)		09:08 (22)	09:14
	16:05	17:16	23	09:54 (22)			20:35	21:44	22:42	22:42	21:42	20:17	18:50	18	09:20 (24)	10	09:18 (22)	15:44
10	09:22	08:25		09:32 (22)			06:41	05:22	04:30	04:43	05:44	06:53	08:00		09:02 (24)		09:13 (22)	09:15
	16:07	17:18	23	09:55 (22)			20:38	21:47	22:43	22:41	21:39	20:14	18:48	19	09:21 (24)	1	09:14 (22)	15:44
11	09:21	08:23		09:31 (22)			06:38	05:20	04:30	04:44	05:46	06:55	08:02		09:01 (24)			09:16
	16:09	17:21	24	09:55 (22)			20:40	21:49	22:44	22:39	21:37	20:11	18:45	20	09:21 (24)			15:43
12	09:20	08:20		09:31 (22)			06:36	05:17	04:29	04:46	05:49	06:58	08:04		09:01 (24)			09:18
	16:11	17:23	23	09:54 (22)			20:42	21:51	22:45	22:38	21:34	20:08	18:42	20	09:21 (24)			15:43
13	09:19	08:18		09:31 (22)			06:33	05:15	04:28	04:47	05:51	07:00	08:07		09:01 (24)			09:19
	16:13	17:26	23	09:54 (22)			20:44	21:53	22:46	22:37	21:32	20:05	18:39	19	09:20 (24)			15:43
14	09:17	08:15		09:33 (22)			06:30	05:13	04:28	04:49	05:53	07:02	08:09		09:01 (24)			09:20
	16:15	17:28	21	09:54 (22)			20:47	21:55	22:47	22:35	21:29	20:02	18:36	18	09:19 (24)			15:42
15	09:16	08:13		09:33 (22)			06:27	05:11	04:28	04:51	05:55	07:04	08:11		09:02 (24)			09:21
	16:17	17:31	20	09:53 (22)			20:49	21:58	22:47	22:34	21:26	20:00	18:34	16	09:18 (24)			15:42
16	09:15	08:10		09:34 (22)			06:24	05:08	04:27	04:53	05:57	07:06	08:14		09:03 (24)			09:22
	16:19	17:33	17	09:51 (22)			20:51	22:00	22:48	22:32	21:24	19:57	18:31	13	09:16 (24)			15:42
17	09:13	08:08		09:36 (22)			06:22	05:06	04:27	04:54	06:00	07:09	08:16		09:05 (24)			09:23
	16:21	17:36	14	09:50 (22)			20:54	22:02	22:49	22:31	21:21	19:54	18:28	10	09:15 (24)			15:42
18	09:12	08:05		09:39 (22)			06:19	05:04	04:27	04:56	06:02	07:11	08:18					09:24
	16:23	17:38	8	09:47 (22)			20:56	22:04	22:49	22:29	21:19	19:51	18:25					15:42
19	09:10	08:02			06:44		06:16	05:02	04:27	04:58	06:04	07:13	08:21					09:25
	16:26	17:41			18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23					15:42
20	09:09	08:00			06:42		06:13	05:00	04:27	05:00	06:06	07:15	08:23					09:26
	16:28	17:43			18:49		21:01	22:08	22:50	22:25	21:13	19:45	18:20					15:43
21	09:07	07:57			06:39		06:10	04:58	04:27	05:02	06:09	07:17	08:25					09:26
	16:30	17:45			18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17					15:43
22	09:05	07:54			06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28					09:27
	16:32	17:48			18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15					15:44
23	09:04	07:52			06:33		06:05	04:54	04:27	05:06	06:13	07:22	08:30					09:27
	16:35	17:50			18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12					15:44
24	09:02	07:49		08:36 (24)	06:30		06:02	04:53	04:28	05:08	06:15	07:24	08:32		10:07 (22)		08:45	09:28
	16:37	17:53	5	08:41 (24)	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09	10	10:17 (22)		16:01	15:45
25	09:00	07:46		08:32 (24)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		09:05 (22)		08:48	09:28
	16:39	17:55	12	08:44 (24)	19:01		21:12	22:18	22:51	22:16	20:59	19:30	17:07	15	09:20 (22)		15:59	15:45
26	08:58	07:44		08:30 (24)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	07:37		09:04 (22)		08:50	09:28
	16:42	17:58	15	08:45 (24)	19:03		21:14	22:20	22:51	22:14	20:57	19:28	17:04	18	09:22 (22)		15:58	15:46
27	08:56	07:41		08:29 (24)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	07:40		09:02 (22)		08:52	09:28
	16:44	18:00	17	08:46 (24)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	17:02	20	09:22 (22)		15:56	15:47
28	08:54	07:38		08:29 (24)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	07:42		09:02 (22)		08:54	09:29
	16:46	18:02	18	08:47 (24)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	16:59	21	09:23 (22)		15:55	15:48
29	08:52				07:16		05:49	04:44	04:30	05:18	06:27	07:35	07:44		09:02 (22)		08:56	09:29
	16:49				20:10		21:21	22:26	22:50	22:08	20:48	19:19	16:56	22	09:24 (22)		15:54	15:49
30	08:50				07:13		05:47	04:43	04:31	05:20	06:29	07:37	07:47		09:01 (22)		08:58	09:28
	16:51				20:12		21:24	22:27	22:49	22:05	20:45	19:16	16:54	23	09:24 (22)		15:53	15:50
31	08:48				07:10			04:41		05:22	06:31		07:49		09:01 (22)			09:28
	16:54				20:15			22:29		22:03	20:43		16:51	23	09:24 (22)			15:51
Potential sun hours	221	260			365		432	521	547	546	478	386	319			236		199
Total, worst case			393		132									351		175		
Sun reduction			0,50		0,50									0,50		0,50		
Oper. time red.			0,80		0,80									0,80		0,80		
Wind dir. red.			0,73		0,73									0,73		0,73		
Total reduction			0,29		0,29									0,29		0,29		
Total, real			114		38									102		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46	09:41 (22)	07:35	08:31 (24)	07:07	05:44	04:40
	15:53		16:56	14 09:55 (22)	18:05	20 08:51 (24)	20:17	21:26	22:31
2	09:28		08:44	09:40 (22)	07:33	08:31 (24)	07:04	05:41	04:39
	15:54		16:59	16 09:56 (22)	18:07	20 08:51 (24)	20:19	21:28	22:32
3	09:27		08:41	09:39 (22)	07:30	08:31 (24)	07:01	05:39	04:37
	15:56		17:01	19 09:58 (22)	18:10	19 08:50 (24)	20:21	21:31	22:34
4	09:27		08:39	09:38 (22)	07:27	08:31 (24)	06:58	05:36	04:36
	15:57		17:04	20 09:58 (22)	18:12	19 08:50 (24)	20:24	21:33	22:35
5	09:26		08:37	09:38 (22)	07:24	08:32 (24)	06:55	05:34	04:35
	15:59		17:06	22 10:00 (22)	18:14	16 08:48 (24)	20:26	21:35	22:37
6	09:25		08:35	09:37 (22)	07:22	08:33 (24)	06:53	05:31	04:34
	16:00		17:08	23 10:00 (22)	18:17	14 08:47 (24)	20:28	21:38	22:38
7	09:25		08:32	09:36 (22)	07:19	08:35 (24)	06:50	05:29	04:33
	16:02		17:11	24 10:00 (22)	18:19	9 08:44 (24)	20:31	21:40	22:39
8	09:24		08:30	09:37 (22)	07:16		06:47	05:27	04:32
	16:04		17:13	24 10:01 (22)	18:21		20:33	21:42	22:41
9	09:23		08:28	09:36 (22)	07:13		06:44	05:24	04:31
	16:05		17:16	24 10:00 (22)	18:24		20:35	21:44	22:42
10	09:22		08:25	09:37 (22)	07:10		06:41	05:22	04:30
	16:07		17:18	24 10:01 (22)	18:26		20:38	21:47	22:43
11	09:21		08:23	09:37 (22)	07:07		06:38	05:20	04:30
	16:09		17:21	23 10:00 (22)	18:28		20:40	21:49	22:44
12	09:20		08:20	09:37 (22)	07:05		06:36	05:17	04:29
	16:11		17:23	23 10:00 (22)	18:31		20:42	21:51	22:45
13	09:19		08:18	09:38 (22)	07:02		06:33	05:15	04:28
	16:13		17:26	21 09:59 (22)	18:33		20:44	21:53	22:46
14	09:17		08:15	09:39 (22)	06:59		06:30	05:13	04:28
	16:15		17:28	20 09:59 (22)	18:35		20:47	21:55	22:47
15	09:16		08:13	09:40 (22)	06:56		06:27	05:11	04:28
	16:17		17:31	17 09:57 (22)	18:38		20:49	21:58	22:47
16	09:15		08:10	09:42 (22)	06:53		06:24	05:08	04:27
	16:19		17:33	13 09:55 (22)	18:40		20:51	22:00	22:48
17	09:13		08:08	09:45 (22)	06:50		06:21	05:06	04:27
	16:21		17:36	8 09:53 (22)	18:42		20:54	22:02	22:49
18	09:12		08:05		06:47		06:19	05:04	04:27
	16:23		17:38		18:45		20:56	22:04	22:49
19	09:10		08:02		06:44		06:16	05:02	04:27
	16:26		17:41		18:47		20:58	22:06	22:50
20	09:09		08:00		06:42		06:13	05:00	04:27
	16:28		17:43		18:49		21:01	22:08	22:50
21	09:07		07:57		06:39		06:10	04:58	04:27
	16:30		17:45		18:52		21:03	22:10	22:50
22	09:05		07:54		06:36		06:08	04:56	04:27
	16:32		17:48		18:54		21:05	22:12	22:51
23	09:04		07:52	08:40 (24)	06:33		06:05	04:54	04:27
	16:35		17:50	5 08:45 (24)	18:56		21:08	22:14	22:51
24	09:02		07:49	08:36 (24)	06:30		06:02	04:53	04:28
	16:37		17:53	12 08:48 (24)	18:59		21:10	22:16	22:51
25	09:00		07:46	08:34 (24)	06:27		06:00	04:51	04:28
	16:39		17:55	15 08:49 (24)	19:01		21:12	22:18	22:51
26	08:58		07:44	08:33 (24)	06:24		05:57	04:49	04:29
	16:42		17:58	17 08:50 (24)	19:03		21:14	22:20	22:51
27	08:56		07:41	08:32 (24)	06:21		05:54	04:47	04:29
	16:44		18:00	18 08:50 (24)	19:05		21:17	22:22	22:50
28	08:54		07:38	08:32 (24)	06:18		05:52	04:46	04:30
	16:46		18:02	19 08:51 (24)	19:08		21:19	22:24	22:50
29	08:52				07:16		05:49	04:44	04:30
	16:49				20:10		21:21	22:26	22:50
30	08:50				07:13		05:47	04:43	04:31
	16:51				20:12		21:24	22:27	22:49
31	08:48	09:43 (22)			07:10			04:41	
	16:54	9 09:52 (22)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case		9		421		117			
Sun reduction		0,50		0,50		0,50			
Oper. time red.		0,80		0,80		0,80			
Wind dir. red.		0,72		0,73		0,73			
Total reduction		0,29		0,29		0,29			
Total, real		3		122		34			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		09:06 (22)	09:00
	22:49	22:01	20:40	19:13			16:49	24	09:30 (22)	15:51
2	04:33	05:26	06:35	07:42			07:54		09:06 (22)	09:02
	22:48	21:59	20:37	19:10			16:46	24	09:30 (22)	15:50
3	04:34	05:29	06:38	07:44			07:56		09:06 (22)	09:04
	22:47	21:56	20:34	19:07			16:44	24	09:30 (22)	15:49
4	04:35	05:31	06:40	07:46			07:59		09:07 (22)	09:05
	22:47	21:54	20:31	19:05			16:42	23	09:30 (22)	15:48
5	04:36	05:33	06:42	07:48			08:01		09:07 (22)	09:07
	22:46	21:52	20:28	19:02			16:39	22	09:29 (22)	15:47
6	04:37	05:35	06:44	07:51		09:12 (24)	08:04		09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7	09:19 (24)	16:37	21	09:29 (22)	15:46
7	04:39	05:37	06:47	07:53		09:10 (24)	08:06		09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12	09:22 (24)	16:35	20	09:29 (22)	15:46
8	04:40	05:40	06:49	07:55		09:08 (24)	08:08		09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15	09:23 (24)	16:32	18	09:27 (22)	15:45
9	04:41	05:42	06:51	07:58		09:06 (24)	08:11		09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18	09:24 (24)	16:30	17	09:27 (22)	15:44
10	04:43	05:44	06:53	08:00		09:06 (24)	08:13		09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19	09:25 (24)	16:28	13	09:25 (22)	15:44
11	04:44	05:46	06:55	08:02		09:05 (24)	08:16		09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19	09:24 (24)	16:26	9	09:23 (22)	15:43
12	04:46	05:49	06:58	08:04		09:05 (24)	08:18			09:18
	22:38	21:34	20:08	18:42	20	09:25 (24)	16:24			15:43
13	04:47	05:51	07:00	08:07		09:04 (24)	08:20			09:19
	22:37	21:32	20:05	18:39	20	09:24 (24)	16:21			15:43
14	04:49	05:53	07:02	08:09		09:04 (24)	08:23			09:20
	22:35	21:29	20:02	18:36	19	09:23 (24)	16:19			15:42
15	04:51	05:55	07:04	08:11		09:05 (24)	08:25			09:21
	22:34	21:26	20:00	18:34	18	09:23 (24)	16:17			15:42
16	04:53	05:57	07:06	08:14		09:05 (24)	08:27			09:22
	22:32	21:24	19:57	18:31	16	09:21 (24)	16:15			15:42
17	04:54	06:00	07:09	08:16		09:07 (24)	08:30			09:23
	22:31	21:21	19:54	18:28	14	09:21 (24)	16:13			15:42
18	04:56	06:02	07:11	08:18		09:08 (24)	08:32			09:24
	22:29	21:19	19:51	18:25	10	09:18 (24)	16:11			15:42
19	04:58	06:04	07:13	08:21			08:34			09:25
	22:27	21:16	19:48	18:23			16:10			15:42
20	05:00	06:06	07:15	08:23			08:37			09:26
	22:25	21:13	19:45	18:20			16:08			15:43
21	05:02	06:09	07:17	08:25			08:39			09:26
	22:24	21:10	19:42	18:17			16:06			15:43
22	05:04	06:11	07:20	08:28			08:41			09:27
	22:22	21:08	19:39	18:15			16:04			15:44
23	05:06	06:13	07:22	08:30			08:43			09:27
	22:20	21:05	19:36	18:12			16:03			15:44
24	05:08	06:15	07:24	08:32			08:45			09:28
	22:18	21:02	19:33	18:09			16:01			15:45
25	05:10	06:18	07:26	07:35		09:13 (22)	08:48			09:28
	22:16	20:59	19:30	17:07	10	09:23 (22)	15:59			15:45
26	05:12	06:20	07:28	07:37		09:11 (22)	08:50			09:28
	22:14	20:57	19:28	17:04	15	09:26 (22)	15:58			15:46
27	05:14	06:22	07:31	07:40		09:09 (22)	08:52			09:28
	22:12	20:54	19:25	17:01	18	09:27 (22)	15:56			15:47
28	05:16	06:24	07:33	07:42		09:08 (22)	08:54			09:29
	22:10	20:51	19:22	16:59	20	09:28 (22)	15:55			15:48
29	05:18	06:27	07:35	07:44		09:08 (22)	08:56			09:29
	22:08	20:48	19:19	16:56	21	09:29 (22)	15:54			15:49
30	05:20	06:29	07:37	07:47		09:07 (22)	08:58			09:28
	22:05	20:45	19:16	16:54	22	09:29 (22)	15:53			15:50
31	05:22	06:31		07:49		09:07 (22)				09:28
	22:03	20:43		16:51	23	09:30 (22)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					336			215		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,73			0,72		
Total reduction					0,29			0,29		
Total, real					98			62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	
Sun reduction			0,50									0,50		0,50	
Oper. time red.			0,80									0,80		0,80	
Wind dir. red.			0,74									0,74		0,74	
Total reduction			0,29									0,29		0,29	
Total, real			71									71		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (24)	08:46	10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (28)	09:00	10:51 (23)	
	15:53	20 12:41 (24)	16:56	20 10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (28)	15:51	28 12:23 (24)	
2	09:28	12:22 (24)	08:44	09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (28)	09:02	10:51 (23)	
	15:54	19 12:41 (24)	16:58	21 10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (28)	15:50	30 12:24 (24)	
3	09:27	12:22 (24)	08:41	10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (28)	09:04	10:52 (23)	
	15:55	19 12:41 (24)	17:01	20 10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (28)	15:49	29 12:25 (24)	
4	09:27	11:12 (23)	08:39	10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (28)	09:05	10:53 (23)	
	15:57	22 12:41 (24)	17:03	20 10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (28)	15:48	30 12:26 (24)	
5	09:26	11:11 (23)	08:37	10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (28)	09:07	10:54 (23)	
	15:58	26 12:42 (24)	17:06	19 10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (28)	15:47	29 12:27 (24)	
6	09:25	11:10 (23)	08:35	10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (28)	09:09	10:56 (23)	
	16:00	28 12:42 (24)	17:08	18 10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (28)	15:46	28 12:28 (24)	
7	09:25	11:09 (23)	08:32	10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (28)	09:10	10:58 (23)	
	16:02	29 12:42 (24)	17:11	17 10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (28)	15:45	26 12:29 (24)	
8	09:24	11:09 (23)	08:30	10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (28)	09:12	11:00 (23)	
	16:03	30 12:42 (24)	17:13	15 10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (28)	15:45	23 12:30 (24)	
9	09:23	11:09 (23)	08:27	10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (28)	09:13	12:11 (24)	
	16:05	30 12:42 (24)	17:16	12 10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (28)	15:44	19 12:30 (24)	
10	09:22	11:08 (23)	08:25	10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (28)	09:15	12:11 (24)	
	16:07	30 12:41 (24)	17:18	5 10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (28)	15:44	19 12:30 (24)	
11	09:21	11:09 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (28)	09:16	12:11 (24)	
	16:09	28 12:41 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (28)	15:43	20 12:31 (24)	
12	09:20	11:08 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (28)	09:18	12:11 (24)	
	16:11	27 12:40 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (23)	15:43	20 12:31 (24)	
13	09:19	11:08 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (28)	09:19	12:12 (24)	
	16:13	25 12:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (23)	15:42	21 12:33 (24)	
14	09:17	11:08 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (28)	09:20	12:12 (24)	
	16:15	20 11:28 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (23)	15:42	21 12:33 (24)	
15	09:16	11:08 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (28)	09:21	12:12 (24)	
	16:17	21 11:29 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (23)	15:42	21 12:33 (24)	
16	09:15	11:08 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (28)	09:22	12:13 (24)	
	16:19	21 11:29 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (23)	15:42	20 12:33 (24)	
17	09:13	11:09 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (28)	09:23	12:14 (24)	
	16:21	22 11:31 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (23)	15:42	21 12:35 (24)	
18	09:12	11:09 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (23)	09:24	12:14 (24)	
	16:23	22 11:31 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (23)	15:42	21 12:35 (24)	
19	09:10	11:09 (23)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (23)	09:25	12:14 (24)	
	16:25	22 11:31 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (23)	15:42	21 12:35 (24)	
20	09:09	11:09 (23)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (23)	09:26	12:15 (24)	
	16:28	23 11:32 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (23)	15:43	21 12:36 (24)	
21	09:07	11:09 (23)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (23)	09:26	12:16 (24)	
	16:30	23 11:32 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (23)	15:43	21 12:37 (24)	
22	09:05	11:10 (23)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (23)	09:27	12:16 (24)	
	16:32	22 11:32 (23)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (23)	15:43	21 12:37 (24)	
23	09:03	11:10 (23)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (23)	09:27	12:16 (24)	
	16:34	22 11:32 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (23)	15:44	21 12:37 (24)	
24	09:02	11:10 (23)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (23)	09:28	12:17 (24)	
	16:37	22 11:32 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (23)	15:45	21 12:38 (24)	
25	09:00	10:04 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (23)	09:28	12:17 (24)	
	16:39	28 11:32 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (23)	15:45	21 12:38 (24)	
26	08:58	10:03 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (23)	09:28	12:18 (24)	
	16:42	31 11:32 (23)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (23)	15:46	21 12:39 (24)	
27	08:56	10:02 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (23)	09:28	12:18 (24)	
	16:44	31 11:31 (23)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (23)	15:47	21 12:39 (24)	
28	08:54	10:00 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (23)	09:29	12:19 (24)	
	16:46	32 11:30 (23)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (23)	15:48	21 12:40 (24)	
29	08:52	10:00 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (23)	09:29	12:19 (24)	
	16:49	31 11:29 (23)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (24)	15:49	21 12:40 (24)	
30	08:50	09:59 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (23)	09:28	12:20 (24)	
	16:51	27 11:26 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (24)	15:50	20 12:40 (24)	
31	08:48	09:59 (28)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (24)	
	16:54	20 10:19 (28)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (24)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06		05:44	04:40
	15:53	16:56		18:04		20:16		21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58	19:38 (63)	05:36	04:36
	15:57	17:03		18:12		20:23	2 19:40 (63)	21:32	22:34
5	09:25	08:36		07:24		06:55	19:34 (63)	05:34	04:35
	15:58	17:06		18:14		20:25	8 19:42 (63)	21:35	22:36
6	09:25	08:34		07:21		06:52	19:32 (63)	05:31	04:34
	16:00	17:08		18:16		20:28	11 19:43 (63)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:31 (63)	05:29	04:33
	16:02	17:11		18:19		20:30	12 19:43 (63)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:31 (63)	05:26	04:32
	16:03	17:13		18:21		20:32	13 19:44 (63)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:31 (63)	05:24	04:31
	16:05	17:16		18:23		20:35	12 19:43 (63)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:31 (63)	05:22	04:30
	16:07	17:18		18:26		20:37	11 19:42 (63)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:32 (63)	05:19	04:30
	16:09	17:21		18:28		20:39	8 19:40 (63)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:34 (63)	05:17	04:29
	16:11	17:23		18:30		20:42	4 19:38 (63)	21:50	22:44
13	09:18	08:17		07:01		06:32		05:15	04:28
	16:13	17:25		18:33		20:44		21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27	19:48 (62)	05:10	04:27
	16:17	17:30		18:37		20:48	9 19:57 (62)	21:57	22:47
16	09:14	08:10	16:48 (66)	06:53		06:24	19:47 (62)	05:08	04:27
	16:19	17:33	1 16:49 (66)	18:40		20:51	13 20:00 (62)	21:59	22:47
17	09:13	08:07	16:44 (66)	06:50		06:21	19:45 (62)	05:06	04:27
	16:21	17:35	8 16:52 (66)	18:42		20:53	15 20:00 (62)	22:01	22:48
18	09:11	08:04	16:42 (66)	06:47		06:18	19:44 (62)	05:04	04:27
	16:23	17:38	12 16:54 (66)	18:44		20:55	16 20:00 (62)	22:03	22:48
19	09:09	08:02	16:41 (66)	06:44		06:16	19:44 (62)	05:02	04:27
	16:25	17:40	13 16:54 (66)	18:47		20:58	17 20:01 (62)	22:05	22:49
20	09:08	07:59	16:42 (66)	06:41		06:13	19:43 (62)	05:00	04:27
	16:28	17:43	13 16:55 (66)	18:49		21:00	18 20:01 (62)	22:08	22:49
21	09:06	07:57	16:41 (66)	06:38	18:02 (65)	06:10	19:42 (62)	04:58	04:27
	16:30	17:45	14 16:55 (66)	18:51	2 18:04 (65)	21:02	18 20:00 (62)	22:10	22:49
22	09:05	07:54	16:41 (66)	06:35	17:58 (65)	06:07	19:43 (62)	04:56	04:27
	16:32	17:48	13 16:54 (66)	18:53	9 18:07 (65)	21:05	17 20:00 (62)	22:12	22:50
23	09:03	07:51	16:42 (66)	06:32	17:56 (65)	06:05	19:43 (62)	04:54	04:27
	16:34	17:50	11 16:53 (66)	18:56	12 18:08 (65)	21:07	16 19:59 (62)	22:14	22:50
24	09:01	07:49	16:43 (66)	06:30	17:55 (65)	06:02	19:44 (62)	04:52	04:28
	16:37	17:52	9 16:52 (66)	18:58	14 18:09 (65)	21:09	15 19:59 (62)	22:16	22:50
25	08:59	07:46	16:45 (66)	06:27	17:54 (65)	05:59	19:45 (62)	04:51	04:28
	16:39	17:55	4 16:49 (66)	19:00	15 18:09 (65)	21:12	12 19:57 (62)	22:17	22:50
26	08:57	07:43		06:24	17:53 (65)	05:57	19:47 (62)	04:49	04:28
	16:41	17:57		19:03	15 18:08 (65)	21:14	8 19:55 (62)	22:19	22:50
27	08:55	07:40		06:21	17:54 (65)	05:54		04:47	04:29
	16:44	18:00		19:05	15 18:09 (65)	21:16		22:21	22:49
28	08:53	07:38		06:18	17:55 (65)	05:51		04:46	04:30
	16:46	18:02		19:07	13 18:08 (65)	21:18		22:23	22:49
29	08:51			07:15	18:55 (65)	05:49		04:44	04:30
	16:49			20:09	11 19:06 (65)	21:21		22:25	22:49
30	08:49			07:12	18:57 (65)	05:46		04:43	04:31
	16:51			20:12	6 19:03 (65)	21:23		22:26	22:48
31	08:47			07:09				04:41	
	16:53			20:14				22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			98		112		255		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,62		0,69		
Total reduction			0,23		0,25		0,27		
Total, real			22		28		70		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:31 (63)	07:39			07:51	08:59
	22:48	22:00			20:39	8	19:39 (63)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:29 (63)	07:41			07:53	09:01
	22:47	21:58			20:36	11	19:40 (63)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:29 (63)	07:43			07:56	09:03
	22:47	21:56			20:34	12	19:41 (63)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:28 (63)	07:46			07:58	09:05
	22:46	21:53			20:31	13	19:41 (63)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:28 (63)	07:48			08:00	09:06
	22:45	21:51			20:28	12	19:40 (63)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:28 (63)	07:50			08:03	09:08
	22:44	21:48			20:25	11	19:39 (63)	18:58			16:37	15:46
7	04:39	05:37			06:46		19:29 (63)	07:52			08:05	09:10
	22:43	21:46			20:22	8	19:37 (63)	18:56			16:34	15:45
8	04:40	05:39			06:48		19:31 (63)	07:55			08:08	09:11
	22:42	21:44			20:19	3	19:34 (63)	18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55			08:02			08:15	09:16
	22:39	21:36			20:11			18:44			16:25	15:43
12	04:46	05:48			06:57			08:04			08:17	09:17
	22:37	21:34			20:08			18:42			16:23	15:43
13	04:47	05:50			06:59		18:49 (65)	08:06			08:20	09:18
	22:36	21:31			20:05	5	18:54 (65)	18:39			16:21	15:42
14	04:49	05:53			07:01		18:46 (65)	08:08			08:22	09:19
	22:34	21:28			20:02	10	18:56 (65)	18:36			16:19	15:42
15	04:51	05:55			07:04		18:44 (65)	08:11			08:24	09:20
	22:33	21:26			19:59	13	18:57 (65)	18:33			16:17	15:42
16	04:52	05:57		19:56 (62)	07:06		18:43 (65)	08:13			08:27	09:21
	22:31	21:23	4	20:00 (62)	19:56	14	18:57 (65)	18:30			16:15	15:42
17	04:54	05:59		19:53 (62)	07:08		18:42 (65)	08:15		17:16 (66)	08:29	09:22
	22:30	21:21	9	20:02 (62)	19:53	15	18:57 (65)	18:28	6	17:22 (66)	16:13	15:42
18	04:56	06:02		19:51 (62)	07:10		18:41 (65)	08:18		17:14 (66)	08:31	09:23
	22:28	21:18	13	20:04 (62)	19:50	15	18:56 (65)	18:25	10	17:24 (66)	16:11	15:42
19	04:58	06:04		19:49 (62)	07:12		18:42 (65)	08:20		17:13 (66)	08:34	09:24
	22:26	21:15	15	20:04 (62)	19:47	14	18:56 (65)	18:22	12	17:25 (66)	16:09	15:42
20	05:00	06:06		19:48 (62)	07:15		18:42 (65)	08:22		17:12 (66)	08:36	09:25
	22:25	21:12	17	20:05 (62)	19:44	13	18:55 (65)	18:20	14	17:26 (66)	16:08	15:43
21	05:01	06:08		19:48 (62)	07:17		18:43 (65)	08:25		17:12 (66)	08:38	09:26
	22:23	21:10	17	20:05 (62)	19:42	10	18:53 (65)	18:17	13	17:25 (66)	16:06	15:43
22	05:03	06:11		19:47 (62)	07:19		18:45 (65)	08:27		17:12 (66)	08:40	09:26
	22:21	21:07	18	20:05 (62)	19:39	5	18:50 (65)	18:14	13	17:25 (66)	16:04	15:43
23	05:05	06:13		19:48 (62)	07:21			08:29		17:12 (66)	08:43	09:27
	22:19	21:04	18	20:06 (62)	19:36			18:12	12	17:24 (66)	16:02	15:44
24	05:07	06:15		19:48 (62)	07:23			08:32		17:13 (66)	08:45	09:27
	22:17	21:02	17	20:05 (62)	19:33			18:09	10	17:23 (66)	16:01	15:45
25	05:09	06:17		19:48 (62)	07:26			07:34		16:14 (66)	08:47	09:27
	22:15	20:59	16	20:04 (62)	19:30			17:06	7	16:21 (66)	15:59	15:45
26	05:11	06:20		19:48 (62)	07:28			07:37			08:49	09:28
	22:13	20:56	15	20:03 (62)	19:27			17:04			15:58	15:46
27	05:13	06:22		19:49 (62)	07:30			07:39			08:51	09:28
	22:11	20:53	12	20:01 (62)	19:24			17:01			15:56	15:47
28	05:16	06:24		19:50 (62)	07:32			07:41			08:53	09:28
	22:09	20:50	9	19:59 (62)	19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28			07:37			07:46			08:57	09:28
	22:05	20:45			19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (63)				07:48				09:27
	22:02	20:42	5	19:38 (63)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			185			192			97			
Sun reduction			0,50			0,50			0,50			
Oper. time red.			0,80			0,80			0,80			
Wind dir. red.			0,69			0,65			0,57			
Total reduction			0,28			0,26			0,23			
Total, real			51			49			22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06	19:00 (65)	05:44	04:40
	15:53	16:56		18:04		20:16	4 19:04 (65)	21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58		05:36	04:36
	15:57	17:03		18:12		20:23		21:32	22:34
5	09:25	08:36		07:24		06:55		05:34	04:35
	15:58	17:06		18:14		20:25		21:35	22:36
6	09:25	08:34		07:21		06:52	19:37 (63)	05:31	04:34
	16:00	17:08		18:16		20:28	6 19:43 (63)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:35 (63)	05:29	04:33
	16:02	17:11		18:19		20:30	10 19:45 (63)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:34 (63)	05:26	04:32
	16:03	17:13		18:21		20:32	12 19:46 (63)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:33 (63)	05:24	04:31
	16:05	17:16		18:23		20:35	13 19:46 (63)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:33 (63)	05:22	04:30
	16:07	17:18		18:26		20:37	12 19:45 (63)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:33 (63)	05:19	04:30
	16:09	17:21		18:28		20:39	11 19:44 (63)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:33 (63)	05:17	04:29
	16:11	17:23		18:30		20:42	10 19:43 (63)	21:50	22:44
13	09:18	08:17		07:01		06:32	19:35 (63)	05:15	04:28
	16:13	17:25		18:33		20:44	7 19:42 (63)	21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27		05:10	04:27
	16:17	17:30		18:37		20:48		21:57	22:47
16	09:14	08:10		06:53		06:24		05:08	04:27
	16:19	17:33		18:40		20:51		21:59	22:47
17	09:13	08:07		06:50		06:21	19:53 (62)	05:06	04:27
	16:21	17:35		18:42		20:53	8 20:01 (62)	22:01	22:48
18	09:11	08:04	16:45 (66)	06:47		06:18	19:50 (62)	05:04	04:27
	16:23	17:38	8 16:53 (66)	18:44		20:55	12 20:02 (62)	22:03	22:48
19	09:09	08:02	16:43 (66)	06:44		06:16	19:49 (62)	05:02	04:27
	16:25	17:40	12 16:55 (66)	18:47		20:58	15 20:04 (62)	22:05	22:49
20	09:08	07:59	16:43 (66)	06:41		06:13	19:48 (62)	05:00	04:27
	16:28	17:43	13 16:56 (66)	18:49		21:00	16 20:04 (62)	22:08	22:49
21	09:06	07:57	16:43 (66)	06:38		06:10	19:46 (62)	04:58	04:27
	16:30	17:45	13 16:56 (66)	18:51		21:02	18 20:04 (62)	22:10	22:49
22	09:05	07:54	16:42 (66)	06:35		06:07	19:47 (62)	04:56	04:27
	16:32	17:48	14 16:56 (66)	18:53		21:05	17 20:04 (62)	22:12	22:50
23	09:03	07:51	16:42 (66)	06:32	18:01 (65)	06:05	19:46 (62)	04:54	04:27
	16:34	17:50	13 16:55 (66)	18:56	7 18:08 (65)	21:07	18 20:04 (62)	22:14	22:50
24	09:01	07:49	16:43 (66)	06:30	17:59 (65)	06:02	19:46 (62)	04:52	04:28
	16:37	17:52	11 16:54 (66)	18:58	11 18:10 (65)	21:09	18 20:04 (62)	22:16	22:50
25	08:59	07:46	16:44 (66)	06:27	17:57 (65)	05:59	19:46 (62)	04:51	04:28
	16:39	17:55	9 16:53 (66)	19:00	14 18:11 (65)	21:12	17 20:03 (62)	22:17	22:50
26	08:57	07:43	16:47 (66)	06:24	17:56 (65)	05:57	19:47 (62)	04:49	04:28
	16:41	17:57	4 16:51 (66)	19:03	15 18:11 (65)	21:14	16 20:03 (62)	22:19	22:50
27	08:55	07:40		06:21	17:56 (65)	05:54	19:47 (62)	04:47	04:29
	16:44	18:00		19:05	16 18:12 (65)	21:16	14 20:01 (62)	22:21	22:49
28	08:53	07:38		06:18	17:56 (65)	05:51	19:49 (62)	04:46	04:30
	16:46	18:02		19:07	15 18:11 (65)	21:18	11 20:00 (62)	22:23	22:49
29	08:51			07:15	18:56 (65)	05:49	19:50 (62)	04:44	04:30
	16:49			20:09	14 19:10 (65)	21:21	7 19:57 (62)	22:25	22:49
30	08:49			07:12	18:56 (65)	05:46		04:43	04:31
	16:51			20:12	13 19:09 (65)	21:23		22:26	22:48
31	08:47			07:09	18:57 (65)			04:41	
	16:53			20:14	10 19:07 (65)			22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			97		115		272		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,63		0,69		
Total reduction			0,23		0,25		0,28		
Total, real			22		29		75		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August		September		October		November	December
1	04:32	05:24		06:33	19:32 (63)	07:39		07:51	08:59
	22:48	22:00		20:39	11 19:43 (63)	19:13		16:49	15:51
2	04:33	05:26		06:35	19:31 (63)	07:41		07:53	09:01
	22:47	21:58		20:36	12 19:43 (63)	19:10		16:46	15:50
3	04:34	05:28		06:37	19:31 (63)	07:43		07:56	09:03
	22:47	21:56		20:34	13 19:44 (63)	19:07		16:44	15:49
4	04:35	05:31		06:39	19:31 (63)	07:46		07:58	09:05
	22:46	21:53		20:31	12 19:43 (63)	19:04		16:41	15:48
5	04:36	05:33		06:42	19:32 (63)	07:48		08:00	09:06
	22:45	21:51		20:28	10 19:42 (63)	19:01		16:39	15:47
6	04:37	05:35		06:44	19:33 (63)	07:50		08:03	09:08
	22:44	21:48		20:25	7 19:40 (63)	18:58		16:37	15:46
7	04:39	05:37		06:46		07:52		08:05	09:10
	22:43	21:46		20:22		18:56		16:34	15:45
8	04:40	05:39		06:48		07:55		08:08	09:11
	22:42	21:44		20:19		18:53		16:32	15:45
9	04:41	05:42		06:50		07:57		08:10	09:13
	22:41	21:41		20:16		18:50		16:30	15:44
10	04:43	05:44		06:53		07:59		08:12	09:14
	22:40	21:39		20:13		18:47		16:28	15:44
11	04:44	05:46		06:55	18:54 (65)	08:02		08:15	09:16
	22:39	21:36		20:11	1 18:55 (65)	18:44		16:25	15:43
12	04:46	05:48		06:57	18:50 (65)	08:04		08:17	09:17
	22:37	21:34		20:08	9 18:59 (65)	18:42		16:23	15:43
13	04:47	05:50		06:59	18:48 (65)	08:06		08:20	09:18
	22:36	21:31		20:05	12 19:00 (65)	18:39		16:21	15:42
14	04:49	05:53	19:58 (62)	07:01	18:47 (65)	08:08		08:22	09:19
	22:34	21:28	8 20:06 (62)	20:02	14 19:01 (65)	18:36		16:19	15:42
15	04:51	05:55	19:56 (62)	07:04	18:46 (65)	08:11		08:24	09:20
	22:33	21:26	12 20:08 (62)	19:59	15 19:01 (65)	18:33		16:17	15:42
16	04:52	05:57	19:54 (62)	07:06	18:45 (65)	08:13	17:18 (66)	08:27	09:21
	22:31	21:23	15 20:09 (62)	19:56	15 19:00 (65)	18:30	7 17:25 (66)	16:15	15:42
17	04:54	05:59	19:53 (62)	07:08	18:45 (65)	08:15	17:15 (66)	08:29	09:22
	22:30	21:21	16 20:09 (62)	19:53	14 18:59 (65)	18:28	11 17:26 (66)	16:13	15:42
18	04:56	06:02	19:52 (62)	07:10	18:45 (65)	08:18	17:14 (66)	08:31	09:23
	22:28	21:18	18 20:10 (62)	19:50	13 18:58 (65)	18:25	13 17:27 (66)	16:11	15:42
19	04:58	06:04	19:52 (62)	07:12	18:46 (65)	08:20	17:13 (66)	08:34	09:24
	22:26	21:15	18 20:10 (62)	19:47	12 18:58 (65)	18:22	14 17:27 (66)	16:09	15:42
20	05:00	06:06	19:51 (62)	07:15	18:47 (65)	08:22	17:13 (66)	08:36	09:25
	22:25	21:12	18 20:09 (62)	19:44	8 18:55 (65)	18:20	14 17:27 (66)	16:08	15:43
21	05:01	06:08	19:51 (62)	07:17		08:25	17:13 (66)	08:38	09:26
	22:23	21:10	18 20:09 (62)	19:42		18:17	13 17:26 (66)	16:06	15:43
22	05:03	06:11	19:51 (62)	07:19		08:27	17:14 (66)	08:40	09:26
	22:21	21:07	17 20:08 (62)	19:39		18:14	12 17:26 (66)	16:04	15:43
23	05:05	06:13	19:52 (62)	07:21		08:29	17:14 (66)	08:43	09:27
	22:19	21:04	17 20:09 (62)	19:36		18:12	10 17:24 (66)	16:02	15:44
24	05:07	06:15	19:53 (62)	07:23		08:32	17:16 (66)	08:45	09:27
	22:17	21:02	14 20:07 (62)	19:33		18:09	7 17:23 (66)	16:01	15:45
25	05:09	06:17	19:54 (62)	07:26		07:34		08:47	09:27
	22:15	20:59	12 20:06 (62)	19:30		17:06		15:59	15:45
26	05:11	06:20	19:56 (62)	07:28		07:37		08:49	09:28
	22:13	20:56	7 20:03 (62)	19:27		17:04		15:58	15:46
27	05:13	06:22		07:30		07:39		08:51	09:28
	22:11	20:53		19:24		17:01		15:56	15:47
28	05:16	06:24		07:32		07:41		08:53	09:28
	22:09	20:50		19:21		16:59		15:55	15:48
29	05:18	06:26		07:35		07:44		08:55	09:28
	22:07	20:48		19:18		16:56		15:54	15:49
30	05:20	06:28	19:35 (63)	07:37		07:46		08:57	09:28
	22:05	20:45	7 19:42 (63)	19:16		16:54		15:52	15:50
31	05:22	06:31	19:33 (63)			07:48			09:27
	22:02	20:42	10 19:43 (63)			16:51			15:51
Potential sun hours	545	478		386		319		236	200
Total, worst case			207		178		101		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,69		0,65		0,57		
Total reduction			0,28		0,26		0,23		
Total, real			57		46		23		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 8.2

Grafisk Moifjellet vindkraftverk

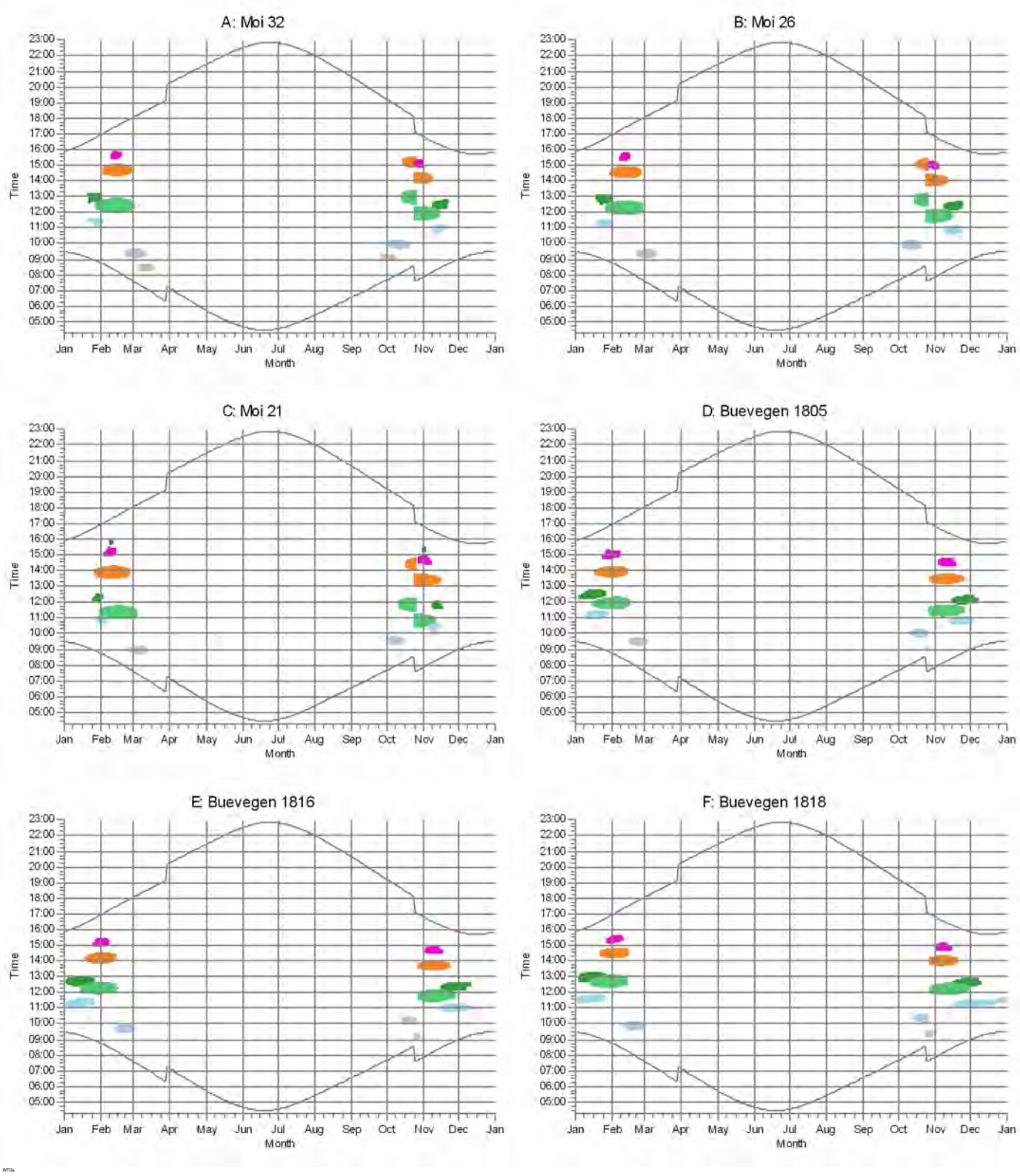
Med nærliggende - realistic case

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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

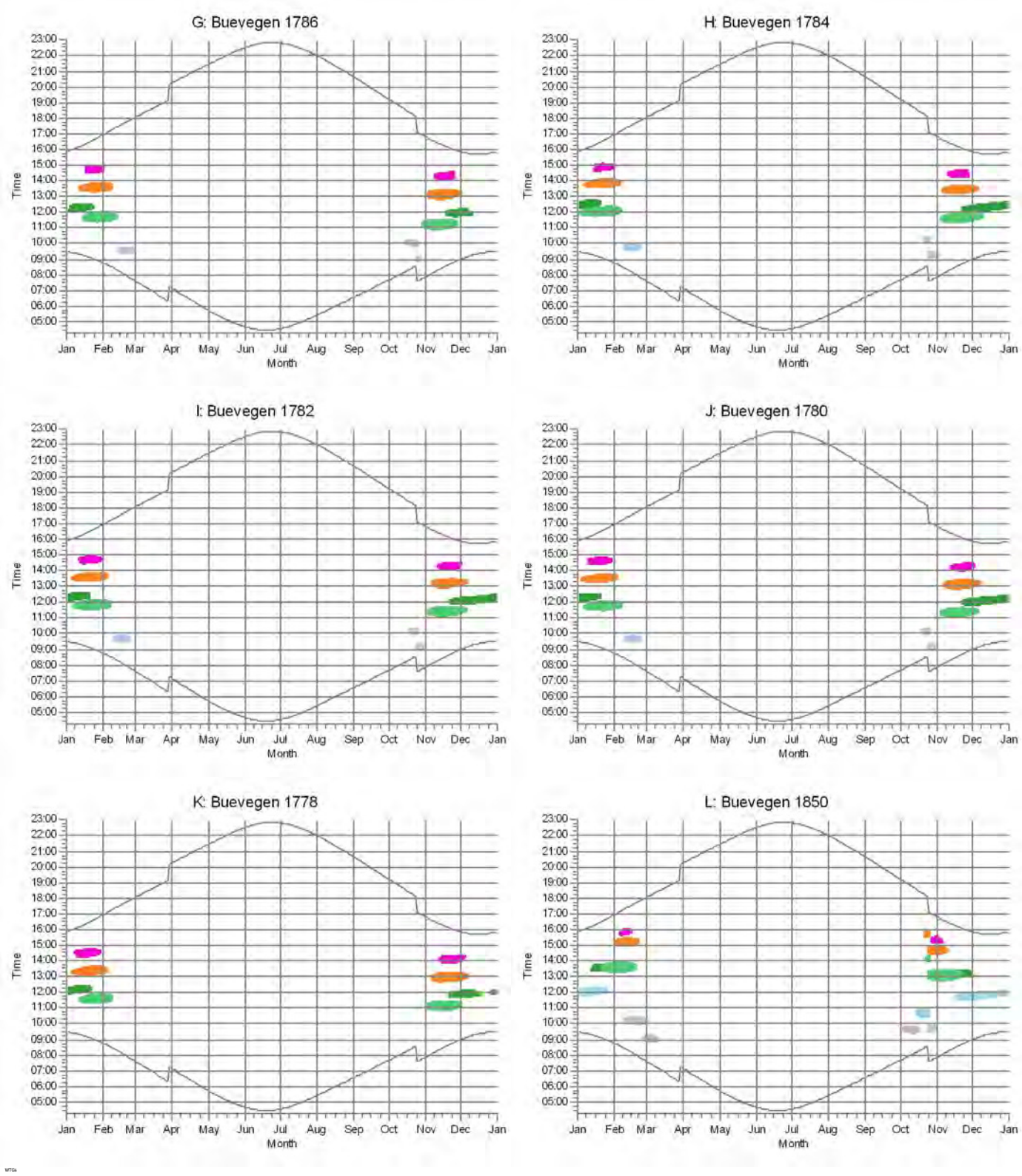


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

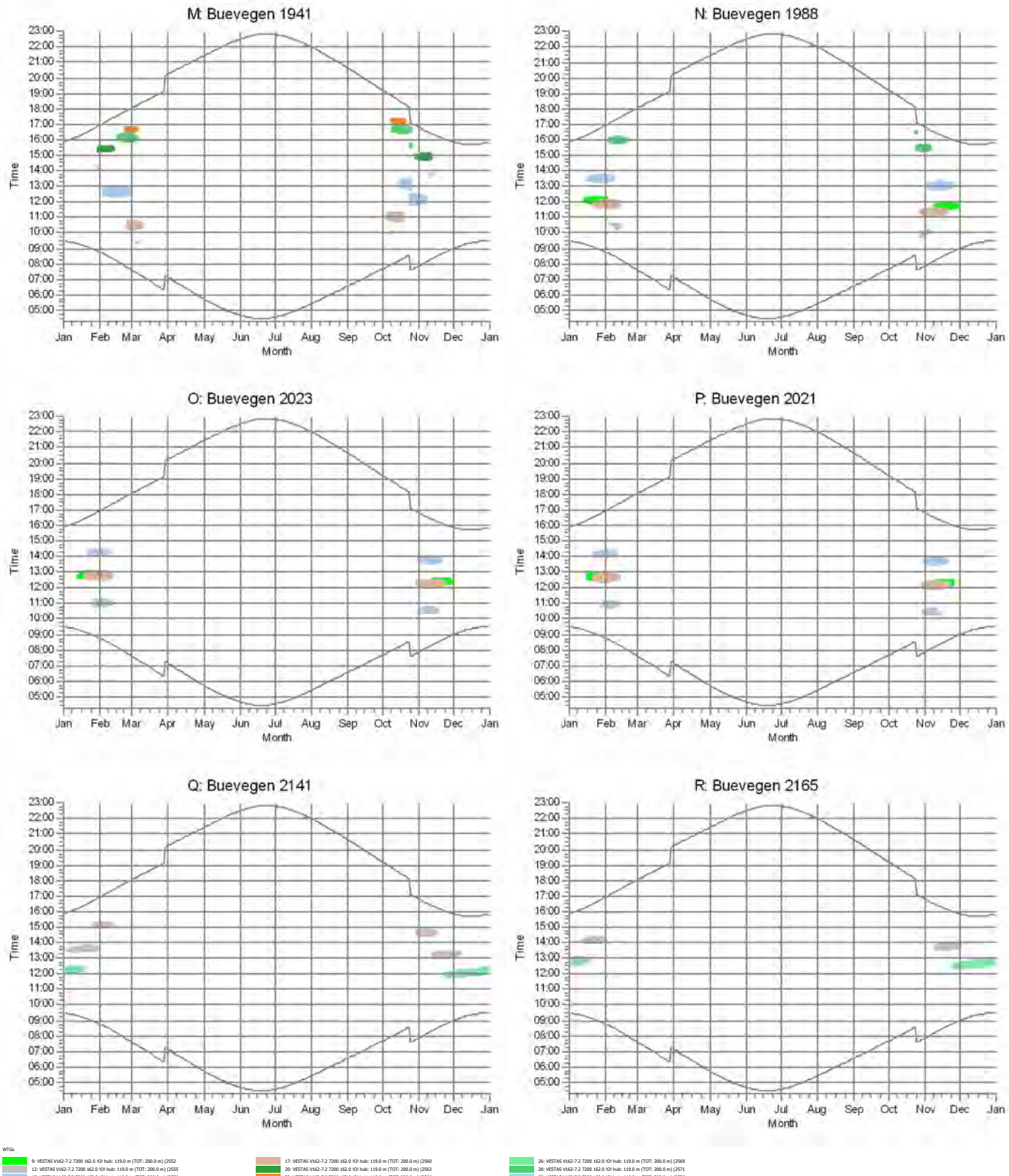


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

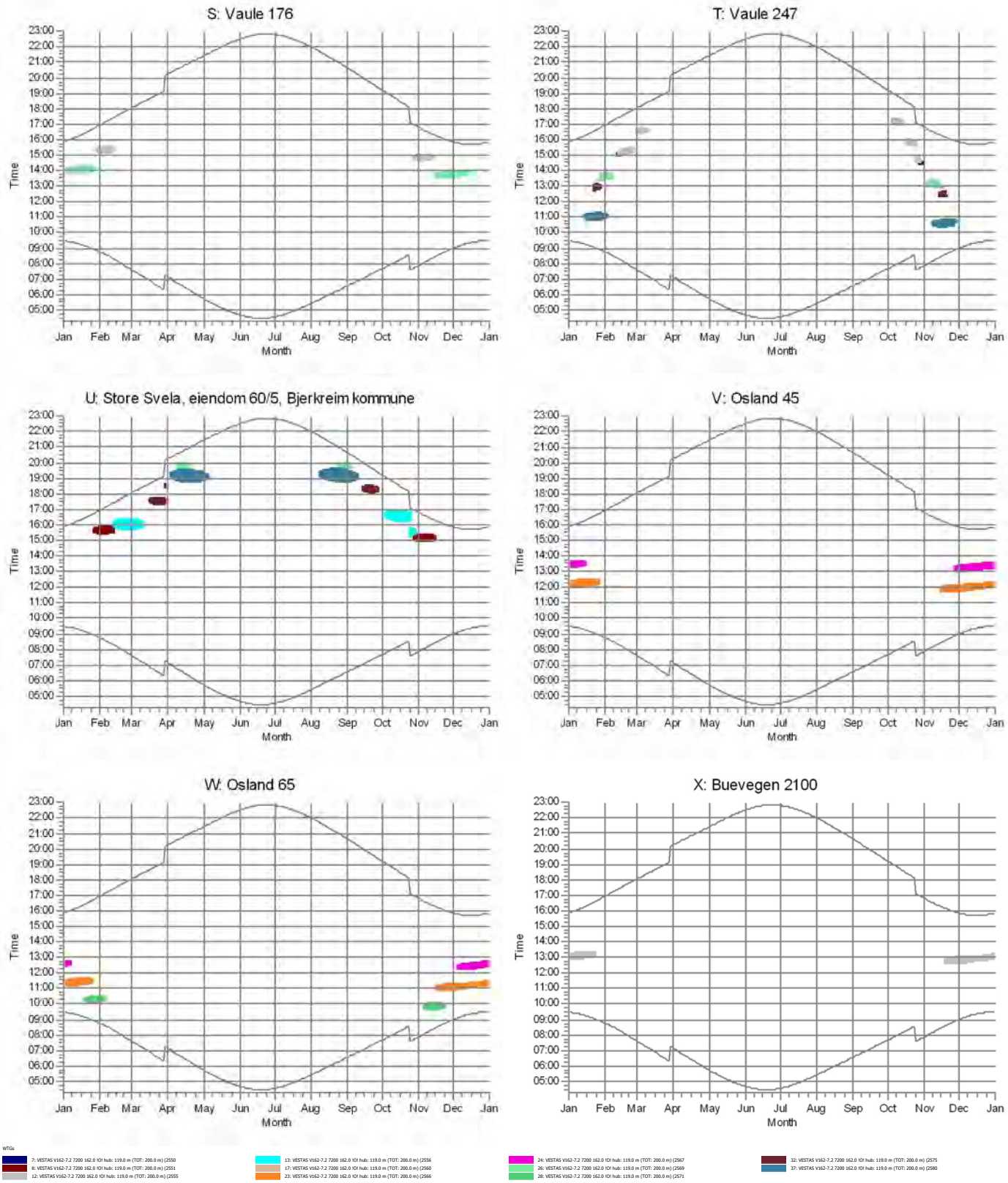


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

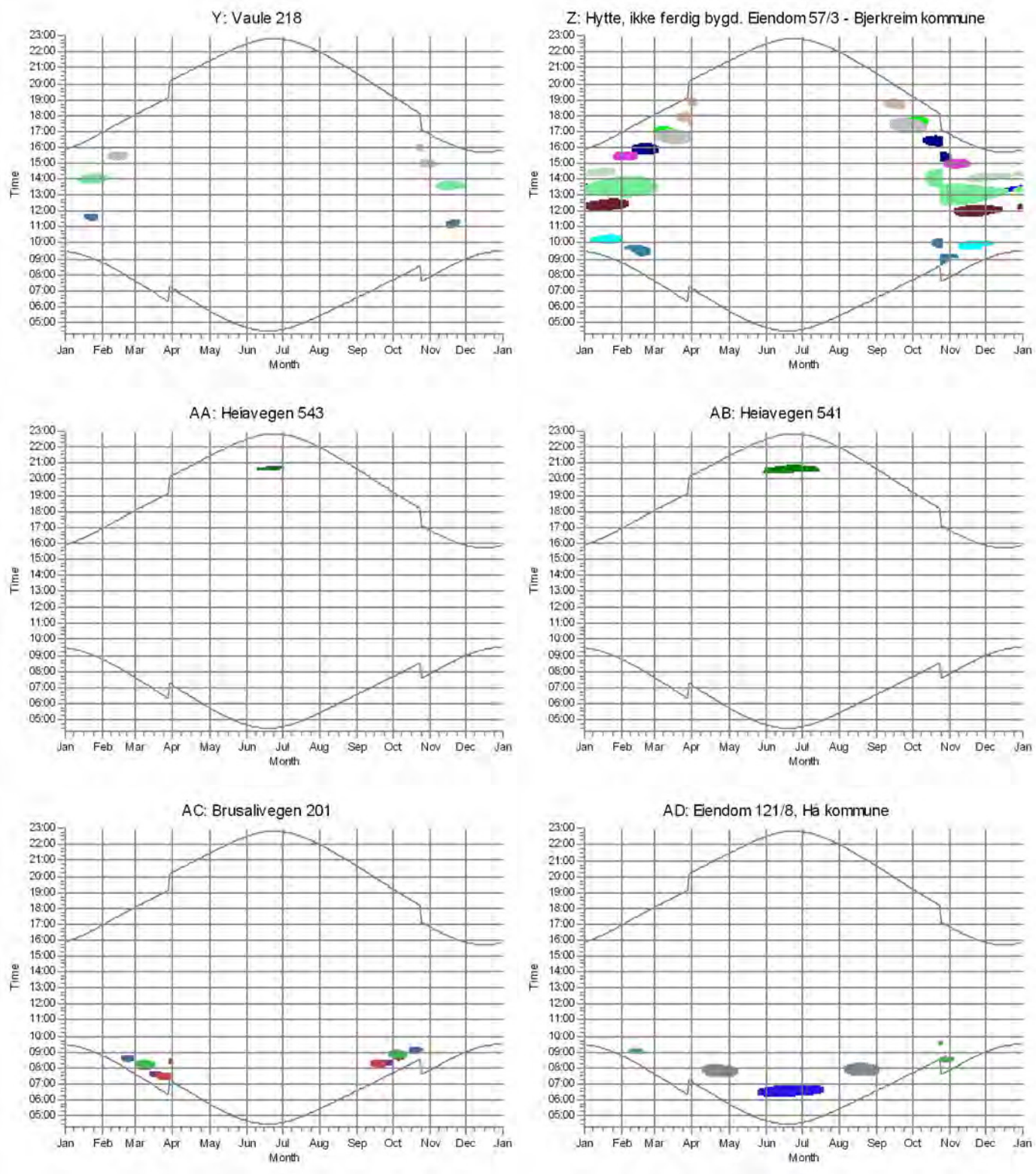


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

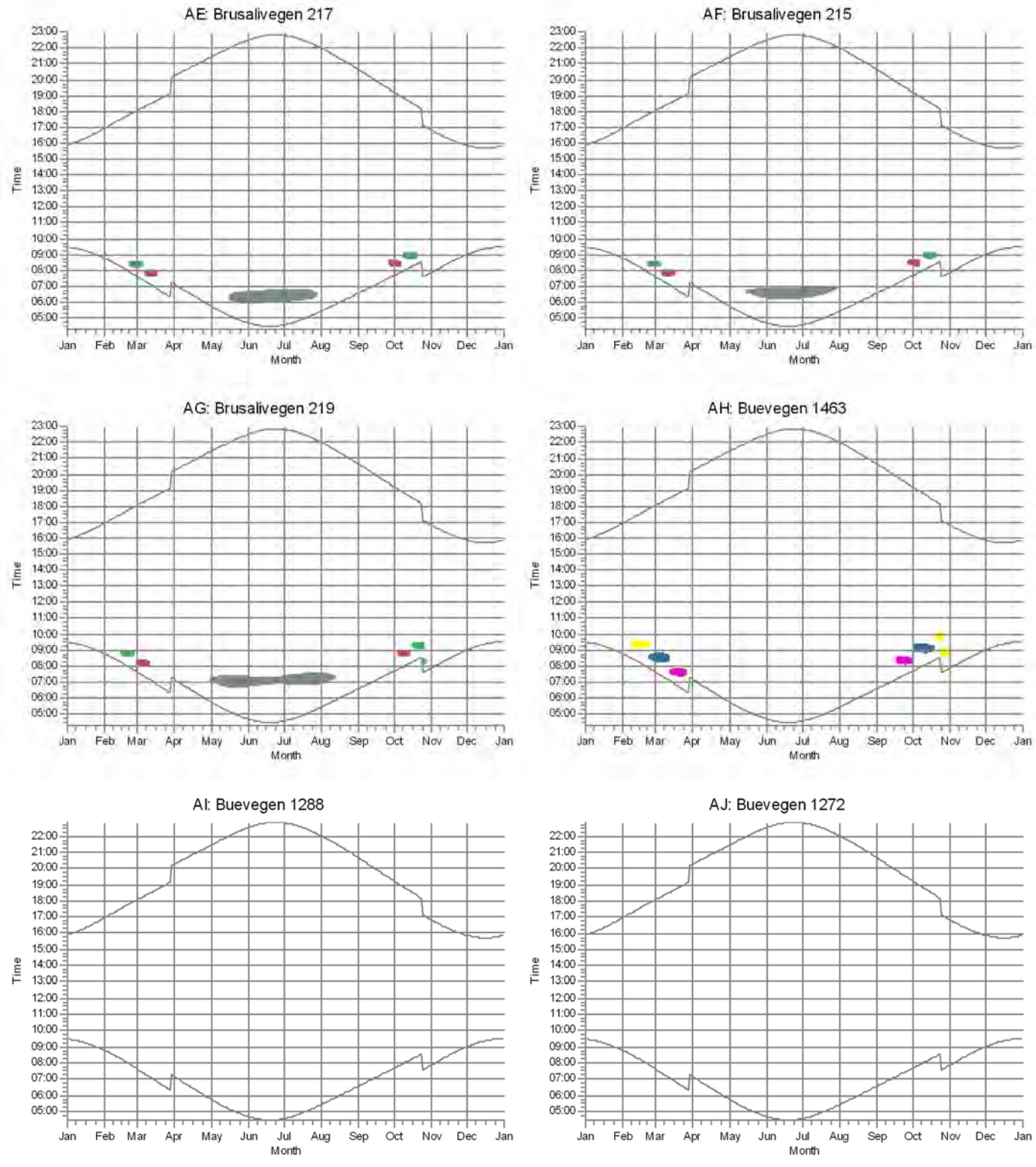


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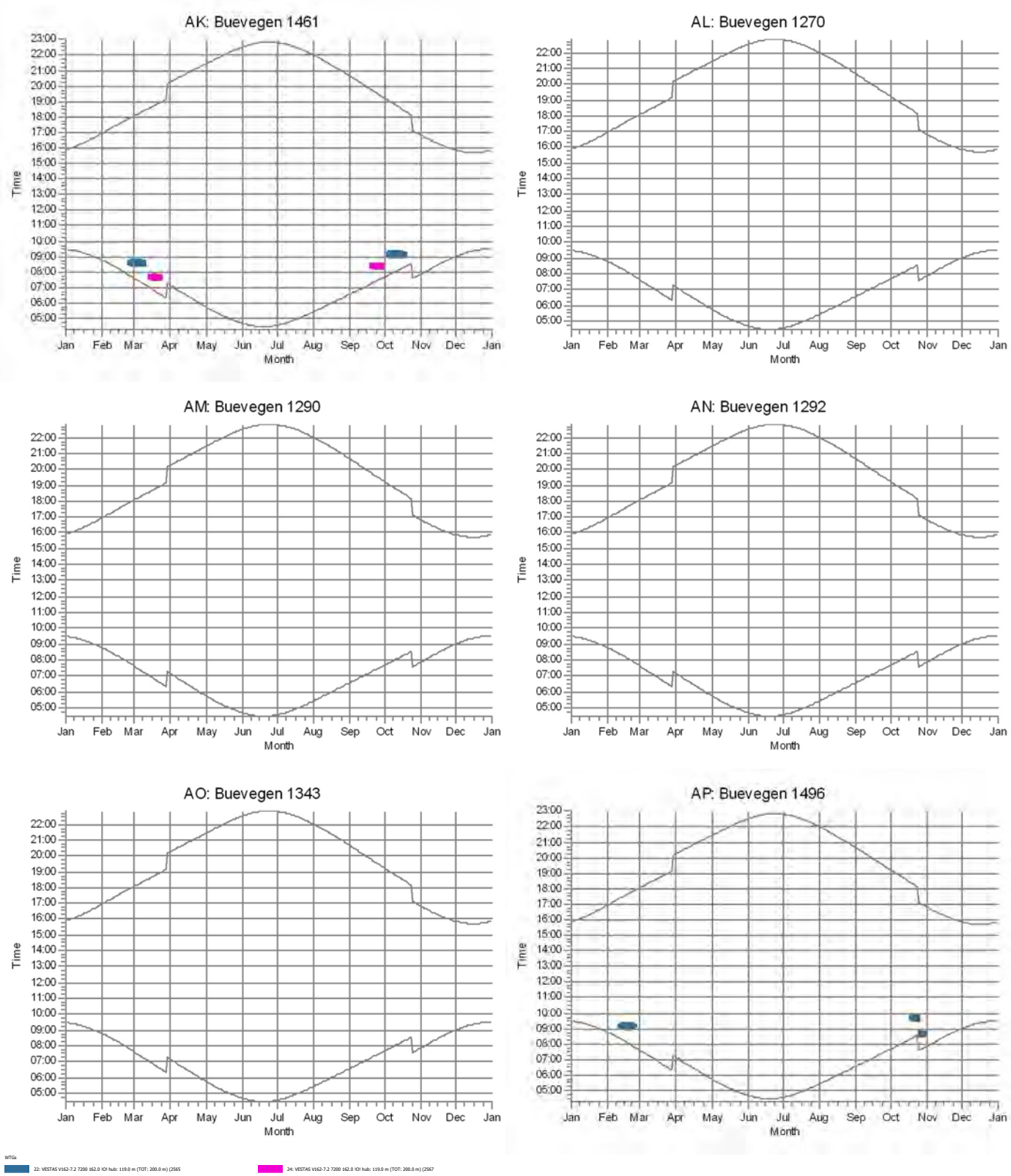


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

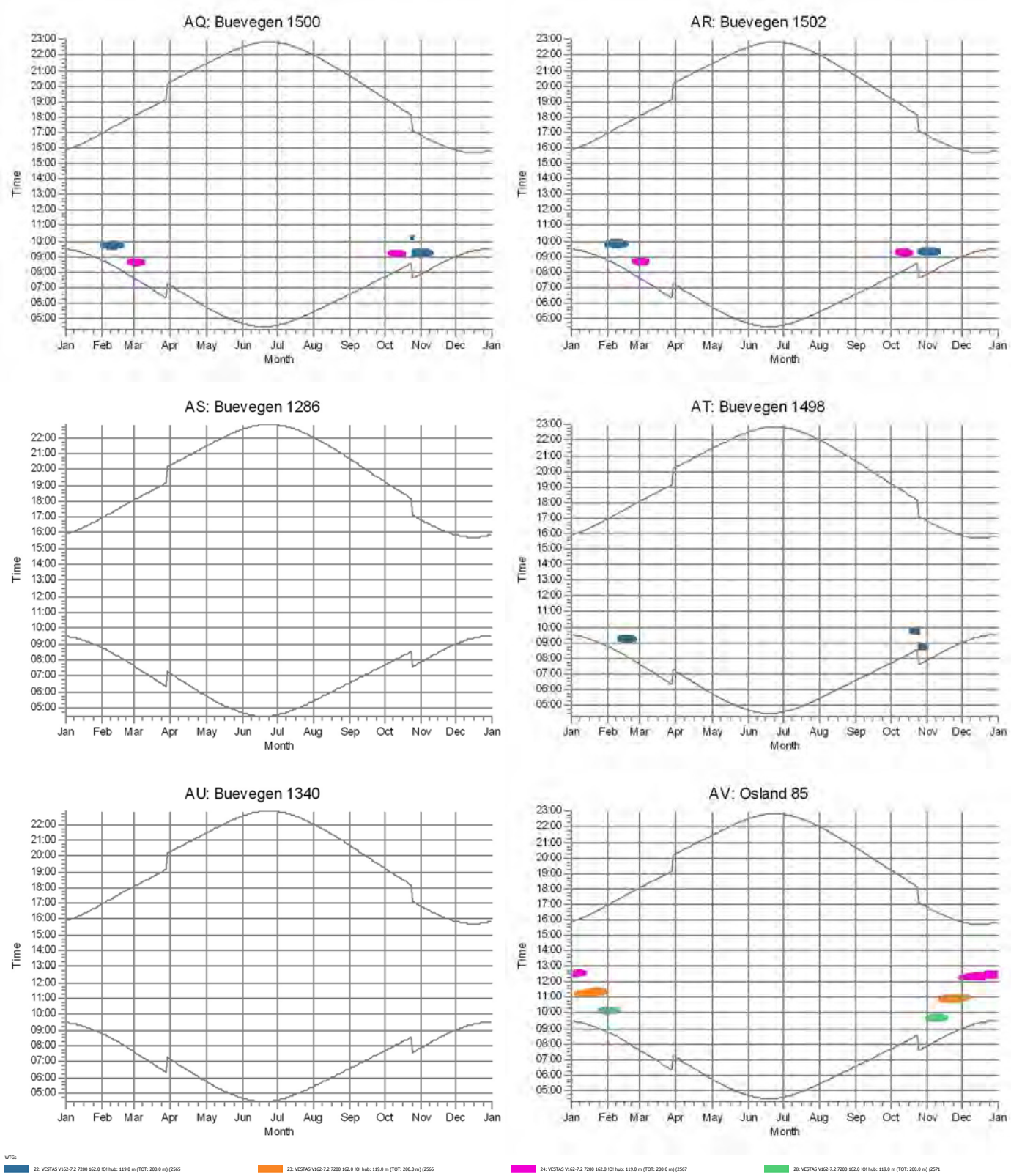


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

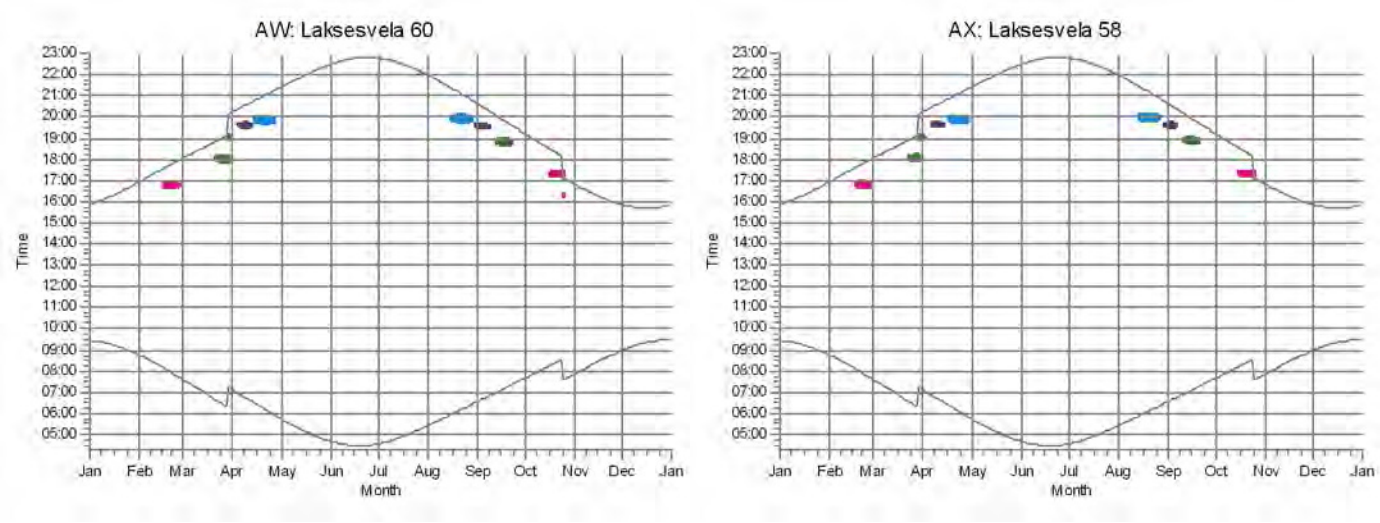


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere



WTGs

62: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (24)
63: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (25)
65: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (27)
66: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (28)

Fagrapport:

Skyggekast

RAPPORT

Moifjellet og Mellomstrand vindkraftverk

OPPDRAGSGIVER

Statkraft Vind Utvikling DA

EMNE

KU - SKYGGEKAST

DATO / REVISJON: 02.03.25 / 03

DOKUMENTKODE: 10265688-01-RIEn-RAP-001



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Rapport

OPPDRAG	Moifjellet og Mellomstrand vindkraftverk	DOKUMENTKODE	10265688-01-RIEn-RAP-001
EMNE	KU - Skyggekast	TILGJENGELIGHET	Åpen
OPPDRAGSGIVER	Statkraft Vind Utvikling DA	OPPDRAGSLEDER	Håvard Finanger
KONTAKTPERSON	Andreas Stokke og Kristin Serck-Hansen	UTARBEIDET AV	Martine Bjugg
KOORDINATER	Sone: / Øst: / Nord:	ANSVARLIG ENHET	10234052 Vindkraft Midt
GNR./BNR./SNR.	/ / /		

SAMMENDRAG

På oppdrag fra Statkraft er det utført en skyggekastanalyse for Moifjellet og Mellomstrand vindkraftverk i Bjerkreim og Time kommuner, Rogaland fylke.

Analysen er gjort i henhold til NVE sin veileder nr. 2/2014 som ble utarbeidet for å vurdere skyggekast fra vindturbiner og følger kravene fastsatt i planprogrammet fra både kommunen og NVE. I tillegg er rapport fra 2022 om oppdatert kunnskapsgrunnlag om skyggekast fra vindturbiner anvendt i fastsettelse av influensområde.

Rapporten kartlegger hvor og i hvilken grad skyggekast kan oppstå fra vindkraftverkene på Moifjellet og Mellomstrand. Rapporten tar for seg to alternativer:

Alternativ 1 inkluderer både Moifjellet og Mellomstrand vindkraftverk.

Alternativ 2 omfatter kun Moifjellet vindkraftverk.

For hvert alternativ er det vurdert hvordan skyggekast påvirker nærliggende boliger, friluftsområder og andre relevante steder. Det er utarbeidet kart som viser omfanget av skyggekast i de ulike scenarioene. I tillegg er det gjort en vurdering på omfanget av sumvirkninger av skyggekast fra flere vindkraftverk på bygg som blir utsatt for skyggekast fra Moifjellet og Mellomstrand vindkraftverk.

Skyggekastanalysen for Moifjellet og Mellomstrand vindkraftverk viser at flere boliger og fritidsbygg i influensområdet vil kunne oppleve skyggekastbelastning. Beregningene viser at skyggekast kan bli en utfordring for flere mottakere, særlig i områdene nord for Moifjellet.

- **Alternativ 1** (Moifjellet og Mellomstrand) gir størst omfang av skyggekast, med 35 mottakere over NVEs anbefalte grenseverdi.
- **Alternativ 2** (kun Moifjellet) gir noe lavere belastning, men fortsatt 28 mottakere over grenseverdien.

Noen mottakere vil kunne oppleve sumvirkninger fra eksisterende vindkraftverk. Disse mottakerne er lokalisert sørøst og sørvest for Moifjellet.

Flere friluftsområder og turruter kan også bli påvirket av skyggekast fra Moifjellet og Mellomstrand vindkraftverk.

For å redusere belastningen av skyggekast på mottakerne kan det derfor være nødvendig med avbøtende tiltak. Skyggekastkalendere kan utarbeides for å vise når skyggekast er forventet å kunne inntreffe. Sammen med automatiserte lyssensorer kan turbinene stoppes dersom det både er klarvær og man ser i skyggekastkalenderen at en mottaker kan være utsatt. Dette vil minimere ulempene for naboer og andre berørte.

03	02.03.26	Oppdatering av figurer og revidering av rapport etter tilbakemelding	Martine Bjugg	Jonas B Ghini	Håvard Finanger
02	22.01.26	Ny revisjon med nytt oppdragsnr og nytt alternativ med Mellomstrand	Martine Bjugg	Jonas B Ghini	Håvard Finanger
01	30.01.25	Oppdatering av rapport etter tilbakemelding	Martine Bjugg	Jonas B Ghini	Håvard Finanger
00	15.11.24	Leveranse av rapport	Martine Bjugg	Jonas B Ghini	Håvard Finanger
REV.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV

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1 Bakgrunn

I forbindelse med konsekvensutredningen for Moifjellet og Mellomstrand vindkraftverk i Bjerkreim og Time kommuner, Rogaland fylke, er det utført en skyggekastanalyse.

Rapporten tar for seg to alternativer:

Alternativ 1 inkluderer både Moifjellet og Mellomstrand vindkraftverk.

Alternativ 2 omfatter kun Moifjellet vindkraftverk.

For begge alternativene er det analysert hvor skyggekast kan oppstå, samt omfanget av dette på nærliggende boliger, friluftsområder og andre berørte arealer. Det er også gjort vurderinger av sumvirkninger, der bygg påvirkes av skyggekast fra flere vindkraftverk.

I området rundt Moifjellet og Mellomstrand finnes det seks eksisterende vindkraftverk. Ved vurdering av sumvirkninger er det kun de tre nærmeste – Bjerkreim, Stigafjellet og Måkaknuten – som er inkludert. De tre øvrige vindkraftverkene ligger for langt unna til å være aktuelle og er derfor ikke tatt med i analysen. Det er gjennomført egne simuleringer for å sikre at disse tre vindkraftverkene alene ikke bidrar til skyggekastbelastning over gjeldende grenseverdier innenfor influensområdet til Moifjellet og Mellomstrand vindkraftverk.

Analysen er utført i henhold til NVE sin veileder nr. 2/2014 for vurdering av skyggekast fra vindturbiner og følger kravene fastsatt i planprogrammet fra både kommunen og NVE. Utredningen er basert på et eksempelutlegg med 38 turbiner for Moifjellet og 4 turbiner for Mellomstrand. Turbinene har en totalhøyde på 200 meter til vingetipp, en rotordiameter på litt over 160 meter og en kapasitet på rundt 7 MW. Figur 3.1 viser det analyserte turbinutlegget.

2 Skyggekast

Et punkt er skyggelagt dersom det står et legeme mellom punktet og solskiven langs strålen fra solskiven mot punktet. Dersom det skyggende legemet beveger seg vil også den resulterende skyggen bevege seg, og dette vil kunne oppleves som sjenerende.

En vindturbin skiller seg ut fra andre høye byggverk og installasjoner med sine roterende blader. Normalt vil man bare observere den direkte bevegelsen når man ser rett på turbinene. Men under spesielle omstendigheter vil turbinen stå i en posisjon mellom solen og betraktningsstedet. Da vil rotorbladene sveipe foran solskiven og kaste en bevegelig skygge som vil projiseres mot betraktningsstedet i et repeterende mønster. Dels vil man oppleve dette som en sveipende skygge over en flate, dels vil man merke en hurtig veksling mellom direkte lys og korte «glimt» med skygge. Dette kan være sjenerende mens fenomenet pågår. Et slikt betraktningssted, som mottar skyggekast, kalles for en skyggekastmottaker. En skyggekastmottaker er altså eksponert for en roterende skygge i løpet av mer eller mindre avgrensende tidsrom ettersom solen beveger seg gjennom året.

Fordi skyggen kastes lengst når solbanen er lav, er det typisk om morgen og kveld skyggekast inntreffer, og oftere i vintermånedene enn om sommeren. Imidlertid er det nødvendig med eksakte beregninger for å få en klar forståelse av skyggekastutfordringen.

For skyggekast fra vindturbiner er det etablert solide metoder og grenseverdier (Norges vassdrags- og energidirektorat, 2022b) og NVE har publisert en veileder til gjennomføring av slike beregninger (Norges vassdrags- og energidirektorat, 2014).

2.1 Skyggekastmottakere

Flere typer mottakere defineres som følsomme for skyggekastmottak. Det er i stor grad snakk om bygg der mennesker oppholder seg over tid, og i noen grad uteareal med spesielle bruksmønster. NVE definerer følgende typer mottakere som sensitive for skyggekast fra vindturbiner:

- Helårsboliger, samt fritidsboliger i aktiv bruk
- Skoler og barnehager
- Sykehus, samt alders- og sykehjem
- Hoteller og andre overnattingsbygg, kafeer, restauranter og veikroer
- Kontor- og næringslokaler med regelmessige dagaktiviteter som samtidig har eksponerte vindusflater

I tillegg til dette kan NVE trekke inn følgende kategorier som sensitive, etter skjønn:

- Veldefinerte kulturminner/kulturmiljøer med stor opplevelsesverdi/pedagogisk verdi
- Kirker, kirkegårder, parker, idrettsanlegg og lekeplasser
- Definerte turmål, utsiktspunkter og lignende
- Havneanlegg, marinaer

2.2 Anbefalte grenseverdier for vindturbiner

Grenseverdiene NVE oppgir referer til antallet timer i året en skyggekastsensitiv mottaker kan utsettes for skyggekast fra en vindturbin før omfanget av belastningen vil regnes som sjenerende. Verdiene gis for to forskjellige scenarioer: verst tenkelig grad av skyggekast, og realistisk grad av skyggekast. Verdiene er anbefalinger, og grenseverdiene kan fravikes i unntakstilfeller.

Verst tenkelig scenario

En skyggekastmottaker, som f.eks. en helårsbolig, regnes som et slags drivhus, med vinduer i alle retninger, slik at all skygge som faller på boligen også legges til total belastningsgrad. I tillegg regner man at solen alltid skinner i alle timer med dagslys, at turbinen alltid står vinkelrett på mottakerpunktet, og man tar ikke høyde for driftsstans på anlegg (for vindturbiner er det snakk om vedlikehold og dårlige vindforhold, altså at det forutsettes at turbinene er i drift hele året (8760 timer)).

NVEs anbefalinger er at skyggekastmottakere ikke utsettes for mer enn 30 timer verst-tenkelig skyggekast per år, eller mer enn 30 minutter per dag

Realistisk scenario

Samme som for verst tenkelig scenario regnes en skyggekastmottaker som et slags drivhus, med vinduer i alle retninger, slik at all skygge som faller på boligen også legges til total belastningsgrad. Videre vil det realistiske scenarioet utføre beregninger med en viss sannsynlighet for solskinn i løpet av timene med dagslys, som altså reduserer total belastning siden under overskyet vær er lyset fra solskiven altfor diffust til at en skygge regnes som sjenerende. I tillegg tar man hensyn til realistisk driftstid for anlegget, basert på vindrosen for området. Ved å bruke vindrosen blir turbinene orientert slik at de vender mot vindretningen, og de er ikke standard fordelt. En viktig effekt av dette er at når vinden dreier turbinene kan det oppstå perioder der skyggen slutter å flakke over mottakeren og dermed reduseres skyggekastbelastningen til null i en slik periode. Dette skyldes at dersom turbinen roterer i et plan (tilnærmet) parallelt med linjen mellom en mottaker og solskiven, så vil skyggen fra bladene være fast, ikke «blinkende».

For realistisk skyggekastmottak anbefaler NVE at en mottaker ikke utsettes for mer enn 8 timer per år. NVE trekker også inn at i en situasjon der vest tenkelig skyggekast overskrider grenseverdien kan man fravike denne dersom realistisk skyggekast kan reduseres til under 8 timer per år ved avbøtende tiltak.

2.3 NVEs krav til beregningsmetodikk

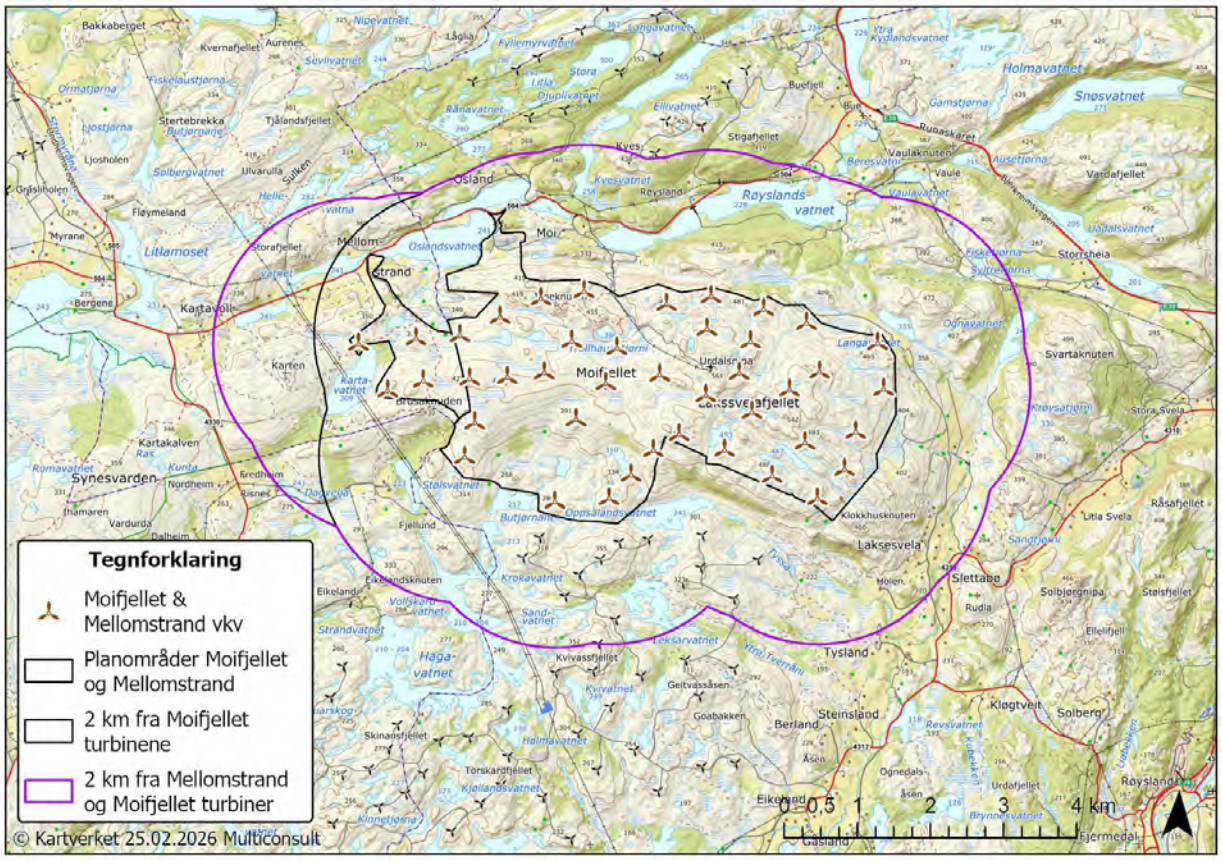
NVEs veileder beskriver noen detaljer rundt fremgangsmåten for skyggekastberegninger.

- Beregningene skal ta hensyn til terrengets høydeprofil i området som vurderes, og dette inkluderer skjermingseffekter av terreng som ligger mellom en mottaker og en kilde til skygge.

- Beregningene av teoretisk skyggekast skal baseres på drivhustilstand, det vil si at bygningene ikke har én bestemt retning mot vindturbinene og at mottakeren har vinduer i alle retninger. Mottakeren skal være en standard vertikal flate på 2 x 2 meter hevet 2 meter over bakken med mindre spesielle forhold tilsier noe annet.
- I det realistiske scenarioet skal en solskinnssannsynlighet på 50% benyttes. Dette er stort sett en overvurdering for de fleste steder i Norge, som forsikrer at man holder seg til et konservativt estimat for skyggekastbelastning. Det skal benyttes en retningsfordeling på vind fordelt på minst 8 sektorer og en årlig driftstid på 7000 timer.
- For beregningene regnes skyggekast fra en kilde som er mer enn 1500[1] m fra en mottaker som så svakt at det ikke bidrar til total belastning.

3 Skyggekastmottakere og analyseområde

NVEs krav til beregningsmetodikk innebærer at ingen områder som er lenger enn 1500 meter fra vindkraftverket er relevante for skyggekastanalysen. Det er planlagt å bruke mer moderne og større turbiner som vil ha bredere blader enn det som ble lagt til grunn for NVEs krav fra 2014. Det vil derfor bli anvendt en radius på 2000 meter etter anbefalinger i rapport utarbeidet av Norconsult på oppdrag fra NVE (Norges vassdrags- og energidirektorat [NVE], 2022). Figur 3-1 viser området som er relevant for skyggekastanalysen, der det er lagt til grunn an avstand på 2000 meter fra turbinene.



Figur 3-1: Området som er relevant for skyggekastanalysen (lilla strek for alternativ 1 og svart strek for alternativ 2), med en avstand på 2000 meter fra turbinene.

[1] Som omtalt i avsnitt 3 vil analysen ta utgangspunkt i et strengere avstandskrav enn det NVE legger opp til, det vil bli benyttet 2000 meter.

På grunn av flere vindkraftverk i området, kan noen mottakere oppleve skyggekast fra ulike vindkraftverk på forskjellige tider av dagen eller året. Selv om hvert enkelt vindkraftverk ikke nødvendigvis overskrider de anbefalte grenseverdiene for skyggekast, kan sumvirkningene føre til at den totale mengden skyggekast i løpet av et år overstiger disse grenseverdiene. Det er derfor gjort simuleringer i to omganger for hvert alternativ. Første omgang tar bare hensyn til vindturbinene i Moifjellet og Mellomstrand vindkraftverk eller Moifjellet vindkraftverk, mens andre omgang inkluderer nærliggende vindkraftverk for å vurdere sumvirkninger av skyggekast.

Det er forventet at utbyggingen vil føre til mest skyggekast oppe på Moifjellet og Lakssvelafjellet, og i grensene mellom Moifjellet vindkraftverk og de allerede etablerte vindkraftverkene nord og sør for Moifjellet vindkraftverk. Det er forventet at boliger nord for vindkraftverket vil kunne oppleve mye skyggekast. Spesielt boligene rundt Røyslandsvatnet og Oslandsvatnet forventes å bli berørt av utbygging av Moifjellet og Mellomstrand vindkraftverk. Disse boligene vil ha de eksisterende vindkraftverkene, Stigafjellet og Måkaknuten nord for seg og få Moifjellet vindkraftverk sør for seg.

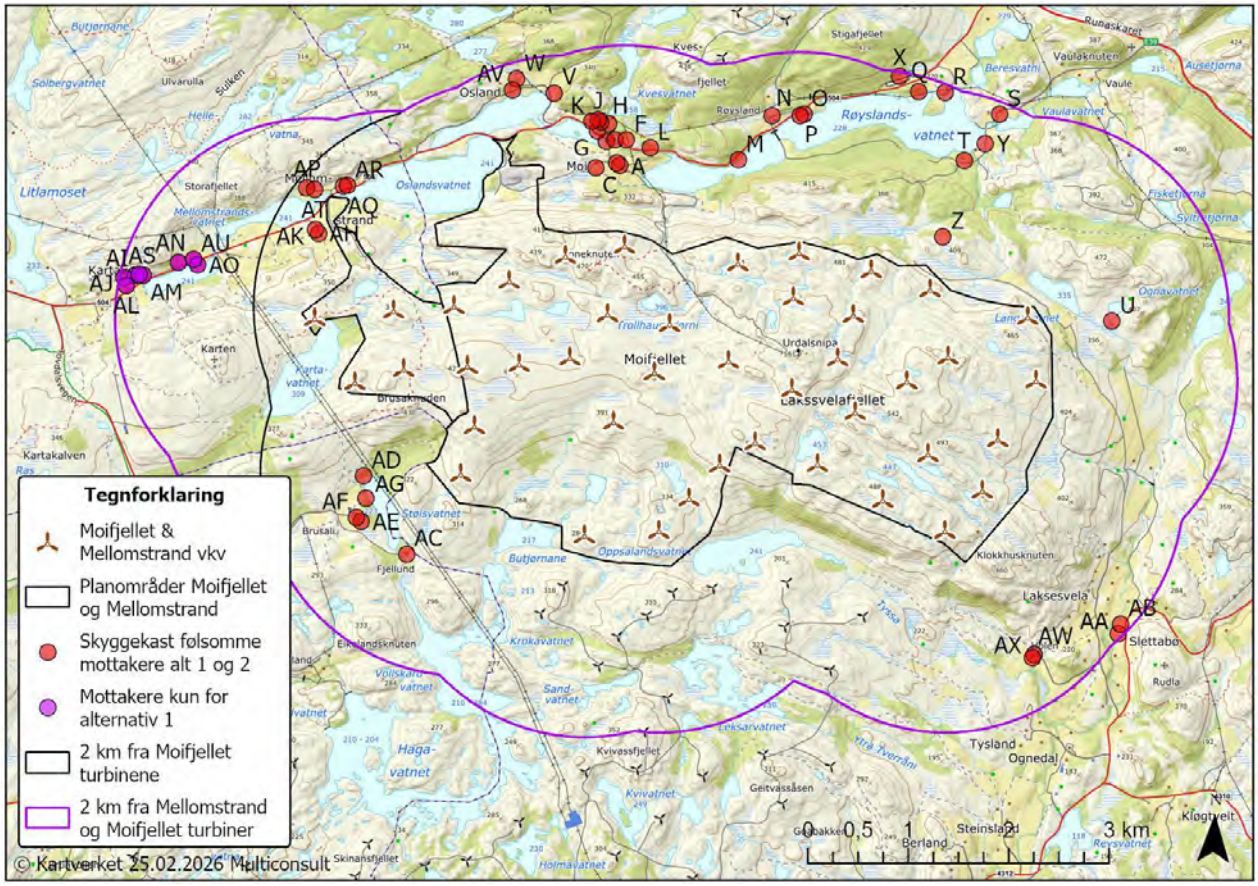
3.1 Definerte skyggekastmottakere

Figur 3-2 viser de identifiserte skyggekastmottakerne som røde og lilla sirkler i området rundt Moifjellet og Mellomstrand. Tabell 3-1 gir en oversikt over boligene, inkludert deres geografiske posisjon og avstand til nærmeste vindturbin. Mottakerne er hovedsakelig spredt i området nord for Moifjellet og Mellomstrand, men enkelte mottakere er også lokalisert på både øst- og vestsiden av planområdet.

Totalt er det identifisert 50 mottakere som er følsomme for skyggekast ved Moifjellet og Mellomstrand vindkraftverk. Av disse er 8 mottakere kun relevante i alternativ 1, ettersom de ligger mer enn 2 km fra nærmeste turbin i alternativ 2. For alternativ 2 er det derfor reelt sett 42 mottakere, men for å sammenligne er alle mottakerne inkludert i samtlige tabeller. Alle mottakerne er illustrert i Figur 3-2. De røde sirklene viser de definerte mottakerne for alternativ 1 og 2, mens de lilla sirklene viser mottakere som bare gjelder for alternativ 1.

Utvalget av mottakere er i praksis gjort ved en iterativ prosess der flere simuleringer er kjørt etter hverandre for å bestemme hvilke mottakere som skal undersøkes i detalj og hvilke mottakere som ikke undersøkes videre. Simuleringene viste at ikke alle boligene innenfor en radius på 2 km blir utsatt for skyggekast. Det kan være på grunn av beliggenhet i forhold til solen og vindkraftverket eller skjerming i terrenget. De mottakerne som ikke undersøkes videre er beskrevet i avsnitt 3.2.

For de skyggekastfølsomme mottakerne som tas med i konsekvensutredningen beregnes skyggekastbelastningen for hver individuell mottaker. NVEs veileder åpner for at analysen kan gruppere lignede mottakere sammen, men dette kan redusere nøyaktigheten, så vi velger å se på hver mottaker individuelt.



Figur 3-2: Definerte skyggekastmottakere.

I tråd med NVE sine krav for beregningsmetodikk (avsnitt 2.3) for verst tenkelig scenario utføres beregningene med skyggekastmottakerne vist i Figur 3-2 definert som «drivhus», hvor hver mottaker er et vindu på 2x2 meter, som alltid peker rett mot skyggekilden. For det realistiske scenarioet, der solskinnsannsynligheten er 50% og driftstiden satt til 7000 timer, brukes samme størrelse og mål på mottakerne som for verst tenkelig scenario.

Tabell 3-1: Oversikt over skyggekastmottakere, deres lokasjon og avstand til nærmeste vindturbin. Koordinatsystemet er EU89, UTM 32. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Plassering		Avstand til nærmeste turbin (m)
		Østlig	Nordlig	
A	Moi 32 – Våningshus	321 454	6 505 063	808
B	Moi 26 – Enebolig	321 420	6 505 084	841
C	Moi 21 – Våningshus	321 215	6 505 041	840
D	Buevegen 1805 – Fritidsbygning	321 315	6 505 303	1 067
E	Buevegen 1816 – Fritidsbygning	321 403	6 505 321	1 076
F	Buevegen 1818 – Fritidsbygning	321 520	6 505 315	1 060
G	Buevegen 1786 – Fritidsbygning	321 226	6 505 404	1 183
H	Buevegen 1784 – Fritidsbygning	321 338	6 505 475	1 230
I	Buevegen 1782 – Fritidsbygning	321 263	6 505 492	1 260
J	Buevegen 1780 – Fritidsbygning	321 239	6 505 515	1 287
K	Buevegen 1778 – Fritidsbygning	321 178	6 505 500	1 289
L	Buevegen 1850 – Fritidsbygning	321 753	6 505 237	1 015

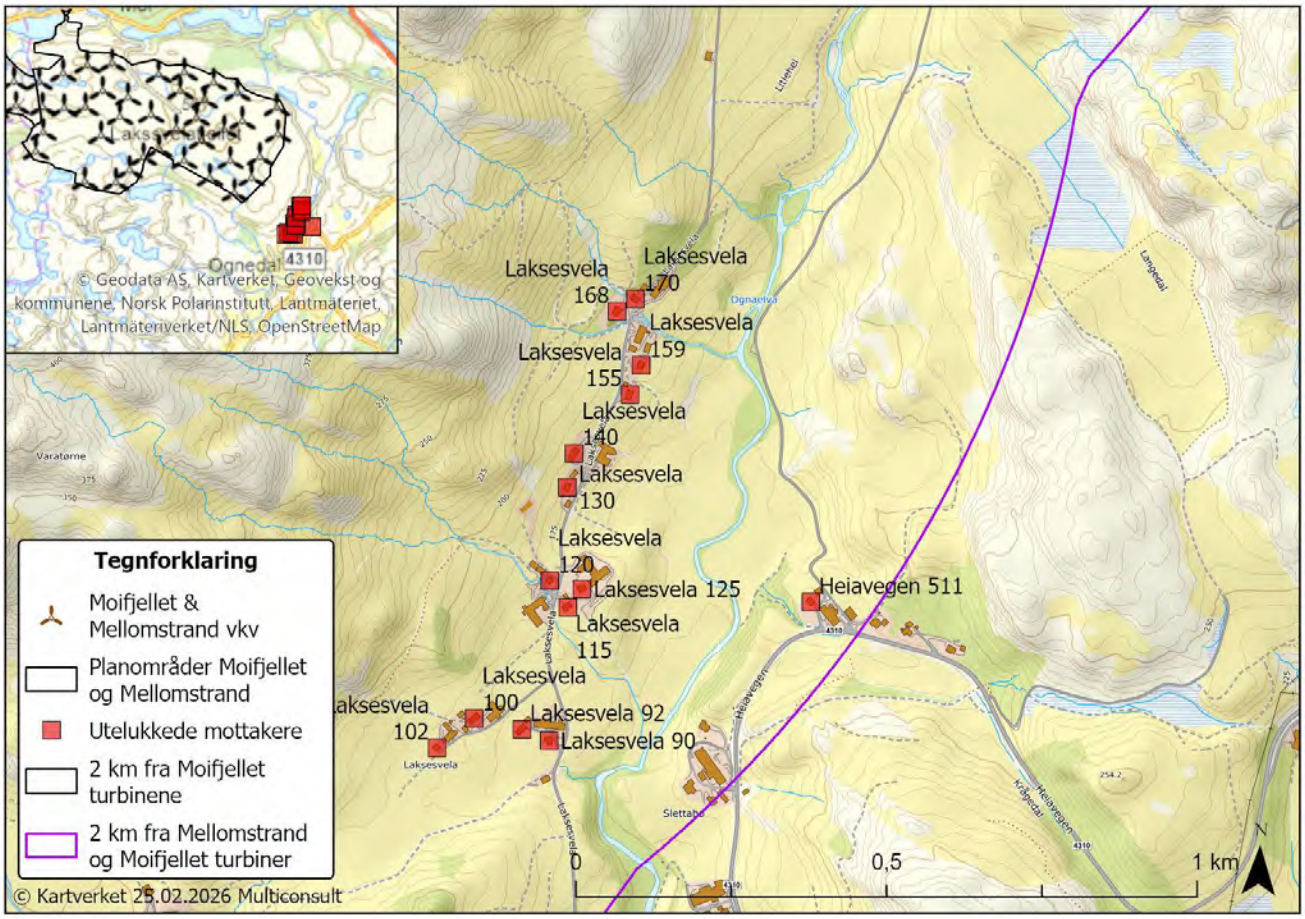
M	Buevegen 1941 – Fritidsbygning	322 631	6 505 117	1 034
N	Buevegen 1988 – Bygning for overnatting	322 968	6 505 553	1 392
O	Buevegen 2023 – Fritidsbygning	323 284	6 505 569	1 383
P	Buevegen 2021 – Fritidsbygning	323 246	6 505 557	1 371
Q	Buevegen 2141 – Fritidsbygning	324 426	6 505 794	1 844
R	Buevegen 2165 – Fritidsbygning	324 693	6 505 786	1 922
S	Vaule 176 – Enebolig	325 238	6 505 571	1 883
T	Vaule 247 – Fritidsbygning	324 881	6 505 111	1 334
U	Store Svela, eiendom 60/5, Bjerkreim kommune – Fritidsbygning	326 356	6 503 511	835
V	Osland 45 – Våningshus	320 801	6 505 783	1 636
W	Osland 65 – Våningshus	320 423	6 505 925	1 837
X	Buevegen 2100 – Gatekjøkken, kioskbygning	324 241	6 505 947	1 956
Y	Vaule 218 – Fritidsbygning	325 098	6 505 291	1 560
Z	Eiendom 57/3, Bjerkreim kommune – Fritidsbygning (ikke ferdig bygd)	324 676	6 504 359	553
AA	Heiavegen 543 – Enebolig	326 420	6 500 403	1 959
AB	Heiavegen 541 – Våningshus	326 443	6 500 501	1 905
AC	Brusalivegen 201 – Våningshus	319 326	6 501 193	961
AD	Eiendom121/8, Hå kommune – Fritidsbygning	318 902	6 501 969	931
AE	Brusalivegen 217 – Enebolig	318 880	6 501 518	1 096
AF	Brusalivegen 215 – Enebolig	318 829	6 501 559	1 129
AG	Brusalivegen 219 – Fritidsbygning	318 928	6 501 743	974
AH	Buevegen 1463 – Våningshus	318 453	6 504 383	849
AI	Buevegen 1288 – Enebolig	316 626	6 503 970	1 844
AJ	Buevegen 1272 - Enebolig	316 516	6 503 946	1 945
AK	Buevegen 1461 – Enebolig	318 418	6 504 425	890
AL	Buevegen 1270 - Våningshus	316 535	6 503 867	1 912
AM	Buevegen 1290 – Enebolig	316 702	6 503 968	1 770
AN	Buevegen 1292 – Våningshus	317 053	6 504 099	1 477
AO	Buevegen 1343 – Fritidsbygning	317 250	6 504 070	1 351
AP	Buevegen 1496 – Våningshus	318 337	6 504 834	1 302
AQ	Buevegen 1500 – Våningshus	318 697	6 504 851	1 341
AR	Buevegen 1502 – Enebolig	318 747	6 504 864	1 336
AS	Buevegen 1286 – Enebolig	316 662	6 503 974	1 810
AT	Buevegen 1498 – Våningshus	318 415	6 594 822	1 286
AU	Buevegen 1340 – Enebolig	317 204	6 504 129	1 285
AV	Osland 85 – Våningshus	320 384	6 505 811	1 740
AW	Laksesvela 60 - Enebolig	325 581	6 500 197	1 507
AX	Laksesvela 58 - Enebolig	325 558	6 500 163	1 522

3.2 Skyggekastmottakere som ble utelukket

Etter flere simuleringer, under både verst tenkelige og realistiske forutsetninger, ble flere boliger ekskludert fra vurderingene til tross for at de ligger innenfor en radius på 2 km fra turbinene. Alle simuleringene viste at disse

boligene ikke ville oppleve belastning fra skyggekast, og de ble derfor utelatt fra resultatene for å forenkle fremstillingen og utregningene.

Bygningene som ble utelukket fra vurderingen ligger sørøst for planområdet ved Laksesvela. De innledende simuleringene indikerte at disse boligene sannsynligvis ikke vil bli påvirket av skyggekast fra vindkraftverkene. Dette skyldes flere faktorer, inkludert bygningenes plassering i forhold til turbinene og solens bane. I tillegg spiller topografien en viktig rolle, da boligene ligger relativt tett oppunder østsida av dalen, som betyr at dersom skyggekast skulle nådd disse mottakerne, så måtte solen ha stått høyt i nordvest. Selv ikke midt på sommeren kommer solen i en slik posisjon, og dermed treffes ikke disse ekskluderte mottakerne av skyggekast. Figur 3-3 viser de utelukkede mottakerne.



Figur 3-3: Utelukkede mottakere.

4 Modellering

Modellen tar inn de planlagte turbinplasseringene, høyde på turbinene, rotordiameter og terrenget i området.

4.1 Hvordan beregningene utføres

Beregningen av skyggekast i programvaren skjer ved en kombinasjon av:

- Kjent geografisk posisjon, for å finne solbanen gjennom året.
- Definert terreng, så man kan bestemme når solens bane er under horisonten sett fra ethvert relevant punkt i simuleringen.
- Turbinenes posisjon og størrelse.

For å sikre en grundig analyse av området rundt Moifjellet, er det lagt til grunn et influensområde som dekker en avstand på omtrent 10 x 10 km. Dette gir tilstrekkelig rom for å inkludere de omkringliggende omgivelsene som

kan ha innvirkning på resultatene. Influensområdet deles inn i et rutenett med 30 x 30 meter oppløsning. Dette rutenettet utgjør en stor samling individuelle punkt (altså små «lapper» á 30 x 30 m), og modellen stiller seg i hvert slikt punkt, og ser mot solen. Dersom en av turbinene står mellom observasjonspunktet og solskiven uten at det er skyggende terreng i veien, tikkes det opp en teller som holder styr på hvor mange minutter skyggekast dette ene punktet mottar per år. Solbanen representeres ved at man hopper tre dager av gangen (dette håndterer årstider), og vurderer hvert døgn oppstykket i 2-minuttersbolker[2]. Etter at alle punkt i rutenettet har gått gjennom en slik solbaneberegning blir det satt sammen kart som beskriver forskjellige karakteristikker ved skyggekastbelastningen.

I tillegg til kartene brukes de spesifikke skyggekastmottakerne, omtalt i avsnitt 3.1, for mer avanserte beregninger.

5 Resultater for alternativ 1: Moifjellet og Mellomstrand

5.1 Resultater for Moifjellet og Mellomstrand vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet og Mellomstrand vindkraftverk. Det er ikke tatt hensyn til sumvirkninger i dette kapittelet, de vises i kapittel 5.2. Resultatene, og diskusjonen rundt disse, som presenteres i dette kapitlet starter med kart over maksimal teoretisk skyggekastbelastning på en flate 1.5 meter over bakkenivå. Dette vil representere den typen skyggekast en person ute på en plen vil kunne motta. Deretter vises skyggekastmottak for mottakerne definert i avsnitt 3.1.

Etter dette presenteres et kart der sannsynligheten for solskinn er satt til 50% og driftstiden til turbinen satt til 7000 timer i tråd med NVEs retningslinjer for beregninger av vindturbiner. For å oppnå en mer realistisk orientering av turbinene, er vindrosen for Mellomstrand (hentet fra Moifjellet) benyttet i fordelingen av driftstid per sektor/vindretning. Vindrosen for Moifjellet er benyttet siden Mellomstrand ligger såpass nært Moifjellet. Det vurderes at vindforholdene er tilnærmet like, og det anses derfor uproblematisk å bruke samme vindrose for begge områdene. Deretter presenteres beregnet realistisk skyggekast for de definerte mottakerne.

Noter at sammenligningen av kartene med de individuelt definerte mottakerne ikke er rett frem; geometrien for modellen er annerledes. Kartene viser skyggekast ned på en tenkt horisontal flate, hvor oppgitt belastning er et gjennomsnitt for en rute på 10 x 10 meter, mens de individuelle beregningene ser på et vertikalt 2 x 2 meter vindu med senter 2 meter over bakken. Kartene vil gi en kvalitativ indikasjon på hvilke deler av et område som er tungt belastet, men ikke nødvendigvis et nøyaktig tall på hvor mange timer skyggekast et kjøkkenvindu utsettes for per år. Generelt viser kartene et lavere antall timer med skyggekastbelastning enn det man finner ved den detaljerte beregningen for mottakere representert med vinduer. Kartene brukes altså for å få en oversikt over belastningen over større areal, mens det er tabeller over individuelle mottakeres skyggekastbelastning som måles opp mot NVEs retningslinjer for maksimal tillatt skyggekastbelastning.

5.1.1 Kart – Verst tenkelig scenario

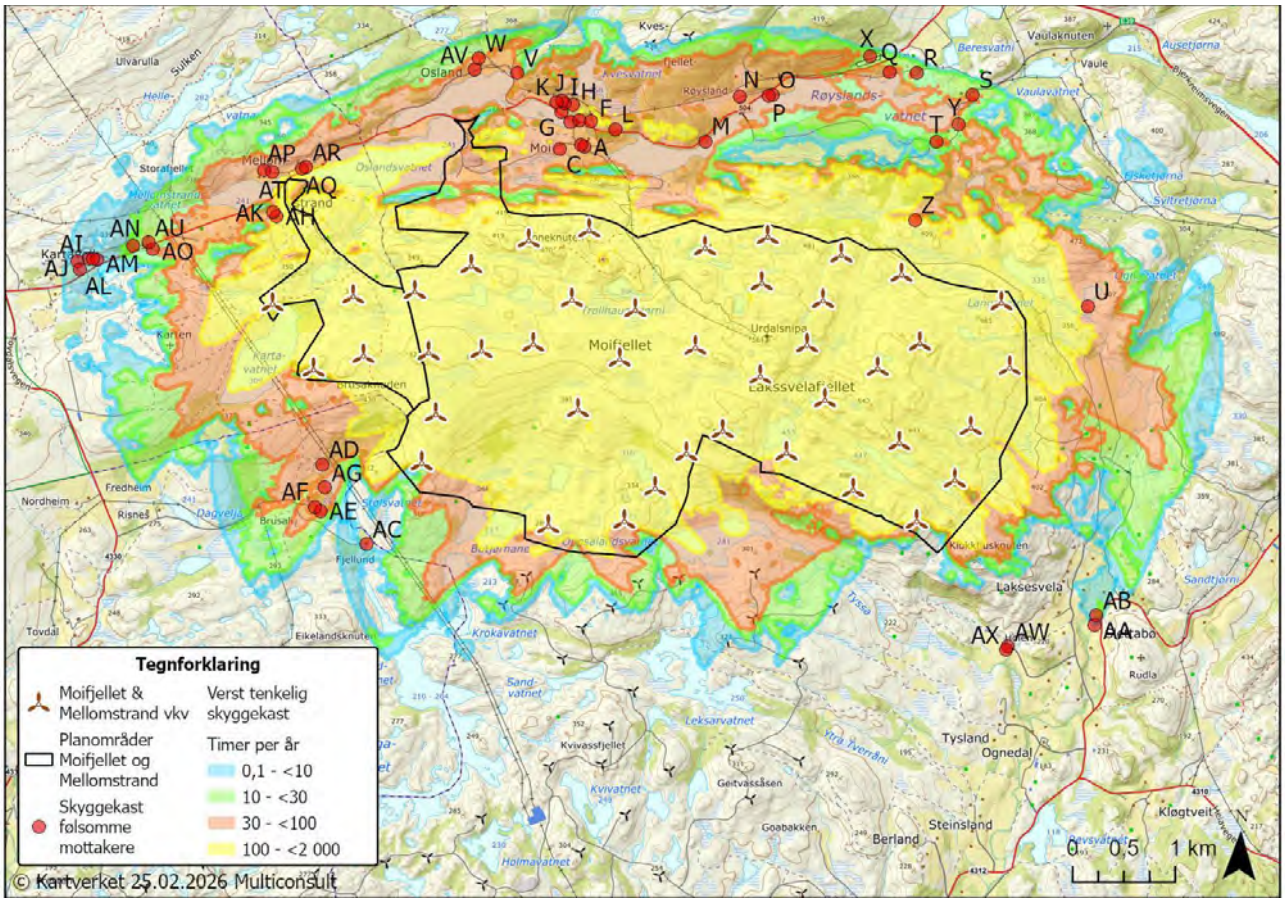
Figur 5-1 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer fra vindkraftverket.

De tykke linjene i kartet representerer koter eller konturlinjer, tilsvarende de som brukes på et terrengkart, men i denne sammenhengen viser de mengden skyggekast i løpet av et år. Innenfor hver konturlinje er skyggekastvarigheten høyere enn verdien angitt i tegnforklaringen. Dette betyr at områdene som befinner seg innenfor en bestemt kontur vil oppleve lengre perioder med skyggekast sammenlignet med områdene utenfor.

[2] Selv om beregningen forenkles ved å hoppe tre dager av gangen og beregnes med 2-minutters oppløsning innenfor hver tredje dag, blir det totale resultatet justert for dette. Analysen antar at dersom det inntreffer 2 minutter skyggekast den ene dagen, så antas det at de to andre dagene, som ikke sjekkes eksplisitt, har samme belastning.

Fargene grønn og blå indikerer akseptable nivåer av skyggekast, som ligger under de anbefalte grenseverdiene for maksimalt teoretisk skyggekast. Fargene rød og gul indikerer områder som er over akseptable nivåer for skyggekast, der gul er områder som er mest utsatt. Kartet gir en klar visualisering av hvor man kan forvente mest skyggekast fra vindkraftverket; som forventet er størst skyggekastbelastning innenfor vindkraftverkets planområde.

Figuren gir en god indikasjon på hvilke områder og mottakere som vil bli meget utsatt for skyggekast. Nord til nordvest for vindkraftverket er det en konsentrasjon av røde områder, med noen gule flekker, som indikerer høy skyggekastpåvirkning. Boliger i disse områdene kan derfor bli betydelig utsatt for skyggekast.



Figur 5-1: Teoretisk verst tenkelig scenario, målt i antall timer per år.

5.1.2 Individuelle mottakere – Verst tenkelig scenario

Tabell 5-1 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i avsnitt 3.1. Det kommer tre delresultater fra beregningen. Det første er vist i kolonnen «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonnen «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Det sier ikke i seg selv noe om intensiteten per dag. Demonstrert med for eksempel, Moi 32 (mottaker A), der det kommer omtrent 91 timer skyggekast fordelt over 112 dager. Dette betyr i snitt, ca. 49 minutter skyggekast per dag med skyggekast. Men, som man ser i kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), som gir belastningen på den verste dagen, ser vi at maksimalt mottak på én dag er 1 time og 42 minutter. Altså er det mange dager med kortere skyggekastmottak enn 49 minutter, og andre dager med mottak opp mot maksimal teoretisk verdi.

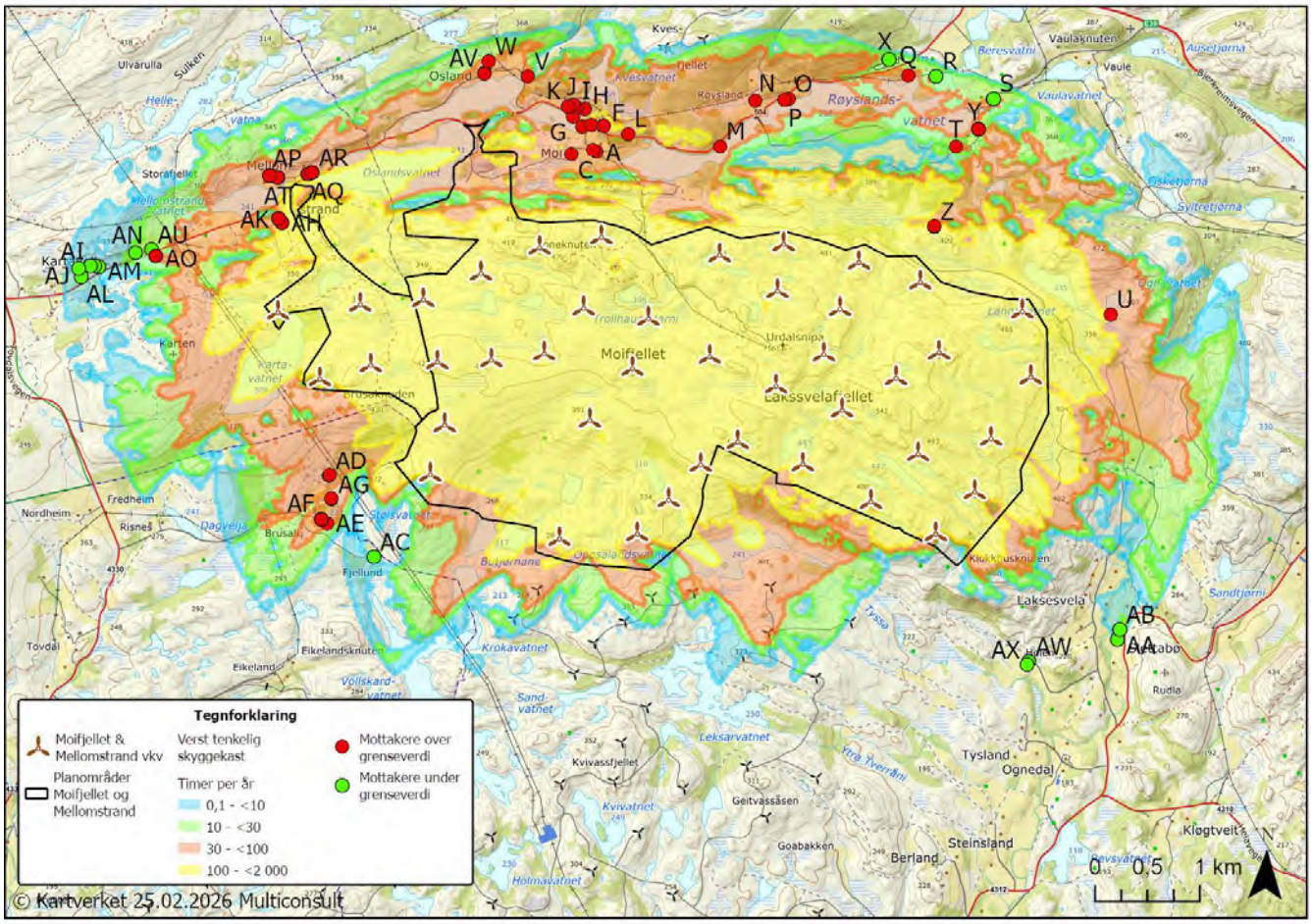
Tabell 5-1: Maksimalt teoretisk skyggekast for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk. Kolonnen «Timer/år» gir totalt antall timer skyggekast på mottakeren per år. Kolonnen «Dager/år» gir antallet dager per år det inntreffer skyggekast i det hele tatt. Kolonnen «Timer/dag (verste dag)» gir antallet

timer skyggekast på den dagen med aller størst belastning. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Dager/år	Timer/dag (verste dag)
A	Moi 32	91:38	112	01:42
B	Moi 26	89:39	100	01:41
C	Moi 21	86:06	91	01:50
D	Buevegen 1805	86:46	113	01:28
E	Buevegen 1816	88:55	117	01:28
F	Buevegen 1818	93:48	136	01:27
G	Buevegen 1786	74:46	111	01:30
H	Buevegen 1784	84:32	122	01:27
I	Buevegen 1782	83:59	124	01:28
J	Buevegen 1780	84:10	121	01:29
K	Buevegen 1778	70:27	91	01:27
L	Buevegen 1850	93:42	157	01:31
M	Buevegen 1941	59:05	78	01:35
N	Buevegen 1988	52:08	72	01:06
O	Buevegen 2023	44:00	60	01:14
P	Buevegen 2021	41:34	54	01:14
Q	Buevegen 2141	38:26	104	00:35
R	Buevegen 2165	27:56	84	00:27
S	Vaule 176	22:57	89	00:22
T	Vaule 247	33:51	96	00:42
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	88:23	178	01:03
V	Osland 45	40:04	74	00:43
W	Osland 65	38:02	93	00:32
X	Buevegen 2100	18:09	68	00:20
Y	Vaule 218	26:05	77	00:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	275:29	207	02:12
AA	Heiavegen 543	00:55	23	00:04
AB	Heiavegen 541	08:56	44	00:16
AC	Brusalivegen 201	00:00	0	00:00
AD	Eiendom 1121/8, Hå kommune	51:19	110	00:39
AE	Brusalivegen 217	38:11	72	00:37
AF	Brusalivegen 215	28:44	73	00:33
AG	Brusalivegen 219	48:21	103	00:40
AH	Buevegen 1463	141:02	185	01:16
AI	Buevegen 1288	06:49	26	00:21
AJ	Buevegen 1272	06:04	24	00:20
AK	Buevegen 1461	130:01	182	01:14

AL	Buevegen 1270	05:09	22	00:20
AM	Buevegen 1290	07:22	26	00:22
AN	Buevegen 1292	10:45	32	00:26
AO	Buevegen 1343	26:21	76	00:36
AP	Buevegen 1496	70:50	130	00:51
AQ	Buevegen 1500	100:51	144	01:18
AR	Buevegen 1502	100:26	142	01:18
AS	Buevegen 1286	07:05	26	00:21
AT	Buevegen 1498	85:06	130	01:04
AU	Buevegen 1340	12:49	36	00:28
AV	Osland 85	38:33	102	00:32
AW	Laksesvela 60	00:00	0	00:00
AX	Laksesvela 58	00:00	0	00:00

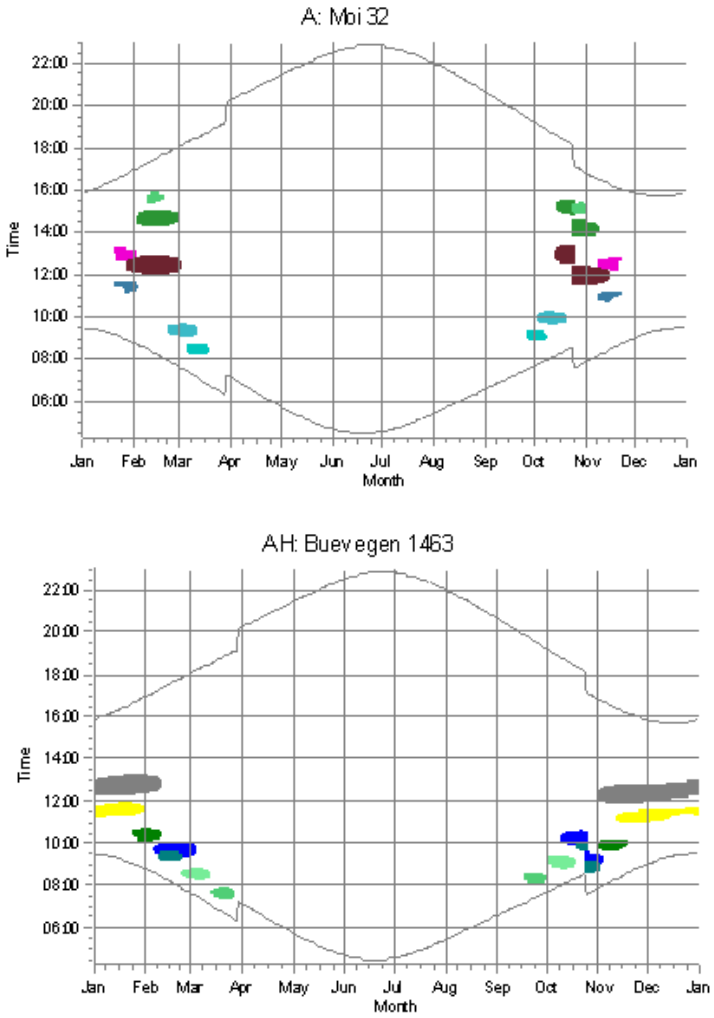
Det er anslått at 15 av 50 mottakere ligger under NVEs anbefalte grenseverdi for teoretisk maksimalt skyggekast, se Figur 5-2 der disse 15 mottakerne er vist med grønne prikker. Tre av disse mottakerne er lokalisert nordøst for planområdet nært Røyslandsvatnet (mottakere R, S og X i tabell), syv mottakere er lokalisert nordvest for planområdet ved Kartavoll (mottakere AI, AJ, AL-AN, AS og AU i tabell), en er lokalisert sørvest for planområdet ved Fjellund (mottaker AC i tabell) og fire er lokalisert sørøst for planområdet ved Slettabø og Holen (mottakere AA, AB, AW og AX i tabell). Den mottakeren som blir mest utsatt for skyggekast er den som ligger nært en turbin, mottakeren er lokalisert nord for planområdet, det er en hytte som er under bygging og er omtrent 553 meter unna en turbin (mottaker Z i tabell).



Figur 5-2: Verst tenkelig skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi.

Mange av de mest utsatte boligene og fritidsbygningene er lokalisert rett nord for vindkraftverket, noe som gjør det sannsynlig at de vil oppleve skyggekast på samme tid i løpet av dagen. Grunnet boligenes posisjon i forhold til vindkraftverket og solens bane vil de fleste av mottakerne mest sannsynlig oppleve mest skyggekast på dagtid, mellom 9 - 16. Mottakernes lokalisering kombinert med solens bevegelsesmønster gjør at belastningen av skyggekast på mottakerne er høyest rundt midt på dagen når solen står høyest på himmelen i løpet av vinterhalvåret. Da strekker skyggen fra vindturbinene seg lenger og mottakerne i nord opplever skyggekast. De fleste av mottakerne vil kun oppleve skyggekast om vinteren, mens noen få vil kunne merke det også i sen høst og tidlig vår. Seks av mottakerne kan imidlertid oppleve skyggekast om sommeren, men da enten tidlig om morgenen eller sent på kvelden.

Figur 5-3 illustrerer når to mottakere forventes å oppleve skyggekast gjennom året (x-aksen), samt på hvilke tidspunkter av døgnet dette skjer (y-aksen). De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast (se vedlagt rapport for info om hvilken turbin som svarer til hvilken farge i figuren). Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast. Mottakerne A og AH er valgt for å illustrere den forventede skyggekastbelastningen for de områdene som ligger nord og nordvest for planområdet, og som trolig vil oppleve ulik belastning fra de to alternativene. En fullstendig oversikt over når hver mottaker kan forvente skyggekast for alle fire scenarioene legges ved rapporten som vedlegg.

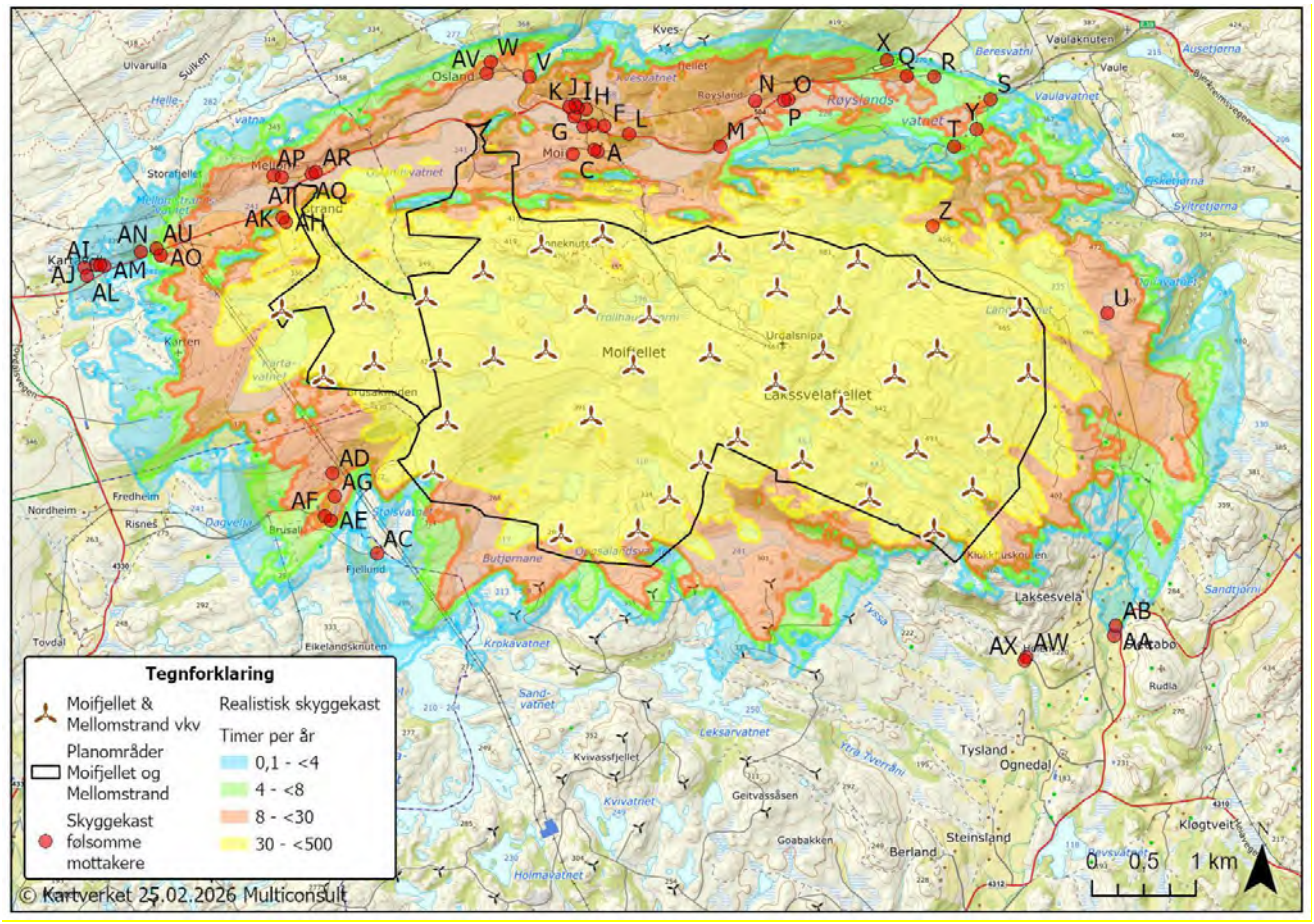


Figur 5-3: Forventet tidspunkt for skyggekast for mottaker A og AH. De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast. Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast. Mottaker A er lokalisert nord for planområdet, mens mottaker AH ligger nordvest for planområdet.

5.1.3 Kart – Realistisk scenario

Figur 5-4 viser et tilsvarende kart som Figur 5-1, men nå er en solskinnssannsynlighet på 50% og driftstid basert på vindrosen tatt med. Forskjellen i resultatet er at simuleringen først beregner teoretisk maksimum som om sola skinner hele tiden (nøyaktig på samme vis som vist i Figur 5-1), og deretter reduseres denne teoretiske maksimumsbelastningen med 50%, basert på antakelsen om at faktisk solskinn bare inntreffer halvparten av tiden. I tillegg justeres belastningen med en driftstid på totalt 7000 timer, basert på vindrosen og driftstid per sektor/vindretning.

Sammenlignet med maksimalt teoretisk skyggekast reduseres utstrekningen av skyggekast noe, og områdene som viser verdier over anbefalt nivå krymper. Denne reduksjonen er imidlertid ikke betydelig nok til å være visuelt fremtredende. Kartet indikerer at arealene med høy belastning forblir omfattende, noe som indikerer at de fleste mottakerne fremdeles vil bli eksponert for skyggekast i mengder som overskrider anbefalte verdier.



Figur 5-4: Realistisk scenario med antall timer per år.

5.1.4 Individuelle mottakere – Realistisk scenario

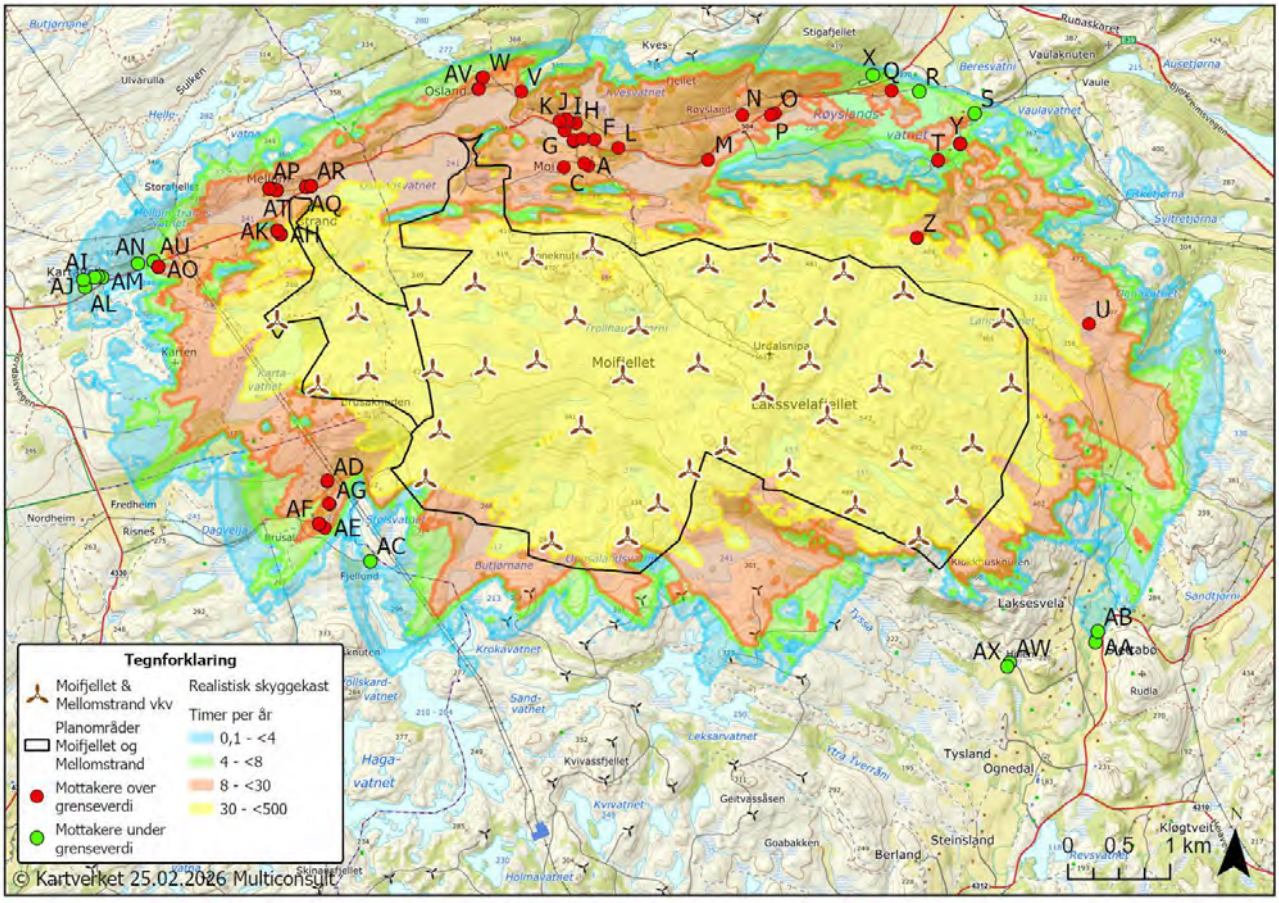
Tabell 5-2 oppsummerer resultatet av denne beregningen. Sammenlignet med tallene for teoretisk maksimum (se *Tabell 5-1*) er disse tallene redusert både på grunn av 50% solskinnssannsynlighet og driftstiden til turbinene.

Tabell 5-2: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk definert i avsnitt 3.1. Andre kolonne «Timer/år (verst tenkelig)» er hentet fra Tabell 5-1 for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	*Timer/år (verst tenkelig)*
A	Moi 32	23:03	91:38
B	Moi 26	22:23	89:39
C	Moi 21	21:52	86:06
D	Buevegen 1805	21:39	86:46
E	Buevegen 1816	22:11	88:55
F	Buevegen 1818	23:19	93:48
G	Buevegen 1786	18:42	74:46
H	Buevegen 1784	20:47	84:32
I	Buevegen 1782	20:49	83:59
J	Buevegen 1780	20:55	84:10

K	Buevegen 1778	17:24	70:27
L	Buevegen 1850	23:02	93:42
M	Buevegen 1941	14:26	59:05
N	Buevegen 1988	12:51	52:08
O	Buevegen 2023	10:56	44:00
P	Buevegen 2021	10:19	41:34
Q	Buevegen 2141	09:10	38:26
R	Buevegen 2165	06:35	27:56
S	Vaule 176	05:01	22:57
T	Vaule 247	08:22	33:51
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	21:46	88:23
V	Osland 45	09:51	40:04
W	Osland 65	10:12	38:02
X	Buevegen 2100	04:23	18:09
Y	Vaule 218	05:48	26:05
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	65:33	275:29
AA	Heiavegen 543	00:16	00:55
AB	Heiavegen 541	02:37	08:56
AC	Brusalivegen 201	00:00	00:00
AD	Eiendom 1121/8, Hå kommune	12:38	51:19
AE	Brusalivegen 217	08:48	38:11
AF	Brusalivegen 215	06:42	28:44
AG	Brusalivegen 219	11:28	48:21
AH	Buevegen 1463	37:39	141:02
AI	Buevegen 1288	01:53	06:49
AJ	Buevegen 1272	01:40	06:04
AK	Buevegen 1461	34:46	130:01
AL	Buevegen 1270	01:24	05:09
AM	Buevegen 1290	02:02	07:22
AN	Buevegen 1292	03:03	10:45
AO	Buevegen 1343	07:32	26:21
AP	Buevegen 1496	18:59	70:50
AQ	Buevegen 1500	26:38	100:51
AR	Buevegen 1502	26:23	100:26
AS	Buevegen 1286	01:58	07:05
AT	Buevegen 1498	22:52	85:06
AU	Buevegen 1340	03:41	12:49
AV	Osland 85	10:20	38:33
AW	Laksesvela 60	00:00	00:00
AX	Laksesvela 58	00:00	00:00

Det er estimert at 18 mottakere befinner seg under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast (mottakere R, S, X, Y, AA – AC, AF, AI, AJ, AL – AO, AS, AU, AW og AX), se Figur 5-5. Av disse 18 er 15 de samme som også lå under grenseverdien i det maksimale teoretiske scenarioet. De tre mottakerne, Y, AF og AO, som kun ligger under grenseverdien i det realistiske scenarioet, er lokalisert henholdsvis nordøst, sørvest og vest for planområdet. Alle de tre mottakerne som kommer under grenseverdiene i det realistiske scenarioet var mottakere som i verst tenkelig scenario var under ble redusert var mottakere som i verst tenkelig var under grenseverdien på 30 timer på år, men over grensen på maksimalt 30 minutter per dag.



Figur 5-5: Realistisk skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi.

Den mottakeren som befinner seg nærmest turbinene, er den som er mest utsatt for skyggekast. Dette antyder at både fysisk avstand fra turbinene og den lokale topografien spiller en sentral rolle i hvor mye skyggekast en mottaker vil oppleve.

For mottakerne som opplever skyggekast rundt midt på dagen, reduseres varigheten av skyggekast primært på grunn av lavere sannsynlighet for solskinn. Dette betyr at selv om skyggekast teoretisk sett kan vare lenger, vil faktiske værforhold, som perioder med overskyet vær, bidra til å korte ned skyggekastets varighet. Dermed oppstår en reduksjon i skyggekastets påvirkning, selv i de mest utsatte periodene, noe som fører til en lavere faktisk eksponering enn beregningene for teoretisk maksimalt skyggekast skulle tilsi. For eksempel Buevegen 2023 (mottaker O) har gått fra 44:00 til 10:56 og Vaule 247 (mottaker Y) har gått fra 22:57 til 05:01. Det er viktig å nevne at Buevegen 2023 fortsatt ikke er under grenseverdiene, mens Vaule 247 er under grenseverdi for begge scenarioene for timer per år, men var målt til over grenseverdi for verst tenkelig på grunn av minutter per dag.

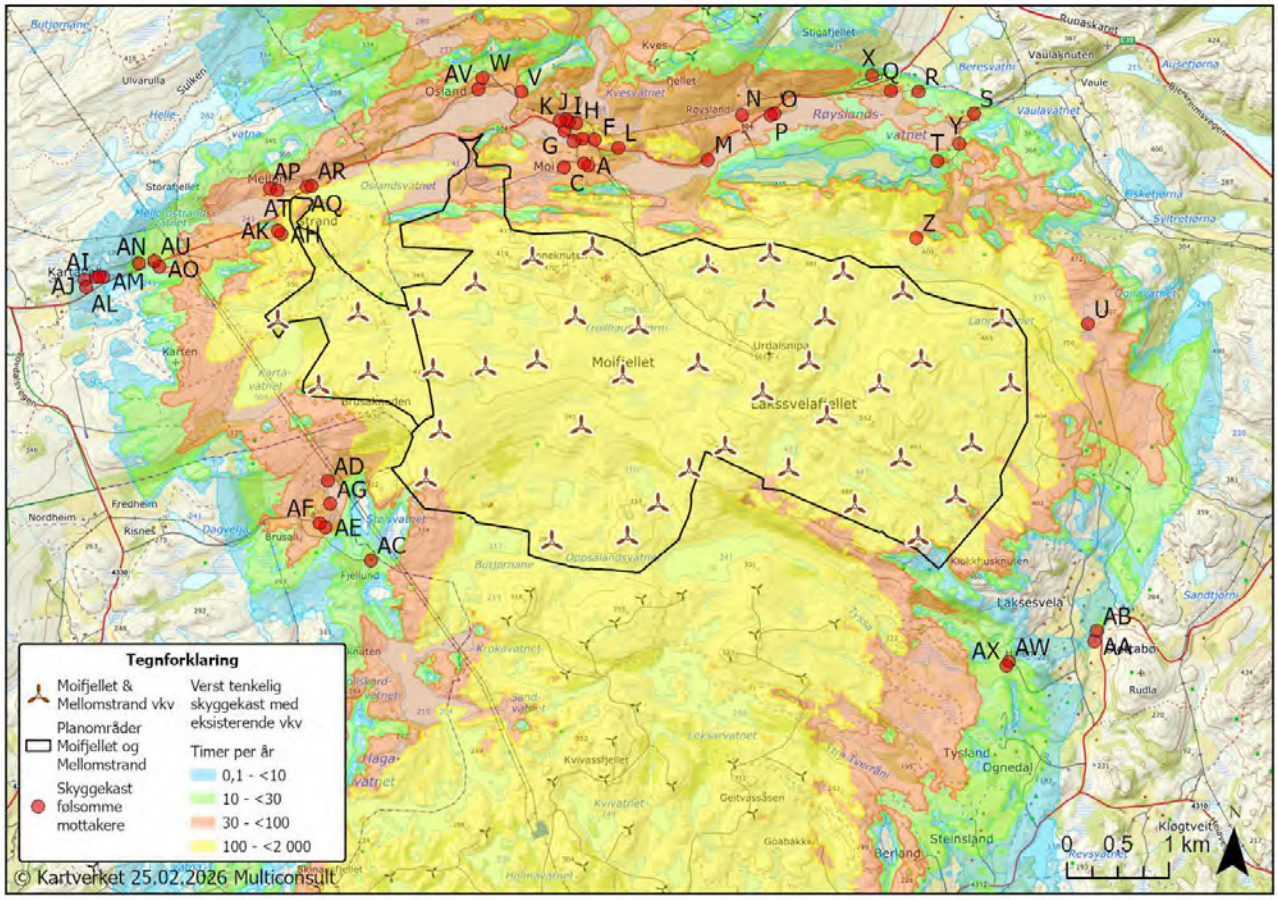
5.2 Resultater for Moifjellet og Mellomstrand vindkraftverk med sumvirkninger fra nærliggende vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet og Mellomstrand vindkraftverk med hensyn til nærliggende vindkraftverk. Resultatene og diskusjonen rundt disse vil ha samme oppsett som i forrige kapittel for å gi et godt sammenligningsgrunnlag, og tydelig vise hvilke skyggekastmottakere som får ekstra belastning på grunn av sumvirkningen av flere vindkraftverk.

For de eksisterende nærliggende vindkraftverkene benyttes Moifjellets vindrose som grunnlag for beregningene i det realistiske scenarioet. Dette medfører en mindre grad av unøyaktighet, mest for vindkraftverket mot nord, fordi mellomliggende terreng vil påvirke den faktiske vindrosen i de andre vindkraftverkene noe. Denne unøyaktigheten er vurdert som liten, siden avstandene mellom vindkraftverkene er små.

5.2.1 Kart – Verst tenkelig scenario

Figur 5-6 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer som følge av alle de tre vindkraftverkene rundt Moifjellet og Mellomstrand vindkraftverk sitt influensområde.



Figur 5-6:Teoretisk verst tenkelig skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

Når man tar hensyn til nærliggende vindkraftverk ser man en større utstrekning nord og sør for Moifjellet og Mellomstrand av arealer som ligger over anbefalt grenseverdi, spesielt røde arealer har blitt større. Dette er naturlig siden disse vindkraftverkene hver for seg vil lage skyggekast som nå legges sammen for en større total belastning. Figuren viser at det vil bli mer skyggekast sør for Moifjellet og Mellomstrand vindkraftverk, men der er det ikke registret noen mottakere. Områdene nord for planområdet er i hovedsak fremdeles rød og det forventes av den grunn ikke særlig endring for mottakerne som er lokalisert der.

5.2.2 Individuelle mottakere – Verst tenkelig scenario

Tabell 5-3 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i Figur 3-2 og tar hensyn til sumvirkninger fra alle vindkraftverkene. Resultatene er vist med de samme oppsettet som delresultatene i avsnitt 5.1.2, der første er vist i kolonnene «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonne «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Den tredje kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), gir belastningen på den verste dagen.

Tabell 5-3: Teoretisk skyggekast for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk med hensyn til nærliggende vindkraftverk. Kolonne 6, 7 og 8 (i grått) er hentet fra tabell 5-1 for verst tenkelig skyggekast for Moifjellet og Mellomstrand uten nærliggende vindkraftverk for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/ år	Dager /år	Timer/ dag (verste dag)	*Timer/ år*	*Dager/ år*	*Timer/ dag (verste dag)*
A	Moi 32	91:38	112	01:42	91:38	112	01:42
B	Moi 26	89:39	100	01:41	89:39	100	01:41
C	Moi 21	86:06	91	01:50	86:06	91	01:50
D	Buevegen 1805	86:46	113	01:28	86:46	113	01:28
E	Buevegen 1816	88:55	117	01:28	88:55	117	01:28
F	Buevegen 1818	93:48	136	01:27	93:48	136	01:27
G	Buevegen 1786	74:46	111	01:30	74:46	111	01:30
H	Buevegen 1784	84:32	122	01:27	84:32	122	01:27
I	Buevegen 1782	83:59	124	01:28	83:59	124	01:28
J	Buevegen 1780	84:10	121	01:29	84:10	121	01:29
K	Buevegen 1778	70:27	91	01:27	70:27	91	01:27
L	Buevegen 1850	93:42	157	01:31	93:42	157	01:31
M	Buevegen 1941	59:05	78	01:35	59:05	78	01:35
N	Buevegen 1988	52:08	72	01:06	52:08	72	01:06
O	Buevegen 2023	44:00	60	01:14	44:00	60	01:14
P	Buevegen 2021	41:34	54	01:14	41:34	54	01:14
Q	Buevegen 2141	38:26	104	00:35	38:26	104	00:35
R	Buevegen 2165	27:56	84	00:27	27:56	84	00:27
S	Vaule 176	22:57	89	00:22	22:57	89	00:22
T	Vaule 247	33:51	96	00:42	33:51	96	00:42
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	88:23	178	01:03	88:23	178	01:03
V	Osland 45	40:04	74	00:43	40:04	74	00:43
W	Osland 65	38:02	93	00:32	38:02	93	00:32
X	Buevegen 2100	18:09	68	00:20	18:09	68	00:20
Y	Vaule 218	26:05	77	00:41	26:05	77	00:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	275:29	207	02:12	275:29	207	02:12
AA	Heiavegen 543	00:55	23	00:04	00:55	23	00:04

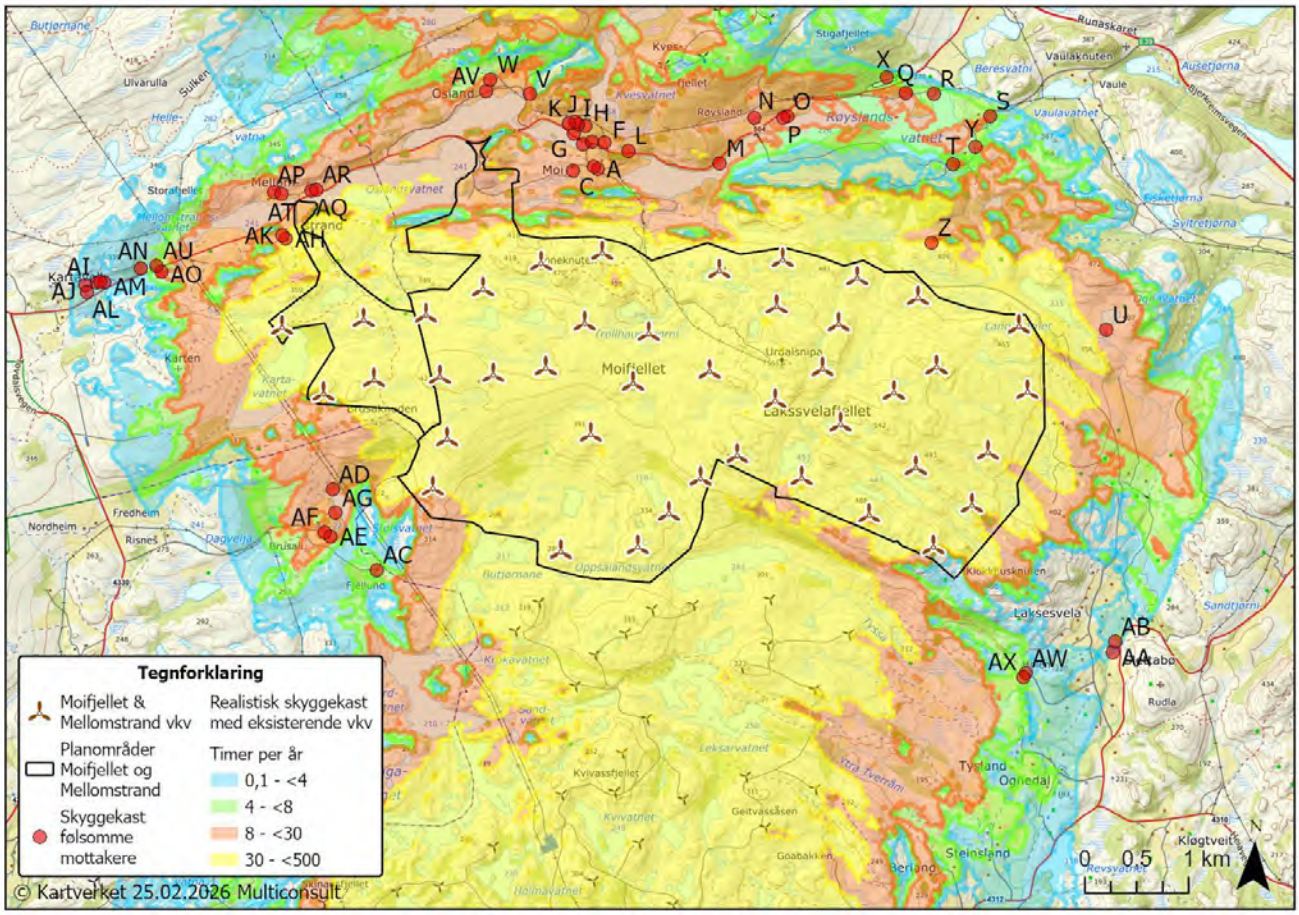
AB	Heiavegen 541	08:56	44	00:16	08:56	44	00:16
AC	**Brusalivegen 201**	**20:48**	**76**	**00:28**	**00:00**	**0**	**00:00**
AD	**Eiendom 1121/8, Hå kommune**	**55:08**	**140**	**00:39**	**51:19**	**110**	**00:39**
AE	**Brusalivegen 217**	**45:46**	**111**	**00:37**	**38:11**	**72**	**00:37**
AF	**Brusalivegen 215**	**35:48**	**111**	**00:33**	**28:44**	**73**	**00:33**
AG	**Brusalivegen 219**	**55:36**	**141**	**00:40**	**48:21**	**103**	**00:40**
AH	Buevegen 1463	141:02	185	01:16	141:02	185	01:16
AI	Buevegen 1288	06:49	26	00:21	06:49	26	00:21
AJ	Buevegen 1272	06:04	24	00:20	06:04	24	00:20
AK	Buevegen 1461	130:01	182	01:14	130:01	182	01:14
AL	Buevegen 1270	05:09	22	00:20	05:09	22	00:20
AM	Buevegen 1290	07:22	26	00:22	07:22	26	00:22
AN	Buevegen 1292	10:45	32	00:26	10:45	32	00:26
AO	Buevegen 1343	26:21	76	00:36	26:21	76	00:36
AP	Buevegen 1496	70:50	130	00:51	70:50	130	00:51
AQ	Buevegen 1500	100:51	144	01:18	100:51	144	01:18
AR	Buevegen 1502	100:26	142	01:18	100:26	142	01:18
AS	Buevegen 1286	07:05	26	00:21	07:05	26	00:21
AT	Buevegen 1498	85:06	130	01:04	85:06	130	01:04
AU	Buevegen 1340	12:49	36	00:28	12:49	36	00:28
AV	Osland 85	38:33	102	00:32	38:33	102	00:32
AW	**Laksesvela 60**	**15:45**	**79**	**00:18**	**00:00**	**0**	**00:00**
AX	**Laksesvela 58**	**16:20**	**82**	**00:18**	**00:00**	**0**	**00:00**

Det er noen forskjeller mellom denne tabellen og tabell 5-1 i avsnitt 5.2. Det er 7 mottakere som kan oppleve en forskjell når man tar til betraktning sumvirkninger. For 4 av de 7 mottakere (AD-AG) er det bare endring i timer per år og antall dager hvor det oppleves skyggekast, men det er ingen forskjell på timer per dag. De tre siste mottakerne (AC, AW og AX) opplever ingenting fra Moifjellet og Mellomstrand men opplever skyggekast fra nærliggende vindkraftverk og har derfor en økning i tabellen. Basert på den maksimerte teoretiske analysen vil det ikke bli stor endring for mottakerne når man ser på sumeffekten av alle aktuelle nærliggende vindkraftverk. Det vil kunne bli en endring på antall timer over et helt år, men ingen endring i hva som maksimalt kan oppleves gjennom en dag, med unntak av mottaker AC, AW og AX. Selv om den verste dagen fortsatt vil ha samme belastning, kan det bli flere dager med høy skyggekastbelastning, noe som kan merkes.

5.2.3 Kart – Realistisk scenario

Figur 5-7 viser et tilsvarende kart som Figur 5-6, men nå er en solskinnssannsynlighet på 50% tatt med og driftstid basert på vindrosen tatt med.

Sammenlignet med maksimalt teoretisk i avsnitt 5.2.2 kan man observere en liten endring. Selv om endringen ikke er svært merkbar, viser kartet at arealene har blitt noe redusert. Spesielt ser man at andelen av røde og gule områder har minsket, og disse strekker seg ikke like langt ut som tidligere.



Figur 5-7: Realistisk skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

5.2.4 Individuelle mottakere – Realistisk scenario

Tabell 5-4 oppsummerer resultatet av det realistiske scenarioet. Det er benyttet samme metodikk som i avsnitt 5.1.4. Sammenlignet med tallene for teoretisk maksimum (se Tabell 5-3) er disse tallene redusert både på grunn av 50% solskinnssannsynlighet og driftstiden til turbinene, som tar høyde for vindrosen. Antall timer er betraktelig redusert. Mottakeren som anses å være mest utsatt for skyggekast opplever nesten 65 timer per år (mottaker Z). Denne fritidsboligen er under bygging og ligger i nærhet av planområdet, omtrent 550 meter unna nærmeste turbin og det er derfor forventet at vil ha en stor belastning. Tabellen viser i tillegg økningen av forventet skyggekasttimer per år når man tar med sumvirkninger.

Tabell 5-4: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet og Mellomstrand vindkraftverk med hensyn til nærliggende vindkraftverk. Tabellen viser økning i antatt skyggekast for realistisk scenario når det tas hensyn til sumvirkninger (økning fra tabell 5.2). De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Økning
A	Moi 32	23:03	-
B	Moi 26	22:23	-
C	Moi 21	21:52	-
D	Buevegen 1805	21:39	-
E	Buevegen 1816	22:11	-
F	Buevegen 1818	23:19	-

G	Buevegen 1786	18:42	-
H	Buevegen 1784	20:47	-
I	Buevegen 1782	20:49	-
J	Buevegen 1780	20:55	-
K	Buevegen 1778	17:24	-
L	Buevegen 1850	23:02	-
M	Buevegen 1941	14:26	-
N	Buevegen 1988	12:51	-
O	Buevegen 2023	10:56	-
P	Buevegen 2021	10:19	-
Q	Buevegen 2141	09:10	-
R	Buevegen 2165	06:35	-
S	Vaule 176	05:01	-
T	Vaule 247	08:22	-
U	Store Svela, eiendom 60/5 - Bjerkreim kommune	21:46	-
V	Osland 45	09:51	-
W	Osland 65	10:12	-
X	Buevegen 2100	04:23	-
Y	Vaule 218	05:48	-
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 – Bjerkreim kommune	65:33	-
AA	Heiavegen 543	00:16	-
AB	Heiavegen 541	02:37	-
AC	Brusalivegen 201	05:52	05:52
AD	Eiendom 1121/8, Hå kommune	13:45	01:07
AE	Brusalivegen 217	10:58	02:10
AF	Brusalivegen 215	08:43	02:01
AG	Brusalivegen 219	13:34	02:06
AH	Buevegen 1463	37:39	-
AI	Buevegen 1288	01:53	-
AJ	Buevegen 1272	01:40	-
AK	Buevegen 1461	34:46	-
AL	Buevegen 1270	01:24	-
AM	Buevegen 1290	02:02	-
AN	Buevegen 1292	03:03	-
AO	Buevegen 1343	07:32	-
AP	Buevegen 1496	18:59	-
AQ	Buevegen 1500	26:38	-
AR	Buevegen 1502	26:23	-
AS	Buevegen 1286	01:58	-

AT	Buevegen 1498	22:52	-
AU	Buevegen 1340	03:41	-
AV	Osland 85	10:20	-
AW	Laksesvela 60	4:04	04:04
AX	Laksesvela 58	4:14	04:14

Når nærliggende vindkraftverk tas med i vurderingen, endres resultatene slik at én mottaker som tidligere lå under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast, nå får et beregnet skyggekast som overstiger grenseverdien (mottaker AF). Det er 17 mottakere som er under anbefalt grenseverdi (mottakere R, S, X, Y, AA – AC, AI, AJ, AL – AO, AS, AU, AW og AX). Åtte av mottakerne er lokalisert ved Kartavoll, en sørvest for området, fire sørøst for området og fire nordøst for området. Resultatene fra Tabell 5-4 viser at skyggekast fra flere vindkraftverk kan forekomme, det er en mottaker (mottaker AF) som går over anbefalt grenseverdi når man tar betraktning av nærliggende vindkraftverk. Det vil si at de nærliggende vindkraftverkene fører til en økning i den totale skyggekastbelastningen for enkelte mottakere.

Basert på hvilke mottakere som opplever en økning i skyggekast, kan vi konkludere med at det er Bjerkreim vindkraftverk, som ligger sør for Moifjellet og Mellomstrand som fører til økt skyggekastbelastning.

Det vil si at for kun Moifellet og Mellomstrand vindkraftverk er det hovedsakelig mottakerne nord for vindkraftverket som belastes over anbefalt grenseverdi. Mens når man tar hensyn til nærliggende vindkraftverk vil noen av mottakere til øst og til vest merke en større belastning, over anbefalt grenseverdi.

Det er ingen av mottakerne som opplever skyggekast over anbefalt grenseverdi fra de eksisterende vindkraftverkene. De mottakerne som merker en belastning fra eksisterende, opplever det i hovedsak tidlig på morgenen eller sent på kvelden i sommerhalvåret. Det er ulike tidspunkt og på ulike tider av året enn hva det forventes Moifjellet og Mellomstrand vindkraftverk vil bidra med. Det vil si at det vil bidra med mer skyggekast på flere tidspunkt igjennom dagen. En oversikt over når hver mottaker opplever skyggekast ligger i vedlegg.

6 Reslultater for alternativ 2: Moifjellet

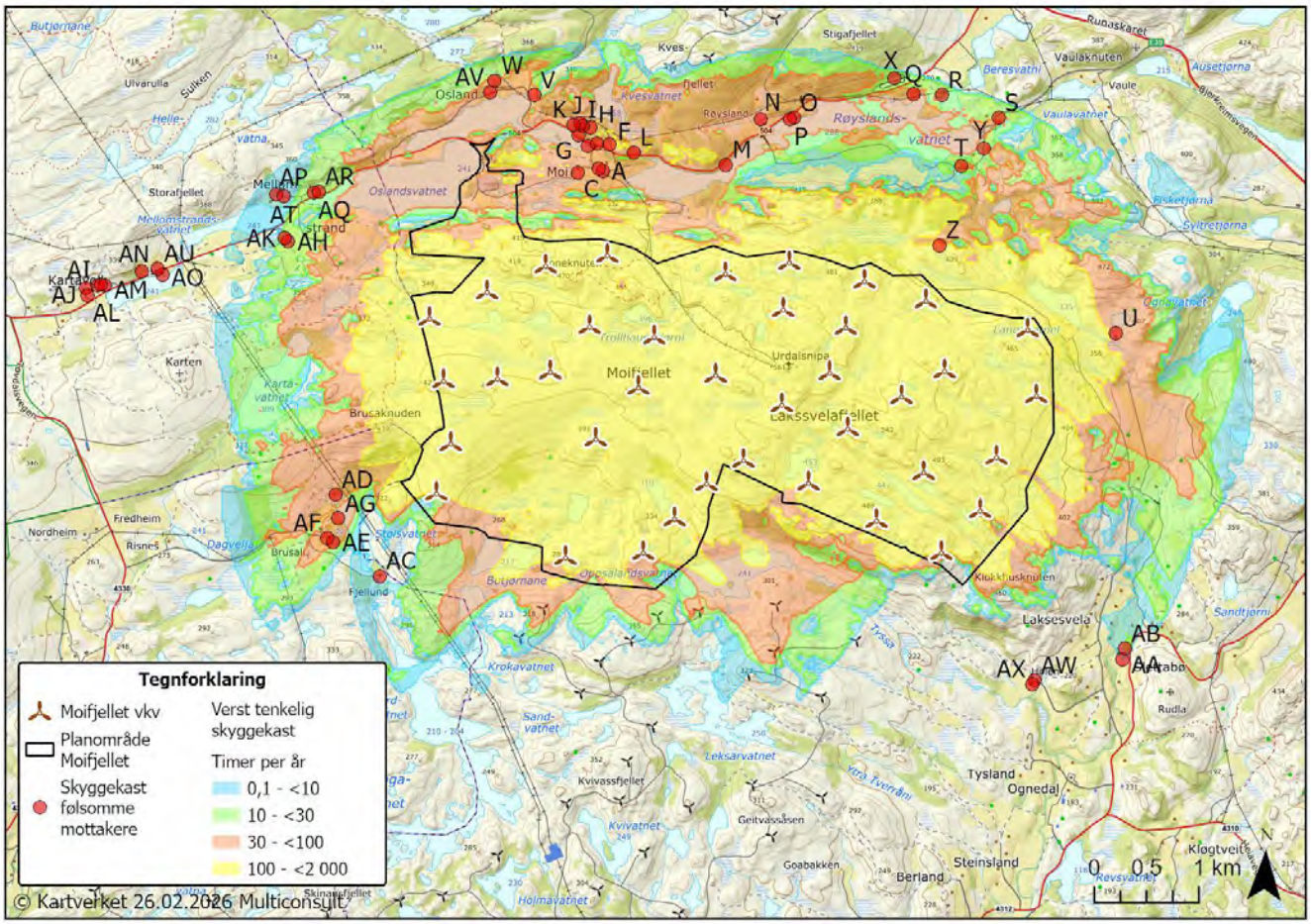
6.1 Resultater for Moifjellet vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet vindkraftverk. Det er ikke tatt hensyn til sumvirkninger i dette kapittelet, de vises i kapittel 6.2.

6.1.1 Kart – Verst tenkelig scenario

Figur 6-1 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer fra vindkraftverket.

Figuren gir en god indikasjon på hvilke områder og mottakere som vil bli utsatt for skyggekast. Nord til nordvest for vindkraftverket er det en konsentrasjon av røde områder, med noen gule flekker, som indikerer høy skyggekastpåvirkning. Boliger i disse områdene kan derfor bli betydelig utsatt for skyggekast.



Figur 6-1: Teoretisk verst tenkelig scenario, målt i antall timer per år.

6.1.2 Individuelle mottakere – Verst tenkelig scenario

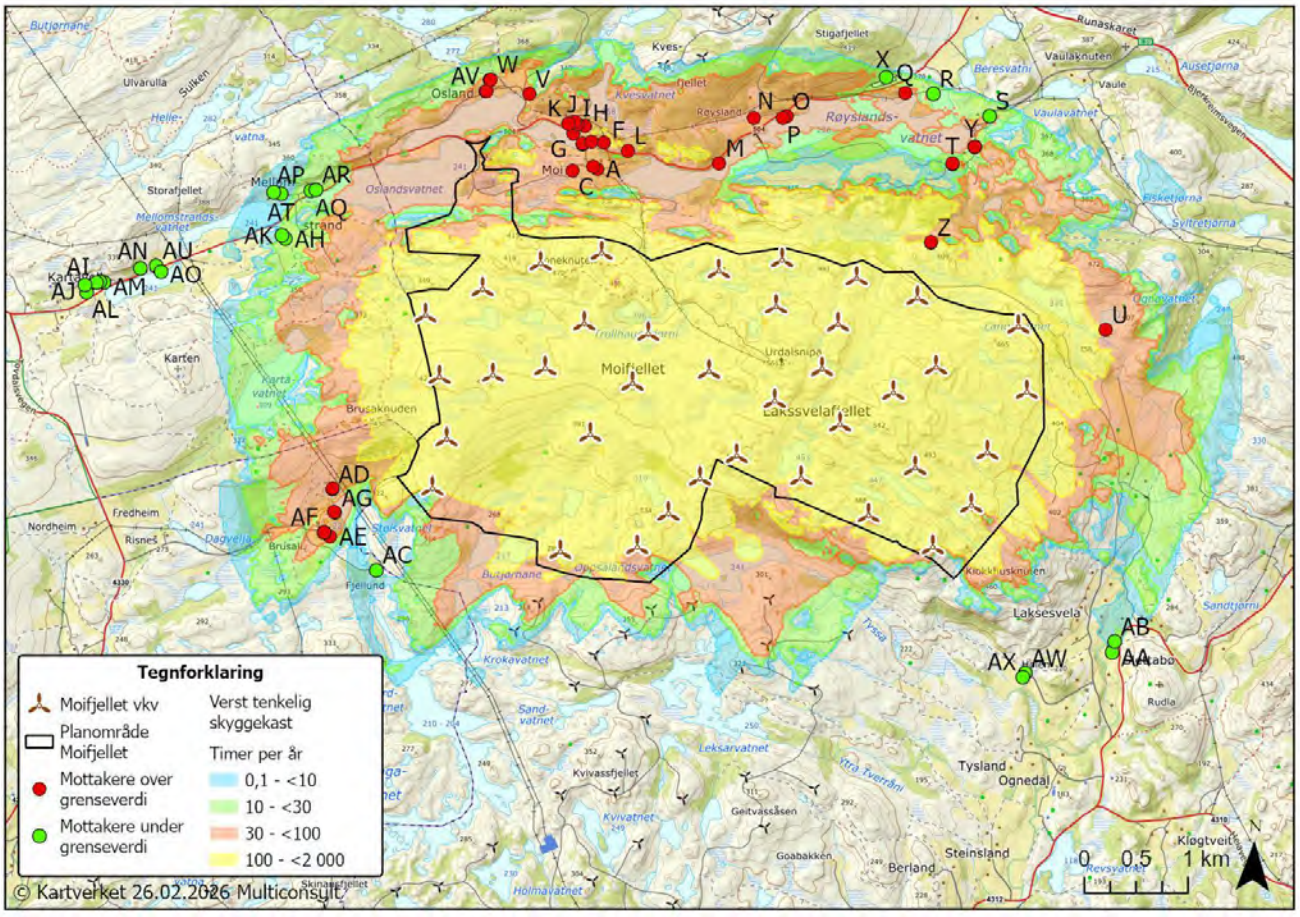
Tabell 6-1 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i avsnitt 3.1. Det kommer tre delresultater fra beregningen. Det første er vist i kolonnen «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonnen «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Den tredje kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), gir belastningen på den verste dagen.

Tabell 6-1: Maksimalt teoretisk skyggekast for skyggekastmottakerne for Moifjellet vindkraftverk. Kolonnen «Timer/år» gir totalt antall timer skyggekast på mottakeren per år. Kolonnen «Dager/år» gir antallet dager per år det inntreffer skyggekast i det hele tatt. Kolonnen «Timer/dag (verste dag)» gir antallet timer skyggekast på den dagen med aller størst belastning. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Dager/år	Timer/dag (verste dag)
A	Moi 32	91:38	112	1:42
B	Moi 26	89:39	100	1:41
C	Moi 21	86:06	91	1:50
D	Buevegen 1805	86:46	113	1:28
E	Buevegen 1816	88:55	117	1:28
F	Buevegen 1818	93:48	136	1:27
G	Buevegen 1786	74:46	111	1:30
H	Buevegen 1784	84:32	122	1:27
I	Buevegen 1782	83:59	124	1:28
J	Buevegen 1780	84:10	121	1:29
K	Buevegen 1778	70:27	91	1:27
L	Buevegen 1850	93:42	157	1:31
M	Buevegen 1941	59:05	78	1:35
N	Buevegen 1988	52:08	72	1:06
O	Buevegen 2023	44:00	60	1:14
P	Buevegen 2021	41:34	54	1:14
Q	Buevegen 2141	38:26	104	0:35
R	Buevegen 2165	27:56	84	0:27
S	Vaule 176	22:57	89	0:22
T	Vaule 247	33:51	96	0:42
U	Store Svela, eiendom 60/5, Bjerkreim kommune	88:23	178	1:03
V	Osland 45	40:04	74	0:43
W	Osland 65	38:02	93	0:32
X	Buevegen 2100	18:09	68	0:20
Y	Vaule 218	26:05	77	0:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	275:29	207	2:12
AA	Heiavegen 543	0:55	23	0:04
AB	Heiavegen 541	8:56	44	0:16
AC	Brusalivegen 201	0:00	0	0:00
AD	Eiendom 121/8, Hå kommune	51:19	110	0:39
AE	Brusalivegen 217	38:11	72	0:37
AF	Brusalivegen 215	28:44	73	0:33
AG	Brusalivegen 219	48:21	103	0:40
AH	Buevegen 1463	22:57	83	0:25
AI	Buevegen 1288	0:00	0	0:00

AJ	Buevegen 1272	0:00	0	0:00
AK	Buevegen 1461	15:23	55	0:24
AL	Buevegen 1270	0:00	0	0:00
AM	Buevegen 1290	0:00	0	0:00
AN	Buevegen 1292	0:00	0	0:00
AO	Buevegen 1343	0:00	0	0:00
AP	Buevegen 1496	7:33	28	0:21
AQ	Buevegen 1500	17:35	62	0:24
AR	Buevegen 1502	18:16	62	0:24
AS	Buevegen 1286	0:00	0	0:00
AT	Buevegen 1498	8:10	30	0:21
AU	Buevegen 1340	0:00	0	0:00
AV	Osland 85	38:33	102	0:32
AW	Laksesvela 60	0:00	0	0:00
AX	Laksesvela 58	0:00	0	0:00

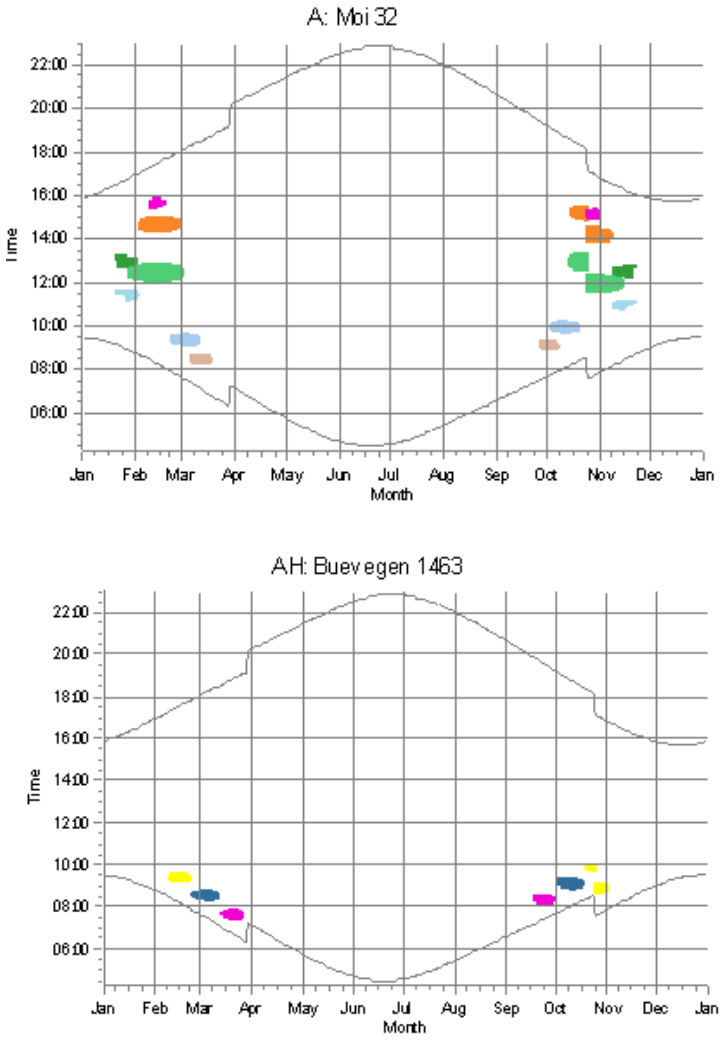
Det er anslått at 22 av 50 mottakere ligger under NVEs anbefalte grenseverdi for teoretisk maksimalt skyggekast. Det er 14 mottakere som er under hvis man bare ser på mottakere innenfor 2 km av Moifjellet vindkraftverk, men for sammenligning er alle mottakerne fra alternativ 1 tatt med. Se Figur 6-2 der disse 22 mottakerne er vist med grønne prikker. Tre av disse mottakerne er lokalisert nordøst for planområdet nært Røyslandsvatnet (mottakere R, S og X i tabell), 14 mottakere er lokalisert nordvest for planområdet ved Mellomstrand/Kartavoll (mottakere AH – AU i tabell), en er lokalisert sørvest for planområdet ved Fjellund (mottaker AC i tabell) og fire er lokalisert sørøst for planområdet ved Slettabø og Holen (mottakere AA, AB, AW og AX i tabell). Den mottakeren som blir mest utsatt for skyggekast er omtrent 553 meter unna en turbin (mottaker Z i tabell).



Figur 6-2: Verst tenkelig skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi.

Mange av de mest utsatte boligene og fritidsbygningene er lokalisert rett nord for vindkraftverket, noe som gjør det sannsynlig at de vil oppleve skyggekast på samme tid i løpet av dagen. Grunnet boligenes posisjon i forhold til vindkraftverket og solens bane vil de fleste av mottakerne mest sannsynlig oppleve mest skyggekast på dagtid, mellom 9 - 16. Mottakernes lokalisering kombinert med solens bevegelsesmønster gjør at belastningen av skyggekast på mottakerne er høyest når solen står høyest på himmelen i løpet av vinterhalvåret. Da strekker skyggen fra vindturbinene seg lenger og mottakerne i nord opplever skyggekast. De fleste av mottakerne vil kun oppleve skyggekast om vinteren, mens noen få vil kunne merke det også i sen høst og tidlig vår. Seks av mottakerne kan imidlertid oppleve skyggekast om sommeren, men da enten tidlig om morgenen eller sent på kvelden.

Figur 6-3 illustrerer når to mottakere forventes å oppleve skyggekast gjennom året (x-aksen), samt på hvilke tidspunkter av døgnet dette skjer (y-aksen). De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast. Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast. Mottakerne A og AH er valgt for å illustrere den forventede skyggekastbelastningen for de områdene som ligger nord og nordvest for planområdet, og som trolig vil oppleve ulik belastning fra de to alternativene. En fullstendig oversikt over når hver mottaker kan forvente skyggekast for alle fire scenarioene legges ved rapporten som vedlegg.

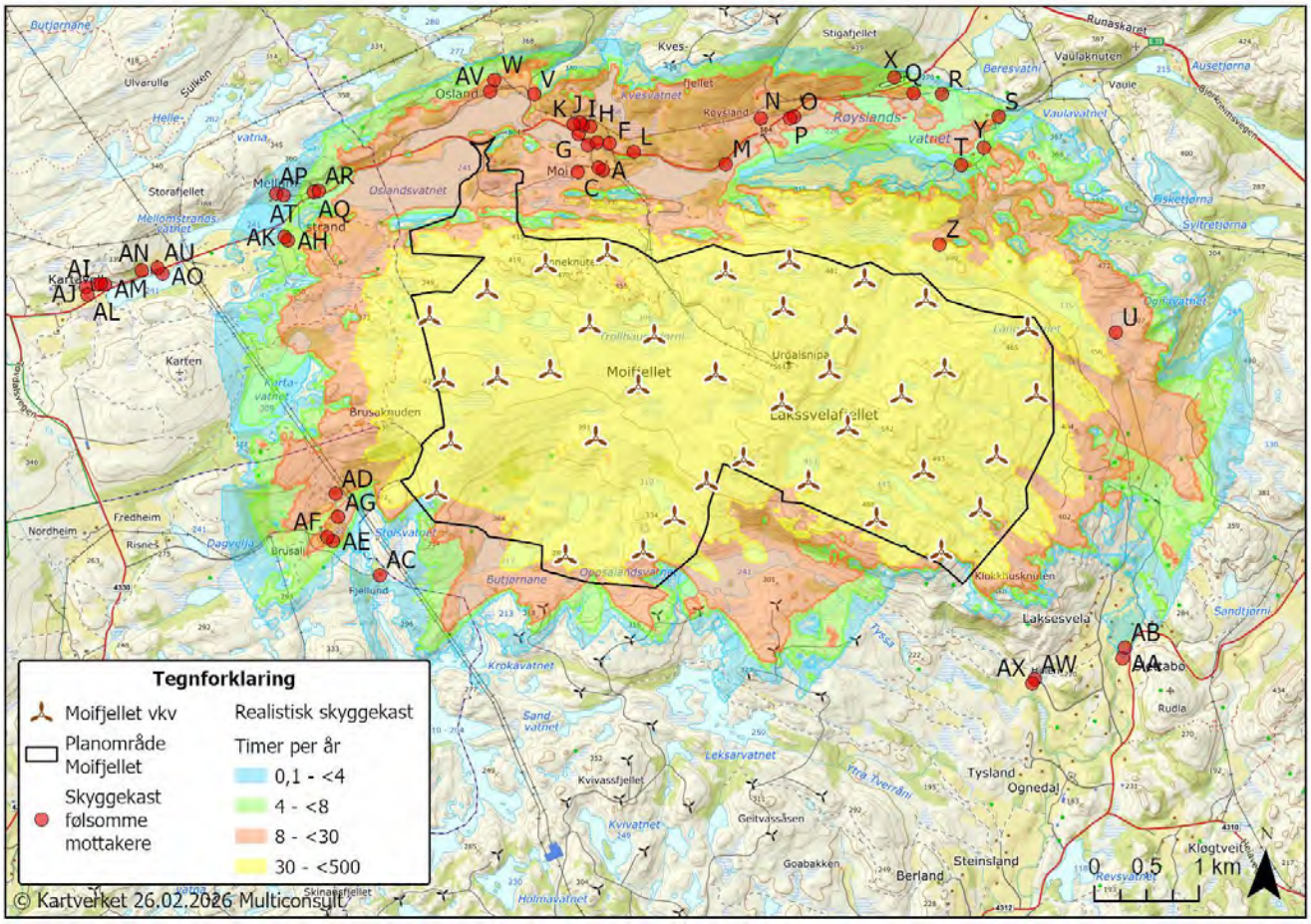


Figur 6-3: Forventet tidspunkt for skyggekast for mottaker A og AH. De ulike fargene representerer de ulike vindturbinene som vil bidra til skyggekast. Tynn grå linje representerer solbanen og viser når det er teoretisk mulig å oppleve skyggekast Mottaker A er lokalisert nord for planområdet, mens mottaker AH ligger nordvest for planområdet.

6.1.3 Kart – Realistisk scenario

Figur 6-4 viser et tilsvarende kart som Figur 6-1, men nå er en solskinnssannsynlighet på 50% og driftstid basert på vindrosen tatt med. Forskjellen i resultatet er at simuleringen først beregner teoretisk maksimum som om sola skinner hele tiden (nøyaktig på samme vis som vist i Figur 6-1), og deretter reduseres denne teoretiske maksimumsbelastningen med 50%, basert på antakelsen om at faktisk solskinn bare inntreffer halvparten av tiden. I tillegg justeres belastningen med en driftstid på totalt 7000 timer, basert på vindrosen og driftstid per sektor/vindretning.

Sammenlignet med maksimalt teoretisk skyggekast reduseres utstrekningen av skyggekast noe, og områdene som viser verdier over anbefalt nivå krymper. Denne reduksjonen er imidlertid ikke betydelig nok til å være visuelt fremtredende. Kartet indikerer at arealene med høy belastning forblir omfattende, noe som indikerer at de fleste mottakerne fremdeles vil bli eksponert for skyggekast i mengder som overskrider anbefalte verdier.



Figur 6-4: Realistisk scenario med antall timer per år.

6.1.4 Individuelle mottakere – Realistisk scenario

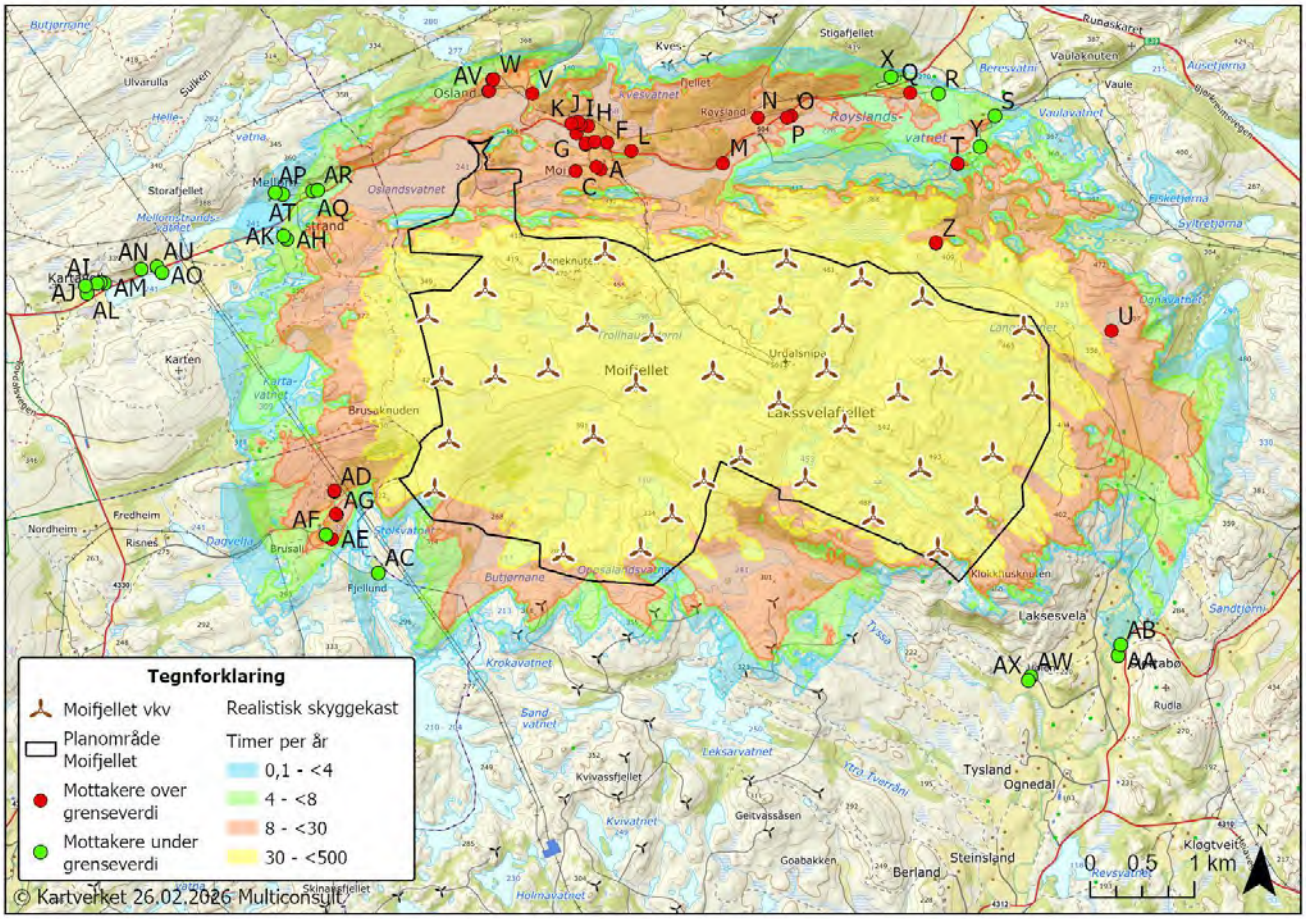
Tabell 6-2 oppsummerer resultatet av den realistiske skyggekastbelastningen. Sammenlignet med tallene for teoretisk maksimum (se Tabell 6-1) er disse tallene redusert både på grunn av 50% solskinnssannsynlighet og driftstiden til turbinene.

Tabell 6-2: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet vindkraftverk definert i avsnitt 3.1. Tredje kolonne «Timer/dag (verste dag)» er hentet fra Tabell 6-1 for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	*Timer/år (verst tenkelig)*
A	Moi 32	23:03	91:38
B	Moi 26	22:23	89:39
C	Moi 21	21:52	86:06
D	Buevegen 1805	21:39	86:46
E	Buevegen 1816	22:11	88:55
F	Buevegen 1818	23:19	93:48
G	Buevegen 1786	18:42	74:46
H	Buevegen 1784	20:47	84:32
I	Buevegen 1782	20:49	83:59
J	Buevegen 1780	20:55	84:10

K	Buevegen 1778	17:24	70:27
L	Buevegen 1850	23:02	93:42
M	Buevegen 1941	14:26	59:05
N	Buevegen 1988	12:51	52:08
O	Buevegen 2023	10:56	44:00
P	Buevegen 2021	10:19	41:34
Q	Buevegen 2141	9:10	38:26
R	Buevegen 2165	6:35	27:56
S	Vaule 176	5:01	22:57
T	Vaule 247	8:22	33:51
U	Store Svela, eiendom 60/5, Bjerkreim kommune	21:46	88:23
V	Osland 45	9:51	40:04
W	Osland 65	10:12	38:02
X	Buevegen 2100	4:23	18:09
Y	Vaule 218	5:48	26:05
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	65:33	275:29
AA	Heiavegen 543	0:16	0:55
AB	Heiavegen 541	2:37	8:56
AC	Brusalivegen 201	0:00	0:00
AD	Eiendom 121/8, Hå kommune	12:38	51:19
AE	Brusalivegen 217	8:48	38:11
AF	Brusalivegen 215	6:42	28:44
AG	Brusalivegen 219	11:28	48:21
AH	Buevegen 1463	6:36	22:57
AI	Buevegen 1288	0:00	0:00
AJ	Buevegen 1272	0:00	0:00
AK	Buevegen 1461	4:24	15:23
AL	Buevegen 1270	0:00	0:00
AM	Buevegen 1290	0:00	0:00
AN	Buevegen 1292	0:00	0:00
AO	Buevegen 1343	0:00	0:00
AP	Buevegen 1496	2:13	7:33
AQ	Buevegen 1500	5:06	17:35
AR	Buevegen 1502	5:18	18:16
AS	Buevegen 1286	0:00	0:00
AT	Buevegen 1498	2:24	8:10
AU	Buevegen 1340	0:00	0:00
AV	Osland 85	10:20	38:33
AW	Laksesvela 60	0:00	0:00
AX	Laksesvela 58	0:00	0:00

Det er estimert at 24 mottakere befinner seg under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast (mottakere R, S, X, Y, AA – AC, AF, AH – AU, AW og AU), se Figur 6-5. Av disse 24 er 22 de samme som også lå under grenseverdien i det maksimale teoretiske scenarioet. De to mottakerne, Y og AF, som kun ligger under grenseverdien i det realistiske scenarioet, er lokalisert sørvest og nordøst for planområdet.



Figur 6-5: Realistisk skyggekast med mottakere. Mottakere vist i grønt ligger under anbefalt grenseverdi mens mottakere vist i rødt ligger over anbefalt grenseverdi

Den mottakeren som befinner seg nærmest turbinene, er den som er mest utsatt for skyggekast. Dette antyder at både fysisk avstand fra turbinene og den lokale topografien spiller en sentral rolle i hvor mye skyggekast en mottaker vil oppleve.

For mottakerne som opplever skyggekast rundt midt på dagen, reduseres varigheten av skyggekast primært på grunn av lavere sannsynlighet for solskinn. Dette betyr at selv om skyggekast teoretisk sett kan vare lenger, vil faktiske værforhold, som perioder med overskyet vær, bidra til å korte ned skyggekastets varighet. Dermed oppstår en reduksjon i skyggekastets påvirkning, selv i de mest utsatte periodene, noe som fører til en lavere faktisk eksponering enn beregningene for teoretisk maksimalt skyggekast skulle tilsi. For eksempel Buevegen 2023 (mottaker O) har gått fra 44:00 til 10:56 og Brusalivegen 215 (mottaker AF) har gått fra 28:44 til 7:23. Det er viktig å nevne at Buevegen 2023 fortsatt ikke er under grenseverdiene, mens Brusalivegen 215 er under grenseverdi for begge scenarioene for timer per år, men var målt til over grenseverdi for verst tenkelig på grunn av timer per dag.

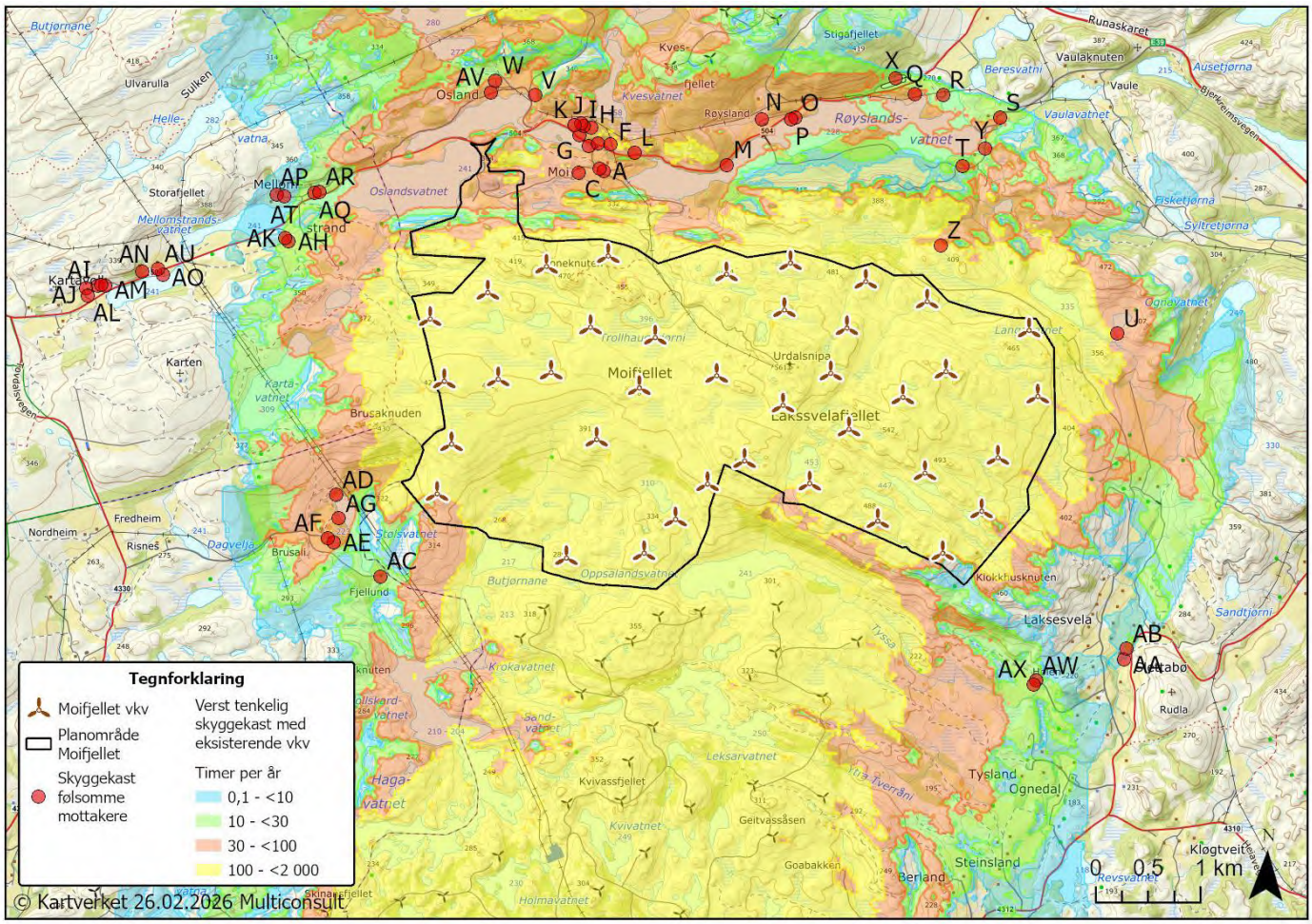
6.2 Resultater for sumvirkninger fra nærliggende vindkraftverk

I dette kapittelet presenteres skyggekastberegningene for Moifjellet vindkraftverk med hensyn til nærliggende vindkraftverk. Resultatene og diskusjonen rundt disse vil ha samme oppsett som i forrige kapittel for å gi et godt sammenligningsgrunnlag, og tydelig vise hvilke skyggekastmottakere som får ekstra belastning på grunn av sumvirkningen av flere vindkraftverk.

Noter at for realistisk skyggekastberegning er vindrosen for Moifjellet benyttet. Dette kan medføre en viss unøyaktighet når den anvendes på de andre vindkraftverkene, da vindrosen spesifikt representerer vindforholdene ved Moifjellet og ikke nødvendigvis de eksakte forholdene ved de andre lokasjonene.

6.2.1 Kart – Verst tenkelig scenario

Figur 6-6 viser kartet over teoretisk verst tenkelig skyggekast, målt i antall timer per år. For denne beregningen antas at solen skinner alle timer i løpet av en dag og at turbinen alltid står vinkelrett på mottakerpunktet, og man ender da opp med en beskrivelse av den maksimale skyggekastbelastningen man forventer som følge av alle de tre vindkraftverkene rundt Moifjellet vindkraftverk sitt influensområde.



Figur 6-6:Teoretisk verst tenkelig skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

Når man tar hensyn til nærliggende vindkraftverk ser man en større utstrekning nord og sør for Moifjellet av arealer som ligger over anbefalt grenseverdi, spesielt røde arealer har blitt større. Dette er naturlig siden disse vindkraftverkene hver for seg vil lage skyggekast som nå legges sammen for en større total belastning. Figuren viser at det vil bli mer skyggekast sør for Moifjellet vindkraftverk, men der er det ikke registret noen mottakere. Områdene nord for planområdet er i hovedsak fremdeles rød og det forventes av den grunn ikke særlig endring for mottakerne som er lokalisert der.

6.2.2 Individuelle mottakere – Verst tenkelig scenario

Tabell 6-3 viser resultatet av beregningene av maksimalt teoretisk skyggekast for alle de definerte mottakerne i Figur 3-2 og tar hensyn til sumvirkninger fra alle vindkraftverkene. Resultatene er vist med de samme oppsettet som delresultatene i avsnitt , der første er vist i kolonnene «Timer/år». Dette er antall timer med skyggekast på mottakeren (på format *timer:minutter*). Det andre delresultatet, vist i kolonne «Dager/år», gir hvor mange dager i løpet av året det inntreffer skyggekast på mottakeren. Den tredje kolonnen «Timer/dag (verste dag)» (på format *timer:minutter*), gir belastningen på den verste dagen.

Tabell 6-3: Teoretisk skyggekast for skyggekastmottakerne for Moifjellet vindkraftverk med hensyn til nærliggende vindkraftverk. Kolonne 6, 7 og 8 (i grått) er hentet fra Tabell 6-1 for skyggekast for Moifjellet uten nærliggende vindkraftverk for sammenligningsgrunnlag. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	**Timer/år**	**Dager/ år**	**Timer/ dag (verste dag)**	*Timer/år*	*Dager /år*	*Timer/ dag (verste dag)*
A	Moi 32	91:38	112	1:42	91:38	112	1:42
B	Moi 26	89:39	100	1:41	89:39	100	1:41
C	Moi 21	86:06	91	1:50	86:06	91	1:50
D	Buevegen 1805	86:46	113	1:28	86:46	113	1:28
E	Buevegen 1816	88:55	117	1:28	88:55	117	1:28
F	Buevegen 1818	93:48	136	1:27	93:48	136	1:27
G	Buevegen 1786	74:46	111	1:30	74:46	111	1:30
H	Buevegen 1784	84:32	122	1:27	84:32	122	1:27
I	Buevegen 1782	83:59	124	1:28	83:59	124	1:28
J	Buevegen 1780	84:10	121	1:29	84:10	121	1:29
K	Buevegen 1778	70:27	91	1:27	70:27	91	1:27
L	Buevegen 1850	93:42	157	1:31	93:42	157	1:31
M	Buevegen 1941	59:05	78	1:35	59:05	78	1:35
N	Buevegen 1988	52:08	72	1:06	52:08	72	1:06
O	Buevegen 2023	44:00	60	1:14	44:00	60	1:14
P	Buevegen 2021	41:34	54	1:14	41:34	54	1:14
Q	Buevegen 2141	38:26	104	0:35	38:26	104	0:35
R	Buevegen 2165	27:56	84	0:27	27:56	84	0:27
S	Vaule 176	22:57	89	0:22	22:57	89	0:22
T	Vaule 247	33:51	96	0:42	33:51	96	0:42
U	Store Svela, eiendom 60/5, Bjerkreim kommune	88:23	178	1:03	88:23	178	1:03
V	Osland 45	40:04	74	0:43	40:04	74	0:43
W	Osland 65	38:02	93	0:32	38:02	93	0:32
X	Buevegen 2100	18:09	68	0:20	18:09	68	0:20
Y	Vaule 218	26:05	77	0:41	26:05	77	0:41
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	275:29	207	2:12	275:29	207	2:12
AA	Heiavegen 543	0:55	23	0:04	0:55	23	0:04
AB	Heiavegen 541	8:56	44	0:16	8:56	44	0:16

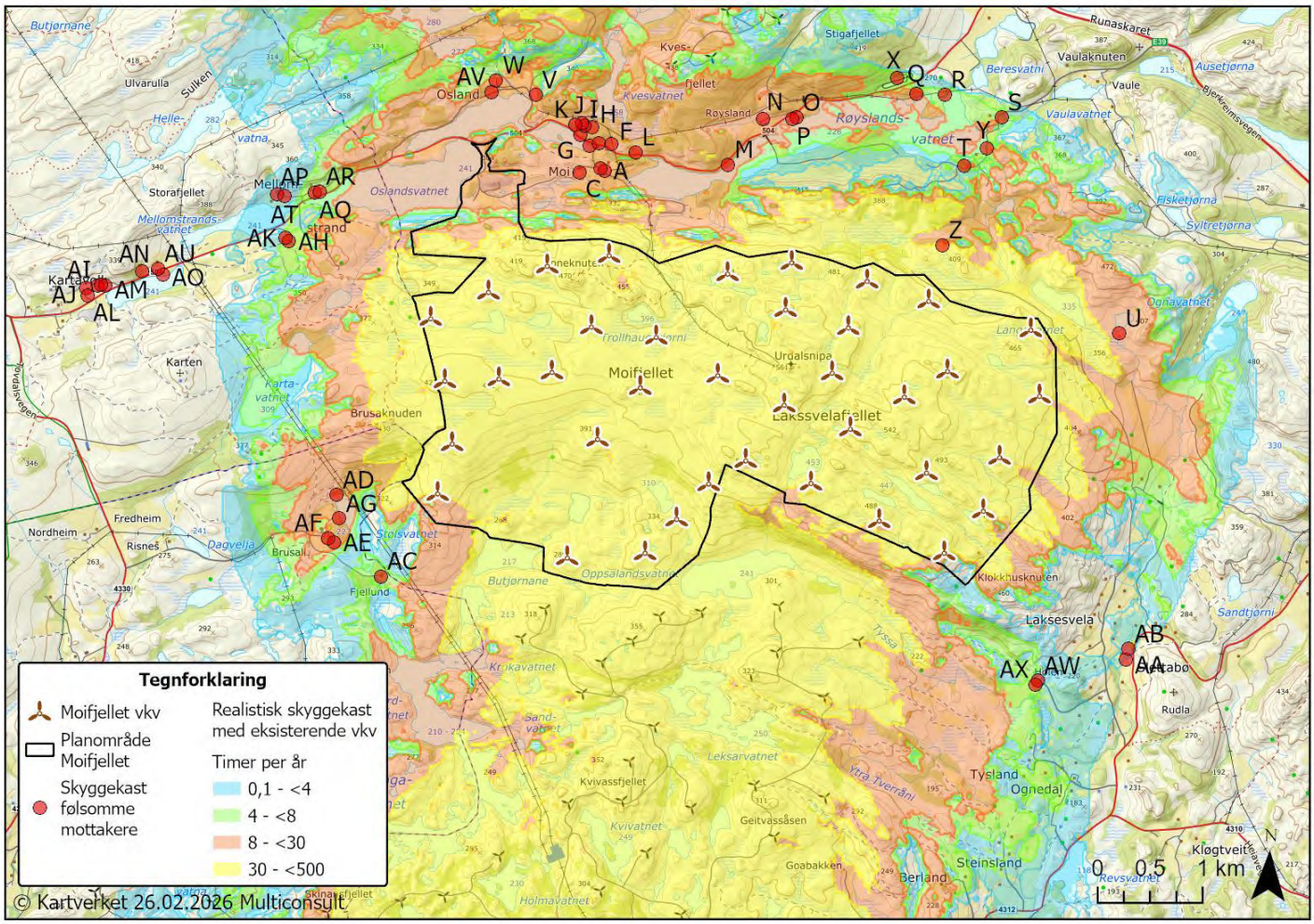
AC	**Brusalivegen 201**	**20:48**	**76**	**0:28**	**0:00**	**0**	**0:00**
AD	**Eiendom 121/8, Hå kommune**	**55:08**	**140**	**0:39**	**51:19**	**110**	**0:39**
AE	**Brusalivegen 217**	**45:46**	**111**	**0:37**	**38:11**	**72**	**0:37**
AF	**Brusalivegen 215**	**35:48**	**111**	**0:33**	**28:44**	**73**	**0:33**
AG	**Brusalivegen 219**	**55:36**	**141**	**0:40**	**48:21**	**103**	**0:40**
AH	Buevegen 1463	22:57	83	0:25	22:57	83	0:25
AI	Buevegen 1288	0:00	0	0:00	0:00	0	0:00
AJ	Buevegen 1272	0:00	0	0:00	0:00	0	0:00
AK	Buevegen 1461	15:23	55	0:24	15:23	55	0:24
AL	Buevegen 1270	0:00	0	0:00	0:00	0	0:00
AM	Buevegen 1290	0:00	0	0:00	0:00	0	0:00
AN	Buevegen 1292	0:00	0	0:00	0:00	0	0:00
AO	Buevegen 1343	0:00	0	0:00	0:00	0	0:00
AP	Buevegen 1496	7:33	28	0:21	7:33	28	0:21
AQ	Buevegen 1500	17:35	62	0:24	17:35	62	0:24
AR	Buevegen 1502	18:16	62	0:24	18:16	62	0:24
AS	Buevegen 1286	0:00	0	0:00	0:00	0	0:00
AT	Buevegen 1498	8:10	30	0:21	8:10	30	0:21
AU	Buevegen 1340	0:00	0	0:00	0:00	0	0:00
AV	Osland 85	38:33	102	0:32	38:33	102	0:32
AW	**Laksesvela 60**	**15:45**	**79**	**0:18**	**0:00**	**0**	**0:00**
AX	**Laksesvela 58**	**16:20**	**82**	**0:18**	**0:00**	**0**	**0:00**

Det er noen forskjeller mellom denne tabellen og Tabell 6-1 i avsnitt 6.1. Samme som for alternativ 1 er det 7 mottakere er det en endring i antall når man tar til betraktning sumvirkninger (mottakerne er markert med fet skrift i tabell). For 4 mottakere (AD-AG) er det bare endring i timer per år og antall dager hvor det oppleves skyggekast, men det er ingen forskjell på timer per dag. De tre siste mottakerne (AC, AW og AX) opplever ingenting fra Moifjellet men opplever skyggekast fra nærliggende vindkraftverk og har derfor en økning i tabellen. Basert på den maksimerte teoretiske analysen vil det ikke bli stor endring for mottakerne når man ser på sumeffekten av alle aktuelle nærliggende vindkraftverk. Det vil kunne bli en endring på antall timer over et helt år, men ingen endring i hva som maksimalt kan oppleves gjennom en dag, med unntak av mottaker AC, AW og AX. Dette betyr at når man vurderer sumvirkninger fra nærliggende vindkraftverk, kan det oppstå endringer i forholdene for mottakerne. Selv om den verste dagen fortsatt vil ha samme belastning, kan det bli flere dager med høy skyggekastbelastning, noe som kan merkes av enkelte mottakere.

6.2.3 Kart – Realistisk scenario

Figur 6-7 viser et tilsvarende kart som Figur 6-6, men nå er en solskinnssannsynlighet på 50% tatt med og driftstid basert på vindrosen tatt med.

Sammenlignet med maksimalt teoretisk i avsnitt 6.2.1 kan man observere en liten endring. Selv om endringen ikke er svært merkbar, viser kartet at arealene har blitt noe redusert. Spesielt ser man at andelen av røde og gule områder har minsket, og disse strekker seg ikke like langt ut som tidligere.



Figur 6-7: Realistisk skyggekast med hensyn til nærliggende vindkraftverk med definerte skyggekastmottakere.

6.2.4 Individuelle mottakere – Realistisk scenario

Tabell 6-4 oppsummerer resultatet av det realistiske scenarioet. Det er benyttet samme metodikk som i avsnitt 6.1.4. Mottakeren som anses å være mest utsatt for skyggekast opplever nesten 65 timer per år (mottaker Z). Denne fritidsboligen er under bygging og ligger i nærhet av planområdet, omtrent 550 meter unna nærmeste turbin og det er derfor forventet at vil ha en stor belastning. Tabellen viser i tillegg økningen av forventet skyggekasttimer per år når man tar med sumvirkninger.

Tabell 6-4: Realistisk skyggekastberegning for skyggekastmottakerne for Moifjellet vindkraftverk med hensyn til nærliggende vindkraftverk. Tabellen viser økning i antatt skyggekast når det tas hensyn til sumvirkninger. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Mottaker	Timer/år	Økning
A	Moi 32	23:03	-
B	Moi 26	22:23	-
C	Moi 21	21:52	-
D	Buevegen 1805	21:39	-
E	Buevegen 1816	22:11	-
F	Buevegen 1818	23:19	-
G	Buevegen 1786	18:42	-

H	Buevegen 1784	20:47	-
I	Buevegen 1782	20:49	-
J	Buevegen 1780	20:55	-
K	Buevegen 1778	17:24	-
L	Buevegen 1850	23:02	-
M	Buevegen 1941	14:26	-
N	Buevegen 1988	12:51	-
O	Buevegen 2023	10:56	-
P	Buevegen 2021	10:19	-
Q	Buevegen 2141	9:10	-
R	Buevegen 2165	6:35	-
S	Vaule 176	5:01	-
T	Vaule 247	8:22	-
U	Store Svela, eiendom 60/5, Bjerkreim kommune	21:46	-
V	Osland 45	9:51	-
W	Osland 65	10:12	-
X	Buevegen 2100	4:23	-
Y	Vaule 218	5:48	-
Z	Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune	65:33	-
AA	Heiavegen 543	0:16	-
AB	Heiavegen 541	2:37	-
AC	Brusalivegen 201	5:52	05:52
AD	Eiendom 121/8, Hå kommune	13:45	01:07
AE	Brusalivegen 217	10:58	02:10
AF	Brusalivegen 215	8:43	02:01
AG	Brusalivegen 219	13:34	02:06
AH	Buevegen 1463	6:36	-
AI	Buevegen 1288	0:00	-
AJ	Buevegen 1272	0:00	-
AK	Buevegen 1461	4:24	-
AL	Buevegen 1270	0:00	-
AM	Buevegen 1290	0:00	-
AN	Buevegen 1292	0:00	-
AO	Buevegen 1343	0:00	-
AP	Buevegen 1496	2:13	-
AQ	Buevegen 1500	5:06	-
AR	Buevegen 1502	5:18	-
AS	Buevegen 1286	0:00	-
AT	Buevegen 1498	2:24	-
AU	Buevegen 1340	0:00	-
AV	Osland 85	10:20	-
AW	Laksesvela 60	4:04	04:04

AX	Laksesvela 58	4:14	04:14

I motsetning til teoretisk skyggekast, tar realistisk skyggekast mer hensyn til realistiske forhold som vær og solskinnsvariasjoner, og gir dermed et mer nøyaktig bilde av hvordan mottakerne vil bli påvirket av nærliggende vindkraftverk. Mens teoretisk skyggekast antar maksimal påvirkning basert på ideelle solforhold, reflekterer realistisk skyggekast hvordan mottakerne faktisk vil oppleve skyggekast under varierende værforhold, noe som ofte resulterer i kortere varighet og mindre intensitet enn de maksimale beregningene tilsier. Det er derfor ulike resultater mellom de to scenarioene.

Når man tar hensyn til nærliggende vindkraftverk, endres resultatene slik at færre mottakere ligger under NVEs anbefalte grenseverdi på 8 timer årlig skyggekast. Det er nå 23 mottakere som er under anbefalt grenseverdi (mottakere R, S, X, Y, AA-AC, AH-AU, AW OG AX). Likt som verst tenkelige scenario er det 7 mottakere som opplever endring som følge av eksisterende vindkraftverk. Den mottakeren som får en størst endring, som går fra under grenseverdi til over grenseverdi er mottaker AF, den går fra 6:42 til 8:43. Det er tre mottakere (AC, AW og AX) som går fra null til å oppleve skyggekast som følge av Bjerkreim vindkraftverk. Det vil si at de nærliggende vindkraftverkene fører til en økning i den totale skyggekastbelastningen for enkelte mottakere.

Basert på hvilke mottakere som opplever en økning i skyggekast, kan vi konkludere med at flere mottakere sørøst og sørvest for Moifjellet vindkraftverk opplever økt skyggekastbelastning fra Bjerkreim vindkraftverk.

Det vil si at for kun Moifellet vindkraftverk er det hovedsakelig mottakerne nord for vindkraftverket som belastes over anbefalt grenseverdi. Mens når man tar hensyn til nærliggende vindkraftverk vil noen av mottakere til øst og til vest merke en større belastning.

Det er ingen av mottakerne som opplever skyggekast over anbefalt grenseverdi fra de eksisterende vindkraftverkene. De mottakerne som merker en belastning fra eksisterende, opplever det i hovedsak tidlig på morgenen eller sent på kvelden i sommerhalvåret. Det er ulike tidspunkt og på ulike tider av året enn hva det forventes Moifjellet vindkraftverk vil bidra med. Det vil si at det vil bidra med mer skyggekast på flere tidspunkt igjennom dagen. En oversikt over når hver mottaker opplever skyggekast ligger i vedlegg.

7 Sammenligning av alternativene

Ved vurdering av hvor mange mottakere som overskrider grenseverdiene for skyggekast, må både teoretiske og realistiske beregninger legges til grunn. Basert på resultatene i kapittel 5.2 og 6.2, som er inkludert sumvirkninger fra eksisterende vindkraftverk, viser beregningene at:

- Alternativ 1 medfører at 35 mottakere havner over anbefalt grenseverdi for skyggekast
- Alternativ 2 medfører at 28 mottakere havner over anbefalt grenseverdi for skyggekast

De realistiske beregningene viste at for alternativ 1 havner 33 mottakere over grenseverdien, men for alternativ 2 havner 27 mottakere over grenseverdien.

For å sammenligne alternativene er det utarbeidet en tabell som viser realistisk skyggekast med sumvirkninger fra eksisterende vindkraftverk (resultater fra avsnitt 5.2.4 og 6.2.4). Tabell 7-1 omfatter de 14 mottakerne som vil oppleve en forskjell mellom alternativene.

Tabell 7-1. Realistisk skyggekastbelasting for de mottakerne som vil oppleve en forskjell mellom alternativ 1 og alternativ 2. De 8 mottakerne som kun er utsatt for skyggekast i alternativ 1 med både Moifjellet og Mellomstrand er markert med blå rad.

	Adresse	Alternativ 1	Alternativ 2	Forskjell
		Timer/år (realistisk)	Timer/år (realistisk)	
AH	Buevegen 1463	37:39	6:36	31:03
AI	Buevegen 1288	01:53	0:00	01:53
AJ	Buevegen 1272	01:40	0:00	01:40
AK	Buevegen 1461	34:46	4:24	30:22
AL	Buevegen 1270	01:24	0:00	01:24
AM	Buevegen 1290	02:02	0:00	02:02
AN	Buevegen 1292	03:03	0:00	03:03
AO	Buevegen 1343	07:32	0:00	07:32
AP	Buevegen 1496	18:59	2:13	16:46
AQ	Buevegen 1500	26:38	5:06	21:32
AR	Buevegen 1502	26:23	5:18	21:05
AS	Buevegen 1286	01:58	0:00	01:58
AT	Buevegen 1498	22:52	2:24	20:28
AU	Buevegen 1340	03:41	0:00	03:41

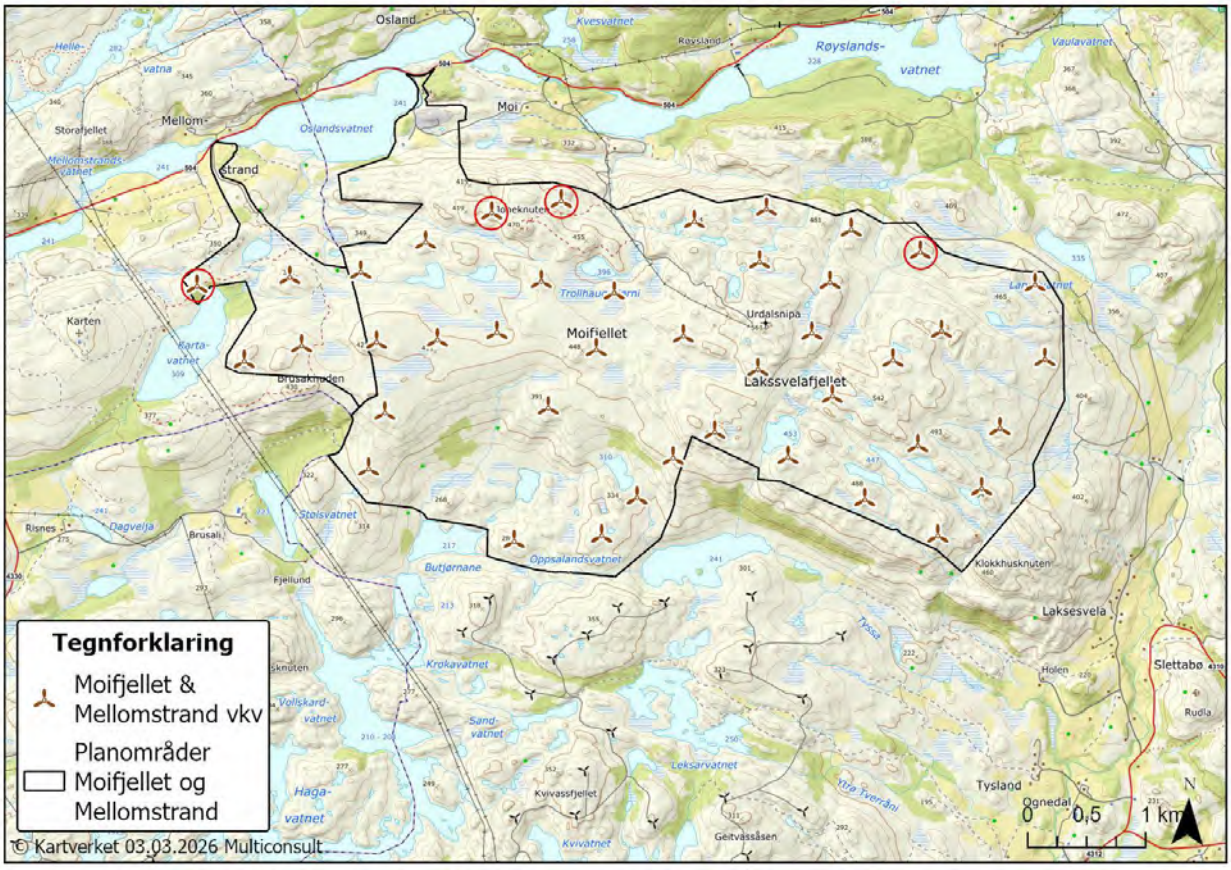
Det er tydelig at alternativ 1 gir mest skyggekast for flest mottakere, noe som henger sammen med at det fire mer turbiner i alternativ 1. Åtte av mottakerne (AI, AJ, AL-AO, AS og AU) i tabellen påvirkes kun av alternativ 1, da de ligger utenfor influensområdet til alternativ 2.

I tillegg er det seks mottakere (AH, AK, AP-AR og AT) som vil oppleve betydelig mer skyggekast med alternativ 1. Dette skyldes at de fire turbinene ved Mellomstrand kommer nær disse mottakerne. For alle seks fører alternativ 1 til at de overskrider grenseverdiene, mens de med alternativ 2 ligger under. Ved utbygging av alternativ 1 må det derfor vurderes tiltak for disse seks mottakerne i tillegg.

8 Avbøtende tiltak

For å sikre at ingen mottakere blir utsatt for skyggekast over anbefalt grenseverdi er det noen aktuelle tiltak som kan gjøres. Før utbygging burde det utarbeides skyggekastkalendere. Skyggekastkalendere viser når skyggekast er forventet å kunne inntreffe. Sammen med automatiserte lyssensorer kan turbinene stoppes dersom det både er klarvær og man ser i skyggekastkalenderen at en mottaker kan være utsatt. Dette vil minimere ulempene for naboer og andre berørte.

Et annet tiltak kan være endring av turbinlayout. Det er spesielt fire turbiner som bidrar med mye skyggekast, en liten justering i layout kan bidra til mindre skyggekastbelastning for mottakerne. I Figur 8-1 er de fire turbinene som bidrar med mest skyggekast markert med en røs sirkel.



Figur 8-1: Kart med det utredningsutlegget. De turbinene som bidrar med mest skyggekast er markert med rød ring rundt.

9 Påvirkning på bebyggelse og friluftsliv

Siden det er flere boliger i nærheten av vindkraftverket, forventes det at bebyggelsen kan påvirkes av skyggekast. Også friluftsområder kan bli utsatt. Det er registrert et viktig friluftsområde på Moifjellet og vannene nord for Moifjellet, og et viktig friluftsområde ved Brusaknuden og Karten[3]. Det er i tillegg registrert en turrute opp til Urdalsnipa og en turrute til Brusaknuden og Karten. Både turrutene og friluftsområdene vil være i hovedsakelig innenfor både de «gule» og «røde» områdene. Dette kan føre til at turgåere opplever skyggekast i perioder med sollys, noe som kan påvirke brukervennligheten av områdene. Alternativ 1 vil føre til den største utbredelsen av skyggekast og vil dermed føre til en større belastning på friluftsliv.

[3] For utdypende informasjon om friluftsområdene se egen utredning om friluftsliv, *Moifjellet og Mellomstrand – Konsekvensutredning Friluftsliv*

10 Konklusjon

Skyggekastanalysen for Moifjellet og Mellomstrand vindkraftverk viser at flere boliger og fritidsbygg i influensområdet vil kunne oppleve betydelig skyggekastbelastning, og i tillegg vil skyggekast kunne berøre viktige friluftsområder. Beregningene viser at skyggekast kan bli en betydelig utfordring for flere mottakere, særlig i områdene nord for Moifjellet.

- **Alternativ 1** (Moifjellet + Mellomstrand) gir størst omfang av skyggekast, med 35 mottakere over NVEs anbefalte grenseverdi.
- **Alternativ 2** (kun Moifjellet) gir noe lavere belastning, men fortsatt 28 mottakere over grenseverdien.

Noen mottakere vil kunne oppleve sumvirkninger fra eksisterende vindkraftverk, de mottakerne er lokalisert sørøst og sørvest for Moifjellet.

Skyggekast forekommer hovedsakelig i vinterhalvåret når solbanen er lav, og belastningen er størst midt på dagen. Enkelte mottakere vil også oppleve skyggekast tidlig morgen og sen kveld i sommerhalvåret.

Viktige friluftsområder og turruter, blant annet ved Moifjellet, Brusaknuden og Karten, ligger innenfor områder med høy skyggekastbelastning. Dette kan redusere opplevelseskvaliteten og brukervennligheten for turgåere.

Det er anbefales avbøtende tiltak for å redusere skyggekast. Skyggekastkalendere kan utarbeides for å vise når skyggekast er forventet å kunne inntreffe. Sammen med automatiserte lyssensorer kan turbinene stoppes dersom det både er klarvær og man ser i skyggekastkalenderen at en mottaker kan være utsatt. Dette vil minimere ulempene for naboer og andre berørte. Et annet tiltak kan være endring av turbinlayout. Det er spesielt fire turbiner som bidrar med mye skyggekast, en liten justering i layout kan bidra til mindre skyggekastbelastning for mottakerne.

Samlet vurdering

Alternativ 2 gir minst skyggekast og lavest påvirkning på friluftsliv, men uansett valg av alternativ må tiltak implementeres for å sikre at belastningen holdes innenfor akseptable nivåer. Det anbefales at avbøtende tiltak planlegges allerede i prosjekteringsfasen for å minimere ulemper for naboer og berørte områder.

11 Vedlegg

1.1 Skyggekastkalender – Tabell – Verst tenkelig scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-1.1_Tabell-Moifjellet og Mellomstrand-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

1.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-1.2_Grafisk-Moifjellet og Mellomstrand-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

2.1 Skyggekastkalender – Tabell – Realistisk scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-2.1_Tabell-Moifjellet og Mellomstrand-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

2.2 Skyggekastkalender – Grafisk – Realistisk scenario Moifjellet og Mellomstrand vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-2.2_Grafisk-Moifjellet og Mellomstrand-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

3.1 Skyggekastkalender – Tabell – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-3.1_Tabell-Moifjellet og Mellomstrand-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

3.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-3.2_Grafisk- Moifjellet og Mellomstrand-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

4.1 Skyggekastkalender – Tabell – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-4.1_Tabell- Moifjellet og Mellomstrand-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

4.2 Skyggekastkalender – Grafisk – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-4.2_Grafisk- Moifjellet og Mellomstrand-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 5-3.

5.1 Skyggekastkalender – Tabell – Verst tenkelig scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-5.1_Tabell-Moifjellet-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

5.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-5.2_Grafisk-Moifjellet-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

6.1 Skyggekastkalender – Tabell – Realistisk scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-6.1_Tabell-Moifjellet-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

6.2 Skyggekastkalender – Grafisk – Realistisk scenario kun Moifjellet vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-6.2_Grafisk-Moifjellet-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

7.1 Skyggekastkalender – Tabell – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-7.1_Tabell- Moifjellet-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

7.2 Skyggekastkalender – Grafisk – Verst tenkelig scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-7.2_Grafisk- Moifjellet-med-nærliggende-worst-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

8.1 Skyggekastkalender – Tabell – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-8.1_Tabell- Moifjellet-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen kalender.

8.2 Skyggekastkalender – Grafisk – Realistisk scenario med nærliggende vindkraftverk
Dokument: *10265688-01-RIEn-RAP-001-Vedlegg-8.2_Grafisk- Moifjellet-med-nærliggende-realistic-case*
Vedlegget representerer råresultatet fra WindPRO sin SHADOW-modul der hver skyggekastmottaker har sin egen belastningsfigur som eksempelvis vist i Figur 6-3.

12 Referanser

Norges vassdrags- og energidirektorat. (2014). *Skyggekast fra vindkraftverk: Veileder for beregning av skyggekast og presentasjon av NVEs forvaltningspraksis* (Veileder nr. 2/2014). NVE. https://publikasjoner.nve.no/veileder/2014/veileder2014_02.pdf

Norges vassdrags- og energidirektorat. (2022a). *Oppdatert kunnskapsgrunnlag om skyggekast fra vindturbiner* (Ekstern rapport nr. 4/2022). NVE. https://publikasjoner.nve.no/eksternrapport/2022/eksternrapport2022_04.pdf

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Vedlegg 1.1

Tabell Moifjellet og Mellomstrand vindkraftverk

worst case

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17	21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19	21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21	21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24	21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26	21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28	21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30	21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33	21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35	21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37	21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40	21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42	21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44	21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47	21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49	21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51	22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53	22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00	22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03	22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05	22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07	22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10	22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12	22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14	22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17	22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19	22:24	22:50
29	08:52		11:15 (33)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21	22:25	22:50
30	08:50		11:15 (33)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24	22:27	22:49
31	08:48		11:17 (33)				07:10				04:41	
	16:54	57	13:05 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33		05:26		06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34		05:28		06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35		05:31		06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36		05:33		06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37		05:35		06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39		05:37		06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40		05:39		06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41		05:42		06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43		05:44		06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44		05:46		06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46		05:48		06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47		05:51		07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49		05:53		07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51		05:55		07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52		05:57		07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54		06:00		07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56		06:02		07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58		06:04		07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00		06:06		07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01		06:08		07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03		06:11		07:19			08:27		12:35 (28)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (28)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (28)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (28)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (28)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13		06:22		07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16		06:24		07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18		06:26		07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20		06:29		07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22		06:31					07:49		11:34 (28)				09:28
	22:03		20:42					16:51	90	15:09 (24)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17	21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19	21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21	21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24	21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26	21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28	21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30	21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33	21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35	21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37	21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40	21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12	22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14	22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17	22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19	22:24	22:50
29	08:52		10:56 (33)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21	22:25	22:50
30	08:50		10:50 (33)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24	22:27	22:49
31	08:48		10:44 (33)				07:10				04:41	
	16:54	62	14:05 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (28)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (22)	15:51
2	04:33		05:26		06:35		07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34		05:28		06:37		07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35		05:31		06:40		07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36		05:33		06:42		07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37		05:35		06:44		07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39		05:37		06:46		07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40		05:39		06:49		07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41		05:42		06:51		07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43		05:44		06:53		08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44		05:46		06:55		08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46		05:48		06:57		08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47		05:51		07:00		08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49		05:53		07:02		08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51		05:55		07:04		08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52		05:57		07:06		08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54		06:00		07:08		08:16		11:34 (28)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (28)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (28)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (23)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (28)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (23)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (28)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (23)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (28)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (23)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (28)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (23)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (28)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (23)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (28)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (23)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (28)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (23)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (28)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (23)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (28)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (23)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (28)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (24)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (28)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (24)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (28)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (24)	15:52			15:50
31	05:22		06:31				07:49		10:31 (28)				09:28
	22:03		20:42				16:51	99	14:52 (24)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April		May	June
1	09:28			08:46			11:39 (28)	07:35		09:25 (15)		07:07	05:44	04:40
	15:53			16:56	88		15:12 (24)	18:05	9	09:34 (15)		20:17	21:26	22:31
2	09:27			08:43			11:39 (28)	07:33				07:04	05:41	04:38
	15:54			16:58	88		15:13 (24)	18:07				20:19	21:28	22:32
3	09:27			08:41			11:40 (28)	07:30				07:01	05:39	04:37
	15:55			17:01	85		15:12 (24)	18:09				20:21	21:31	22:34
4	09:27			08:39			11:39 (28)	07:27				06:58	05:36	04:36
	15:57			17:03	83		15:11 (24)	18:12				20:24	21:33	22:35
5	09:26		12:20 (20)	08:37			11:39 (28)	07:24				06:55	05:34	04:35
	15:58	1	12:21 (20)	17:06	80		15:09 (24)	18:14				20:26	21:35	22:37
6	09:25		12:19 (20)	08:34			11:40 (28)	07:21				06:52	05:31	04:34
	16:00	5	12:24 (20)	17:08	74		15:08 (24)	18:17				20:28	21:37	22:38
7	09:24		12:17 (20)	08:32			11:40 (28)	07:19				06:50	05:29	04:33
	16:02	11	12:28 (20)	17:11	62		14:11 (23)	18:19				20:30	21:40	22:39
8	09:24		12:17 (20)	08:30			11:41 (28)	07:16				06:47	05:26	04:32
	16:03	13	12:30 (20)	17:13	61		14:11 (23)	18:21				20:33	21:42	22:40
9	09:23		12:18 (20)	08:27			11:42 (28)	07:13				06:44	05:24	04:31
	16:05	16	12:34 (20)	17:16	57		14:10 (23)	18:24				20:35	21:44	22:42
10	09:22		11:06 (33)	08:25			11:42 (28)	07:10				06:41	05:22	04:30
	16:07	25	12:39 (20)	17:18	54		14:09 (23)	18:26				20:37	21:46	22:43
11	09:21		11:02 (33)	08:23			11:44 (28)	07:07				06:38	05:19	04:29
	16:09	31	12:41 (20)	17:21	48		14:08 (23)	18:28				20:40	21:49	22:44
12	09:20		11:01 (33)	08:20			11:45 (28)	07:04				06:35	05:17	04:29
	16:11	40	12:41 (20)	17:23	42		14:06 (23)	18:31				20:42	21:51	22:45
13	09:18		11:02 (33)	08:18			11:46 (28)	07:02				06:32	05:15	04:28
	16:13	42	12:42 (20)	17:26	32		14:02 (23)	18:33				20:44	21:53	22:46
14	09:17		11:02 (33)	08:15			11:49 (28)	06:59				06:30	05:13	04:28
	16:15	42	12:42 (20)	17:28	18		12:07 (28)	18:35				20:47	21:55	22:47
15	09:16		11:02 (33)	08:13			11:52 (28)	06:56				06:27	05:10	04:27
	16:17	43	12:42 (20)	17:31	12		12:04 (28)	18:38				20:49	21:58	22:47
16	09:15		11:02 (33)	08:10			09:29 (15)	06:53				06:24	05:08	04:27
	16:19	43	12:42 (20)	17:33	5		09:34 (15)	18:40				20:51	22:00	22:48
17	09:13		11:02 (33)	08:07			09:25 (15)	06:50				06:21	05:06	04:27
	16:21	45	12:42 (20)	17:36	12		09:37 (15)	18:42				20:53	22:02	22:49
18	09:12		11:03 (33)	08:05			09:24 (15)	06:47				06:19	05:04	04:27
	16:23	57	13:55 (23)	17:38	16		09:40 (15)	18:45				20:56	22:04	22:49
19	09:10		11:03 (33)	08:02			09:23 (15)	06:44				06:16	05:02	04:27
	16:25	70	13:59 (23)	17:40	17		09:40 (15)	18:47				20:58	22:06	22:50
20	09:08		11:04 (33)	08:00			09:22 (15)	06:41				06:13	05:00	04:27
	16:28	75	14:01 (23)	17:43	19		09:41 (15)	18:49				21:00	22:08	22:50
21	09:07		11:04 (33)	07:57			09:21 (15)	06:39				06:10	04:58	04:27
	16:30	80	14:03 (23)	17:45	20		09:41 (15)	18:51				21:03	22:10	22:50
22	09:05		11:05 (33)	07:54			09:20 (15)	06:36				06:08	04:56	04:27
	16:32	82	14:05 (23)	17:48	21		09:41 (15)	18:54				21:05	22:12	22:50
23	09:03		11:05 (33)	07:52			09:21 (15)	06:33				06:05	04:54	04:27
	16:34	83	14:05 (23)	17:50	21		09:42 (15)	18:56				21:07	22:14	22:51
24	09:02		11:06 (33)	07:49			09:21 (15)	06:30				06:02	04:52	04:27
	16:37	84	14:07 (23)	17:53	20		09:41 (15)	18:58				21:10	22:16	22:51
25	09:00		11:07 (33)	07:46			09:21 (15)	06:27				05:59	04:51	04:28
	16:39	84	14:52 (24)	17:55	20		09:41 (15)	19:01				21:12	22:18	22:51
26	08:58		11:09 (33)	07:44			09:21 (15)	06:24				05:57	04:49	04:28
	16:41	79	14:57 (24)	17:57	19		09:40 (15)	19:03				21:14	22:20	22:50
27	08:56		11:10 (33)	07:41			09:22 (15)	06:21				05:54	04:47	04:29
	16:44	86	15:12 (24)	18:00	16		09:38 (15)	19:05				21:17	22:22	22:50
28	08:54		11:13 (33)	07:38			09:23 (15)	06:18				05:52	04:46	04:30
	16:46	90	15:13 (24)	18:02	14		09:37 (15)	19:08				21:19	22:24	22:50
29	08:52		11:40 (28)					07:15				05:49	04:44	04:30
	16:49	88	15:14 (24)					20:10				21:21	22:25	22:50
30	08:50		11:39 (28)					07:12				05:46	04:42	04:31
	16:51	88	15:13 (24)					20:12				21:24	22:27	22:49
31	08:48		11:39 (28)					07:10					04:41	
	16:54	88	15:13 (24)					20:14					22:29	
Potential sun hours	221			260			365			432		521	547	
Total, worst case		1491			1104			9						
Sun reduction		0,50			0,50			0,50						
Oper. time red.		0,80			0,80			0,80						
Wind dir. red.		0,62			0,63			0,73						
Total reduction		0,25			0,25			0,29						
Total, real		371			276			3						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33	05:26	06:35	07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34	05:28	06:37	07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35	05:31	06:40	07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36	05:33	06:42	07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37	05:35	06:44	07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39	05:37	06:46	07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40	05:39	06:49	07:55			08:08		11:09 (28)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (24)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (24)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (24)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (24)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22	06:31		07:49		11:13 (28)				09:28		
	22:03	20:42		16:51	50	13:38 (23)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46		11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43		11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41		12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39		11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34		12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32		12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30		12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27		12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25		12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23		12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20		12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18		12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15		09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13		09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10		09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07		09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05		09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02		09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00		09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57		09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54		09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52		09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49		09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46		09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44		09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41		09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38		09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)				20:10	21:21	22:25	22:50
30	08:50		11:58 (28)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)				20:12	21:24	22:27	22:49
31	08:48		11:58 (28)				07:10		04:41	
	16:54	88	15:22 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33		05:26		06:35		07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34		05:28		06:37		07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35		05:31		06:40		07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36		05:33		06:42		07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37		05:35		06:44		07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39		05:37		06:46		07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40		05:39		06:49		07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41		05:42		06:51		07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43		05:44		06:53		08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44		05:46		06:55		08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46		05:48		06:57		08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47		05:51		07:00		08:07			08:20		11:30 (28)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (24)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22		06:31				07:49		11:35 (28)				09:28		11:11 (33)
	22:03		20:42				16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02		19:07	21:19	22:24	22:50
29	08:52		12:24 (28)			07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)			20:10	21:21	22:25	22:50
30	08:50		12:23 (28)			07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)			20:12	21:24	22:27	22:49
31	08:48		12:24 (28)			07:10		04:41	
	16:53	77	15:26 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1549		1149					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,62		0,62					
Total reduction		0,25		0,25					
Total, real		386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28			08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53			16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27		12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1	12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27		12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4	12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27		12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7	12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26		12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17	12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25		12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16	12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24		12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19	12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24		12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22	12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23		12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22	12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22		12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22	12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21		12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22	12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20		12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28	13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18		12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33	13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17		12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36	13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16		11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47	13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54	13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13		11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57	13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12		11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72	14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85	14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09		11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88	14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07		11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88	14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05		11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89	14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03		11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87	14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02		11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81	14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00		11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82	14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58		11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83	14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56		11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83	14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54		11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82	14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80	14:54 (24)				20:10	21:21	22:25	22:50
30	08:50		11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79	14:53 (24)				20:12	21:24	22:27	22:49
31	08:48		11:26 (28)				07:10		04:41	
	16:54	76	14:52 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1562			681					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,61			0,66					
Total reduction		0,24			0,26					
Total, real		382			180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33		05:26		06:35		07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34		05:28		06:37		07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35		05:31		06:40		07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36		05:33		06:42		07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37		05:35		06:44		07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39		05:37		06:46		07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40		05:39		06:49		07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41		05:42		06:51		07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43		05:44		06:53		08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44		05:46		06:55		08:02			08:15		10:57 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (24)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (28)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (24)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (28)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (24)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (28)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (20)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (23)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (20)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (23)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22		06:31				07:49		11:06 (28)				09:28		
	22:03		20:42				16:51	15	11:21 (28)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46	11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43	11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41	11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39	11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34	12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27	09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25	09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23	09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20	09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18	09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15	09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13	09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10	09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07	09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05	09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02	09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00	09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57	09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54	09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (28)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)			20:10	21:21	22:25	22:50
30	08:50		11:51 (28)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)			20:12	21:24	22:27	22:49
31	08:48		11:52 (28)			07:10		04:41	
	16:54	55	14:55 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:08 (20)	08:46	11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (20)	16:56	49	13:50 (23)	18:05	20:17	21:26	22:31
2	09:27		12:08 (20)	08:43	11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (20)	16:58	44	13:48 (23)	18:07	20:19	21:28	22:32
3	09:27		12:09 (20)	08:41	11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (20)	17:01	39	13:47 (23)	18:09	20:21	21:31	22:34
4	09:27		12:09 (20)	08:39	11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (20)	17:03	32	13:45 (23)	18:12	20:24	21:33	22:35
5	09:26		12:09 (20)	08:37	11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (20)	17:06	19	12:02 (28)	18:14	20:26	21:35	22:37
6	09:25		12:10 (20)	08:34	11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (23)	17:08	14	12:00 (28)	18:17	20:28	21:37	22:38
7	09:24		11:43 (28)	08:32	11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (23)	17:11	6	11:56 (28)	18:19	20:30	21:40	22:39
8	09:24		11:41 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	41	13:37 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23		11:40 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	47	13:39 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22		11:38 (28)	08:25		09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (23)	17:18	3	09:42 (15)	18:26	20:37	21:46	22:43
11	09:21		11:38 (28)	08:23		09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (23)	17:21	10	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:37 (28)	08:20		09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (24)	17:23	14	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:37 (28)	08:18		09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (24)	17:26	16	09:49 (15)	18:33	20:44	21:53	22:46
14	09:17		11:36 (28)	08:15		09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (24)	17:28	17	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:36 (28)	08:13		09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (24)	17:31	18	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:35 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:36 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:36 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (24)	17:38	19	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:36 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (24)	17:40	18	09:50 (15)	18:47	20:58	22:06	22:50
20	09:09		11:35 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (24)	17:43	17	09:49 (15)	18:49	21:00	22:08	22:50
21	09:07		11:35 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (24)	17:45	15	09:48 (15)	18:51	21:03	22:10	22:50
22	09:05		11:36 (28)	07:54		09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (24)	17:48	12	09:46 (15)	18:54	21:05	22:12	22:50
23	09:03		11:35 (28)	07:52		09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (24)	17:50	6	09:44 (15)	18:56	21:07	22:14	22:51
24	09:02		11:35 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (28)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (24)				20:10	21:21	22:25	22:50
30	08:50		11:37 (28)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (24)				20:12	21:24	22:27	22:49
31	08:48		11:38 (28)				07:10		04:41	
	16:54	51	13:50 (23)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,61			0,68					
Total reduction		0,24			0,27					
Total, real		457			110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (20)	16:56	45 13:44 (23)	18:05	20:17	21:26	22:31
2	09:27	12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (20)	16:58	40 13:42 (23)	18:07	20:19	21:28	22:32
3	09:27	12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (20)	17:01	34 13:40 (23)	18:09	20:21	21:31	22:34
4	09:27	12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (20)	17:03	20 11:59 (28)	18:12	20:24	21:33	22:35
5	09:26	12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (23)	17:06	16 11:57 (28)	18:14	20:26	21:35	22:37
6	09:25	12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (23)	17:08	11 11:55 (28)	18:17	20:28	21:37	22:38
7	09:24	11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (28)	08:25	09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (24)	17:18	6 09:43 (15)	18:26	20:37	21:46	22:43
11	09:21	11:34 (28)	08:23	09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (24)	17:21	11 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:33 (28)	08:20	09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (24)	17:23	15 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:34 (28)	08:18	09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (24)	17:26	16 09:48 (15)	18:33	20:44	21:53	22:46
14	09:17	11:33 (28)	08:15	09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (24)	17:28	18 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:32 (28)	08:13	09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (24)	17:31	19 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:32 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:32 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (24)	17:38	18 09:50 (15)	18:45	20:56	22:04	22:49
19	09:10	11:32 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (24)	17:40	17 09:49 (15)	18:47	20:58	22:06	22:50
20	09:09	11:32 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (24)	17:43	16 09:48 (15)	18:49	21:00	22:08	22:50
21	09:07	11:32 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (24)	17:45	14 09:47 (15)	18:51	21:03	22:10	22:50
22	09:05	11:32 (28)	07:54	09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (24)	17:48	10 09:45 (15)	18:54	21:05	22:12	22:50
23	09:03	11:31 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (28)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (24)			20:10	21:21	22:25	22:50
30	08:50	11:34 (28)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (23)			20:12	21:24	22:27	22:49
31	08:48	11:35 (28)			07:10		04:41	
	16:54	48 13:44 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,69				
Total reduction		0,24		0,27				
Total, real		467		100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (24)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (23)
5	04:36	05:33	06:42	07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37	05:35	06:44	07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38	05:37	06:46	07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40	05:39	06:49	07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41	05:42	06:51	07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43	05:44	06:53	08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44	05:46	06:55	08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46	05:48	06:57	08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47	05:51	07:00	08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49	05:53	07:02	08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51	05:55	07:04	08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52	05:57	07:06	08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54	06:00	07:08	08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56	06:02	07:11	08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58	06:04	07:13	08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27	21:16	19:48	18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25	21:13	19:45	18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24	21:10	19:42	18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18	21:02	19:33	18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14	20:57	19:27	17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12	20:54	19:25	17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20	06:29	07:37	07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05	20:45	19:16	16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22	06:31		07:49		09:05 (15)				09:28		12:04 (20)
	22:03	20:42		16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28		11:58 (20)	08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56	49	13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43	11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58	47	13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41	11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01	42	13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39	11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03	35	13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37	11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06	23	11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34	11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08	20	11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32	11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11	16	11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30	11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13	11	11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18			18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18			07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45			18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46			06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)				20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)				07:10		04:41		05:22	06:31		07:49				09:28		11:57 (20)
	16:54	53	13:36 (23)				20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	1841		243											1761		403	
Sun reduction	0,50		0,50											0,50		0,50	
Oper. time red.	0,80		0,80											0,80		0,80	
Wind dir. red.	0,62		0,65											0,62		0,62	
Total reduction	0,25		0,26											0,25		0,25	
Total, real	452		63											435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:52 (33)	08:46	13:17 (28)	07:35	08:53 (17)	07:07	05:44	04:40
	15:53 17	12:09 (33)	16:56 36	13:53 (28)	18:05 19	09:12 (17)	20:17	21:26	22:30
2	09:27	11:51 (33)	08:43	13:18 (28)	07:32	08:53 (17)	07:04	05:41	04:38
	15:54 19	12:10 (33)	16:58 43	15:13 (23)	18:07 20	09:13 (17)	20:19	21:28	22:32
3	09:27	11:51 (33)	08:41	13:17 (28)	07:30	08:52 (17)	07:01	05:39	04:37
	15:55 19	12:10 (33)	17:01 52	15:18 (23)	18:09 21	09:13 (17)	20:21	21:30	22:34
4	09:26	11:51 (33)	08:39	13:18 (28)	07:27	08:52 (17)	06:58	05:36	04:36
	15:57 20	12:11 (33)	17:03 54	15:20 (23)	18:12 20	09:12 (17)	20:24	21:33	22:35
5	09:26	11:52 (33)	08:37	13:17 (28)	07:24	08:52 (17)	06:55	05:34	04:35
	15:58 20	12:12 (33)	17:06 58	15:21 (23)	18:14 20	09:12 (17)	20:26	21:35	22:37
6	09:25	11:52 (33)	08:34	13:18 (28)	07:21	08:52 (17)	06:52	05:31	04:34
	16:00 20	12:12 (33)	17:08 62	15:43 (24)	18:16 19	09:11 (17)	20:28	21:37	22:38
7	09:24	11:52 (33)	08:32	13:17 (28)	07:19	08:53 (17)	06:49	05:29	04:33
	16:02 21	12:13 (33)	17:11 68	15:46 (24)	18:19 17	09:10 (17)	20:30	21:40	22:39
8	09:24	11:53 (33)	08:30	13:18 (28)	07:16	08:54 (17)	06:47	05:26	04:32
	16:03 21	12:14 (33)	17:13 72	15:51 (24)	18:21 14	09:08 (17)	20:33	21:42	22:40
9	09:23	11:52 (33)	08:27	13:18 (28)	07:13	08:55 (17)	06:44	05:24	04:31
	16:05 22	12:14 (33)	17:16 78	15:59 (24)	18:24 10	09:05 (17)	20:35	21:44	22:42
10	09:22	11:53 (33)	08:25	13:18 (28)	07:10		06:41	05:22	04:30
	16:07 22	12:15 (33)	17:18 82	16:00 (24)	18:26		20:37	21:46	22:43
11	09:21	11:54 (33)	08:23	10:11 (15)	07:07		06:38	05:19	04:29
	16:09 22	12:16 (33)	17:21 84	16:00 (24)	18:28		20:40	21:49	22:44
12	09:20	11:53 (33)	08:20	10:06 (15)	07:04		06:35	05:17	04:29
	16:11 23	12:16 (33)	17:23 89	15:59 (24)	18:31		20:42	21:51	22:45
13	09:18	11:53 (33)	08:18	10:04 (15)	07:01		06:32	05:15	04:28
	16:13 29	13:27 (20)	17:26 90	15:58 (24)	18:33		20:44	21:53	22:46
14	09:17	11:54 (33)	08:15	10:03 (15)	06:59		06:30	05:13	04:28
	16:15 38	13:37 (20)	17:28 87	15:57 (24)	18:35		20:47	21:55	22:46
15	09:16	11:55 (33)	08:13	10:02 (15)	06:56		06:27	05:10	04:27
	16:17 44	13:43 (20)	17:31 81	15:54 (24)	18:38		20:49	21:57	22:47
16	09:15	11:55 (33)	08:10	10:01 (15)	06:53		06:24	05:08	04:27
	16:19 45	13:44 (20)	17:33 72	15:24 (23)	18:40		20:51	22:00	22:48
17	09:13	11:55 (33)	08:07	10:00 (15)	06:50		06:21	05:06	04:27
	16:21 45	13:44 (20)	17:35 67	15:23 (23)	18:42		20:53	22:02	22:49
18	09:12	11:57 (33)	08:05	10:00 (15)	06:47		06:19	05:04	04:27
	16:23 44	13:46 (20)	17:38 61	15:23 (23)	18:45		20:56	22:04	22:49
19	09:10	11:57 (33)	08:02	10:00 (15)	06:44		06:16	05:02	04:27
	16:25 44	13:46 (20)	17:40 43	15:21 (23)	18:47		20:58	22:06	22:50
20	09:08	11:58 (33)	08:00	09:59 (15)	06:41		06:13	05:00	04:27
	16:28 43	13:46 (20)	17:43 41	15:19 (23)	18:49		21:00	22:08	22:50
21	09:07	11:59 (33)	07:57	09:59 (15)	06:38		06:10	04:58	04:27
	16:30 40	13:46 (20)	17:45 32	15:15 (23)	18:51		21:03	22:10	22:50
22	09:05	11:59 (33)	07:54	09:59 (15)	06:36		06:08	04:56	04:27
	16:32 40	13:46 (20)	17:48 25	10:24 (15)	18:54		21:05	22:12	22:50
23	09:03	12:01 (33)	07:52	10:00 (15)	06:33		06:05	04:54	04:27
	16:34 36	13:46 (20)	17:50 24	10:24 (15)	18:56		21:07	22:14	22:50
24	09:02	12:03 (33)	07:49	10:01 (15)	06:30		06:02	04:52	04:27
	16:37 34	13:46 (20)	17:53 22	10:23 (15)	18:58		21:10	22:16	22:51
25	09:00	12:05 (33)	07:46	09:00 (17)	06:27		05:59	04:51	04:28
	16:39 32	13:46 (28)	17:55 27	10:22 (15)	19:01		21:12	22:18	22:50
26	08:58	13:21 (28)	07:43	08:57 (17)	06:24		05:57	04:49	04:28
	16:41 27	13:48 (28)	17:57 30	10:20 (15)	19:03		21:14	22:20	22:50
27	08:56	13:20 (28)	07:41	08:55 (17)	06:21		05:54	04:47	04:29
	16:44 28	13:48 (28)	18:00 28	10:17 (15)	19:05		21:17	22:22	22:50
28	08:54	13:19 (28)	07:38	08:54 (17)	06:18		05:52	04:46	04:30
	16:46 31	13:50 (28)	18:02 22	10:13 (15)	19:07		21:19	22:24	22:50
29	08:52	13:19 (28)			07:15		05:49	04:44	04:30
	16:49 32	13:51 (28)			20:10		21:21	22:25	22:50
30	08:50	13:18 (28)			07:12		05:46	04:42	04:31
	16:51 33	13:51 (28)			20:12		21:24	22:27	22:49
31	08:48	13:18 (28)			07:10			04:41	
	16:53 34	13:52 (28)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	945		1530		160				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,61		0,61		0,74				
Total reduction	0,24		0,24		0,29				
Total, real	230		370		47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		12:48 (28)	09:00		11:36 (33)
	22:49		22:01		20:40		19:13			16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33		05:26		06:35		07:42			07:54		12:48 (28)	09:02		11:36 (33)
	22:48		21:58		20:37		19:10			16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34		05:28		06:37		07:44			07:56		12:48 (28)	09:03		11:36 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35		05:31		06:40		07:46		09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47		21:54		20:31		19:04	7	09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36		05:33		06:42		07:48		09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46		21:51		20:28		19:01	12	09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37		05:35		06:44		07:51		09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45		21:49		20:25		18:59	15	09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38		05:37		06:46		07:53		09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44		21:47		20:22		18:56	18	09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40		05:39		06:48		07:55		09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43		21:44		20:20		18:53	19	09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41		05:42		06:51		07:57		09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42		21:42		20:17		18:50	20	09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43		05:44		06:53		08:00		09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40		21:39		20:14		18:47	20	09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44		05:46		06:55		08:02		09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39		21:37		20:11		18:45	20	09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46		05:48		06:57		08:04		09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38		21:34		20:08		18:42	19	09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47		05:51		07:00		08:06		09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37		21:31		20:05		18:39	18	09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49		05:53		07:02		08:09		09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35		21:29		20:02		18:36	26	10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51		05:55		07:04		08:11		09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34		21:26		19:59		18:33	29	10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52		05:57		07:06		08:13		09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32		21:24		19:56		18:31	28	10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54		05:59		07:08		08:16		10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30		21:21		19:54		18:28	21	10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56		06:02		07:10		08:18		10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29		21:18		19:51		18:25	23	10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58		06:04		07:13		08:20		10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27		21:16		19:48		18:22	24	10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00		06:06		07:15		08:23		10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25		21:13		19:45		18:20	25	10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01		06:08		07:17		08:25		10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24		21:10		19:42		18:17	37	15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03		06:11		07:19		08:27		10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22		21:08		19:39		18:14	42	15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05		06:13		07:22		08:30		10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20		21:05		19:36		18:12	50	15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07		06:15		07:24		08:32		10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18		21:02		19:33		18:09	63	15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09		06:17		07:26		07:35		09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16		20:59		19:30		17:06	69	14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11		06:20		07:28		07:37		09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14		20:56		19:27		17:04	74	14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13		06:22		07:30		07:39		09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12		20:54		19:24		17:01	82	15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16		06:24		07:33		07:42		09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10		20:51		19:22		16:59	89	15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18		06:26		07:35		07:44		09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07		20:48		19:19		16:56	90	15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20		06:29		07:37		07:47		09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05		20:45		19:16		16:54	90	15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22		06:31				07:49		12:49 (28)				09:28		11:51 (33)
	22:03		20:42				16:51	81	15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								1111			1317			529	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,64			0,59			0,64	
Total reduction								0,26			0,23			0,26	
Total, real								286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17	21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19	21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21	21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23	21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26	21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28	21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30	21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33	21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35	21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (33)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23	22:27	22:49
31	08:48		14:08 (33)				07:10				04:41	
	16:53	21	15:27 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15)	15:45
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	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15)	15:44
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	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (28)	08:45		11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:32 (28)	16:01	30	13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47		11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20	13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49		11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11	11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52		11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10	11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54		11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8	11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56			09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53			15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58			09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52			15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49	09:46 (12)				09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55 15:38 (28)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		793		765									221		1347			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,62		0,61									0,60		0,62			
Total reduction		0,25		0,24									0,24		0,25			
Total, real		197		187									53		334			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56	74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (15)	15:51
2	09:27		08:43		10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58	73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (15)	15:50
3	09:27		08:41		10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01	74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (15)	15:49
4	09:26		08:39		10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03	71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (15)	15:48
5	09:26		08:37		10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06	68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (15)	15:47
6	09:25		08:34		10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08	64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (15)	15:46
7	09:24		08:32		10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11	59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (15)	15:45
8	09:24		08:30		10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13	52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (15)	15:45
9	09:23		08:27		10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16	43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (15)	15:44
10	09:22		08:25		10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18	26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (15)	15:43
11	09:21		08:22		12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21	5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (15)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (15)	15:42
13	09:18	12:39 (9)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13	5 12:44 (9)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (15)	15:42
14	09:17	12:39 (9)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15	7 12:46 (9)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (15)	15:42
15	09:16	12:39 (9)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17	15 12:54 (9)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (15)	15:42
16	09:14	12:38 (9)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19	17 12:55 (9)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (15)	15:42
17	09:13	12:38 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21	18 12:56 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (15)	15:42
18	09:12	12:37 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23	19 12:56 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (15)	15:42
19	09:10	12:38 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25	20 12:58 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (15)	15:42
20	09:08	12:37 (17)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27	22 12:59 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (15)	15:42
21	09:07	12:35 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30	23 12:58 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (9)	15:43
22	09:05	12:34 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32	33 14:16 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (9)	15:43
23	09:03	12:33 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34	39 14:19 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (9)	15:44
24	09:01	12:33 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37	42 14:21 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (9)	15:44
25	09:00	12:32 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39	45 14:22 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (9)	15:45
26	08:58	10:57 (12)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41	50 14:24 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (9)	15:46
27	08:56	10:51 (12)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44	64 14:24 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (9)	15:47
28	08:54	10:51 (12)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46	69 14:25 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (9)	15:48
29	08:52	10:51 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49	70 14:26 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (9)	15:49
30	08:50	10:50 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)				07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53	74 14:27 (15)				20:14		22:29		22:03	20:42		16:51	7 12:20 (17)			15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319		236		199
Total, worst case		704		609										7		1322	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,63										0,63		0,62	
Total reduction		0,25		0,25										0,25		0,25	
Total, real		174		153										2		328	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (12)	09:00
	15:53		16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (15)	15:51
2	09:27		08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (12)	09:01
	15:54		16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (15)	15:50
3	09:27		08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (12)	09:03
	15:55		17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (15)	15:49
4	09:26		08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (12)	09:05
	15:57		17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (15)	15:48
5	09:26		08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (12)	09:07
	15:58		17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (15)	15:47
6	09:25		08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (12)	09:09
	16:00		17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (15)	15:46
7	09:24		08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (12)	09:10
	16:02		17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (15)	15:45
8	09:24		08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (12)	09:12
	16:03		17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (15)	15:45
9	09:23		08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (12)	09:13
	16:05		17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (15)	15:44
10	09:22		08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (12)	09:15
	16:07		17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (15)	15:43
11	09:21		08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (12)	09:16
	16:09		17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (15)	15:43
12	09:20		08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (12)	09:17
	16:11		17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (15)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (12)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (15)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (17)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (15)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (17)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (15)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (17)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (15)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (17)	15:52			15:50
31	08:48		10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)				09:28
	16:53	69	14:22 (15)			20:14		22:29		22:03	20:42		16:51	25 12:17 (17)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (26)	08:45	14:59 (17)	07:35	07:07	05:44	04:39
	15:52 20	12:23 (26)	16:56 18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27	12:03 (26)	08:43	14:59 (17)	07:32	07:04	05:41	04:38
	15:54 20	12:23 (26)	16:58 19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27	12:03 (26)	08:41	14:58 (17)	07:30	07:01	05:38	04:37
	15:55 20	12:23 (26)	17:01 19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26	12:03 (26)	08:39	14:59 (17)	07:27	06:58	05:36	04:36
	15:57 21	12:24 (26)	17:03 19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26	12:04 (26)	08:37	14:59 (17)	07:24	06:55	05:33	04:34
	15:58 26	13:33 (12)	17:06 19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25	12:04 (26)	08:34	15:00 (17)	07:21	06:52	05:31	04:33
	16:00 29	13:35 (12)	17:08 18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24	12:05 (26)	08:32	15:00 (17)	07:18	06:49	05:29	04:32
	16:01 31	13:37 (12)	17:11 17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23	12:06 (26)	08:30	15:00 (17)	07:16	06:46	05:26	04:31
	16:03 33	13:39 (12)	17:13 16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23	12:06 (26)	08:27	15:02 (17)	07:13	06:44	05:24	04:31
	16:05 33	13:39 (12)	17:15 14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22	12:07 (26)	08:25	15:03 (17)	07:10	06:41	05:21	04:30
	16:07 35	13:41 (12)	17:18 11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21	12:07 (26)	08:22	15:07 (17)	07:07	06:38	05:19	04:29
	16:09 35	13:41 (12)	17:20 5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19	12:08 (26)	08:20		07:04	06:35	05:17	04:29
	16:11 35	13:42 (12)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (26)	08:17		07:01	06:32	05:15	04:28
	16:12 35	13:43 (12)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (26)	08:15		06:58	06:29	05:12	04:28
	16:14 35	13:44 (12)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (26)	08:12		06:56	06:27	05:10	04:27
	16:17 34	13:45 (12)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (26)	08:10		06:53	06:24	05:08	04:27
	16:19 32	13:45 (12)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (26)	08:07		06:50	06:21	05:06	04:27
	16:21 29	13:45 (12)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (26)	08:05		06:47	06:18	05:04	04:26
	16:23 26	13:46 (12)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (12)	08:02		06:44	06:16	05:02	04:26
	16:25 21	13:46 (12)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (12)	07:59		06:41	06:13	05:00	04:26
	16:27 22	13:47 (12)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (12)	07:57		06:38	06:10	04:58	04:26
	16:30 21	13:47 (12)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (12)	07:54		06:35	06:07	04:56	04:27
	16:32 21	13:47 (12)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (12)	07:51		06:33	06:05	04:54	04:27
	16:34 20	13:47 (12)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (12)	07:49		06:30	06:02	04:52	04:27
	16:37 19	13:47 (12)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (12)	07:46		06:27	05:59	04:50	04:28
	16:39 18	13:47 (12)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (12)	07:43		06:24	05:57	04:49	04:28
	16:41 17	13:47 (12)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (12)	07:41		06:21	05:54	04:47	04:29
	16:44 20	15:09 (17)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (12)	07:38		06:18	05:51	04:45	04:29
	16:46 23	15:12 (17)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (12)			07:15	05:49	04:44	04:30
	16:48 21	15:14 (17)			20:10	21:21	22:25	22:49
30	08:50	15:00 (17)			07:12	05:46	04:42	04:31
	16:51 15	15:15 (17)			20:12	21:23	22:27	22:49
31	08:48	15:00 (17)			07:09		04:41	
	16:53 16	15:16 (17)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case	783		175					
Sun reduction	0,50		0,50					
Oper. time red.	0,80		0,80					
Wind dir. red.	0,60		0,55					
Total reduction	0,24		0,22					
Total, real	187		39					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15		12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43	21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16		12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43	21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17		12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42	20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19		12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42	20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20		12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42	21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21		12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42	21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22		12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42	20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23		12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42	20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24		12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42	20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25		12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42	20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25		12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42	20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26		12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43	20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27		12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43	20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27		12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44	20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27		12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44	21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28		12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45	20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28		12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46	20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28		12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47	20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28		12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47	21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28		12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49	20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28		12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50	20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	13:54 (26)	08:45	15:12 (12)	07:35	07:06	05:43	04:39
	15:52 9	14:03 (26)	16:56 14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27	13:54 (26)	08:43	15:12 (12)	07:32	07:04	05:41	04:38
	15:54 11	14:05 (26)	16:58 16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27	13:54 (26)	08:41	15:11 (12)	07:29	07:01	05:38	04:37
	15:55 12	14:06 (26)	17:01 17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26	13:54 (26)	08:39	15:11 (12)	07:27	06:58	05:36	04:36
	15:57 13	14:07 (26)	17:03 18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26	13:53 (26)	08:37	15:11 (12)	07:24	06:55	05:33	04:34
	15:58 15	14:08 (26)	17:06 18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25	13:53 (26)	08:34	15:11 (12)	07:21	06:52	05:31	04:33
	16:00 16	14:09 (26)	17:08 19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24	13:54 (26)	08:32	15:11 (12)	07:18	06:49	05:29	04:32
	16:01 16	14:10 (26)	17:10 19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23	13:54 (26)	08:30	15:11 (12)	07:15	06:46	05:26	04:31
	16:03 17	14:11 (26)	17:13 18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23	13:53 (26)	08:27	15:12 (12)	07:13	06:44	05:24	04:31
	16:05 18	14:11 (26)	17:15 18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22	13:53 (26)	08:25	15:12 (12)	07:10	06:41	05:21	04:30
	16:07 19	14:12 (26)	17:18 17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20	13:53 (26)	08:22	15:13 (12)	07:07	06:38	05:19	04:29
	16:09 19	14:12 (26)	17:20 14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19	13:54 (26)	08:20	15:16 (12)	07:04	06:35	05:17	04:28
	16:10 19	14:13 (26)	17:23 11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18	13:53 (26)	08:17	15:18 (12)	07:01	06:32	05:14	04:28
	16:12 21	14:14 (26)	17:25 5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17	13:54 (26)	08:15		06:58	06:29	05:12	04:27
	16:14 21	14:15 (26)	17:28		18:35	20:46	21:55	22:46
15	09:16	13:54 (26)	08:12		06:56	06:27	05:10	04:27
	16:16 21	14:15 (26)	17:30		18:37	20:49	21:57	22:47
16	09:14	13:54 (26)	08:10		06:53	06:24	05:08	04:27
	16:19 21	14:15 (26)	17:33		18:40	20:51	21:59	22:48
17	09:13	13:54 (26)	08:07		06:50	06:21	05:06	04:27
	16:21 22	14:16 (26)	17:35		18:42	20:53	22:02	22:48
18	09:11	13:55 (26)	08:05		06:47	06:18	05:04	04:26
	16:23 21	14:16 (26)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:55 (26)	08:02		06:44	06:15	05:02	04:26
	16:25 21	14:16 (26)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:56 (26)	07:59		06:41	06:13	05:00	04:26
	16:27 20	14:16 (26)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:56 (26)	07:57		06:38	06:10	04:58	04:26
	16:30 20	14:16 (26)	17:45		18:51	21:02	22:10	22:50
22	09:05	13:57 (26)	07:54		06:35	06:07	04:56	04:27
	16:32 19	14:16 (26)	17:47		18:53	21:05	22:12	22:50
23	09:03	13:58 (26)	07:51		06:32	06:05	04:54	04:27
	16:34 18	14:16 (26)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:59 (26)	07:49		06:30	06:02	04:52	04:27
	16:36 17	14:16 (26)	17:52		18:58	21:09	22:16	22:50
25	08:59	14:01 (26)	07:46		06:27	05:59	04:50	04:28
	16:39 14	14:15 (26)	17:55		19:00	21:12	22:18	22:50
26	08:58	14:02 (26)	07:43		06:24	05:57	04:49	04:28
	16:41 11	14:13 (26)	17:57		19:03	21:14	22:20	22:50
27	08:56	14:05 (26)	07:41		06:21	05:54	04:47	04:29
	16:44 6	14:11 (26)	18:00		19:05	21:16	22:22	22:50
28	08:54		07:38		06:18	05:51	04:45	04:29
	16:46		18:02		19:07	21:19	22:23	22:50
29	08:52				07:15	05:49	04:44	04:30
	16:48				20:10	21:21	22:25	22:49
30	08:50	15:15 (12)			07:12	05:46	04:42	04:31
	16:51 8	15:23 (12)			20:12	21:23	22:27	22:49
31	08:48	15:14 (12)			07:09		04:41	
	16:53 11	15:25 (12)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case	476		204					
Sun reduction	0,50		0,50					
Oper. time red.	0,80		0,80					
Wind dir. red.	0,55		0,55					
Total reduction	0,22		0,22					
Total, real	104		45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,55			0,55	
Total reduction					0,22			0,22			0,22	
Total, real					7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:45	10:57 (37)	07:35	16:28 (17)	07:06	05:44	04:39
	15:52		16:56 40	13:50 (26)	18:04 11	16:39 (17)	20:16	21:26	22:30
2	09:27		08:43	10:59 (37)	07:32	16:27 (17)	07:04	05:41	04:38
	15:54		16:58 37	13:51 (26)	18:07 13	16:40 (17)	20:19	21:28	22:32
3	09:27		08:41	11:02 (37)	07:30	16:27 (17)	07:01	05:38	04:37
	15:55		17:01 28	13:49 (26)	18:09 14	16:41 (17)	20:21	21:30	22:33
4	09:26		08:39	13:29 (26)	07:27	16:27 (17)	06:58	05:36	04:36
	15:57		17:03 20	13:49 (26)	18:12 17	16:44 (17)	20:23	21:33	22:35
5	09:26		08:37	13:30 (26)	07:24	16:27 (17)	06:55	05:33	04:34
	15:58		17:06 17	13:47 (26)	18:14 19	16:46 (17)	20:26	21:35	22:36
6	09:25		08:34	13:33 (26)	07:21	16:28 (17)	06:52	05:31	04:33
	16:00		17:08 12	13:45 (26)	18:16 17	16:45 (17)	20:28	21:37	22:38
7	09:24		08:32		07:18	16:29 (17)	06:49	05:29	04:32
	16:01		17:11		18:19 15	16:44 (17)	20:30	21:39	22:39
8	09:23		08:30		07:15	16:30 (17)	06:46	05:26	04:32
	16:03		17:13		18:21 12	16:42 (17)	20:32	21:42	22:40
9	09:23		08:27		07:13	16:33 (17)	06:44	05:24	04:31
	16:05		17:15		18:23 6	16:39 (17)	20:35	21:44	22:41
10	09:22		08:25		07:10		06:41	05:21	04:30
	16:07		17:18		18:26		20:37	21:46	22:43
11	09:20		08:22		07:07		06:38	05:19	04:29
	16:09		17:20		18:28		20:39	21:48	22:44
12	09:19		08:20	14:57 (7)	07:04		06:35	05:17	04:29
	16:11		17:23 8	15:05 (7)	18:30		20:42	21:51	22:45
13	09:18		08:17	14:59 (7)	07:01		06:32	05:15	04:28
	16:12		17:25 11	15:10 (7)	18:33		20:44	21:53	22:45
14	09:17	11:05 (37)	08:15	15:02 (7)	06:58		06:29	05:12	04:28
	16:14 3	11:08 (37)	17:28 12	15:14 (12)	18:35		20:46	21:55	22:46
15	09:16	10:59 (37)	08:12	15:06 (12)	06:56		06:27	05:10	04:27
	16:17 10	11:09 (37)	17:30 12	15:18 (12)	18:37		20:49	21:57	22:47
16	09:14	10:52 (37)	08:10	15:06 (12)	06:53		06:24	05:08	04:27
	16:19 18	11:10 (37)	17:33 15	15:21 (12)	18:40		20:51	21:59	22:48
17	09:13	10:51 (37)	08:07	15:05 (12)	06:50		06:21	05:06	04:27
	16:21 19	11:10 (37)	17:35 16	15:21 (12)	18:42		20:53	22:02	22:48
18	09:11	10:51 (37)	08:05	15:05 (12)	06:47		06:18	05:04	04:26
	16:23 20	11:11 (37)	17:38 15	15:20 (12)	18:44		20:56	22:04	22:49
19	09:10	10:51 (37)	08:02	15:06 (12)	06:44		06:16	05:02	04:26
	16:25 21	11:12 (37)	17:40 16	15:22 (12)	18:47		20:58	22:06	22:49
20	09:08	10:51 (37)	07:59	15:07 (12)	06:41		06:13	05:00	04:26
	16:27 22	11:13 (37)	17:43 17	15:24 (12)	18:49		21:00	22:08	22:50
21	09:07	10:51 (37)	07:57	15:07 (12)	06:38		06:10	04:58	04:26
	16:30 22	11:13 (37)	17:45 20	15:27 (12)	18:51		21:02	22:10	22:50
22	09:05	10:51 (37)	07:54	15:08 (12)	06:35		06:07	04:56	04:27
	16:32 27	12:49 (32)	17:47 20	15:28 (12)	18:53		21:05	22:12	22:50
23	09:03	10:51 (37)	07:51	15:09 (12)	06:32		06:05	04:54	04:27
	16:34 39	13:02 (32)	17:50 18	15:27 (12)	18:56		21:07	22:14	22:50
24	09:01	10:52 (37)	07:49	15:12 (12)	06:30		06:02	04:52	04:27
	16:37 40	13:04 (32)	17:52 13	15:25 (12)	18:58		21:09	22:16	22:50
25	08:59	10:52 (37)	07:46	15:16 (12)	06:27		05:59	04:50	04:28
	16:39 39	13:04 (32)	17:55 5	15:21 (12)	19:00		21:12	22:18	22:50
26	08:58	10:52 (37)	07:43		06:24		05:57	04:49	04:28
	16:41 39	13:24 (26)	17:57		19:03		21:14	22:20	22:50
27	08:56	10:53 (37)	07:41		06:21		05:54	04:47	04:29
	16:44 39	13:28 (26)	18:00		19:05		21:16	22:22	22:50
28	08:54	10:53 (37)	07:38	16:32 (17)	06:18		05:51	04:45	04:29
	16:46 41	13:35 (26)	18:02 4	16:36 (17)	19:07		21:19	22:23	22:50
29	08:52	10:54 (37)			07:15		05:49	04:44	04:30
	16:48 41	13:44 (26)			20:10		21:21	22:25	22:49
30	08:50	10:55 (37)			07:12		05:46	04:42	04:31
	16:51 42	13:47 (26)			20:12		21:23	22:27	22:49
31	08:48	10:56 (37)			07:09			04:41	
	16:53 42	13:49 (26)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	524		356		124				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,67		0,57		0,57				
Total reduction	0,27		0,23		0,23				
Total, real	139		81		28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (26)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (26)	15:48
5	04:36	05:33	06:42	07:48		17:09 (17)	08:01		13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (17)	16:39	13	13:15 (26)	15:47
6	04:37	05:35	06:44	07:50		17:06 (17)	08:03		13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (17)	16:36	17	13:18 (26)	15:46
7	04:38	05:37	06:46	07:53		17:04 (17)	08:06		12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (17)	16:34	21	13:19 (26)	15:45
8	04:40	05:39	06:48	07:55		17:03 (17)	08:08		10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (17)	16:32	29	13:20 (26)	15:44
9	04:41	05:41	06:50	07:57		17:02 (17)	08:10		10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (17)	16:30	37	13:22 (26)	15:44
10	04:42	05:44	06:53	07:59		17:01 (17)	08:13		10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (17)	16:27	40	13:21 (26)	15:43
11	04:44	05:46	06:55	08:02		17:01 (17)	08:15		10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (17)	16:25	41	13:19 (26)	15:43
12	04:45	05:48	06:57	08:04		17:01 (17)	08:18		10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (17)	16:23	42	13:19 (26)	15:42
13	04:47	05:50	06:59	08:06		17:02 (17)	08:20		10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (17)	16:21	41	13:15 (26)	15:42
14	04:49	05:53	07:01	08:09		17:06 (17)	08:22		10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (17)	16:19	41	13:07 (26)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (37)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (26)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (37)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (26)	15:42
17	04:54	05:59	07:08	08:16		15:45 (12)	08:29		10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (12)	16:13	39	12:37 (32)	15:42
18	04:56	06:02	07:10	08:18		15:42 (12)	08:32		10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (12)	16:11	40	12:38 (32)	15:42
19	04:57	06:04	07:12	08:20		15:40 (12)	08:34		10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (12)	16:09	39	12:37 (32)	15:42
20	04:59	06:06	07:15	08:23		15:39 (12)	08:36		10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (12)	16:07	28	12:25 (32)	15:42
21	05:01	06:08	07:17	08:25		15:37 (12)	08:38		10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (12)	16:06	22	10:49 (37)	15:43
22	05:03	06:10	07:19	08:27		15:37 (12)	08:41		10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (12)	16:04	22	10:49 (37)	15:43
23	05:05	06:13	07:21	08:30		15:36 (12)	08:43		10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (12)	16:02	21	10:49 (37)	15:44
24	05:07	06:15	07:24	08:32		15:35 (12)	08:45		10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (12)	16:01	20	10:49 (37)	15:44
25	05:09	06:17	07:26	07:34		14:36 (12)	08:47		10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (12)	15:59	19	10:48 (37)	15:45
26	05:11	06:19	07:28	07:37		14:35 (12)	08:49		10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (12)	15:57	18	10:49 (37)	15:46
27	05:13	06:22	07:30	07:39		14:35 (12)	08:51		10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (12)	15:56	10	10:48 (37)	15:47
28	05:15	06:24	07:32	07:41		14:30 (7)	08:53		10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (12)	15:55	3	10:47 (37)	15:48
29	05:17	06:26	07:35	07:44		14:27 (7)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (7)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (7)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (7)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39		
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30		
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38		
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32		
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37		
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33		
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36		
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35		
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35		
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36		
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33		
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37		
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32		
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39		
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32		
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40		
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31		
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41		
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30		
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42		
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29		
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43		
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29		
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44		
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28		
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45		
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28		
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46		
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27		
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47		
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27		
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47		
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27		
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48		
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26		
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49		
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26		
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49		
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26		
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49		
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26		
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50		
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27		
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50		
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27		
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50		
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27		
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50		
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28		
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50		
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28		
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50		
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29		
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50		
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29		
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49		
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30		
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49		
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31		
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49		
31	08:47		15:29 (8)				07:09						04:41					
	16:53	20	15:49 (8)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				
Sun reduction		0,50			0,50			0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80			0,80			0,80				
Wind dir. red.		0,53			0,54			0,58			0,68			0,68				
Total reduction		0,21			0,22			0,23			0,27			0,27				
Total, real		16			169			118			331			18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60	19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35		18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57	19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37		18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54	19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39		18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35	19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42		18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31	19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44		18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28	19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46		18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25	19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48		18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18	19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50		19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11	19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53			07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13			18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55			08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11			18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57			08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08			18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59			08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05			18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01		18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7	18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04		18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13	18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06		18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16	18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08		18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19	18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10		18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20	18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12		18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21	18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15		18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22	18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17		18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22	18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19		18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22	18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21		18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21	18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23		18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19	18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26		18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18	18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28		18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15	18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30		18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11	18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32			07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21			16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34			07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18			16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37			07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16			16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)				07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)				16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (23)	08:46	10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53 31	12:43 (24)	16:56 18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28	11:14 (23)	08:44	10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54 30	12:43 (24)	16:58 17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27	11:13 (23)	08:41	10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55 31	12:43 (24)	17:01 14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27	11:13 (23)	08:39	10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57 30	12:43 (24)	17:03 11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26	11:14 (23)	08:37	10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58 28	12:42 (24)	17:06 7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25	11:14 (23)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (28)	09:09		11:00 (23)
	16:00 28	12:42 (24)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (28)	15:46	28	12:28 (24)
7	09:25	11:14 (23)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (28)	09:10		11:01 (23)
	16:02 26	12:41 (24)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (28)	15:45	29	12:30 (24)
8	09:24	11:14 (23)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (28)	09:12		11:02 (23)
	16:03 21	11:35 (23)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (28)	15:45	30	12:31 (24)
9	09:23	11:15 (23)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (28)	09:14		11:03 (23)
	16:05 21	11:36 (23)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (28)	15:44	30	12:32 (24)
10	09:22	11:15 (23)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (28)	09:15		11:03 (23)
	16:07 21	11:36 (23)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (28)	15:44	30	12:32 (24)
11	09:21	11:15 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (28)	09:16		11:04 (23)
	16:09 22	11:37 (23)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (28)	15:43	30	12:33 (24)
12	09:20	11:15 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (28)	09:18		11:04 (23)
	16:11 22	11:37 (23)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (28)	15:43	31	12:34 (24)
13	09:19	11:16 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (28)	09:19		11:05 (23)
	16:13 22	11:38 (23)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (28)	15:42	31	12:35 (24)
14	09:17	11:16 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (28)	09:20		11:06 (23)
	16:15 22	11:38 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (28)	15:42	30	12:35 (24)
15	09:16	11:16 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (28)	09:21		11:06 (23)
	16:17 22	11:38 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (28)	15:42	31	12:36 (24)
16	09:15	11:16 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (28)	09:22		11:08 (23)
	16:19 22	11:38 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (28)	15:42	30	12:37 (24)
17	09:13	11:18 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (28)	09:23		11:09 (23)
	16:21 21	11:39 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (23)	15:42	30	12:38 (24)
18	09:12	11:18 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (28)	09:24		11:08 (23)
	16:23 21	11:39 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (23)	15:42	30	12:37 (24)
19	09:10	10:13 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (28)	09:25		11:09 (23)
	16:25 27	11:39 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (23)	15:42	29	12:38 (24)
20	09:09	10:12 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (28)	09:26		11:10 (23)
	16:28 30	11:39 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (23)	15:43	30	12:39 (24)
21	09:07	10:11 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (28)	09:26		11:11 (23)
	16:30 32	11:39 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (23)	15:43	29	12:40 (24)
22	09:05	10:10 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (28)	09:27		11:11 (23)
	16:32 32	11:38 (23)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (23)	15:43	29	12:40 (24)
23	09:03	10:09 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (28)	09:27		11:11 (23)
	16:34 31	11:37 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (23)	15:44	30	12:40 (24)
24	09:02	10:09 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (23)	09:28		11:12 (23)
	16:37 29	11:36 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (23)	15:45	30	12:41 (24)
25	09:00	10:09 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (23)	09:28		11:12 (23)
	16:39 26	11:34 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (23)	15:45	29	12:41 (24)
26	08:58	10:09 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (23)	09:28		11:13 (23)
	16:41 19	10:28 (28)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (23)	15:46	30	12:42 (24)
27	08:56	10:09 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (23)	09:28		11:13 (23)
	16:44 20	10:29 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (23)	15:47	30	12:42 (24)
28	08:54	10:09 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (23)	09:29		11:13 (23)
	16:46 19	10:28 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (23)	15:48	31	12:43 (24)
29	08:52	10:09 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (23)	09:29		11:13 (23)
	16:49 20	10:29 (28)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (23)	15:49	30	12:42 (24)
30	08:50	10:09 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (23)	09:28		11:13 (23)
	16:51 19	10:28 (28)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (23)	15:50	31	12:43 (24)
31	08:48	10:10 (28)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (23)
	16:54 19	10:29 (28)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (12)
	15:52	16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (12)
2	09:27		12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (12)
	15:54	16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (12)
3	09:27		12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (12)
	15:55	17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (12)
4	09:26		12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (12)
	15:57	17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (12)
5	09:26		12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (12)
	15:58	18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (12)
6	09:25		12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (12)
	16:00	19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (12)
7	09:24		12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (12)
	16:01	20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (12)
8	09:24		12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (12)
	16:03	19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (12)
9	09:23		12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (12)
	16:05	20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (12)
10	09:22		12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (12)
	16:07	20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (12)
11	09:21		12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (12)
	16:09	20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (12)
12	09:19		12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (12)
	16:11	20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (12)
13	09:18		12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (12)
	16:12	20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (12)
14	09:17		12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (12)
	16:14	20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (12)
15	09:16		12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (12)
	16:17	20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (12)
16	09:14		12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (12)
	16:19	20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (12)
17	09:13		12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (12)
	16:21	19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (12)
18	09:11		12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (12)
	16:23	19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (12)
19	09:10		13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (12)	09:25		12:50 (12)
	16:25	18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (12)	15:42	13	13:03 (12)
20	09:08		13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (12)	09:25		12:51 (12)
	16:27	16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (12)	15:42	12	13:03 (12)
21	09:07		13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (12)	09:26		12:51 (12)
	16:30	15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (12)	15:43	12	13:03 (12)
22	09:05		13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (12)	09:27		12:52 (12)
	16:32	12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (12)	15:43	12	13:04 (12)
23	09:03		13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (12)	09:27		12:52 (12)
	16:34	9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (12)	15:44	12	13:04 (12)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (12)	09:28		12:52 (12)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (12)	15:44	12	13:04 (12)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (12)	09:28		12:53 (12)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (12)	15:45	13	13:06 (12)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (12)	09:28		12:53 (12)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (12)	15:46	13	13:06 (12)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (12)	09:28		12:54 (12)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (12)	15:47	13	13:07 (12)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (12)	09:28		12:53 (12)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (12)	15:48	14	13:07 (12)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (12)	09:28		12:53 (12)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (12)	15:49	15	13:08 (12)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (12)	09:28		12:54 (12)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (12)	15:50	15	13:09 (12)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (12)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (12)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (12)	08:59
	15:52		16:56 19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (12)	15:51
2	09:27		08:43	13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (12)	09:01
	15:54		16:58 16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (12)	15:50
3	09:27		08:41	13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (12)	09:03
	15:55		17:01 12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (12)	15:49
4	09:26		08:39	14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (12)	09:05
	15:57		17:03 5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (12)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (12)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (12)	15:47
6	09:25		08:34	15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (26)	09:10
	16:01		17:11 11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (26)	15:45
8	09:23		08:30	15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (26)	09:12
	16:03		17:13 15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (26)	15:44
9	09:23		08:27	15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (26)	09:13
	16:05		17:15 18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (26)	15:44
10	09:22		08:25	15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (26)	09:15
	16:07		17:18 19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (26)	15:43
11	09:20		08:22	15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (26)	09:16
	16:09		17:20 21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (26)	15:43
12	09:19		08:20	15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (26)	09:17
	16:10		17:23 22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17	15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (26)	09:19
	16:12 5	13:58 (26)	17:25 22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15	15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (26)	09:20
	16:14 9	14:00 (26)	17:28 23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12	15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (37)	09:21
	16:17 11	14:01 (26)	17:30 22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10	15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (37)	09:22
	16:19 17	14:07 (26)	17:33 22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07	15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (37)	09:23
	16:21 21	14:10 (26)	17:35 21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05	15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (37)	09:24
	16:23 27	14:11 (26)	17:38 19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02	15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (37)	09:25
	16:25 32	14:12 (26)	17:40 17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59	15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (37)	09:25
	16:27 36	14:12 (26)	17:43 14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57	15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (12)	08:38	11:05 (37)	09:26
	16:30 42	14:13 (26)	17:45 8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (12)	16:06 42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (12)	08:41	11:08 (37)	09:27
	16:32 45	14:14 (26)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (12)	16:04 36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (12)	08:43	11:12 (37)	09:27
	16:34 44	14:14 (26)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (12)	16:02 32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (12)	08:45	11:16 (37)	09:27
	16:36 42	14:15 (26)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (12)	16:01 28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (12)	08:47	13:27 (26)	09:28
	16:39 40	14:15 (26)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (12)	15:59 21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (12)	08:49	13:29 (26)	09:28
	16:41 37	14:15 (26)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (12)	15:57 17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (12)	08:51	13:29 (26)	09:28
	16:44 33	14:15 (26)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (12)	15:56 12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (12)	08:53	13:30 (26)	09:28
	16:46 24	14:15 (26)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (12)	15:55 9	13:39 (26)	15:47
29	08:52	13:51 (26)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (12)	08:55	13:35 (26)	09:28
	16:48 23	14:14 (26)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (12)	15:53 5	13:40 (26)	15:49
30	08:50	13:52 (26)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (12)	08:57		09:28
	16:51 22	14:14 (26)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (12)	15:52		15:50
31	08:48	13:54 (26)			07:09		04:41		05:22	06:31		07:49	14:47 (12)			09:28
	16:53 20	14:14 (26)			20:14		22:29		22:03	20:42		16:51 20	15:07 (12)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (32) | 08:45		10:15 (13) | 07:35		13:26 (26) | 07:07		18:42 (17) | 05:44	| 04:39
	15:52	47	14:26 (14) | 16:56	119	15:37 (35) | 18:04	35	17:05 (9) | 20:16	19	19:01 (17) | 21:26	| 22:30
2	09:27		12:11 (32) | 08:43		12:16 (32) | 07:32		15:45 (7) | 07:04		18:43 (17) | 05:41	| 04:38
	15:54	53	14:28 (14) | 16:58	114	15:38 (35) | 18:07	27	17:09 (9) | 20:19	16	18:59 (17) | 21:28	| 22:32
3	09:27		12:10 (32) | 08:41		12:17 (32) | 07:30		16:34 (12) | 07:01		18:46 (17) | 05:38	| 04:37
	15:55	58	14:29 (14) | 17:01	113	15:38 (35) | 18:09	33	17:12 (9) | 20:21	11	18:57 (17) | 21:30	| 22:33
4	09:26		12:10 (32) | 08:39		09:39 (37) | 07:27		16:31 (12) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (14) | 17:03	109	15:39 (35) | 18:12	43	17:15 (9) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (32) | 08:36		09:39 (37) | 07:24		16:29 (12) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (14) | 17:06	105	15:39 (35) | 18:14	46	17:15 (9) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (32) | 08:34		09:40 (37) | 07:21		16:26 (12) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (14) | 17:08	95	15:39 (35) | 18:16	49	17:15 (9) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (13) | 08:32		09:40 (37) | 07:18		16:25 (12) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (14) | 17:11	96	15:39 (35) | 18:19	50	17:15 (9) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (13) | 08:30		09:38 (37) | 07:15		16:23 (12) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (14) | 17:13	96	15:38 (35) | 18:21	52	17:15 (9) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (13) | 08:27		09:36 (37) | 07:13		16:22 (12) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (14) | 17:16	98	15:38 (35) | 18:23	53	17:15 (9) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (13) | 08:25		09:33 (37) | 07:10		16:20 (12) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (14) | 17:18	107	15:57 (7) | 18:26	54	17:14 (9) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (13) | 08:22		09:29 (37) | 07:07		16:19 (12) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (14) | 17:20	114	16:00 (7) | 18:28	54	17:13 (9) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (13) | 08:20		09:27 (37) | 07:04		16:18 (12) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (14) | 17:23	118	16:03 (7) | 18:30	54	17:12 (9) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (13) | 08:17		09:24 (37) | 07:01		16:18 (12) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (14) | 17:25	118	16:04 (7) | 18:33	52	17:10 (9) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (13) | 08:15		09:21 (37) | 06:58		16:17 (12) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (14) | 17:28	114	16:05 (7) | 18:35	51	17:08 (9) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (13) | 08:12		09:18 (37) | 06:56		16:17 (12) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (14) | 17:30	120	16:07 (7) | 18:37	47	17:04 (9) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (13) | 08:10		09:13 (37) | 06:53		16:17 (12) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (14) | 17:33	125	16:08 (7) | 18:40	46	17:03 (12) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (13) | 08:07		09:13 (37) | 06:50		16:17 (12) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (14) | 17:35	123	16:08 (7) | 18:42	46	17:03 (12) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (13) | 08:05		09:13 (37) | 06:47		16:16 (12) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (14) | 17:38	121	16:08 (7) | 18:44	46	17:02 (12) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (13) | 08:02		09:15 (37) | 06:44		16:16 (12) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (14) | 17:40	118	16:09 (7) | 18:47	56	18:01 (17) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (13) | 07:59		09:16 (37) | 06:41		16:16 (12) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (14) | 17:43	114	16:09 (7) | 18:49	60	18:03 (17) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (13) | 07:57		09:17 (37) | 06:38		16:16 (12) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (14) | 17:45	110	16:09 (7) | 18:51	64	18:05 (17) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (13) | 07:54		09:18 (37) | 06:35		16:17 (12) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (14) | 17:48	104	16:08 (7) | 18:54	63	18:05 (17) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (13) | 07:51		09:20 (37) | 06:32		16:17 (12) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (14) | 17:50	95	16:08 (7) | 18:56	64	18:06 (17) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (13) | 07:49		13:09 (26) | 06:30		16:18 (12) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (14) | 17:52	77	16:08 (7) | 18:58	64	18:06 (17) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (13) | 07:46		13:11 (26) | 06:27		16:18 (12) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (14) | 17:55	71	16:07 (7) | 19:00	62	18:06 (17) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (13) | 07:43		13:13 (26) | 06:24		16:20 (12) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (35) | 17:57	66	16:06 (7) | 19:03	61	18:07 (17) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (13) | 07:41		13:16 (26) | 06:21		16:22 (12) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (35) | 18:00	58	16:05 (7) | 19:05	57	18:07 (17) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (13) | 07:38		13:19 (26) | 06:18		16:23 (12) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (35) | 18:02	49	16:04 (7) | 19:07	54	18:06 (17) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (13) |		| 07:15		17:26 (12) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (35) |		| 20:10	47	19:05 (17) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (13) |		| 07:12		17:29 (12) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (35) |		| 20:12	38	19:04 (17) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (13) |		| 07:09		18:41 (17) |			| 04:41	|
	16:53	126	15:37 (35) |		| 20:14	22	19:03 (17) |			| 22:29	|
Potential sun hours	221		260		365		432		521	547
Total, worst case		3257		2867		1550		46		
Sun reduction		0,50		0,50		0,50		0,50		
Oper. time red.		0,80		0,80		0,80		0,80		
Wind dir. red.		0,60		0,59		0,58		0,62		
Total reduction		0,24		0,24		0,23		0,25		
Total, real		786		675		361		11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:39	16:57 (12)	07:51	09:03 (37)	08:59	09:52 (13)
	22:48	22:01	20:39		19:13	53 17:50 (9)	16:49	107 15:26 (7)	15:51	96 14:16 (14)
2	04:33	05:26	06:35		07:41	16:58 (12)	07:53	09:06 (37)	09:01	09:53 (13)
	22:48	21:58	20:37		19:10	54 17:52 (9)	16:46	98 15:08 (35)	15:50	91 14:16 (14)
3	04:34	05:28	06:37		07:44	16:58 (12)	07:56	09:08 (37)	09:03	09:54 (13)
	22:47	21:56	20:34		19:07	54 17:52 (9)	16:44	96 15:08 (35)	15:49	88 14:17 (14)
4	04:35	05:30	06:39		07:46	16:58 (12)	07:58	09:10 (37)	09:05	09:54 (13)
	22:46	21:54	20:31		19:04	54 17:52 (9)	16:41	94 15:08 (35)	15:48	83 14:17 (14)
5	04:36	05:33	06:42		07:48	17:00 (12)	08:01	09:10 (37)	09:07	09:55 (13)
	22:45	21:51	20:28		19:01	52 17:52 (9)	16:39	95 15:09 (35)	15:47	77 14:17 (14)
6	04:37	05:35	06:44		07:50	17:00 (12)	08:03	09:10 (37)	09:08	09:57 (13)
	22:45	21:49	20:25		18:58	52 17:52 (9)	16:37	105 15:09 (35)	15:46	71 14:17 (14)
7	04:38	05:37	06:46		07:53	17:01 (12)	08:06	09:08 (37)	09:10	11:57 (32)
	22:44	21:46	20:22		18:56	50 17:51 (9)	16:34	111 15:09 (35)	15:45	64 14:17 (14)
8	04:40	05:39	06:48		07:55	17:03 (12)	08:08	11:48 (32)	09:12	11:57 (32)
	22:43	21:44	20:19		18:53	48 17:51 (9)	16:32	112 15:09 (35)	15:44	62 14:17 (14)
9	04:41	05:41	06:51	18:40 (17)	07:57	17:04 (12)	08:10	11:47 (32)	09:13	11:59 (32)
	22:41	21:41	20:16	10 18:50 (17)	18:50	46 17:50 (9)	16:30	113 15:09 (35)	15:44	57 14:17 (14)
10	04:42	05:44	06:53	18:37 (17)	07:59	17:06 (12)	08:13	09:45 (13)	09:15	12:00 (32)
	22:40	21:39	20:14	15 18:52 (17)	18:47	40 17:48 (9)	16:27	121 15:08 (35)	15:43	53 14:17 (14)
11	04:44	05:46	06:55	18:35 (17)	08:02	16:22 (7)	08:15	09:42 (13)	09:16	12:01 (32)
	22:39	21:36	20:11	19 18:54 (17)	18:44	36 17:45 (9)	16:25	127 15:08 (35)	15:43	47 14:16 (14)
12	04:45	05:48	06:57	18:34 (17)	08:04	16:18 (7)	08:17	09:41 (13)	09:17	12:03 (32)
	22:38	21:34	20:08	21 18:55 (17)	18:42	25 17:41 (9)	16:23	130 15:08 (35)	15:42	44 14:17 (14)
13	04:47	05:50	06:59	17:21 (12)	08:06	13:56 (26)	08:20	09:39 (13)	09:19	12:04 (32)
	22:36	21:31	20:05	37 18:55 (17)	18:39	42 17:38 (9)	16:21	131 15:06 (35)	15:42	39 14:17 (14)
14	04:49	05:53	07:02	17:17 (12)	08:09	13:50 (26)	08:22	09:39 (13)	09:20	12:07 (32)
	22:35	21:29	20:02	45 18:55 (17)	18:36	53 16:37 (7)	16:19	131 15:05 (35)	15:42	34 14:17 (14)
15	04:50	05:55	07:04	17:13 (12)	08:11	13:46 (26)	08:25	09:39 (13)	09:21	13:06 (26)
	22:33	21:26	19:59	52 18:55 (17)	18:33	62 16:37 (7)	16:17	128 15:03 (35)	15:42	26 14:16 (14)
16	04:52	05:57	07:06	17:11 (12)	08:13	13:44 (26)	08:27	09:39 (13)	09:22	13:08 (26)
	22:32	21:23	19:56	56 18:55 (17)	18:30	69 16:39 (7)	16:15	124 15:02 (35)	15:42	22 14:15 (14)
17	04:54	05:59	07:08	17:08 (12)	08:16	13:41 (26)	08:29	09:38 (13)	09:23	13:10 (26)
	22:30	21:21	19:53	59 18:54 (17)	18:28	75 16:39 (7)	16:13	125 14:07 (14)	15:42	18 14:15 (14)
18	04:56	06:02	07:10	17:07 (12)	08:18	09:55 (37)	08:32	09:38 (13)	09:24	13:12 (26)
	22:29	21:18	19:50	63 18:55 (17)	18:25	86 16:39 (7)	16:11	129 14:09 (14)	15:42	16 14:15 (14)
19	04:58	06:04	07:12	17:06 (12)	08:20	09:51 (37)	08:34	09:39 (13)	09:25	13:16 (3)
	22:27	21:15	19:47	63 18:54 (17)	18:22	98 16:39 (7)	16:09	131 14:11 (14)	15:42	11 14:15 (14)
20	04:59	06:06	07:15	17:04 (12)	08:23	09:49 (37)	08:36	09:38 (13)	09:25	13:16 (3)
	22:25	21:13	19:45	65 18:53 (17)	18:20	106 16:40 (7)	16:07	129 14:11 (14)	15:42	9 14:14 (14)
21	05:01	06:08	07:17	17:03 (12)	08:25	09:46 (37)	08:38	09:39 (13)	09:26	13:17 (3)
	22:23	21:10	19:42	64 18:51 (17)	18:17	113 16:39 (7)	16:06	131 14:13 (14)	15:43	9 14:15 (14)
22	05:03	06:11	07:19	17:01 (12)	08:27	09:45 (37)	08:41	09:38 (13)	09:26	13:18 (3)
	22:21	21:07	19:39	64 18:50 (17)	18:14	116 16:39 (7)	16:04	131 14:13 (14)	15:43	9 14:16 (14)
23	05:05	06:13	07:21	17:00 (12)	08:30	09:44 (37)	08:43	09:39 (13)	09:27	13:18 (3)
	22:19	21:05	19:36	62 18:48 (17)	18:12	119 16:38 (7)	16:02	128 14:14 (14)	15:44	9 14:16 (14)
24	05:07	06:15	07:24	17:00 (12)	08:32	09:43 (37)	08:45	09:39 (13)	09:27	13:18 (3)
	22:18	21:02	19:33	58 18:46 (17)	18:09	122 16:38 (7)	16:01	127 14:14 (14)	15:44	11 14:17 (14)
25	05:09	06:17	07:26	16:59 (12)	07:34	08:43 (37)	08:47	09:40 (13)	09:28	13:15 (26)
	22:16	20:59	19:30	46 17:45 (12)	17:06	123 15:38 (7)	15:59	124 14:15 (14)	15:45	14 14:17 (14)
26	05:11	06:19	07:28	16:58 (12)	07:37	08:44 (37)	08:49	09:40 (13)	09:28	13:14 (26)
	22:14	20:56	19:27	47 17:45 (12)	17:04	122 15:37 (7)	15:58	119 14:15 (14)	15:46	17 14:18 (14)
27	05:13	06:22	07:30	16:58 (12)	07:39	08:48 (37)	08:51	09:49 (13)	09:28	13:13 (26)
	22:11	20:53	19:24	46 17:44 (12)	17:01	118 15:36 (7)	15:56	112 14:16 (14)	15:47	20 14:19 (14)
28	05:15	06:24	07:32	16:58 (12)	07:41	08:51 (37)	08:53	09:49 (13)	09:28	13:12 (26)
	22:09	20:51	19:21	46 17:44 (12)	16:59	115 15:35 (7)	15:55	109 14:16 (14)	15:48	24 14:21 (14)
29	05:17	06:26	07:35	16:58 (12)	07:44	08:54 (37)	08:55	09:50 (13)	09:28	12:14 (32)
	22:07	20:48	19:19	50 17:48 (9)	16:56	119 15:34 (7)	15:53	106 14:16 (14)	15:49	31 14:23 (14)
30	05:20	06:28	07:37	16:57 (12)	07:46	08:57 (37)	08:57	09:50 (13)	09:28	12:13 (32)
	22:05	20:45	19:16	52 17:49 (9)	16:53	117 15:32 (7)	15:52	103 14:16 (14)	15:50	37 14:25 (14)
31	05:22	06:31			07:49	08:59 (37)			09:28	12:12 (32)
	22:03	20:42			16:51	115 15:29 (7)			15:51	41 14:25 (14)
Potential sun hours	546	478	386		319		236		199	
Total, worst case				1040		2454		3527		1230
Sun reduction				0,50		0,50		0,50		0,50
Oper. time red.				0,80		0,80		0,80		0,80
Wind dir. red.				0,59		0,59		0,60		0,59
Total reduction				0,24		0,24		0,24		0,24
Total, real				245		577		846		289

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (1) 04:32	20:33 (1) 05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30 8	20:35 (1) 22:48 15	20:48 (1) 22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (1) 04:33	20:33 (1) 05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31 11	20:38 (1) 22:47 15	20:48 (1) 21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (1) 04:34	20:33 (1) 05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33 12	20:39 (1) 22:47 15	20:48 (1) 21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (1) 04:35	20:33 (1) 05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34 12	20:39 (1) 22:46 14	20:47 (1) 21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (1) 04:36	20:33 (1) 05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36 13	20:40 (1) 22:45 14	20:47 (1) 21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (1) 04:37	20:34 (1) 05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37 13	20:40 (1) 22:44 13	20:47 (1) 21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (1) 04:39	20:34 (1) 05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38 14	20:42 (1) 22:43 12	20:46 (1) 21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (1) 04:40	20:34 (1) 05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40 14	20:42 (1) 22:42 12	20:46 (1) 21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (1) 04:41	20:35 (1) 05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41 14	20:42 (1) 22:41 11	20:46 (1) 21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (1) 04:43	20:35 (1) 05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42 14	20:43 (1) 22:40 11	20:46 (1) 21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (1) 04:44	20:35 (1) 05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43 16	20:44 (1) 22:39 9	20:44 (1) 21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (1) 04:46	20:35 (1) 05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44 16	20:45 (1) 22:37 4	20:39 (1) 21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (1) 04:47	20:35 (1) 05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45 16	20:45 (1) 22:36 3	20:38 (1) 21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (1) 04:49	20:35 (1) 05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46 17	20:46 (1) 22:34 2	20:37 (1) 21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (1) 04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47 17	20:47 (1) 22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (1) 04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47 17	20:47 (1) 22:31	21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (1) 04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48 18	20:48 (1) 22:30	21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (1) 04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48 17	20:48 (1) 22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (1) 04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49 18	20:49 (1) 22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (1) 05:00	06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49 18	20:49 (1) 22:25	21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (1) 05:01	06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49 18	20:49 (1) 22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (1) 05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50 18	20:49 (1) 22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (1) 05:05	06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50 18	20:49 (1) 22:19	21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (1) 05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50 17	20:49 (1) 22:17	21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (1) 05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50 17	20:49 (1) 22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (1) 05:11	06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50 18	20:50 (1) 22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (1) 05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49 17	20:49 (1) 22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (1) 05:15	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49 17	20:49 (1) 22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (1) 05:18	06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49 17	20:50 (1) 22:07	20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42 20:27 (1)	04:31	20:32 (1) 05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26 2 20:29 (1)	22:48 17	20:49 (1) 22:05	20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41 20:27 (1)		05:22	06:31		07:48		09:27
	16:53		20:14		22:28 3 20:30 (1)		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					5	469	150					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,73	0,73	0,73					
Total reduction					0,29	0,29	0,29					
Total, real					1	138	44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April			May			June		
1	09:28	08:46	07:35	07:07			05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56	18:05	20:17			21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43	07:33	07:04			05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59	18:07	20:19			21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41	07:30	07:01			05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01	18:10	20:21			21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39	07:27	06:58			05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04	18:12	20:24			21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37	07:24	06:55			05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06	18:14	20:26			21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34	07:21	06:53			05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09	18:17	20:28			21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32	07:19	06:50			05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11	18:19	20:31			21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	07:16	06:47			05:27			04:32		06:15 (36)
	16:04	17:14	18:21	20:33			21:42			22:40	29	06:44 (36)
9	09:23	08:27	07:13	06:44			05:24			04:31		06:16 (36)
	16:06	17:16	18:24	20:35			21:44			22:42	29	06:45 (36)
10	09:22	08:25	07:10	06:41		07:48 (38)	05:22			04:31		06:15 (36)
	16:07	17:18	18:26	20:37	10	07:58 (38)	21:46			22:43	30	06:45 (36)
11	09:21	08:23	07:07	06:38		07:45 (38)	05:20			04:30		06:16 (36)
	16:09	17:21	18:28	20:40	17	08:02 (38)	21:49			22:44	29	06:45 (36)
12	09:20	08:20	07:04	06:36		07:41 (38)	05:17			04:29		06:15 (36)
	16:11	17:23	18:31	20:42	22	08:03 (38)	21:51			22:45	30	06:45 (36)
13	09:18	08:18	07:02	06:33		07:37 (38)	05:15			04:29		06:16 (36)
	16:13	17:26	18:33	20:44	27	08:04 (38)	21:53			22:46	30	06:46 (36)
14	09:17	08:15	06:59	06:30		07:35 (38)	05:13			04:28		06:16 (36)
	16:15	17:28	18:35	20:47	30	08:05 (38)	21:55			22:46	30	06:46 (36)
15	09:16	08:13	06:56	06:27		07:34 (38)	05:11			04:28		06:15 (36)
	16:17	17:31	18:38	20:49	33	08:07 (38)	21:57			22:47	31	06:46 (36)
16	09:14	08:10	06:53	06:24		07:33 (38)	05:09			04:28		06:16 (36)
	16:19	17:33	18:40	20:51	34	08:07 (38)	22:00			22:48	30	06:46 (36)
17	09:13	08:07	06:50	06:22		07:32 (38)	05:06			04:27		06:16 (36)
	16:21	17:36	18:42	20:54	35	08:07 (38)	22:02			22:48	31	06:47 (36)
18	09:12	08:05	06:47	06:19		07:31 (38)	05:04			04:27		06:16 (36)
	16:24	17:38	18:45	20:56	37	08:08 (38)	22:04			22:49	31	06:47 (36)
19	09:10	08:02	06:44	06:16		07:30 (38)	05:02			04:27		06:16 (36)
	16:26	17:41	18:47	20:58	38	08:08 (38)	22:06			22:49	31	06:47 (36)
20	09:08	08:00	06:42	06:13		07:30 (38)	05:00			04:27		06:16 (36)
	16:28	17:43	18:49	21:00	39	08:09 (38)	22:08			22:50	31	06:47 (36)
21	09:07	07:57	06:39	06:11		07:30 (38)	04:58			04:27		06:16 (36)
	16:30	17:46	18:52	21:03	38	08:08 (38)	22:10			22:50	31	06:47 (36)
22	09:05	07:54	06:36	06:08		07:29 (38)	04:56			04:27		06:17 (36)
	16:32	17:48	18:54	21:05	39	08:08 (38)	22:12			22:50	31	06:48 (36)
23	09:03	07:52	06:33	06:05		07:29 (38)	04:55			04:28		06:17 (36)
	16:35	17:50	18:56	21:07	39	08:08 (38)	22:14			22:50	31	06:48 (36)
24	09:02	07:49	06:30	06:02		07:29 (38)	04:53			04:28		06:17 (36)
	16:37	17:53	18:58	21:10	38	08:07 (38)	22:16			22:50	31	06:48 (36)
25	09:00	07:46	06:27	06:00		07:29 (38)	04:51			04:28		06:18 (36)
	16:39	17:55	19:01	21:12	38	08:07 (38)	22:18			22:50	31	06:49 (36)
26	08:58	07:44	06:24	05:57		07:29 (38)	04:49		06:24 (36)	04:29		06:18 (36)
	16:42	17:58	19:03	21:14	37	08:06 (38)	22:20	8	06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41	06:21	05:54		07:29 (38)	04:48		06:21 (36)	04:29		06:19 (36)
	16:44	18:00	19:05	21:17	37	08:06 (38)	22:22	13	06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38	06:18	05:52		07:29 (38)	04:46		06:20 (36)	04:30		06:18 (36)
	16:47	18:02	19:08	21:19	36	08:05 (38)	22:24	16	06:36 (36)	22:50	31	06:49 (36)
29	08:52		07:16	05:49		07:30 (38)	04:44		06:19 (36)	04:31		06:19 (36)
	16:49		20:10	21:21	34	08:04 (38)	22:25	18	06:37 (36)	22:49	30	06:49 (36)
30	08:50		07:13	05:47		07:30 (38)	04:43		06:19 (36)	04:31		06:19 (36)
	16:51		20:12	21:24	33	08:03 (38)	22:27	20	06:39 (36)	22:49	30	06:49 (36)
31	08:48		07:10				04:41		06:17 (36)			
	16:54		20:14				22:29	22	06:39 (36)			
Potential sun hours	221	260	365	432			521			547		
Total, worst case					691			254			878	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,65			0,62			0,58	
Total reduction					0,26			0,25			0,23	
Total, real					178			63			204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October	November	December
1	04:32		06:20 (36)	05:24			06:33		07:44 (38)	07:39	07:51	09:00
	22:48	30	06:50 (36)	22:01			20:40	17	08:01 (38)	19:13	16:49	15:51
2	04:33		06:20 (36)	05:27			06:35		07:47 (38)	07:42	07:54	09:01
	22:48	30	06:50 (36)	21:58			20:37	10	07:57 (38)	19:10	16:47	15:50
3	04:34		06:20 (36)	05:29			06:38			07:44	07:56	09:03
	22:47	29	06:49 (36)	21:56			20:34			19:07	16:44	15:49
4	04:35		06:20 (36)	05:31			06:40			07:46	07:59	09:05
	22:46	29	06:49 (36)	21:54			20:31			19:05	16:42	15:48
5	04:36		06:21 (36)	05:33			06:42			07:48	08:01	09:07
	22:46	28	06:49 (36)	21:51			20:28			19:02	16:39	15:47
6	04:38		06:21 (36)	05:35		07:49 (38)	06:44			07:51	08:03	09:09
	22:45	28	06:49 (36)	21:49	13	08:02 (38)	20:25			18:59	16:37	15:47
7	04:39		06:23 (36)	05:38		07:46 (38)	06:47			07:53	08:06	09:10
	22:44	27	06:50 (36)	21:47	18	08:04 (38)	20:23			18:56	16:35	15:46
8	04:40		06:23 (36)	05:40		07:44 (38)	06:49			07:55	08:08	09:12
	22:43	26	06:49 (36)	21:44	22	08:06 (38)	20:20			18:53	16:32	15:45
9	04:42		06:23 (36)	05:42		07:43 (38)	06:51			07:57	08:11	09:13
	22:42	26	06:49 (36)	21:42	25	08:08 (38)	20:17			18:50	16:30	15:44
10	04:43		06:24 (36)	05:44		07:41 (38)	06:53			08:00	08:13	09:15
	22:40	24	06:48 (36)	21:39	28	08:09 (38)	20:14			18:48	16:28	15:44
11	04:45		06:25 (36)	05:46		07:40 (38)	06:55			08:02	08:15	09:16
	22:39	23	06:48 (36)	21:37	30	08:10 (38)	20:11			18:45	16:26	15:43
12	04:46		06:25 (36)	05:49		07:39 (38)	06:58			08:04	08:18	09:17
	22:38	23	06:48 (36)	21:34	32	08:11 (38)	20:08			18:42	16:24	15:43
13	04:48		06:26 (36)	05:51		07:38 (38)	07:00			08:07	08:20	09:19
	22:36	21	06:47 (36)	21:32	33	08:11 (38)	20:05			18:39	16:22	15:43
14	04:49		06:28 (36)	05:53		07:37 (38)	07:02			08:09	08:22	09:20
	22:35	18	06:46 (36)	21:29	35	08:12 (38)	20:02			18:36	16:19	15:43
15	04:51		06:28 (36)	05:55		07:36 (38)	07:04			08:11	08:25	09:21
	22:34	17	06:45 (36)	21:26	36	08:12 (38)	19:59			18:34	16:17	15:42
16	04:53		06:30 (36)	05:58		07:36 (38)	07:06			08:14	08:27	09:22
	22:32	14	06:44 (36)	21:24	37	08:13 (38)	19:57			18:31	16:15	15:42
17	04:54		06:31 (36)	06:00		07:35 (38)	07:09			08:16	08:29	09:23
	22:30	11	06:42 (36)	21:21	38	08:13 (38)	19:54			18:28	16:13	15:42
18	04:56		06:35 (36)	06:02		07:36 (38)	07:11			08:18	08:32	09:24
	22:29	5	06:40 (36)	21:18	38	08:14 (38)	19:51			18:25	16:12	15:42
19	04:58			06:04		07:35 (38)	07:13			08:21	08:34	09:25
	22:27			21:16	39	08:14 (38)	19:48			18:23	16:10	15:43
20	05:00			06:07		07:35 (38)	07:15			08:23	08:36	09:25
	22:25			21:13	38	08:13 (38)	19:45			18:20	16:08	15:43
21	05:02			06:09		07:34 (38)	07:17			08:25	08:39	09:26
	22:23			21:10	39	08:13 (38)	19:42			18:17	16:06	15:43
22	05:04			06:11		07:34 (38)	07:20			08:28	08:41	09:27
	22:22			21:08	39	08:13 (38)	19:39			18:15	16:04	15:44
23	05:06			06:13		07:34 (38)	07:22			08:30	08:43	09:27
	22:20			21:05	38	08:12 (38)	19:36			18:12	16:03	15:44
24	05:08			06:15		07:34 (38)	07:24			08:32	08:45	09:28
	22:18			21:02	37	08:11 (38)	19:33			18:09	16:01	15:45
25	05:10			06:18		07:34 (38)	07:26			07:35	08:47	09:28
	22:16			20:59	37	08:11 (38)	19:30			17:07	16:00	15:46
26	05:12			06:20		07:34 (38)	07:28			07:37	08:50	09:28
	22:14			20:57	36	08:10 (38)	19:28			17:04	15:58	15:46
27	05:14			06:22		07:35 (38)	07:31			07:39	08:52	09:28
	22:12			20:54	34	08:09 (38)	19:25			17:02	15:57	15:47
28	05:16			06:24		07:35 (38)	07:33			07:42	08:54	09:28
	22:10			20:51	32	08:07 (38)	19:22			16:59	15:55	15:48
29	05:18			06:27		07:36 (38)	07:35			07:44	08:56	09:28
	22:07			20:48	30	08:06 (38)	19:19			16:56	15:54	15:49
30	05:20			06:29		07:38 (38)	07:37			07:47	08:58	09:28
	22:05			20:45	27	08:05 (38)	19:16			16:54	15:53	15:50
31	05:22			06:31		07:41 (38)				07:49		09:28
	22:03			20:43	22	08:03 (38)				16:51		15:51
Potential sun hours	545			478			386			319	236	200
Total, worst case		409			833			27				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,58			0,65			0,65				
Total reduction		0,23			0,26			0,26				
Total, real		95			215			7				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	06:01 (38) 04:32	06:06 (38) 05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30 34	06:35 (38) 22:48 37	06:43 (38) 22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	06:01 (38) 04:33	06:07 (38) 05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32 35	06:36 (38) 22:48 36	06:43 (38) 21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	06:01 (38) 04:34	06:06 (38) 05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33 35	06:36 (38) 22:47 37	06:43 (38) 21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37	04:36	06:00 (38) 04:35	06:06 (38) 05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35 36	06:36 (38) 22:46 37	06:43 (38) 21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	06:01 (38) 04:37	06:06 (38) 05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36 36	06:37 (38) 22:46 37	06:43 (38) 21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	06:01 (38) 04:38	06:08 (38) 05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37	22:38 36	06:37 (38) 22:45 36	06:44 (38) 21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	06:01 (38) 04:39	06:08 (38) 05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39 36	06:37 (38) 22:44 36	06:44 (38) 21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	06:01 (38) 04:40	06:08 (38) 05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40 36	06:37 (38) 22:43 36	06:44 (38) 21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	06:02 (38) 04:42	06:08 (38) 05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41 36	06:38 (38) 22:42 36	06:44 (38) 21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	06:01 (38) 04:43	06:08 (38) 05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46	22:43 37	06:38 (38) 22:40 35	06:43 (38) 21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	06:02 (38) 04:45	06:09 (38) 05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44 37	06:39 (38) 22:39 35	06:44 (38) 21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17	04:29	06:02 (38) 04:46	06:09 (38) 05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45 36	06:38 (38) 22:38 35	06:44 (38) 21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	06:02 (38) 04:48	06:09 (38) 05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46 37	06:39 (38) 22:36 34	06:43 (38) 21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	06:03 (38) 04:49	06:10 (38) 05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46 36	06:39 (38) 22:35 33	06:43 (38) 21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	06:02 (38) 04:51	06:10 (38) 05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47 37	06:39 (38) 22:34 33	06:43 (38) 21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	06:02 (38) 04:53	06:11 (38) 05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48 37	06:39 (38) 22:32 32	06:43 (38) 21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06 06:12 (38)	04:27	06:03 (38) 04:54	06:11 (38) 06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02 10 06:22 (38)	22:48 37	06:40 (38) 22:30 31	06:42 (38) 21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04 06:11 (38)	04:27	06:03 (38) 04:56	06:12 (38) 06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04 14 06:25 (38)	22:49 37	06:40 (38) 22:29 30	06:42 (38) 21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02 06:09 (38)	04:27	06:03 (38) 04:58	06:13 (38) 06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06 18 06:27 (38)	22:49 37	06:40 (38) 22:27 29	06:42 (38) 21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00 06:08 (38)	04:27	06:03 (38) 05:00	06:13 (38) 06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08 20 06:28 (38)	22:50 37	06:40 (38) 22:25 28	06:41 (38) 21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58 06:06 (38)	04:27	06:03 (38) 05:02	06:14 (38) 06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10 23 06:29 (38)	22:50 37	06:40 (38) 22:23 27	06:41 (38) 21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56 06:05 (38)	04:27	06:04 (38) 05:04	06:16 (38) 06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12 25 06:30 (38)	22:50 37	06:41 (38) 22:22 24	06:40 (38) 21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55 06:03 (38)	04:28	06:04 (38) 05:06	06:17 (38) 06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14 28 06:31 (38)	22:50 37	06:41 (38) 22:20 21	06:38 (38) 21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53 06:03 (38)	04:28	06:04 (38) 05:08	06:18 (38) 06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16 29 06:32 (38)	22:50 37	06:41 (38) 22:18 19	06:37 (38) 21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51 06:02 (38)	04:28	06:05 (38) 05:10	06:20 (38) 06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18 30 06:32 (38)	22:50 37	06:42 (38) 22:16 16	06:36 (38) 20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49 06:02 (38)	04:29	06:05 (38) 05:12	06:22 (38) 06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20 31 06:33 (38)	22:50 36	06:41 (38) 22:14 12	06:34 (38) 20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48 06:01 (38)	04:29	06:05 (38) 05:14	06:25 (38) 06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22 32 06:33 (38)	22:50 37	06:42 (38) 22:12 6	06:31 (38) 20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46 06:01 (38)	04:30	06:05 (38) 05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24 33 06:34 (38)	22:50 37	06:42 (38) 22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44 06:01 (38)	04:31	06:05 (38) 05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25 34 06:35 (38)	22:49 37	06:42 (38) 22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43 06:01 (38)	04:32	06:06 (38) 05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27 34 06:35 (38)	22:49 37	06:43 (38) 22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41 06:01 (38)		05:22	06:31		07:49		09:28
	16:54		20:14		22:29 34 06:35 (38)		22:03	20:43		16:51		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					395	1094	808					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,58	0,58	0,58					
Total reduction					0,23	0,23	0,23					
Total, real					91	252	186					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		04:32		05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:18 (38)	33	06:46 (38)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (38)		04:33	06:19 (38)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	28	06:46 (38)	33	22:48	06:52 (38)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:17 (38)		04:34	06:18 (38)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:46 (38)	33	22:47	06:51 (38)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:16 (38)		04:35	06:18 (38)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:46 (38)	33	22:46	06:51 (38)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:16 (38)		04:37	06:19 (38)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:47 (38)	33	22:46	06:52 (38)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:15 (38)		04:38	06:21 (38)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:47 (38)	32	22:45	06:53 (38)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:14 (38)		04:39	06:22 (38)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:46 (38)	31	22:44	06:53 (38)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:13 (38)		04:40	06:23 (38)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	33	06:46 (38)	30	22:43	06:53 (38)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:14 (38)		04:42	06:24 (38)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	33	06:47 (38)	29	22:42	06:53 (38)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:13 (38)		04:43	06:25 (38)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:46 (38)	28	22:40	06:53 (38)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:14 (38)		04:45	06:26 (38)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:47 (38)	28	22:39	06:54 (38)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (38)		04:46	06:27 (38)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	32	06:46 (38)	27	22:38	06:54 (38)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:14 (38)		04:48	06:28 (38)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	33	06:47 (38)	26	22:36	06:54 (38)	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:15 (38)		04:49	06:30 (38)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	32	06:47 (38)	24	22:35	06:54 (38)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:15 (38)		04:51	06:31 (38)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	32	06:47 (38)	23	22:34	06:54 (38)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:39 (38)		04:28		06:15 (38)	04:53	06:33 (38)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	2	06:41 (38)		22:48	32	06:47 (38)	22:32	06:55 (38)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:37 (38)		04:27		06:15 (38)	04:54	06:33 (38)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	4	06:41 (38)		22:48	32	06:47 (38)	22:30	06:54 (38)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04		06:36 (38)		04:27		06:16 (38)	04:56	06:35 (38)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	7	06:43 (38)		22:49	31	06:47 (38)	22:29	06:55 (38)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:35 (38)		04:27		06:16 (38)	04:58	06:37 (38)	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	8	06:43 (38)		22:49	31	06:47 (38)	22:27	06:55 (38)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:33 (38)		04:27		06:16 (38)	05:00	06:38 (38)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	10	06:43 (38)		22:50	31	06:47 (38)	22:25	06:54 (38)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:31 (38)		04:27		06:16 (38)	05:02	06:39 (38)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	12	06:43 (38)		22:50	31	06:47 (38)	22:23	06:54 (38)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:30 (38)		04:27		06:17 (38)	05:04	06:41 (38)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	14	06:44 (38)		22:50	31	06:48 (38)	22:22	06:54 (38)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:29 (38)		04:28		06:17 (38)	05:06	06:42 (38)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	15	06:44 (38)		22:50	31	06:48 (38)	22:20	06:53 (38)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:28 (38)		04:28		06:17 (38)	05:08	06:44 (38)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	17	06:45 (38)		22:50	31	06:48 (38)	22:18	06:53 (38)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:26 (38)		04:28		06:18 (38)	05:10	06:45 (38)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	19	06:45 (38)		22:50	31	06:49 (38)	22:16	06:53 (38)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:25 (38)		04:29		06:17 (38)	05:12	06:47 (38)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	20	06:45 (38)		22:50	32	06:49 (38)	22:14	06:53 (38)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:23 (38)		04:29		06:18 (38)	05:14	06:49 (38)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22	06:45 (38)		22:50	32	06:50 (38)	22:12	06:52 (38)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:23 (38)		04:30		06:17 (38)	05:16	06:51 (38)	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	22	06:45 (38)		22:50	32	06:49 (38)	22:10	06:52 (38)	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:22 (38)		04:31		06:18 (38)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	24	06:46 (38)		22:49	32	06:50 (38)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:21 (38)		04:32		06:18 (38)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	25	06:46 (38)		22:49	33	06:51 (38)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:19 (38)					05:22		06:31		07:49		09:28
	16:54		20:14		22:29	26	06:45 (38)					22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521			547			545		478	386	319	236	200
Total, worst case						247			944			606						
Sun reduction						0,50			0,50			0,50						
Oper. time red.						0,80			0,80			0,80						
Wind dir. red.						0,58			0,58			0,58						
Total reduction						0,23			0,23			0,23						
Total, real						58			220			141						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 15:53	08:46 16:56	07:35 18:05	07:07 20:17	05:44 21:26 1	07:08 (38) | 04:40 07:09 (38) | 22:30 32	06:45 (38) | 04:32 07:17 (38) | 22:48 23	06:56 (38) | 05:24 07:19 (38) | 22:01 33	06:57 (38) | 06:33 07:30 (38) | 20:40	07:39 19:13	07:51 16:49	09:00 15:52
2	09:27 15:54	08:43 16:59	07:33 18:07	07:04 20:19	05:42 21:28 6	07:06 (38) | 04:39 07:12 (38) | 22:32 31	06:46 (38) | 04:33 07:17 (38) | 22:48 24	06:56 (38) | 05:27 07:20 (38) | 21:58 31	06:59 (38) | 06:35 07:30 (38) | 20:37	07:42 19:10	07:54 16:47	09:01 15:50
3	09:27 15:56	08:41 17:01	07:30 18:10	07:01 20:21	05:39 21:31 9	07:04 (38) | 04:38 07:13 (38) | 22:33 31	06:46 (38) | 04:34 07:17 (38) | 22:47 25	06:55 (38) | 05:29 07:20 (38) | 21:56 28	07:01 (38) | 06:38 07:29 (38) | 20:34	07:44 19:07	07:56 16:44	09:03 15:49
4	09:26 15:57	08:39 17:04	07:27 18:12	06:58 20:24	05:37 21:33 13	07:02 (38) | 04:36 07:15 (38) | 22:35 29	06:47 (38) | 04:35 07:16 (38) | 22:46 25	06:55 (38) | 05:31 07:20 (38) | 21:54 26	07:03 (38) | 06:40 07:29 (38) | 20:31	07:46 19:05	07:59 16:42	09:05 15:48
5	09:26 15:59	08:37 17:06	07:24 18:14	06:55 20:26	05:34 21:35 16	07:00 (38) | 04:35 07:16 (38) | 22:36 29	06:48 (38) | 04:37 07:17 (38) | 22:46 27	06:54 (38) | 05:33 07:21 (38) | 21:51 23	07:05 (38) | 06:42 07:28 (38) | 20:28	07:48 19:02	08:01 16:39	09:07 15:47
6	09:25 16:00	08:34 17:09	07:21 18:17	06:53 20:28	05:32 21:37 19	06:58 (38) | 04:34 07:17 (38) | 22:38 27	06:49 (38) | 04:38 07:16 (38) | 22:45 28	06:55 (38) | 05:35 07:23 (38) | 21:49 21	07:06 (38) | 06:44 07:27 (38) | 20:25	07:51 18:59	08:03 16:37	09:09 15:47
7	09:24 16:02	08:32 17:11	07:19 18:19	06:50 20:31	05:29 21:40 22	06:55 (38) | 04:33 07:17 (38) | 22:39 27	06:49 (38) | 04:39 07:16 (38) | 22:44 28	06:55 (38) | 05:38 07:23 (38) | 21:47 18	07:08 (38) | 06:47 07:26 (38) | 20:23	07:53 18:56	08:06 16:35	09:10 15:46
8	09:24 16:04	08:30 17:14	07:16 18:21	06:47 20:33	05:27 21:42 24	06:54 (38) | 04:32 07:18 (38) | 22:40 26	06:49 (38) | 04:40 07:15 (38) | 22:43 30	06:54 (38) | 05:40 07:24 (38) | 21:44 15	07:10 (38) | 06:49 07:25 (38) | 20:20	07:55 18:53	08:08 16:32	09:12 15:45
9	09:23 16:06	08:27 17:16	07:13 18:24	06:44 20:35	05:24 21:44 27	06:52 (38) | 04:31 07:19 (38) | 22:42 26	06:50 (38) | 04:42 07:16 (38) | 22:42 30	06:54 (38) | 05:42 07:24 (38) | 21:42 12	07:12 (38) | 06:51 07:24 (38) | 20:17	07:57 18:50	08:11 16:30	09:13 15:44
10	09:22 16:07	08:25 17:18	07:10 18:26	06:41 20:37	05:22 21:46 29	06:50 (38) | 04:31 07:19 (38) | 22:43 24	06:51 (38) | 04:43 07:15 (38) | 22:40 31	06:53 (38) | 05:44 07:24 (38) | 21:39 9	07:13 (38) | 06:53 07:22 (38) | 20:14	08:00 18:48	08:13 16:28	09:15 15:44
11	09:21 16:09	08:23 17:21	07:07 18:28	06:38 20:40	05:20 21:49 32	06:48 (38) | 04:30 07:20 (38) | 22:44 23	06:52 (38) | 04:45 07:15 (38) | 22:39 32	06:54 (38) | 05:46 07:26 (38) | 21:37 5	07:15 (38) | 06:55 07:20 (38) | 20:11	08:02 18:45	08:15 16:26	09:16 15:43
12	09:20 16:11	08:20 17:23	07:04 18:31	06:36 20:42	05:17 21:51 34	06:46 (38) | 04:29 07:20 (38) | 22:45 22	06:52 (38) | 04:46 07:14 (38) | 22:38 33	06:53 (38) | 05:49 07:26 (38) | 21:34	06:58 20:08	08:04 18:42	08:18 16:24	09:17 15:43
13	09:18 16:13	08:18 17:26	07:02 18:33	06:33 20:44	05:15 21:53 35	06:45 (38) | 04:29 07:20 (38) | 22:46 21	06:53 (38) | 04:48 07:14 (38) | 22:36 33	06:53 (38) | 05:51 07:26 (38) | 21:32	07:00 20:05	08:07 18:39	08:20 16:22	09:19 15:43
14	09:17 16:15	08:15 17:28	06:59 18:35	06:30 20:47	05:13 21:55 37	06:43 (38) | 04:28 07:20 (38) | 22:46 22	06:53 (38) | 04:49 07:15 (38) | 22:35 34	06:53 (38) | 05:53 07:27 (38) | 21:29	07:02 20:02	08:09 18:36	08:22 16:19	09:20 15:43
15	09:16 16:17	08:13 17:31	06:56 18:38	06:27 20:49	05:11 21:57 39	06:41 (38) | 04:28 07:20 (38) | 22:47 21	06:53 (38) | 04:51 07:14 (38) | 22:34 35	06:52 (38) | 05:55 07:27 (38) | 21:26	07:04 19:59	08:11 18:34	08:25 16:17	09:21 15:42
16	09:14 16:19	08:10 17:33	06:53 18:40	06:24 20:51	05:09 22:00 39	06:41 (38) | 04:28 07:20 (38) | 22:48 20	06:54 (38) | 04:53 07:14 (38) | 22:32 36	06:52 (38) | 05:58 07:28 (38) | 21:24	07:06 19:57	08:14 18:31	08:27 16:15	09:22 15:42
17	09:13 16:21	08:07 17:36	06:50 18:42	06:22 20:54	05:06 22:02 40	06:40 (38) | 04:27 07:20 (38) | 22:48 20	06:54 (38) | 04:54 07:14 (38) | 22:30 36	06:52 (38) | 06:00 07:28 (38) | 21:21	07:09 19:54	08:16 18:28	08:29 16:13	09:23 15:42
18	09:12 16:24	08:05 17:38	06:47 18:45	06:19 20:56	05:04 22:04 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:56 07:14 (38) | 22:29 37	06:52 (38) | 06:02 07:29 (38) | 21:18	07:11 19:51	08:18 18:25	08:32 16:12	09:24 15:42
19	09:10 16:26	08:02 17:41	06:44 18:47	06:16 20:58	05:02 22:06 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:58 07:14 (38) | 22:27 38	06:52 (38) | 06:04 07:30 (38) | 21:16	07:13 19:48	08:21 18:23	08:34 16:10	09:25 15:43
20	09:08 16:28	08:00 17:43	06:42 18:49	06:13 21:00	05:00 22:08 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:00 07:14 (38) | 22:25 38	06:51 (38) | 06:07 07:29 (38) | 21:13	07:15 19:45	08:23 18:20	08:36 16:08	09:25 15:43
21	09:07 16:30	07:57 17:46	06:39 18:52	06:11 21:03	04:58 22:10 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:02 07:14 (38) | 22:23 39	06:51 (38) | 06:09 07:30 (38) | 21:10	07:17 19:42	08:25 18:17	08:39 16:06	09:26 15:43
22	09:05 16:32	07:54 17:48	06:36 18:54	06:08 21:05	04:56 22:12 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:56 (38) | 05:04 07:15 (38) | 22:22 39	06:52 (38) | 06:11 07:31 (38) | 21:08	07:19 19:39	08:28 18:15	08:41 16:04	09:27 15:44
23	09:03 16:35	07:52 17:50	06:33 18:56	06:05 21:07	04:55 22:14 39	06:41 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:06 07:15 (38) | 22:20 39	06:51 (38) | 06:13 07:30 (38) | 21:05	07:22 19:36	08:30 18:12	08:43 16:03	09:27 15:44
24	09:02 16:37	07:49 17:53	06:30 18:58	06:02 21:10	04:53 22:16 38	06:42 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:08 07:15 (38) | 22:18 40	06:51 (38) | 06:15 07:31 (38) | 21:02	07:24 19:33	08:32 18:09	08:45 16:01	09:28 15:45
25	09:00 16:39	07:46 17:55	06:27 19:01	06:00 21:12	04:51 22:18 37	06:42 (38) | 04:28 07:19 (38) | 22:50 19	06:57 (38) | 05:10 07:16 (38) | 22:16 40	06:51 (38) | 06:18 07:31 (38) | 20:59	07:26 19:30	08:35 17:07	08:47 16:00	09:28 15:46
26	08:58 16:42	07:44 17:58	06:24 19:03	05:57 21:14	04:49 22:20 37	06:43 (38) | 04:29 07:20 (38) | 22:50 20	06:56 (38) | 05:12 07:16 (38) | 22:14 40	06:51 (38) | 06:20 07:31 (38) | 20:57	07:28 19:28	08:37 17:04	08:49 15:58	09:28 15:46
27	08:56 16:44	07:41 18:00	06:21 19:05	05:54 21:17	04:48 22:22 36	06:43 (38) | 04:29 07:19 (38) | 22:50 21	06:56 (38) | 05:14 07:17 (38) | 22:12 39	06:52 (38) | 06:22 07:31 (38) | 20:54	07:31 19:25	08:39 17:02	08:52 15:57	09:28 15:47
28	08:54 16:47	07:38 18:02	06:18 19:08	05:52 21:19	04:46 22:24 36	06:43 (38) | 04:30 07:19 (38) | 22:50 21	06:56 (38) | 05:16 07:17 (38) | 22:10 39	06:52 (38) | 06:24 07:31 (38) | 20:51	07:33 19:22	08:42 16:59	08:54 15:55	09:28 15:48
29	08:52 16:49		07:16 20:10	05:49 21:21	04:44 22:25 35	06:44 (38) | 04:31 07:19 (38) | 22:49 21	06:56 (38) | 05:18 07:17 (38) | 22:07 38	06:52 (38) | 06:27 07:30 (38) | 20:48	07:35 19:19	08:44 16:56	08:56 15:54	09:28 15:49
30	08:50 16:51		07:13 20:12	05:47 21:24	04:43 22:27 34	06:45 (38) | 04:32 07:19 (38) | 22:49 22	06:56 (38) | 05:20 07:18 (38) | 22:05 36	06:54 (38) | 06:29 07:30 (38) | 20:45	07:37 19:16	08:47 16:54	08:58 15:53	09:28 15:50
31	08:48 16:54		07:10 20:14		04:41 22:29 34	06:44 (38) | 07:18 (38) |	05:22 22:03 35	06:55 (38) | 06:31 07:30 (38) | 20:43		07:49 16:51		09:28 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					945	688	1047	221				
Sun reduction					0,50	0,50	0,50	0,50				
Oper. time red.					0,80	0,80	0,80	0,80				
Wind dir. red.					0,59	0,59	0,59	0,59				
Total reduction					0,24	0,24	0,24	0,24				
Total, real					224	163	248	52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				
Sun reduction			0,50		0,50				
Oper. time red.			0,80		0,80				
Wind dir. red.			0,73		0,71				
Total reduction			0,29		0,28				
Total, real			80		117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December
1	04:32	05:24	06:33		07:40		07:52	08:47 (2)	09:00
	22:49	22:01	20:40		19:13		16:49	9 08:56 (2)	15:51
2	04:33	05:26	06:35		07:42	09:06 (22)	07:54		09:02
	22:48	21:59	20:37		19:10	6 09:12 (22)	16:46		15:50
3	04:34	05:29	06:38		07:44	09:02 (22)	07:56		09:04
	22:47	21:56	20:34		19:07	13 09:15 (22)	16:44		15:49
4	04:35	05:31	06:40		07:46	09:00 (22)	07:59		09:05
	22:47	21:54	20:31		19:05	17 09:17 (22)	16:42		15:48
5	04:36	05:33	06:42		07:48	08:58 (22)	08:01		09:07
	22:46	21:52	20:28		19:02	20 09:18 (22)	16:39		15:47
6	04:38	05:35	06:44		07:51	08:57 (22)	08:04		09:09
	22:45	21:49	20:26		18:59	22 09:19 (22)	16:37		15:46
7	04:39	05:37	06:47		07:53	08:57 (22)	08:06		09:10
	22:44	21:47	20:23		18:56	23 09:20 (22)	16:35		15:46
8	04:40	05:40	06:49		07:55	08:55 (22)	08:08		09:12
	22:43	21:44	20:20		18:53	24 09:19 (22)	16:32		15:45
9	04:41	05:42	06:51		07:58	08:55 (22)	08:11		09:14
	22:42	21:42	20:17		18:50	24 09:19 (22)	16:30		15:44
10	04:43	05:44	06:53		08:00	08:55 (22)	08:13		09:15
	22:41	21:39	20:14		18:48	24 09:19 (22)	16:28		15:44
11	04:44	05:46	06:55		08:02	08:54 (22)	08:16		09:16
	22:39	21:37	20:11		18:45	25 09:19 (22)	16:26		15:43
12	04:46	05:49	06:58		08:04	08:55 (22)	08:18		09:18
	22:38	21:34	20:08		18:42	23 09:18 (22)	16:24		15:43
13	04:48	05:51	07:00		08:07	08:55 (22)	08:20		09:19
	22:37	21:32	20:05		18:39	22 09:17 (22)	16:21		15:43
14	04:49	05:53	07:02		08:09	08:55 (22)	08:23		09:20
	22:35	21:29	20:02		18:36	21 09:16 (22)	16:19		15:42
15	04:51	05:55	07:04		08:11	08:57 (22)	08:25		09:21
	22:34	21:26	20:00		18:34	18 09:15 (22)	16:17		15:42
16	04:53	05:58	07:06		08:14	08:58 (22)	08:27		09:22
	22:32	21:24	19:57		18:31	15 09:13 (22)	16:15		15:42
17	04:54	06:00	07:09		08:16	09:01 (22)	08:30		09:23
	22:31	21:21	19:54		18:28	10 09:11 (22)	16:13		15:42
18	04:56	06:02	07:11	08:19 (24)	08:18		08:32		09:24
	22:29	21:19	19:51	9 08:28 (24)	18:25		16:11		15:42
19	04:58	06:04	07:13	08:16 (24)	08:21		08:34		09:25
	22:27	21:16	19:48	13 08:29 (24)	18:23		16:10		15:43
20	05:00	06:06	07:15	08:14 (24)	08:23	09:48 (2)	08:37		09:26
	22:25	21:13	19:45	16 08:30 (24)	18:20	9 09:57 (2)	16:08		15:43
21	05:02	06:09	07:17	08:14 (24)	08:25	09:46 (2)	08:39		09:26
	22:24	21:10	19:42	17 08:31 (24)	18:17	13 09:59 (2)	16:06		15:43
22	05:04	06:11	07:20	08:13 (24)	08:28	09:44 (2)	08:41		09:27
	22:22	21:08	19:39	18 08:31 (24)	18:15	16 10:00 (2)	16:04		15:44
23	05:06	06:13	07:22	08:12 (24)	08:30	09:44 (2)	08:43		09:27
	22:20	21:05	19:36	19 08:31 (24)	18:12	17 10:01 (2)	16:03		15:44
24	05:08	06:15	07:24	08:12 (24)	08:32	09:42 (2)	08:45		09:28
	22:18	21:02	19:33	19 08:31 (24)	18:09	19 10:01 (2)	16:01		15:45
25	05:10	06:18	07:26	08:11 (24)	07:35	08:42 (2)	08:48		09:28
	22:16	20:59	19:31	19 08:30 (24)	17:07	19 09:01 (2)	15:59		15:45
26	05:12	06:20	07:28	08:12 (24)	07:37	08:43 (2)	08:50		09:28
	22:14	20:57	19:28	17 08:29 (24)	17:04	19 09:02 (2)	15:58		15:46
27	05:14	06:22	07:31	08:13 (24)	07:40	08:42 (2)	08:52		09:28
	22:12	20:54	19:25	15 08:28 (24)	17:02	19 09:01 (2)	15:57		15:47
28	05:16	06:24	07:33	08:14 (24)	07:42	08:43 (2)	08:54		09:29
	22:10	20:51	19:22	12 08:26 (24)	16:59	18 09:01 (2)	15:55		15:48
29	05:18	06:27	07:35	08:15 (24)	07:44	08:44 (2)	08:56		09:29
	22:08	20:48	19:19	8 08:23 (24)	16:56	17 09:01 (2)	15:54		15:49
30	05:20	06:29	07:37		07:47	08:44 (2)	08:58		09:28
	22:05	20:45	19:16		16:54	15 08:59 (2)	15:53		15:50
31	05:22	06:31			07:49	08:45 (2)			09:28
	22:03	20:43			16:51	13 08:58 (2)			15:51
Potential sun hours	545	478	386		319		236		200
Total, worst case				182		501		9	
Sun reduction				0,50		0,50		0,50	
Oper. time red.				0,80		0,80		0,80	
Wind dir. red.				0,70		0,73		0,74	
Total reduction				0,28		0,29		0,29	
Total, real				51		146		3	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05 23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35	07:42	07:54	09:02
	15:54	16:59	18:07 24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	15:50
3	09:27	08:41	07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10 24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	15:49
4	09:27	08:39	07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40	07:46 09:05 (22)	07:59	09:05
	15:57	17:04	18:12 23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31	19:05 11 09:16 (22)	16:42	15:48
5	09:26	08:37	07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42	07:48 09:02 (22)	08:01	09:07
	15:59	17:06	18:14 22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28	19:02 16 09:18 (22)	16:39	15:47
6	09:25	08:35	07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44	07:51 09:00 (22)	08:04	09:09
	16:00	17:09	18:17 22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26	18:59 19 09:19 (22)	16:37	15:46
7	09:25	08:32	07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47	07:53 09:00 (22)	08:06	09:10
	16:02	17:11	18:19 19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23	18:56 20 09:20 (22)	16:35	15:46
8	09:24	08:30	07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49	07:55 08:58 (22)	08:08	09:12
	16:04	17:13	18:21 18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20	18:53 23 09:21 (22)	16:32	15:45
9	09:23	08:28	07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51	07:58 08:57 (22)	08:11	09:14
	16:05	17:16	18:24 13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17	18:50 23 09:20 (22)	16:30	15:44
10	09:22	08:25	07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53	08:00 08:57 (22)	08:13	09:15
	16:07	17:18	18:26 7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14	18:48 24 09:21 (22)	16:28	15:44
11	09:21	08:23	07:07		06:38	05:20	04:30	04:44	05:46	06:55	08:02 08:57 (22)	08:16	09:16
	16:09	17:21	18:28		20:40	21:49	22:44	22:39	21:37	20:11	18:45 23 09:20 (22)	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58	08:04 08:57 (22)	08:18	09:18
	16:11	17:23	18:31		20:42	21:51	22:45	22:38	21:34	20:08	18:42 24 09:21 (22)	16:24	15:43
13	09:19	08:18	07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00	08:07 08:57 (22)	08:20	09:19
	16:13	17:26	18:33 5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05	18:39 23 09:20 (22)	16:21	15:43
14	09:17	08:15	06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02	08:09 08:57 (22)	08:23	09:20
	16:15	17:28	18:35 11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02	18:36 21 09:18 (22)	16:19	15:42
15	09:16	08:13	06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04	08:11 08:58 (22)	08:25	09:21
	16:17	17:31	18:38 15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00	18:34 20 09:18 (22)	16:17	15:42
16	09:15	08:10	06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06	08:14 08:58 (22)	08:27	09:22
	16:19	17:33	18:40 16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57	18:31 18 09:16 (22)	16:15	15:42
17	09:13	08:08	06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09	08:16 09:00 (22)	08:30	09:23
	16:21	17:36	18:42 18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54	18:28 15 09:15 (22)	16:13	15:42
18	09:12	08:05	06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 09:02 (22)	08:32	09:24
	16:23	17:38	18:45 19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51	18:25 10 09:12 (22)	16:11	15:42
19	09:10	08:02	06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13 08:22 (24)	08:21	08:34	09:25
	16:26	17:41	18:47 18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48 7 08:29 (24)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15 08:19 (24)	08:23	08:37	09:26
	16:28	17:43	18:49 19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45 12 08:31 (24)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17 08:18 (24)	08:25	08:39	09:26
	16:30	17:46	18:52 17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42 15 08:33 (24)	18:17	16:06	15:43
22	09:05	07:54	06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20 08:16 (24)	08:28	08:41	09:27
	16:32	17:48	18:54 15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39 17 08:33 (24)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22 08:15 (24)	08:30	08:43	09:27
	16:35	17:50	18:56 13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36 18 08:33 (24)	18:12	16:03	15:44
24	09:02	07:49 08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24 08:14 (24)	08:32	08:45	09:28
	16:37	17:53 12 08:42 (22)	18:59 8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33 19 08:33 (24)	18:09	16:01	15:45
25	09:00	07:46 08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26 08:14 (24)	07:35	08:48	09:28
	16:39	17:55 15 08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31 18 08:32 (24)	17:07	15:59	15:45
26	08:58	07:44 08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28 08:14 (24)	07:37	08:50	09:28
	16:42	17:58 19 08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28 19 08:33 (24)	17:04	15:58	15:46
27	08:56	07:41 08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31 08:14 (24)	07:40	08:52	09:28
	16:44	18:00 20 08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25 18 08:32 (24)	17:02	15:57	15:47
28	08:54	07:38 08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33 08:15 (24)	07:42	08:54	09:29
	16:46	18:02 22 08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 15 08:30 (24)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35 08:15 (24)	07:44	08:56	09:29
	16:49		20:10		21:21	22:26	22:50	22:08	20:48	19:19 13 08:28 (24)	16:56	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37 08:18 (24)	07:47	08:58	09:28
	16:51		20:12		21:24	22:27	22:49	22:05	20:45	19:16 8 08:26 (24)	16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31		07:49		09:28
	16:54		20:15			22:29		22:03	20:43		16:51		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200	
Total, worst case		88	369						179	290			
Sun reduction		0,50	0,50						0,50	0,50			
Oper. time red.		0,80	0,80						0,80	0,80			
Wind dir. red.		0,73	0,71						0,70	0,73			
Total reduction		0,29	0,29						0,28	0,29			
Total, real		26	105						50	84			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
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14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
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	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
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28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
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19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
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	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
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26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
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29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
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	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
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	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
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	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
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	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
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	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
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23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
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24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
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Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
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	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
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	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
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	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
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	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
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	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		
Sun reduction			0,50									0,50		
Oper. time red.			0,80									0,80		
Wind dir. red.			0,74									0,74		
Total reduction			0,29									0,29		
Total, real			66									67		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September	October		November		December
1	09:28	08:46		09:41 (22)		08:28 (24)	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:52		09:00 (22)	09:00
	15:53	16:56	3	09:44 (22)	19	08:47 (24)	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	24	09:24 (22)	15:51
2	09:28	08:44		09:37 (22)		08:27 (24)	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:01 (22)	09:02
	15:54	16:59	10	09:47 (22)	20	08:47 (24)	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	23	09:24 (22)	15:50
3	09:27	08:41		09:35 (22)		08:27 (24)	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:01 (22)	09:04
	15:56	17:01	15	09:50 (22)	20	08:47 (24)	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	23	09:24 (22)	15:49
4	09:27	08:39		09:34 (22)		08:27 (24)	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:02 (22)	09:05
	15:57	17:04	17	09:51 (22)	19	08:46 (24)	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	22	09:24 (22)	15:48
5	09:26	08:37		09:33 (22)		08:28 (24)	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:02 (22)	09:07
	15:59	17:06	20	09:53 (22)	17	08:45 (24)	20:26	21:35	22:37	22:46	21:52	20:28	19:02	3	09:14 (24)	21	09:23 (22)	15:47
6	09:25	08:35		09:32 (22)		08:28 (24)	06:53	05:31	04:34	04:37	05:35	06:44	07:51		09:06 (24)		09:03 (22)	09:09
	16:00	17:08	21	09:53 (22)	16	08:44 (24)	20:28	21:38	22:38	22:45	21:49	20:26	18:59	11	09:17 (24)	19	09:22 (22)	15:46
7	09:25	08:32		09:31 (22)		08:29 (24)	06:50	05:29	04:33	04:39	05:37	06:47	07:53		09:05 (24)		09:05 (22)	09:10
	16:02	17:11	22	09:53 (22)	13	08:42 (24)	20:31	21:40	22:39	22:44	21:47	20:23	18:56	15	09:20 (24)	17	09:22 (22)	15:46
8	09:24	08:30		09:32 (22)		08:31 (24)	06:47	05:27	04:32	04:40	05:40	06:49	07:55		09:03 (24)		09:05 (22)	09:12
	16:04	17:13	22	09:54 (22)	8	08:39 (24)	20:33	21:42	22:41	22:43	21:44	20:20	18:53	17	09:20 (24)	15	09:20 (22)	15:45
9	09:23	08:28		09:31 (22)			06:44	05:24	04:31	04:41	05:42	06:51	07:58		09:02 (24)		09:08 (22)	09:14
	16:05	17:16	23	09:54 (22)			20:35	21:44	22:42	22:42	21:42	20:17	18:50	18	09:20 (24)	10	09:18 (22)	15:44
10	09:22	08:25		09:32 (22)			06:41	05:22	04:30	04:43	05:44	06:53	08:00		09:02 (24)		09:13 (22)	09:15
	16:07	17:18	23	09:55 (22)			20:38	21:47	22:43	22:41	21:39	20:14	18:48	19	09:21 (24)	1	09:14 (22)	15:44
11	09:21	08:23		09:31 (22)			06:38	05:20	04:30	04:44	05:46	06:55	08:02		09:01 (24)			09:16
	16:09	17:21	24	09:55 (22)			20:40	21:49	22:44	22:39	21:37	20:11	18:45	20	09:21 (24)			15:43
12	09:20	08:20		09:31 (22)			06:36	05:17	04:29	04:46	05:49	06:58	08:04		09:01 (24)			09:18
	16:11	17:23	23	09:54 (22)			20:42	21:51	22:45	22:38	21:34	20:08	18:42	20	09:21 (24)			15:43
13	09:19	08:18		09:31 (22)			06:33	05:15	04:28	04:47	05:51	07:00	08:07		09:01 (24)			09:19
	16:13	17:26	23	09:54 (22)			20:44	21:53	22:46	22:37	21:32	20:05	18:39	19	09:20 (24)			15:43
14	09:17	08:15		09:33 (22)			06:30	05:13	04:28	04:49	05:53	07:02	08:09		09:01 (24)			09:20
	16:15	17:28	21	09:54 (22)			20:47	21:55	22:47	22:35	21:29	20:02	18:36	18	09:19 (24)			15:42
15	09:16	08:13		09:33 (22)			06:27	05:11	04:28	04:51	05:55	07:04	08:11		09:02 (24)			09:21
	16:17	17:31	20	09:53 (22)			20:49	21:58	22:47	22:34	21:26	20:00	18:34	16	09:18 (24)			15:42
16	09:15	08:10		09:34 (22)			06:24	05:08	04:27	04:53	05:57	07:06	08:14		09:03 (24)			09:22
	16:19	17:33	17	09:51 (22)			20:51	22:00	22:48	22:32	21:24	19:57	18:31	13	09:16 (24)			15:42
17	09:13	08:08		09:36 (22)			06:22	05:06	04:27	04:54	06:00	07:09	08:16		09:05 (24)			09:23
	16:21	17:36	14	09:50 (22)			20:54	22:02	22:49	22:31	21:21	19:54	18:28	10	09:15 (24)			15:42
18	09:12	08:05		09:39 (22)			06:19	05:04	04:27	04:56	06:02	07:11	08:18					09:24
	16:23	17:38	8	09:47 (22)			20:56	22:04	22:49	22:29	21:19	19:51	18:25					15:42
19	09:10	08:02			06:44		06:16	05:02	04:27	04:58	06:04	07:13	08:21					09:25
	16:26	17:41			18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23					15:42
20	09:09	08:00			06:42		06:13	05:00	04:27	05:00	06:06	07:15	08:23					09:26
	16:28	17:43			18:49		21:01	22:08	22:50	22:25	21:13	19:45	18:20					15:43
21	09:07	07:57			06:39		06:10	04:58	04:27	05:02	06:09	07:17	08:25					09:26
	16:30	17:45			18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17					15:43
22	09:05	07:54			06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28					09:27
	16:32	17:48			18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15					15:44
23	09:04	07:52			06:33		06:05	04:54	04:27	05:06	06:13	07:22	08:30					09:27
	16:35	17:50			18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12					15:44
24	09:02	07:49		08:36 (24)	06:30		06:02	04:53	04:28	05:08	06:15	07:24	08:32		10:07 (22)		08:45	09:28
	16:37	17:53	5	08:41 (24)	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09	10	10:17 (22)		16:01	15:45
25	09:00	07:46		08:32 (24)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		09:05 (22)		08:48	09:28
	16:39	17:55	12	08:44 (24)	19:01		21:12	22:18	22:51	22:16	20:59	19:30	17:07	15	09:20 (22)		15:59	15:45
26	08:58	07:44		08:30 (24)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	07:37		09:04 (22)		08:50	09:28
	16:42	17:58	15	08:45 (24)	19:03		21:14	22:20	22:51	22:14	20:57	19:28	17:04	18	09:22 (22)		15:58	15:46
27	08:56	07:41		08:29 (24)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	07:40		09:02 (22)		08:52	09:28
	16:44	18:00	17	08:46 (24)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	17:02	20	09:22 (22)		15:56	15:47
28	08:54	07:38		08:29 (24)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	07:42		09:02 (22)		08:54	09:29
	16:46	18:02	18	08:47 (24)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	16:59	21	09:23 (22)		15:55	15:48
29	08:52				07:16		05:49	04:44	04:30	05:18	06:27	07:35	07:44		09:02 (22)		08:56	09:29
	16:49				20:10		21:21	22:26	22:50	22:08	20:48	19:19	16:56	22	09:24 (22)		15:54	15:49
30	08:50				07:13		05:47	04:43	04:31	05:20	06:29	07:37	07:47		09:01 (22)		08:58	09:28
	16:51				20:12		21:24	22:27	22:49	22:05	20:45	19:16	16:54	23	09:24 (22)		15:53	15:50
31	08:48				07:10			04:41		05:22	06:31		07:49		09:01 (22)			09:28
	16:54				20:15			22:29		22:03	20:43		16:51	23	09:24 (22)			15:51
Potential sun hours	221	260			365		432	521	547	546	478	386	319			236		199
Total, worst case			393		132									351		175		
Sun reduction			0,50		0,50									0,50		0,50		
Oper. time red.			0,80		0,80									0,80		0,80		
Wind dir. red.			0,73		0,73									0,73		0,73		
Total reduction			0,29		0,29									0,29		0,29		
Total, real			114		38									102		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46	09:41 (22)	07:35	08:31 (24)	07:07	05:44	04:40
	15:53		16:56	14 09:55 (22)	18:05	20 08:51 (24)	20:17	21:26	22:31
2	09:28		08:44	09:40 (22)	07:33	08:31 (24)	07:04	05:41	04:39
	15:54		16:59	16 09:56 (22)	18:07	20 08:51 (24)	20:19	21:28	22:32
3	09:27		08:41	09:39 (22)	07:30	08:31 (24)	07:01	05:39	04:37
	15:56		17:01	19 09:58 (22)	18:10	19 08:50 (24)	20:21	21:31	22:34
4	09:27		08:39	09:38 (22)	07:27	08:31 (24)	06:58	05:36	04:36
	15:57		17:04	20 09:58 (22)	18:12	19 08:50 (24)	20:24	21:33	22:35
5	09:26		08:37	09:38 (22)	07:24	08:32 (24)	06:55	05:34	04:35
	15:59		17:06	22 10:00 (22)	18:14	16 08:48 (24)	20:26	21:35	22:37
6	09:25		08:35	09:37 (22)	07:22	08:33 (24)	06:53	05:31	04:34
	16:00		17:08	23 10:00 (22)	18:17	14 08:47 (24)	20:28	21:38	22:38
7	09:25		08:32	09:36 (22)	07:19	08:35 (24)	06:50	05:29	04:33
	16:02		17:11	24 10:00 (22)	18:19	9 08:44 (24)	20:31	21:40	22:39
8	09:24		08:30	09:37 (22)	07:16		06:47	05:27	04:32
	16:04		17:13	24 10:01 (22)	18:21		20:33	21:42	22:41
9	09:23		08:28	09:36 (22)	07:13		06:44	05:24	04:31
	16:05		17:16	24 10:00 (22)	18:24		20:35	21:44	22:42
10	09:22		08:25	09:37 (22)	07:10		06:41	05:22	04:30
	16:07		17:18	24 10:01 (22)	18:26		20:38	21:47	22:43
11	09:21		08:23	09:37 (22)	07:07		06:38	05:20	04:30
	16:09		17:21	23 10:00 (22)	18:28		20:40	21:49	22:44
12	09:20		08:20	09:37 (22)	07:05		06:36	05:17	04:29
	16:11		17:23	23 10:00 (22)	18:31		20:42	21:51	22:45
13	09:19		08:18	09:38 (22)	07:02		06:33	05:15	04:28
	16:13		17:26	21 09:59 (22)	18:33		20:44	21:53	22:46
14	09:17		08:15	09:39 (22)	06:59		06:30	05:13	04:28
	16:15		17:28	20 09:59 (22)	18:35		20:47	21:55	22:47
15	09:16		08:13	09:40 (22)	06:56		06:27	05:11	04:28
	16:17		17:31	17 09:57 (22)	18:38		20:49	21:58	22:47
16	09:15		08:10	09:42 (22)	06:53		06:24	05:08	04:27
	16:19		17:33	13 09:55 (22)	18:40		20:51	22:00	22:48
17	09:13		08:08	09:45 (22)	06:50		06:21	05:06	04:27
	16:21		17:36	8 09:53 (22)	18:42		20:54	22:02	22:49
18	09:12		08:05		06:47		06:19	05:04	04:27
	16:23		17:38		18:45		20:56	22:04	22:49
19	09:10		08:02		06:44		06:16	05:02	04:27
	16:26		17:41		18:47		20:58	22:06	22:50
20	09:09		08:00		06:42		06:13	05:00	04:27
	16:28		17:43		18:49		21:01	22:08	22:50
21	09:07		07:57		06:39		06:10	04:58	04:27
	16:30		17:45		18:52		21:03	22:10	22:50
22	09:05		07:54		06:36		06:08	04:56	04:27
	16:32		17:48		18:54		21:05	22:12	22:51
23	09:04		07:52	08:40 (24)	06:33		06:05	04:54	04:27
	16:35		17:50	5 08:45 (24)	18:56		21:08	22:14	22:51
24	09:02		07:49	08:36 (24)	06:30		06:02	04:53	04:28
	16:37		17:53	12 08:48 (24)	18:59		21:10	22:16	22:51
25	09:00		07:46	08:34 (24)	06:27		06:00	04:51	04:28
	16:39		17:55	15 08:49 (24)	19:01		21:12	22:18	22:51
26	08:58		07:44	08:33 (24)	06:24		05:57	04:49	04:29
	16:42		17:58	17 08:50 (24)	19:03		21:14	22:20	22:51
27	08:56		07:41	08:32 (24)	06:21		05:54	04:47	04:29
	16:44		18:00	18 08:50 (24)	19:05		21:17	22:22	22:50
28	08:54		07:38	08:32 (24)	06:18		05:52	04:46	04:30
	16:46		18:02	19 08:51 (24)	19:08		21:19	22:24	22:50
29	08:52				07:16		05:49	04:44	04:30
	16:49				20:10		21:21	22:26	22:50
30	08:50				07:13		05:47	04:43	04:31
	16:51				20:12		21:24	22:27	22:49
31	08:48	09:43 (22)			07:10			04:41	
	16:54	9 09:52 (22)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case		9		421		117			
Sun reduction		0,50		0,50		0,50			
Oper. time red.		0,80		0,80		0,80			
Wind dir. red.		0,72		0,73		0,73			
Total reduction		0,29		0,29		0,29			
Total, real		3		122		34			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		09:06 (22)	09:00
	22:49	22:01	20:40	19:13			16:49	24	09:30 (22)	15:51
2	04:33	05:26	06:35	07:42			07:54		09:06 (22)	09:02
	22:48	21:59	20:37	19:10			16:46	24	09:30 (22)	15:50
3	04:34	05:29	06:38	07:44			07:56		09:06 (22)	09:04
	22:47	21:56	20:34	19:07			16:44	24	09:30 (22)	15:49
4	04:35	05:31	06:40	07:46			07:59		09:07 (22)	09:05
	22:47	21:54	20:31	19:05			16:42	23	09:30 (22)	15:48
5	04:36	05:33	06:42	07:48			08:01		09:07 (22)	09:07
	22:46	21:52	20:28	19:02			16:39	22	09:29 (22)	15:47
6	04:37	05:35	06:44	07:51		09:12 (24)	08:04		09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7	09:19 (24)	16:37	21	09:29 (22)	15:46
7	04:39	05:37	06:47	07:53		09:10 (24)	08:06		09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12	09:22 (24)	16:35	20	09:29 (22)	15:46
8	04:40	05:40	06:49	07:55		09:08 (24)	08:08		09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15	09:23 (24)	16:32	18	09:27 (22)	15:45
9	04:41	05:42	06:51	07:58		09:06 (24)	08:11		09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18	09:24 (24)	16:30	17	09:27 (22)	15:44
10	04:43	05:44	06:53	08:00		09:06 (24)	08:13		09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19	09:25 (24)	16:28	13	09:25 (22)	15:44
11	04:44	05:46	06:55	08:02		09:05 (24)	08:16		09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19	09:24 (24)	16:26	9	09:23 (22)	15:43
12	04:46	05:49	06:58	08:04		09:05 (24)	08:18			09:18
	22:38	21:34	20:08	18:42	20	09:25 (24)	16:24			15:43
13	04:47	05:51	07:00	08:07		09:04 (24)	08:20			09:19
	22:37	21:32	20:05	18:39	20	09:24 (24)	16:21			15:43
14	04:49	05:53	07:02	08:09		09:04 (24)	08:23			09:20
	22:35	21:29	20:02	18:36	19	09:23 (24)	16:19			15:42
15	04:51	05:55	07:04	08:11		09:05 (24)	08:25			09:21
	22:34	21:26	20:00	18:34	18	09:23 (24)	16:17			15:42
16	04:53	05:57	07:06	08:14		09:05 (24)	08:27			09:22
	22:32	21:24	19:57	18:31	16	09:21 (24)	16:15			15:42
17	04:54	06:00	07:09	08:16		09:07 (24)	08:30			09:23
	22:31	21:21	19:54	18:28	14	09:21 (24)	16:13			15:42
18	04:56	06:02	07:11	08:18		09:08 (24)	08:32			09:24
	22:29	21:19	19:51	18:25	10	09:18 (24)	16:11			15:42
19	04:58	06:04	07:13	08:21			08:34			09:25
	22:27	21:16	19:48	18:23			16:10			15:42
20	05:00	06:06	07:15	08:23			08:37			09:26
	22:25	21:13	19:45	18:20			16:08			15:43
21	05:02	06:09	07:17	08:25			08:39			09:26
	22:24	21:10	19:42	18:17			16:06			15:43
22	05:04	06:11	07:20	08:28			08:41			09:27
	22:22	21:08	19:39	18:15			16:04			15:44
23	05:06	06:13	07:22	08:30			08:43			09:27
	22:20	21:05	19:36	18:12			16:03			15:44
24	05:08	06:15	07:24	08:32			08:45			09:28
	22:18	21:02	19:33	18:09			16:01			15:45
25	05:10	06:18	07:26	07:35		09:13 (22)	08:48			09:28
	22:16	20:59	19:30	17:07	10	09:23 (22)	15:59			15:45
26	05:12	06:20	07:28	07:37		09:11 (22)	08:50			09:28
	22:14	20:57	19:28	17:04	15	09:26 (22)	15:58			15:46
27	05:14	06:22	07:31	07:40		09:09 (22)	08:52			09:28
	22:12	20:54	19:25	17:01	18	09:27 (22)	15:56			15:47
28	05:16	06:24	07:33	07:42		09:08 (22)	08:54			09:29
	22:10	20:51	19:22	16:59	20	09:28 (22)	15:55			15:48
29	05:18	06:27	07:35	07:44		09:08 (22)	08:56			09:29
	22:08	20:48	19:19	16:56	21	09:29 (22)	15:54			15:49
30	05:20	06:29	07:37	07:47		09:07 (22)	08:58			09:28
	22:05	20:45	19:16	16:54	22	09:29 (22)	15:53			15:50
31	05:22	06:31		07:49		09:07 (22)				09:28
	22:03	20:43		16:51	23	09:30 (22)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					336			215		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,73			0,72		
Total reduction					0,29			0,29		
Total, real					98			62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	
Sun reduction			0,50									0,50		0,50	
Oper. time red.			0,80									0,80		0,80	
Wind dir. red.			0,74									0,74		0,74	
Total reduction			0,29									0,29		0,29	
Total, real			71									71		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (24)	08:46	10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (28)	09:00	10:51 (23)	
	15:53	20 12:41 (24)	16:56	20 10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (28)	15:51	28 12:23 (24)	
2	09:28	12:22 (24)	08:44	09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (28)	09:02	10:51 (23)	
	15:54	19 12:41 (24)	16:58	21 10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (28)	15:50	30 12:24 (24)	
3	09:27	12:22 (24)	08:41	10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (28)	09:04	10:52 (23)	
	15:55	19 12:41 (24)	17:01	20 10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (28)	15:49	29 12:25 (24)	
4	09:27	11:12 (23)	08:39	10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (28)	09:05	10:53 (23)	
	15:57	22 12:41 (24)	17:03	20 10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (28)	15:48	30 12:26 (24)	
5	09:26	11:11 (23)	08:37	10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (28)	09:07	10:54 (23)	
	15:58	26 12:42 (24)	17:06	19 10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (28)	15:47	29 12:27 (24)	
6	09:25	11:10 (23)	08:35	10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (28)	09:09	10:56 (23)	
	16:00	28 12:42 (24)	17:08	18 10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (28)	15:46	28 12:28 (24)	
7	09:25	11:09 (23)	08:32	10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (28)	09:10	10:58 (23)	
	16:02	29 12:42 (24)	17:11	17 10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (28)	15:45	26 12:29 (24)	
8	09:24	11:09 (23)	08:30	10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (28)	09:12	11:00 (23)	
	16:03	30 12:42 (24)	17:13	15 10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (28)	15:45	23 12:30 (24)	
9	09:23	11:09 (23)	08:27	10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (28)	09:13	12:11 (24)	
	16:05	30 12:42 (24)	17:16	12 10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (28)	15:44	19 12:30 (24)	
10	09:22	11:08 (23)	08:25	10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (28)	09:15	12:11 (24)	
	16:07	30 12:41 (24)	17:18	5 10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (28)	15:44	19 12:30 (24)	
11	09:21	11:09 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (28)	09:16	12:11 (24)	
	16:09	28 12:41 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (28)	15:43	20 12:31 (24)	
12	09:20	11:08 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (28)	09:18	12:11 (24)	
	16:11	27 12:40 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (23)	15:43	20 12:31 (24)	
13	09:19	11:08 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (28)	09:19	12:12 (24)	
	16:13	25 12:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (23)	15:42	21 12:33 (24)	
14	09:17	11:08 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (28)	09:20	12:12 (24)	
	16:15	20 11:28 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (23)	15:42	21 12:33 (24)	
15	09:16	11:08 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (28)	09:21	12:12 (24)	
	16:17	21 11:29 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (23)	15:42	21 12:33 (24)	
16	09:15	11:08 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (28)	09:22	12:13 (24)	
	16:19	21 11:29 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (23)	15:42	20 12:33 (24)	
17	09:13	11:09 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (28)	09:23	12:14 (24)	
	16:21	22 11:31 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (23)	15:42	21 12:35 (24)	
18	09:12	11:09 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (23)	09:24	12:14 (24)	
	16:23	22 11:31 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (23)	15:42	21 12:35 (24)	
19	09:10	11:09 (23)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (23)	09:25	12:14 (24)	
	16:25	22 11:31 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (23)	15:42	21 12:35 (24)	
20	09:09	11:09 (23)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (23)	09:26	12:15 (24)	
	16:28	23 11:32 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (23)	15:43	21 12:36 (24)	
21	09:07	11:09 (23)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (23)	09:26	12:16 (24)	
	16:30	23 11:32 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (23)	15:43	21 12:37 (24)	
22	09:05	11:10 (23)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (23)	09:27	12:16 (24)	
	16:32	22 11:32 (23)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (23)	15:43	21 12:37 (24)	
23	09:03	11:10 (23)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (23)	09:27	12:16 (24)	
	16:34	22 11:32 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (23)	15:44	21 12:37 (24)	
24	09:02	11:10 (23)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (23)	09:28	12:17 (24)	
	16:37	22 11:32 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (23)	15:45	21 12:38 (24)	
25	09:00	10:04 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (23)	09:28	12:17 (24)	
	16:39	28 11:32 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (23)	15:45	21 12:38 (24)	
26	08:58	10:03 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (23)	09:28	12:18 (24)	
	16:42	31 11:32 (23)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (23)	15:46	21 12:39 (24)	
27	08:56	10:02 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (23)	09:28	12:18 (24)	
	16:44	31 11:31 (23)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (23)	15:47	21 12:39 (24)	
28	08:54	10:00 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (23)	09:29	12:19 (24)	
	16:46	32 11:30 (23)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (23)	15:48	21 12:40 (24)	
29	08:52	10:00 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (23)	09:29	12:19 (24)	
	16:49	31 11:29 (23)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (24)	15:49	21 12:40 (24)	
30	08:50	09:59 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (23)	09:28	12:20 (24)	
	16:51	27 11:26 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (24)	15:50	20 12:40 (24)	
31	08:48	09:59 (28)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (24)	
	16:54	20 10:19 (28)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (24)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
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31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
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	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
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	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
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	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
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31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
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Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 1.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

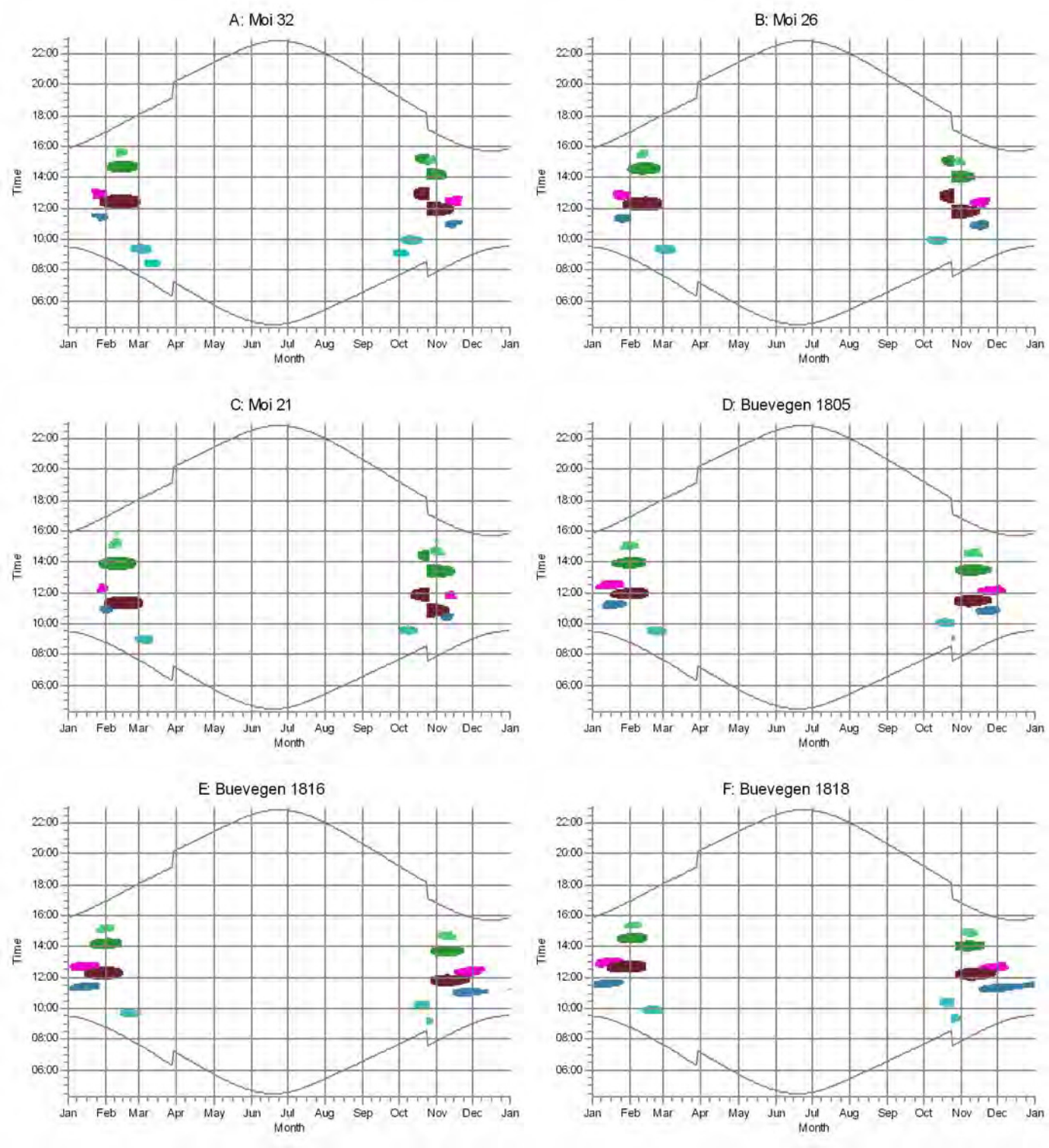
worst case

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere



WTGs

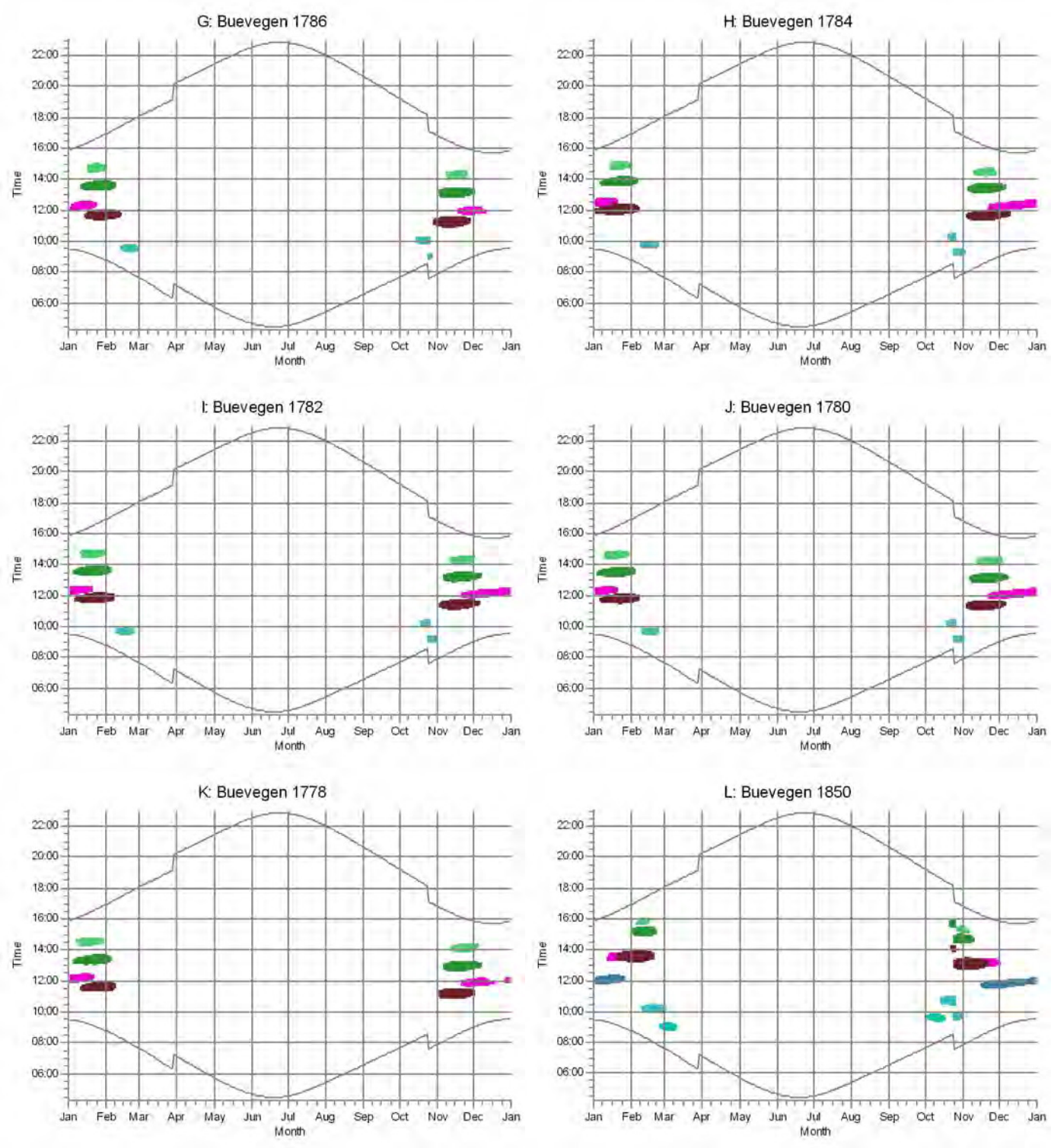
19: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2565
27: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

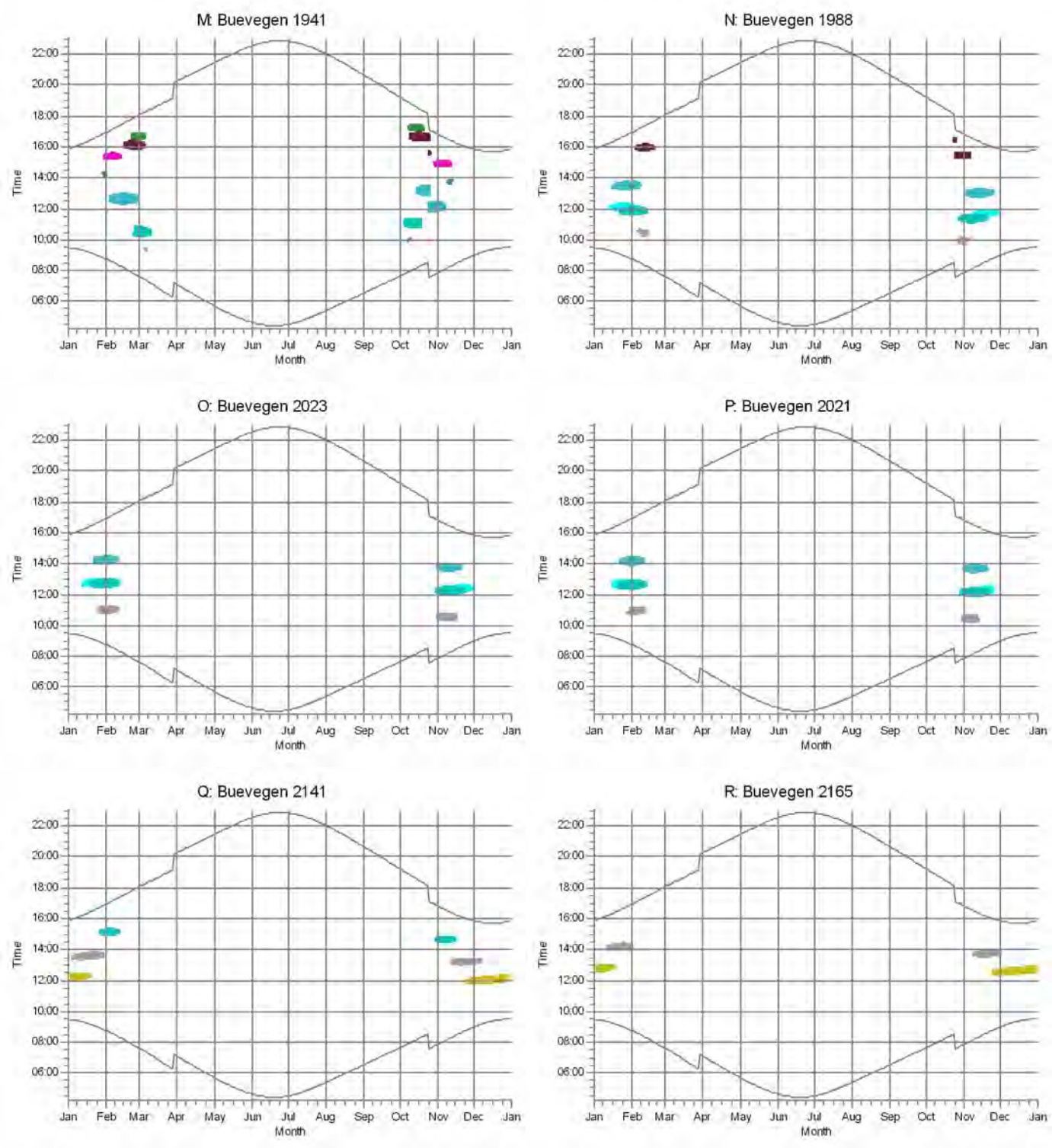


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

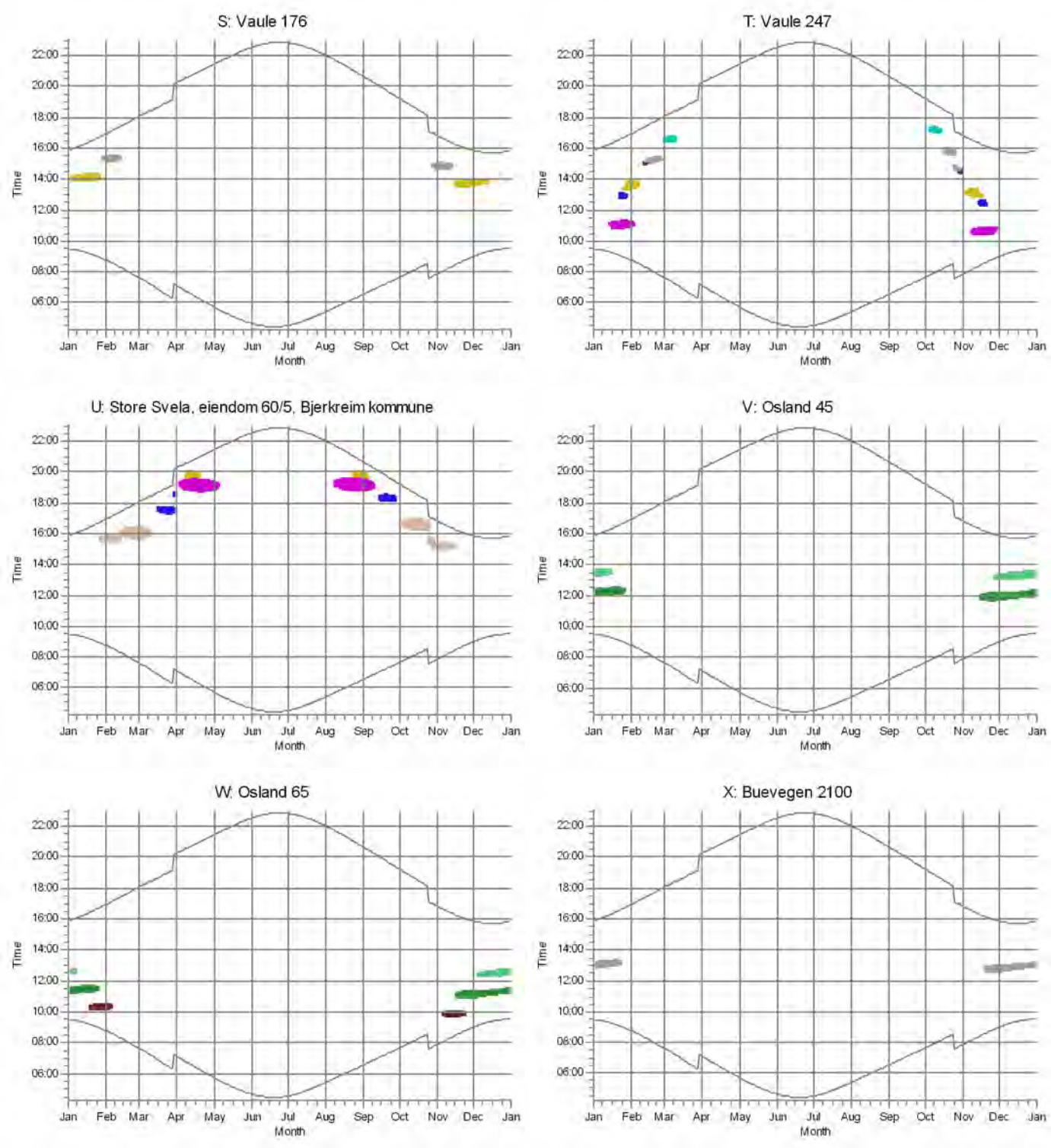


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SHADOW - Calendar, graphical

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WTGs

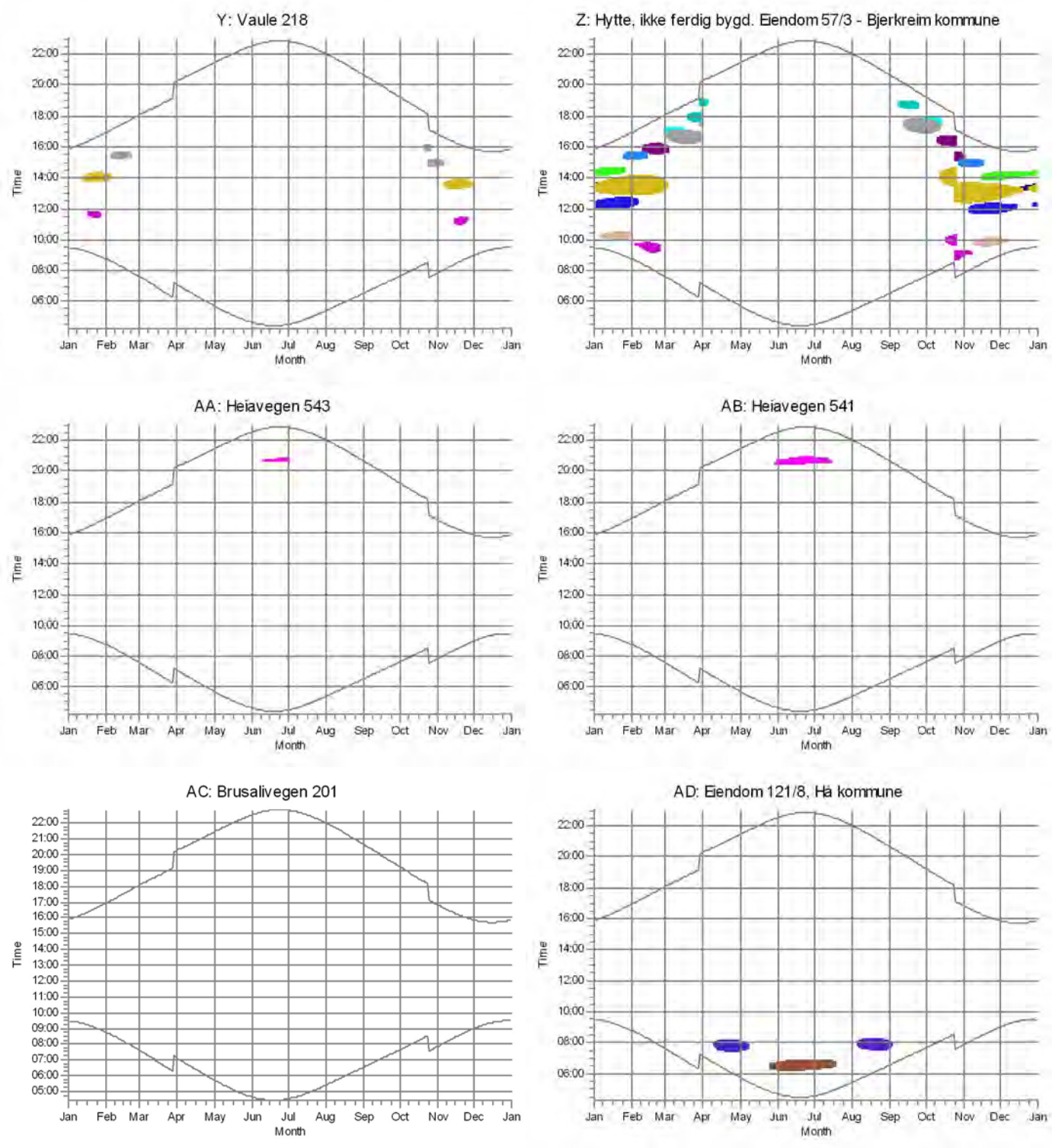
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
27: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere



WTGs

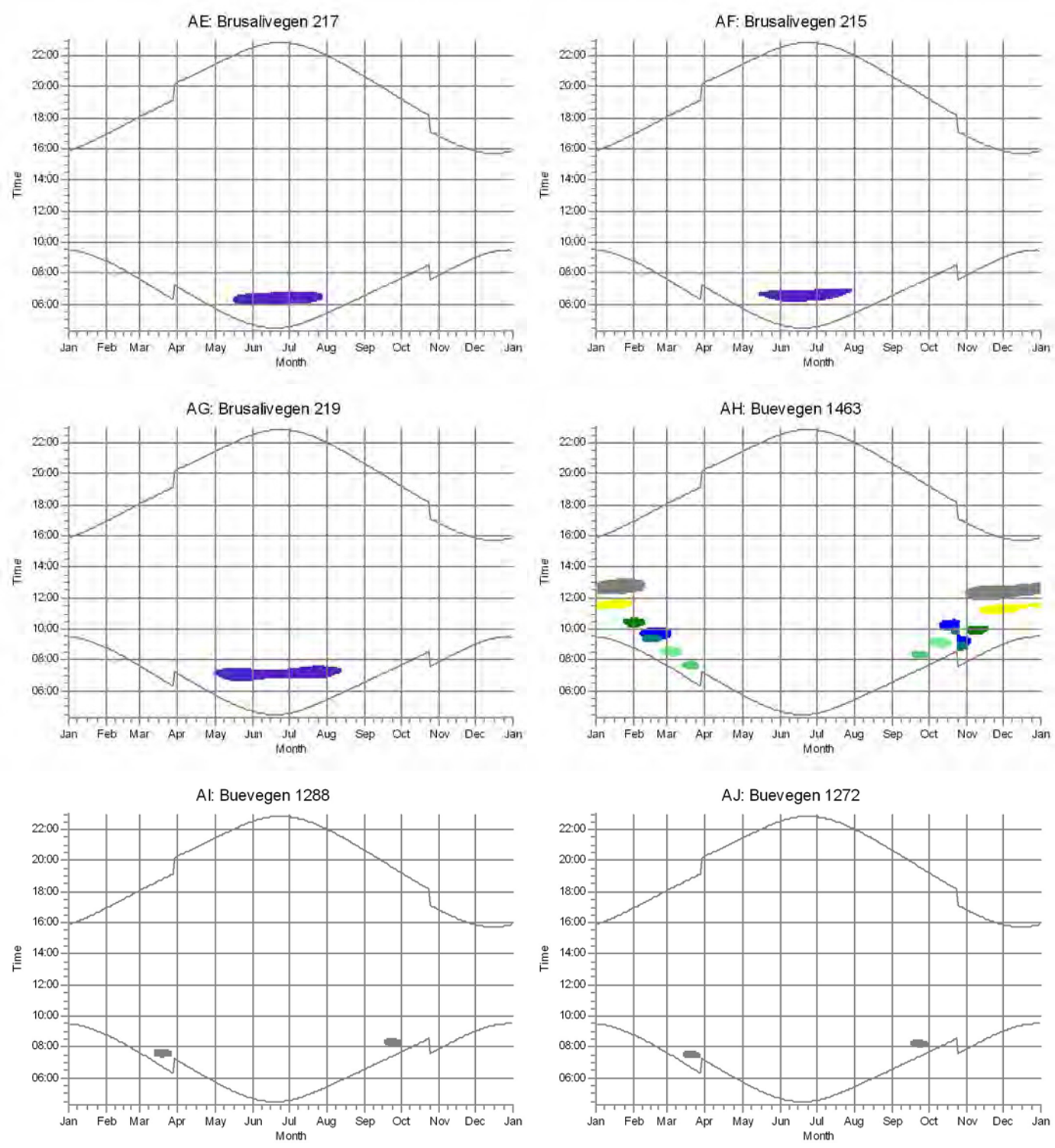
5: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544	17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556	39: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546	18: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557	40: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550	21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560	41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552	30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569	42: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555	36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575	

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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

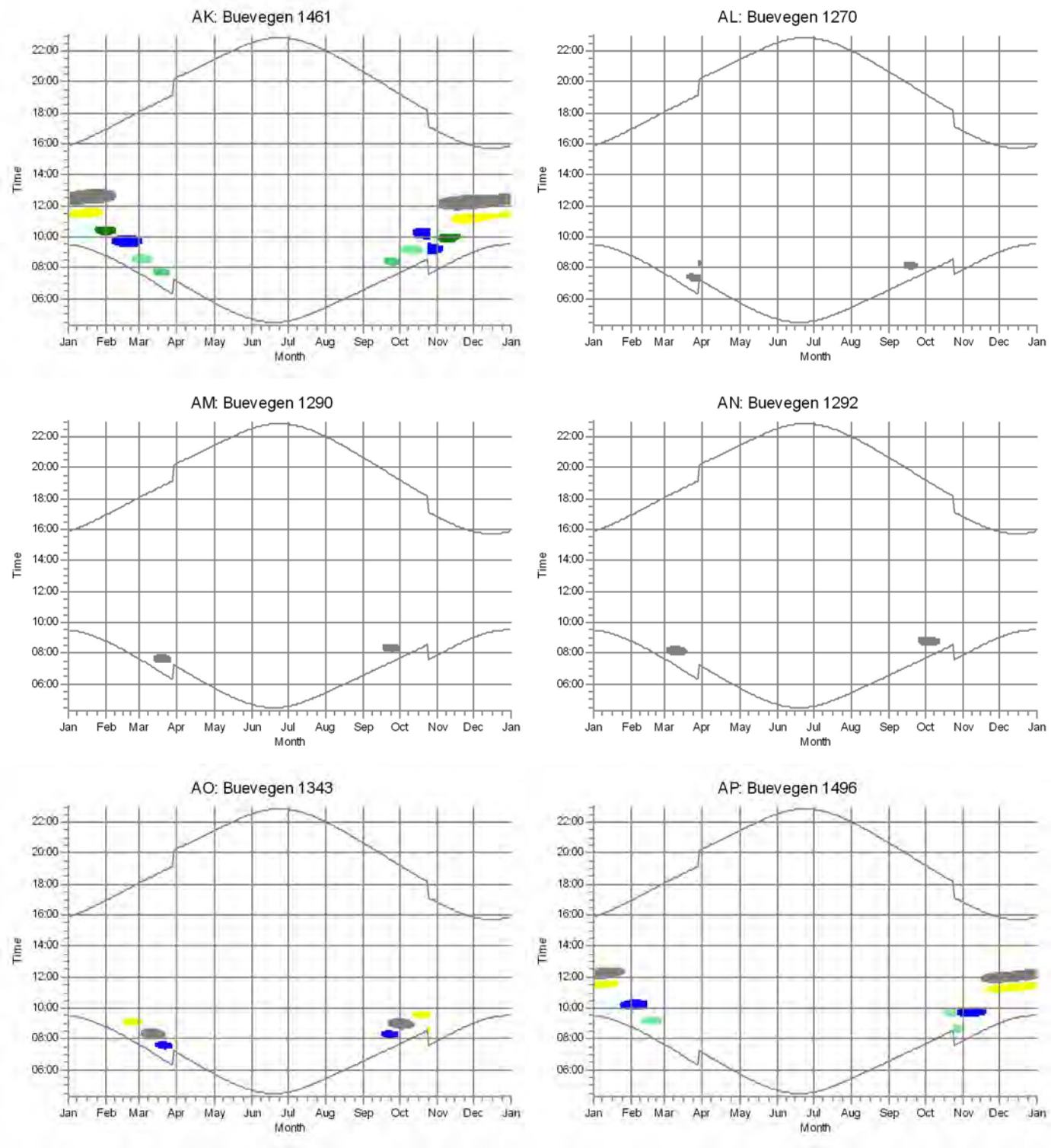


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SHADOW - Calendar, graphical

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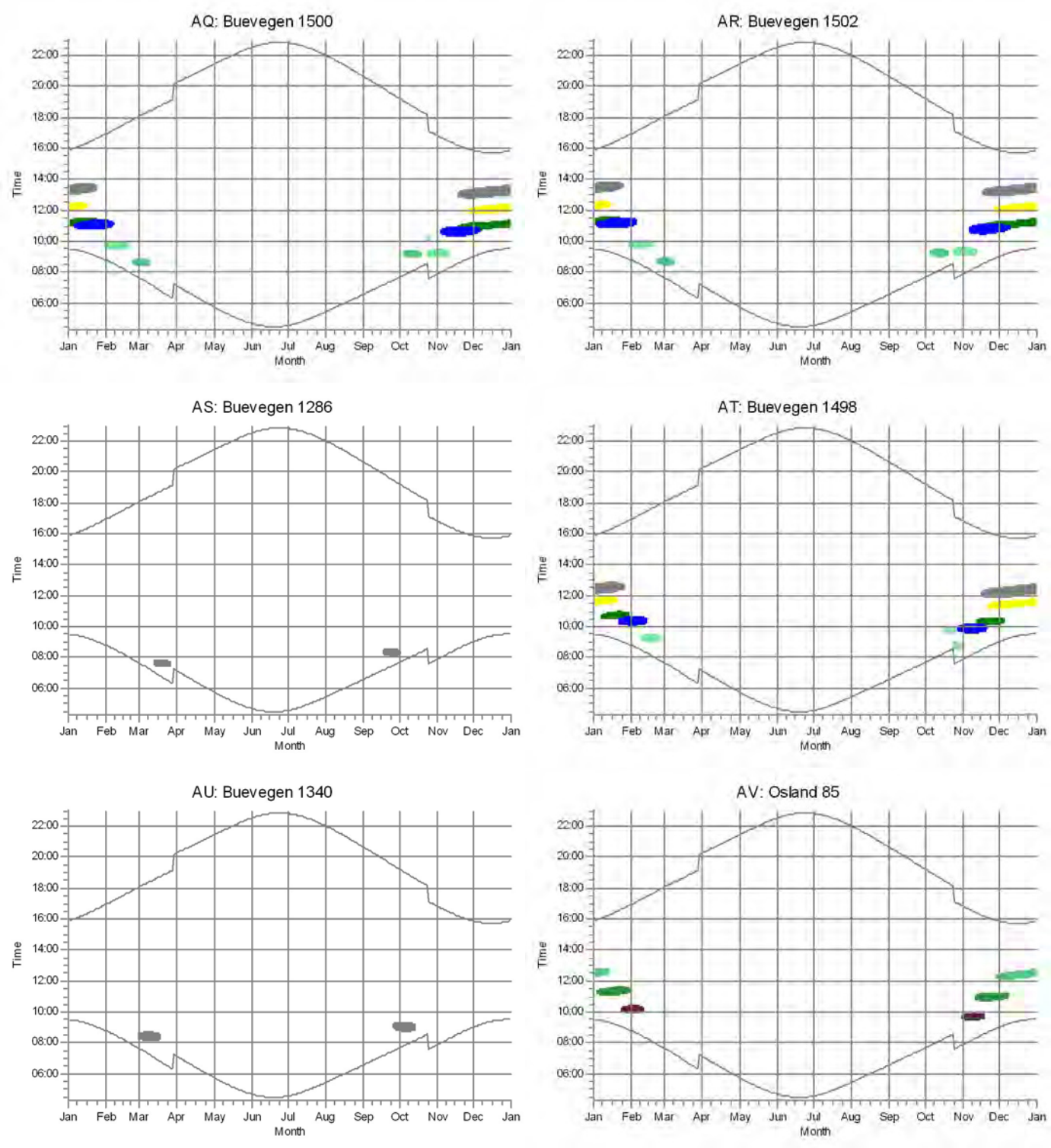


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SHADOW - Calendar, graphical

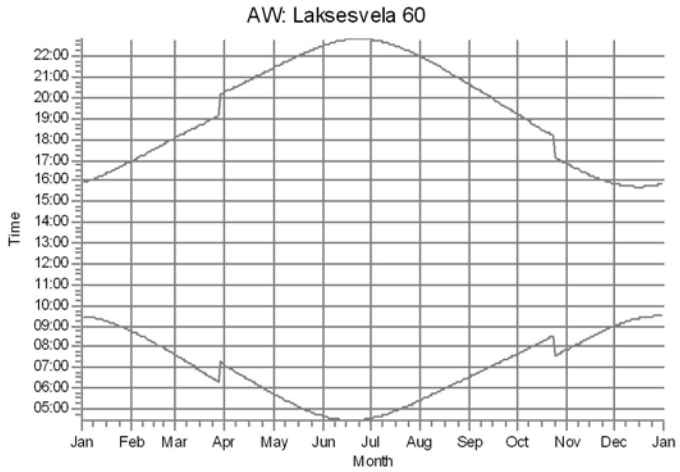
Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere

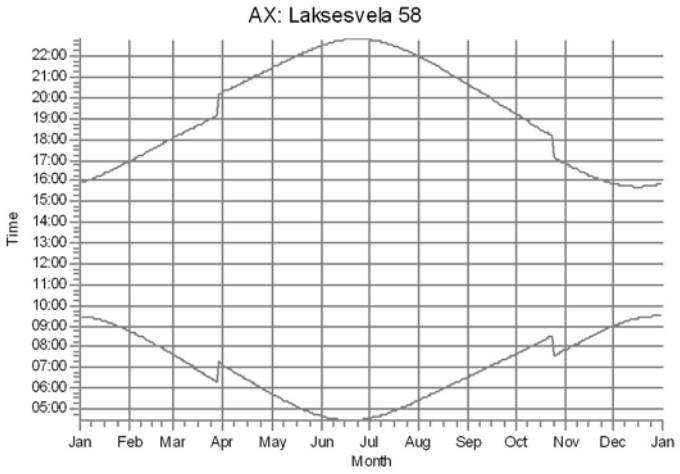


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - worst case - mottakere





WTGs

Vedlegg 2.1

Tabell Moifjellet og Mellomstrand vindkraftverk

realistic case

Project:

Moifjellet og Mellomstrand vrk

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Calculated:

19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (37)	07:35		09:10 (19)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (24)	18:05	24	09:34 (19)	20:17	21:26	22:30
2	09:27			08:43		11:24 (37)	07:33		09:10 (19)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (32)	18:07	25	09:35 (19)	20:19	21:28	22:32
3	09:27			08:41		12:08 (32)	07:30		09:10 (19)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (27)	18:09	24	09:34 (19)	20:21	21:30	22:34
4	09:26			08:39		12:07 (32)	07:27		09:10 (19)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (27)	18:12	24	09:34 (19)	20:24	21:33	22:35
5	09:26			08:37		12:06 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (27)	18:14	23	09:33 (19)	20:26	21:35	22:37
6	09:25			08:34		12:06 (32)	07:21		08:24 (21)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (27)	18:17	28	09:32 (19)	20:28	21:37	22:38
7	09:24			08:32		12:05 (32)	07:19		08:21 (21)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (27)	18:19	32	09:30 (19)	20:30	21:40	22:39
8	09:24			08:30		12:05 (32)	07:16		08:19 (21)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (27)	18:21	32	09:28 (19)	20:33	21:42	22:40
9	09:23			08:27		12:04 (32)	07:13		08:18 (21)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (27)	18:24	29	09:26 (19)	20:35	21:44	22:42
10	09:22			08:25		12:04 (32)	07:10		08:17 (21)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (28)	18:26	18	08:35 (21)	20:37	21:46	22:43
11	09:21			08:23		12:04 (32)	07:07		08:17 (21)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (28)	18:28	18	08:35 (21)	20:40	21:49	22:44
12	09:20			08:20		12:04 (32)	07:04		08:17 (21)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (28)	18:31	19	08:36 (21)	20:42	21:51	22:45
13	09:18			08:18		12:03 (32)	07:01		08:17 (21)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (28)	18:33	18	08:35 (21)	20:44	21:53	22:46
14	09:17			08:15		12:04 (32)	06:59		08:17 (21)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (28)	18:35	17	08:34 (21)	20:47	21:55	22:47
15	09:16			08:13		12:04 (32)	06:56		08:18 (21)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (28)	18:38	15	08:33 (21)	20:49	21:58	22:47
16	09:15			08:10		12:03 (32)	06:53		08:19 (21)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (28)	18:40	12	08:31 (21)	20:51	22:00	22:48
17	09:13			08:07		12:03 (32)	06:50		08:22 (21)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (28)	18:42	5	08:27 (21)	20:53	22:02	22:49
18	09:12			08:05		12:04 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (27)	18:49			21:00	22:08	22:50
21	09:07		11:29 (37)	07:57		12:05 (32)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (24)	17:45	71	14:56 (27)	18:51			21:03	22:10	22:50
22	09:05		11:28 (37)	07:54		12:06 (32)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (24)	17:48	66	14:55 (27)	18:54			21:05	22:12	22:50
23	09:03		11:29 (37)	07:52		09:20 (19)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (24)	17:50	69	14:54 (27)	18:56			21:07	22:14	22:50
24	09:02		11:28 (37)	07:49		09:16 (19)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (24)	17:53	69	14:52 (27)	18:58			21:10	22:16	22:51
25	09:00		11:27 (37)	07:46		09:14 (19)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (24)	17:55	64	14:49 (27)	19:01			21:12	22:18	22:50
26	08:58		11:22 (37)	07:44		09:13 (19)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (24)	17:57	54	14:45 (27)	19:03			21:14	22:20	22:50
27	08:56		11:14 (37)	07:41		09:12 (19)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (24)	18:00	41	12:35 (32)	19:05			21:17	22:22	22:50
28	08:54		11:14 (37)	07:38		09:11 (19)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (24)	18:02	33	12:29 (32)	19:07			21:19	22:24	22:50
29	08:52		11:15 (37)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (24)				20:10			21:21	22:25	22:50
30	08:50		11:15 (37)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (24)				20:12			21:24	22:27	22:49
31	08:48		11:17 (37)				07:10				04:41	
	16:54	57	13:05 (24)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (21)	07:51		11:33 (32)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (21)	16:49	78	14:57 (28)	15:51
2	04:33		05:26		06:35			07:42		08:56 (21)	07:54		11:34 (32)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (21)	16:46	74	14:26 (27)	15:50
3	04:34		05:28		06:37			07:44		08:55 (21)	07:56		11:35 (32)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (21)	16:44	71	14:25 (27)	15:49
4	04:35		05:31		06:40			07:46		08:55 (21)	07:59		11:35 (32)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (19)	16:41	69	14:24 (27)	15:48
5	04:36		05:33		06:42			07:48		08:56 (21)	08:01		11:36 (32)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (19)	16:39	64	14:23 (27)	15:47
6	04:37		05:35		06:44			07:51		08:57 (21)	08:03		11:37 (32)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (19)	16:37	61	14:22 (27)	15:46
7	04:39		05:37		06:46			07:53		08:58 (21)	08:06		11:37 (32)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (19)	16:34	53	14:17 (27)	15:45
8	04:40		05:39		06:49			07:55		09:03 (21)	08:08		11:39 (32)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (19)	16:32	42	14:11 (27)	15:45
9	04:41		05:42		06:51			07:57		09:45 (19)	08:11		10:53 (37)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (19)	16:30	37	12:12 (32)	15:44
10	04:43		05:44		06:53			08:00		09:45 (19)	08:13		10:50 (37)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (19)	16:28	52	12:34 (24)	15:44
11	04:44		05:46		06:55			08:02		09:44 (19)	08:15		10:48 (37)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (19)	16:25	57	12:36 (24)	15:43
12	04:46		05:48		06:57			08:04		09:43 (19)	08:18		10:47 (37)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (19)	16:23	58	12:37 (24)	15:43
13	04:47		05:51		07:00			08:07		09:44 (19)	08:20		10:47 (37)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (19)	16:21	57	12:39 (24)	15:42
14	04:49		05:53		07:02			08:09		09:44 (19)	08:22		10:46 (37)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (32)	16:19	52	12:39 (24)	15:42
15	04:51		05:55		07:04			08:11		09:45 (19)	08:25		10:47 (37)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (32)	16:17	43	12:40 (24)	15:42
16	04:52		05:57		07:06			08:13		09:45 (19)	08:27		10:55 (37)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (27)	16:15	37	12:41 (24)	15:42
17	04:54		06:00		07:08			08:16		09:47 (19)	08:29		11:00 (37)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (27)	16:13	33	12:41 (24)	15:42
18	04:56		06:02		07:11			08:18		09:48 (19)	08:32		11:02 (37)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (27)	16:11	33	12:42 (24)	15:42
19	04:58		06:04		07:13			08:20		09:52 (19)	08:34		11:04 (37)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (27)	16:09	21	12:43 (24)	15:42
20	05:00		06:06		07:15			08:23		12:37 (32)	08:36		11:03 (37)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (27)	16:08	22	12:42 (24)	15:43
21	05:01		06:08		07:17			08:25		12:36 (32)	08:39		11:04 (37)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (27)	16:06	8	12:43 (24)	15:43
22	05:03		06:11		07:19			08:27		12:35 (32)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (27)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (32)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (27)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (32)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (27)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (32)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (28)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (32)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (28)	15:58			15:46
27	05:13		06:22		07:30		09:02 (21)	07:39		11:33 (32)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (21)	17:01	97	15:16 (28)	15:56			15:47
28	05:16		06:24		07:33		09:00 (21)	07:42		11:33 (32)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (21)	16:59	101	15:18 (28)	15:55			15:48
29	05:18		06:26		07:35		08:58 (21)	07:44		11:33 (32)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (21)	16:56	102	15:18 (28)	15:54			15:49
30	05:20		06:29		07:37		08:56 (21)	07:47		11:33 (32)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (21)	16:54	99	15:15 (28)	15:52			15:50
31	05:22		06:31					07:49		11:34 (32)				09:28
	22:03		20:42					16:51	90	15:09 (28)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (37)	07:35		09:09 (19)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (27)	18:05	23	09:32 (19)	20:17	21:26	22:30
2	09:27			08:43		12:00 (32)	07:33		09:09 (19)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (27)	18:07	24	09:33 (19)	20:19	21:28	22:32
3	09:27			08:41		11:58 (32)	07:30		09:09 (19)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (27)	18:09	24	09:33 (19)	20:21	21:30	22:34
4	09:26			08:39		11:58 (32)	07:27		09:09 (19)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (27)	18:12	23	09:32 (19)	20:24	21:33	22:35
5	09:26			08:37		11:57 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (27)	18:14	21	09:31 (19)	20:26	21:35	22:37
6	09:25			08:34		11:57 (32)	07:21		09:10 (19)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (27)	18:17	20	09:30 (19)	20:28	21:37	22:38
7	09:24			08:32		11:56 (32)	07:19		09:11 (19)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (27)	18:19	17	09:28 (19)	20:30	21:40	22:39
8	09:24			08:30		11:56 (32)	07:16		09:13 (19)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (28)	18:21	12	09:25 (19)	20:33	21:42	22:40
9	09:23			08:27		11:56 (32)	07:13		09:16 (19)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (28)	18:24	5	09:21 (19)	20:35	21:44	22:42
10	09:22			08:25		11:55 (32)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (28)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (32)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (28)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (32)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (28)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (28)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (27)	18:45			20:56	22:04	22:49
19	09:10		12:54 (24)	08:02		11:57 (32)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (24)	17:40	70	14:48 (27)	18:47			20:58	22:06	22:50
20	09:08		11:12 (37)	08:00		11:57 (32)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (24)	17:43	68	14:47 (27)	18:49			21:00	22:08	22:50
21	09:07		11:11 (37)	07:57		11:58 (32)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (24)	17:45	64	14:46 (27)	18:51			21:03	22:10	22:50
22	09:05		11:11 (37)	07:54		11:59 (32)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (24)	17:48	58	14:44 (27)	18:54			21:05	22:12	22:50
23	09:03		11:11 (37)	07:52		09:17 (19)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (24)	17:50	62	14:43 (27)	18:56			21:07	22:14	22:50
24	09:02		11:10 (37)	07:49		09:14 (19)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (24)	17:53	57	14:39 (27)	18:58			21:10	22:16	22:51
25	09:00		11:08 (37)	07:46		09:13 (19)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (24)	17:55	42	12:28 (32)	19:01			21:12	22:18	22:50
26	08:58		11:09 (37)	07:44		09:11 (19)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (24)	17:57	38	12:24 (32)	19:03			21:14	22:20	22:50
27	08:56		11:09 (37)	07:41		09:10 (19)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (24)	18:00	22	09:32 (19)	19:05			21:17	22:22	22:50
28	08:54		11:10 (37)	07:38		09:09 (19)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (24)	18:02	23	09:32 (19)	19:07			21:19	22:24	22:50
29	08:52		11:12 (37)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (24)				20:10			21:21	22:25	22:50
30	08:50		11:12 (37)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (24)				20:12			21:24	22:27	22:49
31	08:48		11:14 (37)				07:10				04:41	
	16:54	56	14:29 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (32)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (28)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (32)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (28)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (32)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (28)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (32)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (27)	15:48
5	04:36	05:33	06:42	07:48		09:51 (19)	08:01		11:27 (32)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (19)	16:39	70	14:17 (27)	15:47
6	04:37	05:35	06:44	07:51		09:48 (19)	08:03		11:28 (32)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (19)	16:37	65	14:16 (27)	15:46
7	04:39	05:37	06:46	07:53		09:46 (19)	08:06		11:28 (32)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (19)	16:34	62	14:14 (27)	15:45
8	04:40	05:39	06:49	07:55		09:45 (19)	08:08		11:29 (32)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (19)	16:32	57	14:13 (27)	15:45
9	04:41	05:42	06:51	07:57		09:44 (19)	08:11		11:30 (32)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (19)	16:30	53	14:12 (27)	15:44
10	04:43	05:44	06:53	08:00		09:44 (19)	08:13		10:47 (37)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (19)	16:28	58	14:10 (27)	15:44
11	04:44	05:46	06:55	08:02		09:43 (19)	08:15		10:45 (37)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (19)	16:25	55	13:59 (27)	15:43
12	04:46	05:48	06:57	08:04		09:42 (19)	08:18		10:44 (37)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (19)	16:23	57	12:31 (24)	15:43
13	04:47	05:51	07:00	08:07		09:43 (19)	08:20		10:43 (37)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (19)	16:21	59	12:32 (24)	15:42
14	04:49	05:53	07:02	08:09		09:42 (19)	08:22		10:42 (37)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (19)	16:19	58	12:33 (24)	15:42
15	04:51	05:55	07:04	08:11		09:43 (19)	08:25		10:42 (37)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (32)	16:17	53	12:34 (24)	15:42
16	04:52	05:57	07:06	08:13		09:44 (19)	08:27		10:42 (37)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (32)	16:15	45	12:35 (24)	15:42
17	04:54	06:00	07:08	08:16		09:45 (19)	08:29		10:41 (37)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (27)	16:13	47	12:35 (24)	15:42
18	04:56	06:02	07:11	08:18		09:46 (19)	08:32		10:44 (37)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (27)	16:11	46	12:36 (24)	15:42
19	04:58	06:04	07:13	08:20		09:49 (19)	08:34		10:46 (37)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (27)	16:09	45	12:37 (24)	15:42
20	05:00	06:06	07:15	08:23		12:30 (32)	08:36		10:46 (37)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (27)	16:08	45	12:37 (24)	15:43
21	05:01	06:08	07:17	08:25		12:29 (32)	08:39		10:46 (37)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (27)	16:06	36	12:37 (24)	15:43
22	05:03	06:11	07:19	08:27		12:27 (32)	08:41		10:48 (37)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (27)	16:04	30	12:38 (24)	15:43
23	05:05	06:13	07:22	08:30		12:27 (32)	08:43		12:30 (24)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (27)	16:02	5	12:35 (24)	15:44
24	05:07	06:15	07:24	08:32		12:26 (32)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (27)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (32)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (27)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (32)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (32)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (28)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (32)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (28)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (32)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (28)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (32)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (28)	15:52			15:50
31	05:22	06:31		07:49		11:25 (32)				09:28
	22:03	20:42		16:51	101	15:13 (28)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (37)	07:35		08:50 (19)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (27)	18:05	39	11:29 (32)	20:17	21:26	22:30
2	09:27			08:43		10:44 (37)	07:33		08:50 (19)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (27)	18:07	31	11:25 (32)	20:19	21:28	22:32
3	09:27			08:41		10:46 (37)	07:30		08:49 (19)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (27)	18:09	21	09:10 (19)	20:21	21:31	22:34
4	09:26			08:39		10:47 (37)	07:27		08:48 (19)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (28)	18:12	22	09:10 (19)	20:24	21:33	22:35
5	09:26			08:37		10:50 (37)	07:24		08:48 (19)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (28)	18:14	21	09:09 (19)	20:26	21:35	22:37
6	09:25			08:34		11:05 (32)	07:21		08:48 (19)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (28)	18:17	21	09:09 (19)	20:28	21:37	22:38
7	09:24			08:32		11:03 (32)	07:19		08:48 (19)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (28)	18:19	20	09:08 (19)	20:30	21:40	22:39
8	09:24			08:30		11:03 (32)	07:16		08:48 (19)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (28)	18:21	19	09:07 (19)	20:33	21:42	22:40
9	09:23			08:27		11:02 (32)	07:13		08:48 (19)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (26)	18:24	18	09:06 (19)	20:35	21:44	22:42
10	09:22			08:25		11:01 (32)	07:10		08:49 (19)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (26)	18:26	15	09:04 (19)	20:37	21:46	22:43
11	09:21			08:23		11:01 (32)	07:07		08:51 (19)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (28)	18:28	10	09:01 (19)	20:40	21:49	22:44
12	09:20			08:20		11:00 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (32)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (27)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (27)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (27)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (32)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (27)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (32)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (27)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (32)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (27)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (32)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (27)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (32)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (32)	19:01			21:12	22:18	22:50
26	08:58		12:05 (24)	07:44		08:58 (19)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (24)	17:57	36	11:36 (32)	19:03			21:14	22:20	22:50
27	08:56		12:05 (24)	07:41		08:54 (19)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (27)	18:00	41	11:34 (32)	19:05			21:17	22:22	22:50
28	08:54		11:00 (37)	07:38		08:52 (19)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (27)	18:02	41	11:32 (32)	19:08			21:19	22:24	22:50
29	08:52		10:56 (37)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (27)				20:10			21:21	22:25	22:50
30	08:50		10:50 (37)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (27)				20:12			21:24	22:27	22:49
31	08:48		10:44 (37)				07:10				04:41	
	16:54	62	14:05 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (32)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (26)	15:51
2	04:33		05:26		06:35		07:42		09:32 (19)	07:54		10:32 (32)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (19)	16:46	110	15:25 (26)	15:50
3	04:34		05:28		06:37		07:44		09:28 (19)	07:56		10:33 (32)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (19)	16:44	97	14:53 (28)	15:49
4	04:35		05:31		06:40		07:46		09:26 (19)	07:59		10:33 (32)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (19)	16:41	89	14:46 (28)	15:48
5	04:36		05:33		06:42		07:48		09:25 (19)	08:01		10:35 (32)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (19)	16:39	81	14:41 (28)	15:47
6	04:37		05:35		06:44		07:51		09:24 (19)	08:03		10:20 (37)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (19)	16:37	77	14:35 (28)	15:46
7	04:39		05:37		06:46		07:53		09:23 (19)	08:06		10:16 (37)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (19)	16:34	77	14:32 (28)	15:45
8	04:40		05:39		06:49		07:55		09:23 (19)	08:08		10:15 (37)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (19)	16:32	71	13:39 (27)	15:45
9	04:41		05:42		06:51		07:57		09:22 (19)	08:11		10:15 (37)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (19)	16:30	72	13:39 (27)	15:44
10	04:43		05:44		06:53		08:00		09:23 (19)	08:13		10:14 (37)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (19)	16:28	71	13:38 (27)	15:44
11	04:44		05:46		06:55		08:02		09:23 (19)	08:15		10:15 (37)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (19)	16:25	61	13:36 (27)	15:43
12	04:46		05:48		06:57		08:04		09:23 (19)	08:18		10:24 (37)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (32)	16:23	52	13:35 (27)	15:43
13	04:47		05:51		07:00		08:07		09:24 (19)	08:20		10:28 (37)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (32)	16:21	47	13:33 (27)	15:42
14	04:49		05:53		07:02		08:09		09:25 (19)	08:22		10:32 (37)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (32)	16:19	39	13:30 (27)	15:42
15	04:51		05:55		07:04		08:11		09:28 (19)	08:25		11:38 (24)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (32)	16:17	19	13:26 (27)	15:42
16	04:52		05:57		07:06		08:13		11:35 (32)	08:27		11:38 (24)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (32)	16:15	4	11:42 (24)	15:42
17	04:54		06:00		07:08		08:16		11:34 (32)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (32)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (32)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (27)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (32)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (27)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (32)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (27)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (32)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (27)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (32)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (27)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (32)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (27)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (32)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (27)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (32)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (27)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (32)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (27)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (32)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (27)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (32)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (28)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (32)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (28)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (32)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (28)	15:52			15:50
31	05:22		06:31				07:49		10:31 (32)				09:28
	22:03		20:42				16:51	99	14:52 (28)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46		11:39 (32)	07:35	09:25 (19)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (28)	18:05	9 09:34 (19)	20:17	21:26	22:31
2	09:27		08:43		11:39 (32)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (28)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (32)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (28)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (32)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (28)	18:12		20:24	21:33	22:35
5	09:26	12:20 (24)	08:37		11:39 (32)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (24)	17:06	80	15:09 (28)	18:14		20:26	21:35	22:37
6	09:25	12:19 (24)	08:34		11:40 (32)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (24)	17:08	74	15:08 (28)	18:17		20:28	21:37	22:38
7	09:24	12:17 (24)	08:32		11:40 (32)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (24)	17:11	62	14:11 (27)	18:19		20:30	21:40	22:39
8	09:24	12:17 (24)	08:30		11:41 (32)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (24)	17:13	61	14:11 (27)	18:21		20:33	21:42	22:40
9	09:23	12:18 (24)	08:27		11:42 (32)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (24)	17:16	57	14:10 (27)	18:24		20:35	21:44	22:42
10	09:22	11:06 (37)	08:25		11:42 (32)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (24)	17:18	54	14:09 (27)	18:26		20:37	21:46	22:43
11	09:21	11:02 (37)	08:23		11:44 (32)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (24)	17:21	48	14:08 (27)	18:28		20:40	21:49	22:44
12	09:20	11:01 (37)	08:20		11:45 (32)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (24)	17:23	42	14:06 (27)	18:31		20:42	21:51	22:45
13	09:18	11:02 (37)	08:18		11:46 (32)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (24)	17:26	32	14:02 (27)	18:33		20:44	21:53	22:46
14	09:17	11:02 (37)	08:15		11:49 (32)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (24)	17:28	18	12:07 (32)	18:35		20:47	21:55	22:47
15	09:16	11:02 (37)	08:13		11:52 (32)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (24)	17:31	12	12:04 (32)	18:38		20:49	21:58	22:47
16	09:15	11:02 (37)	08:10		09:29 (19)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (24)	17:33	5	09:34 (19)	18:40		20:51	22:00	22:48
17	09:13	11:02 (37)	08:07		09:25 (19)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (24)	17:36	12	09:37 (19)	18:42		20:53	22:02	22:49
18	09:12	11:03 (37)	08:05		09:24 (19)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (27)	17:38	16	09:40 (19)	18:45		20:56	22:04	22:49
19	09:10	11:03 (37)	08:02		09:23 (19)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (27)	17:40	17	09:40 (19)	18:47		20:58	22:06	22:50
20	09:08	11:04 (37)	08:00		09:22 (19)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (27)	17:43	19	09:41 (19)	18:49		21:00	22:08	22:50
21	09:07	11:04 (37)	07:57		09:21 (19)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (27)	17:45	20	09:41 (19)	18:51		21:03	22:10	22:50
22	09:05	11:05 (37)	07:54		09:20 (19)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (27)	17:48	21	09:41 (19)	18:54		21:05	22:12	22:50
23	09:03	11:05 (37)	07:52		09:21 (19)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (27)	17:50	21	09:42 (19)	18:56		21:07	22:14	22:51
24	09:02	11:06 (37)	07:49		09:21 (19)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (27)	17:53	20	09:41 (19)	18:58		21:10	22:16	22:51
25	09:00	11:07 (37)	07:46		09:21 (19)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (28)	17:55	20	09:41 (19)	19:01		21:12	22:18	22:51
26	08:58	11:09 (37)	07:44		09:21 (19)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (28)	17:57	19	09:40 (19)	19:03		21:14	22:20	22:50
27	08:56	11:10 (37)	07:41		09:22 (19)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (28)	18:00	16	09:38 (19)	19:05		21:17	22:22	22:50
28	08:54	11:13 (37)	07:38		09:23 (19)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (28)	18:02	14	09:37 (19)	19:08		21:19	22:24	22:50
29	08:52	11:40 (32)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (28)				20:10		21:21	22:25	22:50
30	08:50	11:39 (32)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (28)				20:12		21:24	22:27	22:49
31	08:48	11:39 (32)				07:10			04:41	
	16:54	88 15:13 (28)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				
Sun reduction		0,50		0,50		0,50				
Oper. time red.		0,80		0,80		0,80				
Wind dir. red.		0,62		0,63		0,73				
Total reduction		0,25		0,25		0,29				
Total, real		371		276		3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (32)	09:00		10:44 (37)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (27)	15:51	31	12:23 (24)
2	04:33	05:26	06:35	07:42			07:54		11:11 (32)	09:02		10:48 (37)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (27)	15:50	27	12:23 (24)
3	04:34	05:28	06:37	07:44			07:56		11:11 (32)	09:03		12:01 (24)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (27)	15:49	17	12:18 (24)
4	04:35	05:31	06:40	07:46			07:59		11:10 (32)	09:05		12:01 (24)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (27)	15:48	13	12:14 (24)
5	04:36	05:33	06:42	07:48			08:01		11:10 (32)	09:07		12:02 (24)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (28)	15:47	11	12:13 (24)
6	04:37	05:35	06:44	07:51			08:03		11:10 (32)	09:09		12:05 (24)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (28)	15:46	5	12:10 (24)
7	04:39	05:37	06:46	07:53			08:06		11:09 (32)	09:10		12:07 (24)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (28)	15:45	2	12:09 (24)
8	04:40	05:39	06:49	07:55			08:08		11:09 (32)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (28)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (28)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (28)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (28)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (19)	08:18		11:11 (32)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (19)	16:23	88	14:45 (28)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (19)	08:20		11:12 (32)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (19)	16:21	86	14:45 (28)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (19)	08:22		10:45 (37)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (19)	16:19	89	14:45 (28)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (19)	08:25		10:42 (37)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (19)	16:17	87	14:45 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (19)	08:27		10:41 (37)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (19)	16:15	81	14:30 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (19)	08:30		10:41 (37)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (19)	16:13	83	14:25 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (19)	08:32		10:40 (37)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (19)	16:11	84	13:41 (27)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (19)	08:34		10:40 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (19)	16:09	83	13:40 (27)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (19)	08:36		10:39 (37)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (19)	16:08	82	13:39 (27)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (19)	08:39		10:39 (37)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (19)	16:06	80	13:38 (27)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		10:40 (37)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (19)	16:04	75	13:37 (27)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		10:39 (37)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (19)	16:02	69	13:35 (27)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (19)	08:45		10:40 (37)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (19)	16:01	58	13:32 (27)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (19)	08:47		10:40 (37)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (19)	15:59	45	12:20 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		10:41 (37)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (19)	15:58	43	12:21 (24)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (32)	08:52		10:41 (37)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (32)	15:56	43	12:21 (24)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (32)	08:54		10:42 (37)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (32)	15:55	42	12:22 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (32)	08:56		10:42 (37)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (27)	15:54	42	12:22 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (32)	08:58		10:42 (37)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (27)	15:52	40	12:22 (24)	15:50		
31	05:22	06:31		07:49		11:13 (32)				09:28		
	22:03	20:42		16:51	50	13:38 (27)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (37)	08:46		11:58 (32)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (37)	16:56	88	15:21 (28)	18:05	20:17	21:26	22:30
2	09:27		11:11 (37)	08:43		11:59 (32)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (37)	16:58	85	15:21 (28)	18:07	20:19	21:28	22:32
3	09:27		11:11 (37)	08:41		12:00 (32)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (24)	17:01	84	15:21 (28)	18:09	20:21	21:31	22:34
4	09:27		11:11 (37)	08:39		11:59 (32)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (24)	17:03	82	15:20 (28)	18:12	20:24	21:33	22:35
5	09:26		11:11 (37)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (24)	17:06	81	15:19 (28)	18:14	20:26	21:35	22:37
6	09:25		11:11 (37)	08:34		12:00 (32)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (24)	17:08	75	15:18 (28)	18:17	20:28	21:37	22:38
7	09:24		11:11 (37)	08:32		12:01 (32)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (24)	17:11	64	15:14 (28)	18:19	20:30	21:40	22:39
8	09:24		11:11 (37)	08:30		12:02 (32)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (24)	17:13	57	14:25 (27)	18:21	20:33	21:42	22:40
9	09:23		11:12 (37)	08:27		12:03 (32)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (24)	17:16	53	14:24 (27)	18:24	20:35	21:44	22:42
10	09:22		11:11 (37)	08:25		12:04 (32)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (24)	17:18	48	14:23 (27)	18:26	20:37	21:46	22:43
11	09:21		11:12 (37)	08:23		12:06 (32)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (24)	17:21	43	14:22 (27)	18:28	20:40	21:49	22:44
12	09:20		11:12 (37)	08:20		12:07 (32)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (24)	17:23	35	14:20 (27)	18:31	20:42	21:51	22:45
13	09:18		11:12 (37)	08:18		12:10 (32)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (24)	17:26	22	14:16 (27)	18:33	20:44	21:53	22:46
14	09:17		11:12 (37)	08:15		09:38 (19)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (24)	17:28	10	12:19 (32)	18:35	20:47	21:55	22:47
15	09:16		11:12 (37)	08:13		09:35 (19)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (24)	17:31	12	09:47 (19)	18:38	20:49	21:58	22:47
16	09:15		11:12 (37)	08:10		09:33 (19)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (24)	17:33	16	09:49 (19)	18:40	20:51	22:00	22:48
17	09:13		11:13 (37)	08:07		09:32 (19)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (24)	17:36	18	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:14 (37)	08:05		09:31 (19)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (24)	17:38	20	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:15 (37)	08:02		09:31 (19)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (24)	17:40	20	09:51 (19)	18:47	20:58	22:06	22:50
20	09:08		11:15 (37)	08:00		09:30 (19)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (27)	17:43	21	09:51 (19)	18:49	21:00	22:08	22:50
21	09:07		11:16 (37)	07:57		09:30 (19)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (27)	17:45	21	09:51 (19)	18:51	21:03	22:10	22:50
22	09:05		11:16 (37)	07:54		09:29 (19)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (27)	17:48	22	09:51 (19)	18:54	21:05	22:12	22:50
23	09:03		11:17 (37)	07:52		09:30 (19)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (27)	17:50	21	09:51 (19)	18:56	21:07	22:14	22:51
24	09:02		11:19 (37)	07:49		09:31 (19)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (27)	17:53	19	09:50 (19)	18:58	21:10	22:16	22:51
25	09:00		11:20 (37)	07:46		09:31 (19)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (27)	17:55	18	09:49 (19)	19:01	21:12	22:18	22:51
26	08:58		11:23 (37)	07:44		09:32 (19)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (28)	17:57	15	09:47 (19)	19:03	21:14	22:20	22:50
27	08:56		11:58 (32)	07:41		09:34 (19)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (28)	18:00	11	09:45 (19)	19:05	21:17	22:22	22:50
28	08:54		11:58 (32)	07:38		09:38 (19)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (28)	18:02	2	09:40 (19)	19:07	21:19	22:24	22:50
29	08:52		11:59 (32)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (28)				20:10	21:21	22:25	22:50
30	08:50		11:58 (32)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (28)				20:12	21:24	22:27	22:49
31	08:48		11:58 (32)				07:10		04:41	
	16:54	88	15:22 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (32)	09:00		10:54 (37)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (27)	15:51	43	12:35 (24)
2	04:33		05:26		06:35		07:42			07:54		11:32 (32)	09:02		10:54 (37)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (27)	15:50	42	12:35 (24)
3	04:34		05:28		06:37		07:44			07:56		11:32 (32)	09:03		10:55 (37)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (27)	15:49	40	12:35 (24)
4	04:35		05:31		06:40		07:46			07:59		11:30 (32)	09:05		10:56 (37)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (28)	15:48	39	12:35 (24)
5	04:36		05:33		06:42		07:48			08:01		11:30 (32)	09:07		10:56 (37)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (28)	15:47	39	12:36 (24)
6	04:37		05:35		06:44		07:51			08:03		11:30 (32)	09:09		10:57 (37)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (28)	15:46	30	12:36 (24)
7	04:39		05:37		06:46		07:53			08:06		11:29 (32)	09:10		10:58 (37)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (28)	15:45	29	12:36 (24)
8	04:40		05:39		06:49		07:55			08:08		11:29 (32)	09:12		10:59 (37)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (28)	15:45	15	12:33 (24)
9	04:41		05:42		06:51		07:57			08:11		11:29 (32)	09:13		11:00 (37)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (28)	15:44	12	12:34 (24)
10	04:43		05:44		06:53		08:00			08:13		11:30 (32)	09:15		11:00 (37)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (28)	15:43	4	12:31 (24)
11	04:44		05:46		06:55		08:02			08:15		11:29 (32)	09:16		11:02 (37)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (28)	15:43	2	11:04 (37)
12	04:46		05:48		06:57		08:04			08:18		11:30 (32)	09:18		11:02 (37)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (28)	15:43	2	11:04 (37)
13	04:47		05:51		07:00		08:07			08:20		11:30 (32)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (28)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (19)	08:22		11:30 (32)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (19)	16:19	74	14:42 (28)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (19)	08:25		11:31 (32)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (19)	16:17	68	14:38 (28)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (19)	08:27		10:56 (37)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (19)	16:15	69	14:36 (28)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (19)	08:30		10:54 (37)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (19)	16:13	73	13:55 (27)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (19)	08:32		10:52 (37)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (19)	16:11	78	13:54 (27)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (19)	08:34		10:52 (37)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (19)	16:09	81	13:54 (27)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (19)	08:36		10:51 (37)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (19)	16:08	80	13:52 (27)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (19)	08:39		10:51 (37)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (19)	16:06	78	13:51 (27)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (19)	08:41		10:51 (37)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (19)	16:04	75	13:50 (27)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (19)	08:43		10:51 (37)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (19)	16:02	64	12:31 (24)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (19)	08:45		10:51 (37)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (19)	16:01	63	12:32 (24)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (19)	08:47		10:51 (37)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (19)	15:59	60	12:32 (24)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (19)	08:50		10:52 (37)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (19)	15:58	56	12:33 (24)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (19)	08:52		10:51 (37)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (19)	15:56	53	12:33 (24)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (19)	08:54		10:52 (37)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (32)	15:55	44	12:34 (24)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (32)	08:56		10:53 (37)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (27)	15:54	43	12:34 (24)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (32)	08:58		10:53 (37)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (27)	15:52	43	12:34 (24)	15:50		
31	05:22		06:31				07:49		11:35 (32)				09:28		11:11 (37)
	22:03		20:42				16:51	44	13:52 (27)				15:51	1	11:12 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (37)	08:46	12:23 (32)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (37)	16:56	82	15:30 (28)	18:05	20:17	21:26	22:30
2	09:27		11:23 (37)	08:43	12:24 (32)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (37)	16:58	86	15:34 (28)	18:07	20:19	21:28	22:32
3	09:27		11:23 (37)	08:41	12:25 (32)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (37)	17:01	84	15:34 (28)	18:09	20:21	21:31	22:34
4	09:26		11:23 (37)	08:39	12:25 (32)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (24)	17:03	85	15:34 (28)	18:12	20:24	21:33	22:35
5	09:26		11:23 (37)	08:37	12:25 (32)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (24)	17:06	82	15:33 (28)	18:14	20:26	21:35	22:37
6	09:25		11:24 (37)	08:34	12:26 (32)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (24)	17:08	79	15:33 (28)	18:17	20:28	21:37	22:38
7	09:24		11:24 (37)	08:32	12:26 (32)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (24)	17:11	74	15:31 (28)	18:19	20:30	21:40	22:39
8	09:24		11:24 (37)	08:30	12:28 (32)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (24)	17:13	68	15:30 (28)	18:21	20:33	21:42	22:40
9	09:23		11:24 (37)	08:27	12:28 (32)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (24)	17:16	60	15:26 (28)	18:24	20:35	21:44	22:42
10	09:22		11:25 (37)	08:25	12:29 (32)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (24)	17:18	51	14:44 (27)	18:26	20:37	21:46	22:43
11	09:21		11:25 (37)	08:23	12:32 (32)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (24)	17:21	45	14:43 (27)	18:28	20:40	21:49	22:44
12	09:20		11:25 (37)	08:20	09:49 (19)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (24)	17:23	45	14:42 (27)	18:31	20:42	21:51	22:45
13	09:18		11:26 (37)	08:18	09:45 (19)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (24)	17:26	43	14:40 (27)	18:33	20:44	21:53	22:46
14	09:17		11:26 (37)	08:15	09:44 (19)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (24)	17:28	27	14:38 (27)	18:35	20:47	21:55	22:47
15	09:16		11:26 (37)	08:13	09:43 (19)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (24)	17:31	18	10:01 (19)	18:38	20:49	21:58	22:47
16	09:15		11:27 (37)	08:10	09:42 (19)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (24)	17:33	20	10:02 (19)	18:40	20:51	22:00	22:48
17	09:13		11:27 (37)	08:07	09:41 (19)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (24)	17:35	21	10:02 (19)	18:42	20:53	22:02	22:49
18	09:12		11:28 (37)	08:05	09:41 (19)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (24)	17:38	22	10:03 (19)	18:45	20:56	22:04	22:49
19	09:10		11:29 (37)	08:02	09:40 (19)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (24)	17:40	23	10:03 (19)	18:47	20:58	22:06	22:50
20	09:08		11:30 (37)	08:00	09:40 (19)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (24)	17:43	23	10:03 (19)	18:49	21:00	22:08	22:50
21	09:07		11:31 (37)	07:57	09:40 (19)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (24)	17:45	22	10:02 (19)	18:51	21:03	22:10	22:50
22	09:05		11:31 (37)	07:54	09:40 (19)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (24)	17:48	22	10:02 (19)	18:54	21:05	22:12	22:50
23	09:03		11:33 (37)	07:52	09:42 (19)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (27)	17:50	20	10:02 (19)	18:56	21:07	22:14	22:50
24	09:02		11:35 (37)	07:49	09:42 (19)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (27)	17:53	18	10:00 (19)	18:58	21:10	22:16	22:51
25	09:00		11:39 (37)	07:46	09:43 (19)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (27)	17:55	16	09:59 (19)	19:01	21:12	22:18	22:50
26	08:58		12:24 (32)	07:44	09:45 (19)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (27)	17:57	11	09:56 (19)	19:03	21:14	22:20	22:50
27	08:56		12:23 (32)	07:41	09:49 (19)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (27)	18:00	2	09:51 (19)	19:05	21:17	22:22	22:50
28	08:54		12:23 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	61	15:15 (28)	18:02		19:07	21:19	22:24	22:50
29	08:52		12:24 (32)			07:15	05:49	04:44	04:30
	16:49	67	15:19 (28)			20:10	21:21	22:25	22:50
30	08:50		12:23 (32)			07:12	05:46	04:42	04:31
	16:51	74	15:23 (28)			20:12	21:24	22:27	22:49
31	08:48		12:24 (32)			07:10		04:41	
	16:53	77	15:26 (28)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1549		1149					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,62		0,62					
Total reduction		0,25		0,25					
Total, real		386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:59 (32)	09:00		11:07 (37)
	22:49	22:01	20:40	19:13			16:49	51	14:13 (27)	15:51	43	12:51 (24)
2	04:33	05:26	06:35	07:42			07:54		11:58 (32)	09:02		11:08 (37)
	22:48	21:58	20:37	19:10			16:46	61	14:57 (28)	15:50	42	12:51 (24)
3	04:34	05:28	06:37	07:44			07:56		11:57 (32)	09:03		11:08 (37)
	22:47	21:56	20:34	19:07			16:44	71	15:00 (28)	15:49	42	12:51 (24)
4	04:35	05:31	06:40	07:46			07:59		11:56 (32)	09:05		11:09 (37)
	22:47	21:54	20:31	19:04			16:41	76	15:01 (28)	15:48	41	12:52 (24)
5	04:36	05:33	06:42	07:48			08:01		11:55 (32)	09:07		11:09 (37)
	22:46	21:51	20:28	19:02			16:39	80	15:02 (28)	15:47	35	12:52 (24)
6	04:37	05:35	06:44	07:51			08:03		11:55 (32)	09:09		11:10 (37)
	22:45	21:49	20:25	18:59			16:37	82	15:03 (28)	15:46	31	12:52 (24)
7	04:38	05:37	06:46	07:53			08:06		11:54 (32)	09:10		11:11 (37)
	22:44	21:47	20:22	18:56			16:34	84	15:03 (28)	15:45	24	12:40 (24)
8	04:40	05:39	06:49	07:55			08:08		11:54 (32)	09:12		11:11 (37)
	22:43	21:44	20:20	18:53			16:32	87	15:04 (28)	15:45	24	12:41 (24)
9	04:41	05:42	06:51	07:57			08:11		11:55 (32)	09:13		11:12 (37)
	22:42	21:42	20:17	18:50			16:30	87	15:05 (28)	15:44	20	12:37 (24)
10	04:43	05:44	06:53	08:00			08:13		11:55 (32)	09:15		11:12 (37)
	22:40	21:39	20:14	18:47			16:28	81	15:01 (28)	15:43	17	11:29 (37)
11	04:44	05:46	06:55	08:02			08:15		11:54 (32)	09:16		11:14 (37)
	22:39	21:37	20:11	18:45			16:25	78	14:57 (28)	15:43	16	11:30 (37)
12	04:46	05:48	06:57	08:04			08:18		11:55 (32)	09:18		11:14 (37)
	22:38	21:34	20:08	18:42			16:23	74	14:55 (28)	15:43	15	11:29 (37)
13	04:47	05:51	07:00	08:07			08:20		11:56 (32)	09:19		11:15 (37)
	22:37	21:31	20:05	18:39			16:21	67	14:51 (28)	15:42	15	11:30 (37)
14	04:49	05:53	07:02	08:09			08:22		11:55 (32)	09:20		11:16 (37)
	22:35	21:29	20:02	18:36			16:19	62	14:47 (28)	15:42	14	11:30 (37)
15	04:51	05:55	07:04	08:11		10:19 (19)	08:25		11:56 (32)	09:21		11:16 (37)
	22:34	21:26	19:59	18:33	8	10:27 (19)	16:17	57	14:13 (27)	15:42	14	11:30 (37)
16	04:52	05:57	07:06	08:13		10:16 (19)	08:27		11:57 (32)	09:22		11:17 (37)
	22:32	21:24	19:56	18:31	13	10:29 (19)	16:15	54	14:12 (27)	15:42	12	11:29 (37)
17	04:54	06:00	07:08	08:16		10:15 (19)	08:29		11:12 (37)	09:23		11:17 (37)
	22:30	21:21	19:54	18:28	16	10:31 (19)	16:13	58	14:11 (27)	15:42	12	11:29 (37)
18	04:56	06:02	07:11	08:18		10:13 (19)	08:32		11:09 (37)	09:24		11:18 (37)
	22:29	21:18	19:51	18:25	19	10:32 (19)	16:11	67	14:10 (27)	15:42	11	11:29 (37)
19	04:58	06:04	07:13	08:20		10:12 (19)	08:34		11:08 (37)	09:25		11:19 (37)
	22:27	21:16	19:48	18:22	21	10:33 (19)	16:09	66	14:08 (27)	15:42	11	11:30 (37)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:06 (37)	09:26		11:20 (37)
	22:25	21:13	19:45	18:20	22	10:33 (19)	16:08	60	12:44 (24)	15:43	10	11:30 (37)
21	05:01	06:08	07:17	08:25		10:11 (19)	08:39		11:06 (37)	09:26		11:20 (37)
	22:24	21:10	19:42	18:17	23	10:34 (19)	16:06	62	12:46 (24)	15:43	10	11:30 (37)
22	05:03	06:11	07:19	08:27		10:10 (19)	08:41		11:06 (37)	09:27		11:21 (37)
	22:22	21:08	19:39	18:14	23	10:33 (19)	16:04	63	12:47 (24)	15:43	10	11:31 (37)
23	05:05	06:13	07:22	08:30		10:11 (19)	08:43		11:05 (37)	09:27		11:21 (37)
	22:20	21:05	19:36	18:12	22	10:33 (19)	16:02	63	12:47 (24)	15:44	10	11:31 (37)
24	05:07	06:15	07:24	08:32		10:10 (19)	08:45		11:05 (37)	09:28		11:22 (37)
	22:18	21:02	19:33	18:09	22	10:32 (19)	16:01	64	12:48 (24)	15:44	10	11:32 (37)
25	05:09	06:17	07:26	07:35		09:11 (19)	08:47		11:05 (37)	09:28		11:22 (37)
	22:16	20:59	19:30	17:06	21	09:32 (19)	15:59	63	12:48 (24)	15:45	11	11:33 (37)
26	05:11	06:20	07:28	07:37		09:11 (19)	08:50		11:06 (37)	09:28		11:22 (37)
	22:14	20:56	19:27	17:04	20	09:31 (19)	15:58	59	12:49 (24)	15:46	12	11:34 (37)
27	05:13	06:22	07:30	07:39		09:12 (19)	08:52		11:05 (37)	09:28		11:23 (37)
	22:12	20:54	19:25	17:01	18	09:30 (19)	15:56	57	12:49 (24)	15:47	11	11:34 (37)
28	05:16	06:24	07:33	07:42		09:14 (19)	08:54		11:06 (37)	09:28		11:23 (37)
	22:10	20:51	19:22	16:59	28	14:08 (27)	15:55	53	12:50 (24)	15:48	13	11:36 (37)
29	05:18	06:26	07:35	07:44		09:15 (19)	08:56		11:06 (37)	09:28		11:22 (37)
	22:07	20:48	19:19	16:56	44	14:10 (27)	15:54	44	12:50 (24)	15:49	14	11:36 (37)
30	05:20	06:29	07:37	07:47		09:19 (19)	08:58		11:06 (37)	09:28		11:23 (37)
	22:05	20:45	19:16	16:54	44	14:11 (27)	15:52	43	12:50 (24)	15:50	15	11:38 (37)
31	05:22	06:31		07:49		12:01 (32)				09:28		11:23 (37)
	22:03	20:42		16:51	46	14:13 (27)				15:51	15	11:38 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					410			1974			580	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,68			0,61			0,65	
Total reduction					0,27			0,24			0,26	
Total, real					112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		08:46		11:27 (32)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (28)	18:05	20:17	21:26	22:31
2	09:27	12:04 (24)	08:43		11:27 (32)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (24)	16:58	60	13:50 (27)	18:07	20:19	21:28	22:32
3	09:27	12:04 (24)	08:41		11:28 (32)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (24)	17:01	58	13:50 (27)	18:09	20:21	21:31	22:34
4	09:27	12:04 (24)	08:39		11:28 (32)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (24)	17:03	54	13:48 (27)	18:12	20:24	21:33	22:35
5	09:26	12:04 (24)	08:37		11:28 (32)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (24)	17:06	52	13:47 (27)	18:14	20:26	21:35	22:37
6	09:25	12:05 (24)	08:34		11:29 (32)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (24)	17:08	49	13:47 (27)	18:17	20:28	21:37	22:38
7	09:24	12:05 (24)	08:32		11:29 (32)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (24)	17:11	43	13:44 (27)	18:19	20:30	21:40	22:39
8	09:24	12:05 (24)	08:30		11:31 (32)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (24)	17:13	35	13:42 (27)	18:21	20:33	21:42	22:40
9	09:23	12:06 (24)	08:27		11:32 (32)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (24)	17:16	22	11:54 (32)	18:24	20:35	21:44	22:42
10	09:22	12:06 (24)	08:25		11:34 (32)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (24)	17:18	18	11:52 (32)	18:26	20:37	21:46	22:43
11	09:21	12:07 (24)	08:23		11:37 (32)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (24)	17:21	14	11:51 (32)	18:28	20:40	21:49	22:44
12	09:20	12:07 (24)	08:20		11:41 (32)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (27)	17:23	4	11:45 (32)	18:31	20:42	21:51	22:45
13	09:18	12:08 (24)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (27)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (24)	08:15		09:30 (19)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (27)	17:28	5	09:35 (19)	18:35	20:47	21:55	22:47
15	09:16	11:34 (32)	08:13		09:27 (19)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (27)	17:31	11	09:38 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10		09:25 (19)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (27)	17:33	14	09:39 (19)	18:40	20:51	22:00	22:48
17	09:13	11:31 (32)	08:07		09:23 (19)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (27)	17:36	17	09:40 (19)	18:42	20:53	22:02	22:49
18	09:12	11:30 (32)	08:05		09:23 (19)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (28)	17:38	18	09:41 (19)	18:45	20:56	22:04	22:49
19	09:10	11:29 (32)	08:02		09:22 (19)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (28)	17:40	19	09:41 (19)	18:47	20:58	22:06	22:50
20	09:09	11:28 (32)	08:00		09:22 (19)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (28)	17:43	19	09:41 (19)	18:49	21:00	22:08	22:50
21	09:07	11:28 (32)	07:57		09:22 (19)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (28)	17:45	19	09:41 (19)	18:51	21:03	22:10	22:50
22	09:05	11:28 (32)	07:54		09:22 (19)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (28)	17:48	19	09:41 (19)	18:54	21:05	22:12	22:50
23	09:03	11:26 (32)	07:52		09:23 (19)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (28)	17:50	18	09:41 (19)	18:56	21:07	22:14	22:51
24	09:02	11:26 (32)	07:49		09:23 (19)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (28)	17:53	17	09:40 (19)	18:58	21:10	22:16	22:51
25	09:00	11:26 (32)	07:46		09:24 (19)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (28)	17:55	14	09:38 (19)	19:01	21:12	22:18	22:51
26	08:58	11:26 (32)	07:44		09:25 (19)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (28)	17:57	11	09:36 (19)	19:03	21:14	22:20	22:50
27	08:56	11:25 (32)	07:41		09:30 (19)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (28)	18:00	1	09:31 (19)	19:05	21:17	22:22	22:50
28	08:54	11:26 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (32)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (28)				20:10	21:21	22:25	22:50
30	08:50	11:26 (32)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (28)				20:12	21:24	22:27	22:49
31	08:48	11:26 (32)				07:10		04:41	
	16:54	76 14:52 (28)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,66					
Total reduction		0,24		0,26					
Total, real		382		180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:03 (32)	09:00		11:49 (24)
	22:49	22:01	20:40	19:13			16:49	19	11:22 (32)	15:51	22	12:11 (24)
2	04:33	05:26	06:35	07:42			07:54		11:01 (32)	09:02		11:49 (24)
	22:48	21:59	20:37	19:10			16:46	23	11:24 (32)	15:50	22	12:11 (24)
3	04:34	05:28	06:37	07:44			07:56		11:01 (32)	09:03		11:49 (24)
	22:47	21:56	20:34	19:07			16:44	36	13:12 (27)	15:49	22	12:11 (24)
4	04:35	05:31	06:40	07:46			07:59		10:59 (32)	09:05		11:50 (24)
	22:47	21:54	20:31	19:04			16:41	43	13:14 (27)	15:48	21	12:11 (24)
5	04:36	05:33	06:42	07:48			08:01		10:59 (32)	09:07		11:50 (24)
	22:46	21:51	20:28	19:02			16:39	48	13:16 (27)	15:47	21	12:11 (24)
6	04:37	05:35	06:44	07:51			08:03		10:58 (32)	09:09		11:51 (24)
	22:45	21:49	20:25	18:59			16:37	53	13:18 (27)	15:46	16	12:07 (24)
7	04:39	05:37	06:46	07:53			08:06		10:57 (32)	09:10		11:51 (24)
	22:44	21:47	20:23	18:56			16:34	55	13:18 (27)	15:45	17	12:08 (24)
8	04:40	05:39	06:49	07:55			08:08		10:57 (32)	09:12		11:52 (24)
	22:43	21:44	20:20	18:53			16:32	58	13:19 (27)	15:45	8	12:00 (24)
9	04:41	05:42	06:51	07:57			08:11		10:57 (32)	09:13		11:53 (24)
	22:42	21:42	20:17	18:50			16:30	63	14:18 (28)	15:44	4	11:57 (24)
10	04:43	05:44	06:53	08:00			08:13		10:58 (32)	09:15		11:53 (24)
	22:41	21:39	20:14	18:47			16:28	71	14:22 (28)	15:43	1	11:54 (24)
11	04:44	05:46	06:55	08:02			08:15		10:57 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	76	14:23 (28)	15:43		
12	04:46	05:48	06:57	08:04			08:18		10:57 (32)	09:18		
	22:38	21:34	20:08	18:42			16:23	80	14:25 (28)	15:43		
13	04:47	05:51	07:00	08:07			08:20		10:58 (32)	09:19		
	22:37	21:32	20:05	18:39			16:21	81	14:26 (28)	15:42		
14	04:49	05:53	07:02	08:09			08:22		10:58 (32)	09:20		
	22:35	21:29	20:02	18:36			16:19	82	14:26 (28)	15:42		
15	04:51	05:55	07:04	08:11		10:00 (19)	08:25		10:58 (32)	09:21		
	22:34	21:26	19:59	18:33	7	10:07 (19)	16:17	83	14:27 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:57 (19)	08:27		10:59 (32)	09:22		
	22:32	21:24	19:56	18:31	12	10:09 (19)	16:15	83	14:28 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:56 (19)	08:30		11:00 (32)	09:23		
	22:31	21:21	19:54	18:28	15	10:11 (19)	16:13	83	14:29 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:54 (19)	08:32		11:00 (32)	09:24		
	22:29	21:18	19:51	18:25	17	10:11 (19)	16:11	81	14:29 (28)	15:42		
19	04:58	06:04	07:13	08:20		09:54 (19)	08:34		11:01 (32)	09:25		
	22:27	21:16	19:48	18:22	18	10:12 (19)	16:09	87	14:29 (28)	15:42		
20	05:00	06:06	07:15	08:23		09:53 (19)	08:36		11:02 (32)	09:26		
	22:25	21:13	19:45	18:20	19	10:12 (19)	16:08	88	14:29 (28)	15:43		
21	05:01	06:08	07:17	08:25		09:53 (19)	08:39		11:03 (32)	09:26		
	22:24	21:10	19:42	18:17	19	10:12 (19)	16:06	88	14:29 (28)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		11:04 (32)	09:27		
	22:22	21:08	19:39	18:14	20	10:12 (19)	16:04	88	14:30 (28)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		11:05 (32)	09:27		
	22:20	21:05	19:36	18:12	19	10:12 (19)	16:02	84	14:29 (28)	15:44		
24	05:07	06:15	07:24	08:32		09:53 (19)	08:45		11:07 (32)	09:28		
	22:18	21:02	19:33	18:09	17	10:10 (19)	16:01	72	14:30 (28)	15:44		
25	05:09	06:17	07:26	07:35		08:54 (19)	08:47		11:08 (32)	09:28		
	22:16	20:59	19:30	17:06	16	09:10 (19)	15:59	58	13:20 (27)	15:45		
26	05:11	06:20	07:28	07:37		08:55 (19)	08:50		11:11 (32)	09:28		
	22:14	20:57	19:27	17:04	14	09:09 (19)	15:58	53	13:20 (27)	15:46		
27	05:13	06:22	07:30	07:39		08:56 (19)	08:52		11:13 (32)	09:28		
	22:12	20:54	19:25	17:01	10	09:06 (19)	15:56	47	13:19 (27)	15:47		
28	05:16	06:24	07:33	07:42			08:54		11:48 (24)	09:28		
	22:10	20:51	19:22	16:59			15:55	35	13:18 (27)	15:48		
29	05:18	06:26	07:35	07:44			08:56		11:48 (24)	09:28		
	22:07	20:48	19:19	16:56			15:54	33	13:17 (27)	15:49		
30	05:20	06:29	07:37	07:47		11:09 (32)	08:58		11:48 (24)	09:28		
	22:05	20:45	19:16	16:54	7	11:16 (32)	15:52	30	13:15 (27)	15:50		
31	05:22	06:31		07:49		11:06 (32)				09:28		
	22:03	20:42		16:51	15	11:21 (32)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					225			1881			154	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,64	
Total reduction					0,29			0,25			0,25	
Total, real					65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (24)	08:46	11:53 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (24)	16:56	49	14:04 (27)	18:05	20:17	21:26	22:31
2	09:27		12:18 (24)	08:43	11:54 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (24)	16:58	44	14:02 (27)	18:07	20:19	21:28	22:32
3	09:27		11:54 (32)	08:41	11:56 (32)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (24)	17:01	39	14:01 (27)	18:09	20:21	21:31	22:34
4	09:27		11:52 (32)	08:39	11:57 (32)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (24)	17:03	32	13:59 (27)	18:12	20:24	21:33	22:35
5	09:26		11:51 (32)	08:37	11:59 (32)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (24)	17:06	19	13:55 (27)	18:14	20:26	21:35	22:37
6	09:25		11:50 (32)	08:34	12:04 (32)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (24)	17:08	5	12:09 (32)	18:17	20:28	21:37	22:38
7	09:24		11:50 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (27)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (32)	08:27	09:42 (19)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (27)	17:16	7	09:49 (19)	18:24	20:35	21:44	22:42
10	09:22		11:49 (32)	08:25	09:40 (19)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (27)	17:18	12	09:52 (19)	18:26	20:37	21:46	22:43
11	09:21		11:49 (32)	08:23	09:39 (19)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (27)	17:21	15	09:54 (19)	18:28	20:40	21:49	22:44
12	09:20		11:48 (32)	08:20	09:37 (19)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (27)	17:23	17	09:54 (19)	18:31	20:42	21:51	22:45
13	09:18		11:49 (32)	08:18	09:36 (19)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (27)	17:26	19	09:55 (19)	18:33	20:44	21:53	22:46
14	09:17		11:48 (32)	08:15	09:37 (19)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (27)	17:28	19	09:56 (19)	18:35	20:47	21:55	22:47
15	09:16		11:48 (32)	08:13	09:36 (19)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (28)	17:31	20	09:56 (19)	18:38	20:49	21:58	22:47
16	09:15		11:47 (32)	08:10	09:36 (19)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (28)	17:33	20	09:56 (19)	18:40	20:51	22:00	22:48
17	09:13		11:48 (32)	08:07	09:36 (19)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (28)	17:36	19	09:55 (19)	18:42	20:53	22:02	22:49
18	09:12		11:48 (32)	08:05	09:37 (19)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (28)	17:38	19	09:56 (19)	18:45	20:56	22:04	22:49
19	09:10		11:48 (32)	08:02	09:37 (19)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (28)	17:40	18	09:55 (19)	18:47	20:58	22:06	22:50
20	09:08		11:48 (32)	08:00	09:38 (19)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (28)	17:43	15	09:53 (19)	18:49	21:00	22:08	22:50
21	09:07		11:48 (32)	07:57	09:39 (19)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (28)	17:45	13	09:52 (19)	18:51	21:03	22:10	22:50
22	09:05		11:48 (32)	07:54	09:41 (19)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (28)	17:48	8	09:49 (19)	18:54	21:05	22:12	22:50
23	09:03		11:48 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (32)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (28)			20:10	21:21	22:25	22:50
30	08:50		11:51 (32)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (28)			20:12	21:24	22:27	22:49
31	08:48		11:52 (32)			07:10		04:41	
	16:54	55	14:55 (28)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (19)	09:00		11:31 (32)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (19)	15:51	60	13:37 (27)
2	04:33	05:26	06:35	07:42			07:54		09:12 (19)	09:02		11:32 (32)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (19)	15:50	56	13:36 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (27)
5	04:36	05:33	06:42	07:48			08:01		11:32 (32)	09:07		11:35 (32)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (32)	15:47	43	13:32 (27)
6	04:37	05:35	06:44	07:51			08:03		11:29 (32)	09:09		11:37 (32)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (27)	15:46	36	12:27 (24)
7	04:38	05:37	06:46	07:53			08:06		11:27 (32)	09:10		11:38 (32)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (27)	15:45	34	12:27 (24)
8	04:40	05:39	06:49	07:55			08:08		11:25 (32)	09:12		11:40 (32)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (27)	15:45	32	12:28 (24)
9	04:41	05:42	06:51	07:57			08:11		11:25 (32)	09:13		11:42 (32)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (27)	15:44	28	12:28 (24)
10	04:43	05:44	06:53	08:00			08:13		11:24 (32)	09:15		12:07 (24)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (27)	15:43	21	12:28 (24)
11	04:44	05:46	06:55	08:02			08:15		11:23 (32)	09:16		12:08 (24)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (28)	15:43	21	12:29 (24)
12	04:46	05:48	06:57	08:04			08:18		11:23 (32)	09:18		12:08 (24)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (28)	15:43	21	12:29 (24)
13	04:47	05:51	07:00	08:07			08:20		11:23 (32)	09:19		12:09 (24)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (28)	15:42	21	12:30 (24)
14	04:49	05:53	07:02	08:09			08:22		11:22 (32)	09:20		12:09 (24)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (28)	15:42	21	12:30 (24)
15	04:51	05:55	07:04	08:11			08:25		11:22 (32)	09:21		12:09 (24)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (28)	15:42	21	12:30 (24)
16	04:52	05:57	07:06	08:13			08:27		11:22 (32)	09:22		12:10 (24)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (28)	15:42	20	12:30 (24)
17	04:54	06:00	07:08	08:16			08:30		11:23 (32)	09:23		12:10 (24)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (28)	15:42	21	12:31 (24)
18	04:56	06:02	07:11	08:18			08:32		11:22 (32)	09:24		12:11 (24)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (28)	15:42	20	12:31 (24)
19	04:58	06:04	07:13	08:20			08:34		11:23 (32)	09:25		12:12 (24)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (28)	15:42	20	12:32 (24)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:22 (32)	09:26		12:12 (24)
	22:25	21:13	19:45	18:20	10	10:21 (19)	16:08	82	14:37 (28)	15:43	20	12:32 (24)
21	05:01	06:08	07:17	08:25		10:10 (19)	08:39		11:23 (32)	09:26		12:12 (24)
	22:24	21:10	19:42	18:17	13	10:23 (19)	16:06	80	14:37 (28)	15:43	20	12:32 (24)
22	05:03	06:11	07:19	08:27		10:08 (19)	08:41		11:24 (32)	09:27		12:13 (24)
	22:22	21:08	19:39	18:14	16	10:24 (19)	16:04	79	14:38 (28)	15:43	20	12:33 (24)
23	05:05	06:13	07:22	08:30		10:07 (19)	08:43		11:24 (32)	09:27		12:13 (24)
	22:20	21:05	19:36	18:12	18	10:25 (19)	16:02	84	14:38 (28)	15:44	20	12:33 (24)
24	05:07	06:15	07:24	08:32		10:06 (19)	08:45		11:25 (32)	09:28		12:14 (24)
	22:18	21:02	19:33	18:09	19	10:25 (19)	16:01	88	14:38 (28)	15:44	21	12:35 (24)
25	05:09	06:17	07:26	07:35		09:06 (19)	08:47		11:25 (32)	09:28		12:15 (24)
	22:16	20:59	19:30	17:06	20	09:26 (19)	15:59	88	14:38 (28)	15:45	20	12:35 (24)
26	05:11	06:20	07:28	07:37		09:06 (19)	08:50		11:26 (32)	09:28		12:15 (24)
	22:14	20:57	19:27	17:04	20	09:26 (19)	15:58	81	14:37 (28)	15:46	20	12:35 (24)
27	05:13	06:22	07:30	07:39		09:06 (19)	08:52		11:27 (32)	09:28		12:16 (24)
	22:12	20:54	19:25	17:01	19	09:25 (19)	15:56	73	14:26 (28)	15:47	20	12:36 (24)
28	05:16	06:24	07:33	07:42		09:06 (19)	08:54		11:28 (32)	09:28		12:16 (24)
	22:10	20:51	19:22	16:59	19	09:25 (19)	15:55	65	13:38 (27)	15:48	21	12:37 (24)
29	05:18	06:26	07:35	07:44		09:06 (19)	08:56		11:29 (32)	09:28		12:16 (24)
	22:07	20:48	19:19	16:56	18	09:24 (19)	15:54	64	13:37 (27)	15:49	20	12:36 (24)
30	05:20	06:29	07:37	07:47		09:07 (19)	08:58		11:29 (32)	09:28		12:17 (24)
	22:05	20:45	19:16	16:54	17	09:24 (19)	15:52	62	13:37 (27)	15:50	20	12:37 (24)
31	05:22	06:31		07:49		09:08 (19)				09:28		12:16 (24)
	22:03	20:42		16:51	15	09:23 (19)				15:51	21	12:37 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:08 (24)	08:46	11:39 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (24)	16:56	49	13:50 (27)	18:05	20:17	21:26	22:31
2	09:27		12:08 (24)	08:43	11:40 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (24)	16:58	44	13:48 (27)	18:07	20:19	21:28	22:32
3	09:27		12:09 (24)	08:41	11:41 (32)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (24)	17:01	39	13:47 (27)	18:09	20:21	21:31	22:34
4	09:27		12:09 (24)	08:39	11:42 (32)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (24)	17:03	32	13:45 (27)	18:12	20:24	21:33	22:35
5	09:26		12:09 (24)	08:37	11:43 (32)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (24)	17:06	19	12:02 (32)	18:14	20:26	21:35	22:37
6	09:25		12:10 (24)	08:34	11:46 (32)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (27)	17:08	14	12:00 (32)	18:17	20:28	21:37	22:38
7	09:24		11:43 (32)	08:32	11:50 (32)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (27)	17:11	6	11:56 (32)	18:19	20:30	21:40	22:39
8	09:24		11:41 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	41	13:37 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23		11:40 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	47	13:39 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22		11:38 (32)	08:25		09:39 (19)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (27)	17:18	3	09:42 (19)	18:26	20:37	21:46	22:43
11	09:21		11:38 (32)	08:23		09:36 (19)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (27)	17:21	10	09:46 (19)	18:28	20:40	21:49	22:44
12	09:20		11:37 (32)	08:20		09:34 (19)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (28)	17:23	14	09:48 (19)	18:31	20:42	21:51	22:45
13	09:18		11:37 (32)	08:18		09:33 (19)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (28)	17:26	16	09:49 (19)	18:33	20:44	21:53	22:46
14	09:17		11:36 (32)	08:15		09:33 (19)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (28)	17:28	17	09:50 (19)	18:35	20:47	21:55	22:47
15	09:16		11:36 (32)	08:13		09:32 (19)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (28)	17:31	18	09:50 (19)	18:38	20:49	21:58	22:47
16	09:15		11:35 (32)	08:10		09:31 (19)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (28)	17:33	19	09:50 (19)	18:40	20:51	22:00	22:48
17	09:13		11:36 (32)	08:07		09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (28)	17:36	19	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:36 (32)	08:05		09:32 (19)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (28)	17:38	19	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:36 (32)	08:02		09:32 (19)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (28)	17:40	18	09:50 (19)	18:47	20:58	22:06	22:50
20	09:09		11:35 (32)	08:00		09:32 (19)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (28)	17:43	17	09:49 (19)	18:49	21:00	22:08	22:50
21	09:07		11:35 (32)	07:57		09:33 (19)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (28)	17:45	15	09:48 (19)	18:51	21:03	22:10	22:50
22	09:05		11:36 (32)	07:54		09:34 (19)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (28)	17:48	12	09:46 (19)	18:54	21:05	22:12	22:50
23	09:03		11:35 (32)	07:52		09:38 (19)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (28)	17:50	6	09:44 (19)	18:56	21:07	22:14	22:51
24	09:02		11:35 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (32)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (28)				20:10	21:21	22:25	22:50
30	08:50		11:37 (32)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (28)				20:12	21:24	22:27	22:49
31	08:48		11:38 (32)				07:10		04:41	
	16:54	51	13:50 (27)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1881		406					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,68					
Total reduction		0,24		0,27					
Total, real		457		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (32)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (27)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (27)
4	04:35	05:31	06:40	07:46			07:59		11:18 (32)	09:05		11:25 (32)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (32)	15:48	42	13:22 (27)
5	04:36	05:33	06:42	07:48			08:01		11:15 (32)	09:07		11:28 (32)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (32)	15:47	34	13:21 (27)
6	04:37	05:35	06:44	07:51			08:03		11:14 (32)	09:09		11:56 (24)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (32)	15:46	26	13:19 (27)
7	04:38	05:37	06:46	07:53			08:06		11:12 (32)	09:10		11:56 (24)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (27)	15:45	21	12:17 (24)
8	04:40	05:39	06:49	07:55			08:08		11:11 (32)	09:12		11:57 (24)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (27)	15:45	21	12:18 (24)
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		11:58 (24)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (27)	15:44	20	12:18 (24)
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		11:58 (24)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (27)	15:43	20	12:18 (24)
11	04:44	05:46	06:55	08:02			08:15		11:09 (32)	09:16		11:58 (24)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (27)	15:43	21	12:19 (24)
12	04:46	05:48	06:57	08:04			08:18		11:09 (32)	09:18		11:58 (24)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (28)	15:43	21	12:19 (24)
13	04:47	05:51	07:00	08:07			08:20		11:09 (32)	09:19		12:00 (24)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (28)	15:42	20	12:20 (24)
14	04:49	05:53	07:02	08:09			08:23		11:08 (32)	09:20		12:00 (24)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (28)	15:42	20	12:20 (24)
15	04:51	05:55	07:04	08:11			08:25		11:08 (32)	09:21		12:00 (24)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (28)	15:42	20	12:20 (24)
16	04:52	05:57	07:06	08:13			08:27		11:09 (32)	09:22		12:01 (24)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (28)	15:42	19	12:20 (24)
17	04:54	06:00	07:08	08:16			08:30		11:09 (32)	09:23		12:01 (24)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (28)	15:42	20	12:21 (24)
18	04:56	06:02	07:11	08:18			08:32		11:09 (32)	09:24		12:02 (24)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (28)	15:42	19	12:21 (24)
19	04:58	06:04	07:13	08:20		10:07 (19)	08:34		11:10 (32)	09:25		12:02 (24)
	22:27	21:16	19:48	18:22	9	10:16 (19)	16:09	79	14:27 (28)	15:42	20	12:22 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:10 (32)	09:26		12:03 (24)
	22:25	21:13	19:45	18:20	13	10:18 (19)	16:08	79	14:27 (28)	15:43	19	12:22 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:10 (32)	09:26		12:03 (24)
	22:24	21:10	19:42	18:17	15	10:19 (19)	16:06	79	14:28 (28)	15:43	19	12:22 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:11 (32)	09:27		12:04 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	84	14:29 (28)	15:43	19	12:23 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:12 (32)	09:27		12:04 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:28 (28)	15:44	19	12:23 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:13 (32)	09:28		12:05 (24)
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	88	14:29 (28)	15:44	19	12:24 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:13 (32)	09:28		12:06 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	88	14:29 (28)	15:45	19	12:25 (24)
26	05:11	06:20	07:28	07:37		09:02 (19)	08:50		11:14 (32)	09:28		12:06 (24)
	22:14	20:57	19:27	17:04	19	09:21 (19)	15:58	87	14:29 (28)	15:46	19	12:25 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:15 (32)	09:28		12:06 (24)
	22:12	20:54	19:25	17:01	19	09:20 (19)	15:56	86	14:29 (28)	15:47	20	12:26 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:16 (32)	09:28		12:07 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	82	14:29 (28)	15:48	20	12:27 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:17 (32)	09:28		12:07 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	72	14:29 (28)	15:49	19	12:26 (24)
30	05:20	06:29	07:37	07:47		09:04 (19)	08:58		11:18 (32)	09:28		12:07 (24)
	22:05	20:45	19:16	16:54	13	09:17 (19)	15:52	60	14:28 (28)	15:50	20	12:27 (24)
31	05:22	06:31		07:49		09:06 (19)				09:28		12:07 (24)
	22:03	20:42		16:51	9	09:15 (19)				15:51	20	12:27 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:05 (24)	08:46	11:36 (32)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (24)	16:56	45 13:44 (27)	18:05	20:17	21:26	22:31
2	09:27	12:06 (24)	08:43	11:37 (32)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (24)	16:58	40 13:42 (27)	18:07	20:19	21:28	22:32
3	09:27	12:06 (24)	08:41	11:38 (32)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (24)	17:01	34 13:40 (27)	18:09	20:21	21:31	22:34
4	09:27	12:06 (24)	08:39	11:39 (32)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (24)	17:03	20 11:59 (32)	18:12	20:24	21:33	22:35
5	09:26	12:06 (24)	08:37	11:41 (32)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (27)	17:06	16 11:57 (32)	18:14	20:26	21:35	22:37
6	09:25	12:07 (24)	08:34	11:44 (32)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (27)	17:08	11 11:55 (32)	18:17	20:28	21:37	22:38
7	09:24	11:39 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (32)	08:25	09:37 (19)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (28)	17:18	6 09:43 (19)	18:26	20:37	21:46	22:43
11	09:21	11:34 (32)	08:23	09:35 (19)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (28)	17:21	11 09:46 (19)	18:28	20:40	21:49	22:44
12	09:20	11:33 (32)	08:20	09:33 (19)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (28)	17:23	15 09:48 (19)	18:31	20:42	21:51	22:45
13	09:18	11:34 (32)	08:18	09:32 (19)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (28)	17:26	16 09:48 (19)	18:33	20:44	21:53	22:46
14	09:17	11:33 (32)	08:15	09:32 (19)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (28)	17:28	18 09:50 (19)	18:35	20:47	21:55	22:47
15	09:16	11:32 (32)	08:13	09:31 (19)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (28)	17:31	19 09:50 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (28)	17:33	19 09:50 (19)	18:40	20:51	22:00	22:48
17	09:13	11:32 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (28)	17:36	19 09:50 (19)	18:42	20:53	22:02	22:49
18	09:12	11:32 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (28)	17:38	18 09:50 (19)	18:45	20:56	22:04	22:49
19	09:10	11:32 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (28)	17:40	17 09:49 (19)	18:47	20:58	22:06	22:50
20	09:09	11:32 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (28)	17:43	16 09:48 (19)	18:49	21:00	22:08	22:50
21	09:07	11:32 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (28)	17:45	14 09:47 (19)	18:51	21:03	22:10	22:50
22	09:05	11:32 (32)	07:54	09:35 (19)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (28)	17:48	10 09:45 (19)	18:54	21:05	22:12	22:50
23	09:03	11:31 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (32)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (28)			20:10	21:21	22:25	22:50
30	08:50	11:34 (32)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (27)			20:12	21:24	22:27	22:49
31	08:48	11:35 (32)			07:10		04:41	
	16:54	48 13:44 (27)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,69				
Total reduction		0,24		0,27				
Total, real		467		100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (19)	09:00		11:16 (32)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (19)	15:51	74	14:26 (28)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (28)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (27)
5	04:36	05:33	06:42	07:48			08:01		11:13 (32)	09:07		11:23 (32)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (32)	15:47	39	13:18 (27)
6	04:37	05:35	06:44	07:51			08:03		11:11 (32)	09:09		11:53 (24)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (32)	15:46	32	13:17 (27)
7	04:38	05:37	06:46	07:53			08:06		11:10 (32)	09:10		11:54 (24)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (27)	15:45	28	13:16 (27)
8	04:40	05:39	06:49	07:55			08:08		11:08 (32)	09:12		11:54 (24)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (27)	15:45	22	13:13 (27)
9	04:41	05:42	06:51	07:57			08:11		11:07 (32)	09:13		11:55 (24)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (27)	15:44	20	12:15 (24)
10	04:43	05:44	06:53	08:00			08:13		11:07 (32)	09:15		11:55 (24)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (27)	15:43	20	12:15 (24)
11	04:44	05:46	06:55	08:02			08:15		11:06 (32)	09:16		11:56 (24)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (27)	15:43	20	12:16 (24)
12	04:46	05:48	06:57	08:04			08:18		11:06 (32)	09:18		11:56 (24)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (27)	15:43	20	12:16 (24)
13	04:47	05:51	07:00	08:07			08:20		11:06 (32)	09:19		11:57 (24)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (28)	15:42	20	12:17 (24)
14	04:49	05:53	07:02	08:09			08:23		11:05 (32)	09:20		11:57 (24)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (28)	15:42	20	12:17 (24)
15	04:51	05:55	07:04	08:11			08:25		11:05 (32)	09:21		11:57 (24)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (28)	15:42	20	12:17 (24)
16	04:52	05:57	07:06	08:13			08:27		11:06 (32)	09:22		11:58 (24)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (28)	15:42	19	12:17 (24)
17	04:54	06:00	07:08	08:16			08:30		11:06 (32)	09:23		11:58 (24)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (28)	15:42	19	12:17 (24)
18	04:56	06:02	07:11	08:18			08:32		11:06 (32)	09:24		11:59 (24)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (28)	15:42	19	12:18 (24)
19	04:58	06:04	07:13	08:20		10:09 (19)	08:34		11:06 (32)	09:25		11:59 (24)
	22:27	21:16	19:48	18:22	5	10:14 (19)	16:09	78	14:23 (28)	15:42	20	12:19 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:06 (32)	09:26		12:00 (24)
	22:25	21:13	19:45	18:20	11	10:16 (19)	16:08	79	14:23 (28)	15:43	19	12:19 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:07 (32)	09:26		12:00 (24)
	22:24	21:10	19:42	18:17	14	10:18 (19)	16:06	77	14:23 (28)	15:43	19	12:19 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:08 (32)	09:27		12:01 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	77	14:24 (28)	15:43	19	12:20 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:08 (32)	09:27		12:01 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:24 (28)	15:44	19	12:20 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:09 (32)	09:28		12:02 (24)
	22:18	21:02	19:33	18:09	18	10:19 (19)	16:01	87	14:25 (28)	15:44	19	12:21 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:10 (32)	09:28		12:03 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	87	14:25 (28)	15:45	19	12:22 (24)
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		11:11 (32)	09:28		12:03 (24)
	22:14	20:57	19:27	17:04	19	09:20 (19)	15:58	87	14:25 (28)	15:46	19	12:22 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:11 (32)	09:28		12:03 (24)
	22:12	20:54	19:25	17:01	18	09:19 (19)	15:56	86	14:25 (28)	15:47	20	12:23 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:13 (32)	09:28		12:04 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	85	14:26 (28)	15:48	20	12:24 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:14 (32)	09:28		12:04 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	82	14:25 (28)	15:49	19	12:23 (24)
30	05:20	06:29	07:37	07:47		09:03 (19)	08:58		11:14 (32)	09:28		12:04 (24)
	22:05	20:45	19:16	16:54	14	09:17 (19)	15:52	80	14:25 (28)	15:50	20	12:24 (24)
31	05:22	06:31		07:49		09:05 (19)				09:28		12:04 (24)
	22:03	20:42		16:51	11	09:16 (19)				15:51	20	12:24 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	11:58 (24)	08:46	11:24 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00	11:44 (24)
	15:53 16	12:14 (24)	16:56 49	13:35 (27)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51 57	14:20 (28)
2	09:28	11:58 (24)	08:43	11:24 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02	11:44 (24)
	15:54 18	12:16 (24)	16:58 47	13:34 (27)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50 50	14:19 (28)
3	09:27	11:58 (24)	08:41	11:25 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (32)	09:03	11:44 (24)
	15:55 20	12:18 (24)	17:01 42	13:33 (27)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44 12	11:14 (32)	15:49 40	14:19 (28)
4	09:27	11:58 (24)	08:39	11:26 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (32)	09:05	11:44 (24)
	15:57 21	12:19 (24)	17:03 35	13:30 (27)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41 17	11:16 (32)	15:48 34	14:19 (28)
5	09:26	11:59 (24)	08:37	11:26 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (32)	09:07	11:45 (24)
	15:58 20	12:19 (24)	17:06 23	11:49 (32)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39 20	11:18 (32)	15:47 31	13:06 (27)
6	09:25	11:59 (24)	08:34	11:28 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (32)	09:09	11:45 (24)
	16:00 26	13:18 (27)	17:08 20	11:48 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 23	11:20 (32)	15:46 27	13:05 (27)
7	09:25	12:00 (24)	08:32	11:30 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (32)	09:10	11:46 (24)
	16:02 30	13:21 (27)	17:11 16	11:46 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34 37	13:01 (27)	15:45 20	12:06 (24)
8	09:24	12:00 (24)	08:30	11:33 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (32)	09:12	11:47 (24)
	16:03 34	14:35 (28)	17:13 11	11:44 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 43	13:03 (27)	15:45 20	12:07 (24)
9	09:23	12:01 (24)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (32)	09:13	11:47 (24)
	16:05 41	14:36 (28)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 48	13:05 (27)	15:44 20	12:07 (24)
10	09:22	12:01 (24)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (32)	09:15	11:47 (24)
	16:07 50	14:36 (28)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28 51	13:06 (27)	15:43 19	12:07 (24)
11	09:21	12:02 (24)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (32)	09:16	11:48 (24)
	16:09 57	14:37 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25 52	13:06 (27)	15:43 16	12:04 (24)
12	09:20	11:28 (32)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (32)	09:18	11:48 (24)
	16:11 68	14:38 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 55	13:08 (27)	15:43 11	11:59 (24)
13	09:18	11:26 (32)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (32)	09:19	11:49 (24)
	16:13 75	14:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 62	14:08 (28)	15:42 11	12:00 (24)
14	09:17	11:25 (32)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (32)	09:20	11:50 (24)
	16:15 78	14:39 (28)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 69	14:10 (28)	15:42 7	12:00 (24)
15	09:16	11:24 (32)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (32)	09:21	11:50 (24)
	16:17 82	14:40 (28)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 71	14:12 (28)	15:42 3	11:53 (24)
16	09:15	11:23 (32)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (32)	09:22	11:50 (24)
	16:19 85	14:40 (28)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 75	14:14 (28)	15:42 3	11:53 (24)
17	09:13	11:23 (32)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (32)	09:23	11:51 (24)
	16:21 86	14:41 (28)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 77	14:15 (28)	15:42 1	11:52 (24)
18	09:12	11:23 (32)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (32)	09:24	
	16:23 87	14:42 (28)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 76	14:15 (28)	15:42	
19	09:10	11:22 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (32)	09:25	
	16:25 88	14:42 (28)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09 77	14:16 (28)	15:42	
20	09:09	11:22 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (32)	09:26	
	16:28 86	14:42 (28)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08 77	14:16 (28)	15:43	
21	09:07	11:22 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (32)	09:26	
	16:30 83	14:42 (28)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 83	14:17 (28)	15:43	
22	09:05	11:22 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (32)	09:27	
	16:32 77	14:42 (28)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04 86	14:18 (28)	15:43	
23	09:03	11:21 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (32)	09:27	
	16:34 77	14:41 (28)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 88	14:18 (28)	15:44	
24	09:02	11:21 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (32)	09:28	
	16:37 76	14:41 (28)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 87	14:19 (28)	15:44	
25	09:00	11:21 (32)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (32)	09:28	
	16:39 77	14:41 (28)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59 86	14:18 (28)	15:45	
26	08:58	11:22 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (32)	09:28	
	16:41 74	14:41 (28)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58 85	14:19 (28)	15:46	
27	08:56	11:21 (32)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (32)	09:28	11:56 (24)
	16:44 71	14:39 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 83	14:19 (28)	15:47 3	11:59 (24)
28	08:54	11:21 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (32)	09:28	11:57 (24)
	16:46 69	14:38 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 79	14:19 (28)	15:48 3	12:00 (24)
29	08:52	11:22 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (32)	09:28	11:56 (24)
	16:49 61	14:36 (28)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54 73	14:19 (28)	15:49 5	12:07 (24)
30	08:50	11:22 (32)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (32)	09:28	11:57 (24)
	16:51 55	13:36 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 69	14:19 (28)	15:50 11	12:08 (24)
31	08:48	11:23 (32)			07:10		04:41		05:22	06:31		07:49			09:28	11:57 (24)
	16:54 53	13:36 (27)			20:14		22:29		22:03	20:42		16:51			15:51 11	12:08 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case	1841		243										1761		403	
Sun reduction	0,50		0,50										0,50		0,50	
Oper. time red.	0,80		0,80										0,80		0,80	
Wind dir. red.	0,62		0,65										0,62		0,62	
Total reduction	0,25		0,26										0,25		0,25	
Total, real	452		63										435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (37)	08:46		13:17 (32)	07:35		08:53 (21)	07:07	05:44	04:40
	15:53	17	12:09 (37)	16:56	36	13:53 (32)	18:05	19	09:12 (21)	20:17	21:26	22:30
2	09:27		11:51 (37)	08:43		13:18 (32)	07:32		08:53 (21)	07:04	05:41	04:38
	15:54	19	12:10 (37)	16:58	43	15:13 (27)	18:07	20	09:13 (21)	20:19	21:28	22:32
3	09:27		11:51 (37)	08:41		13:17 (32)	07:30		08:52 (21)	07:01	05:39	04:37
	15:55	19	12:10 (37)	17:01	52	15:18 (27)	18:09	21	09:13 (21)	20:21	21:30	22:34
4	09:26		11:51 (37)	08:39		13:18 (32)	07:27		08:52 (21)	06:58	05:36	04:36
	15:57	20	12:11 (37)	17:03	54	15:20 (27)	18:12	20	09:12 (21)	20:24	21:33	22:35
5	09:26		11:52 (37)	08:37		13:17 (32)	07:24		08:52 (21)	06:55	05:34	04:35
	15:58	20	12:12 (37)	17:06	58	15:21 (27)	18:14	20	09:12 (21)	20:26	21:35	22:37
6	09:25		11:52 (37)	08:34		13:18 (32)	07:21		08:52 (21)	06:52	05:31	04:34
	16:00	20	12:12 (37)	17:08	62	15:43 (28)	18:16	19	09:11 (21)	20:28	21:37	22:38
7	09:24		11:52 (37)	08:32		13:17 (32)	07:19		08:53 (21)	06:49	05:29	04:33
	16:02	21	12:13 (37)	17:11	68	15:46 (28)	18:19	17	09:10 (21)	20:30	21:40	22:39
8	09:24		11:53 (37)	08:30		13:18 (32)	07:16		08:54 (21)	06:47	05:26	04:32
	16:03	21	12:14 (37)	17:13	72	15:51 (28)	18:21	14	09:08 (21)	20:33	21:42	22:40
9	09:23		11:52 (37)	08:27		13:18 (32)	07:13		08:55 (21)	06:44	05:24	04:31
	16:05	22	12:14 (37)	17:16	78	15:59 (28)	18:24	10	09:05 (21)	20:35	21:44	22:42
10	09:22		11:53 (37)	08:25		13:18 (32)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (37)	17:18	82	16:00 (28)	18:26			20:37	21:46	22:43
11	09:21		11:54 (37)	08:23		10:11 (19)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (37)	17:21	84	16:00 (28)	18:28			20:40	21:49	22:44
12	09:20		11:53 (37)	08:20		10:06 (19)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (37)	17:23	89	15:59 (28)	18:31			20:42	21:51	22:45
13	09:18		11:53 (37)	08:18		10:04 (19)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (24)	17:26	90	15:58 (28)	18:33			20:44	21:53	22:46
14	09:17		11:54 (37)	08:15		10:03 (19)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (24)	17:28	87	15:57 (28)	18:35			20:47	21:55	22:46
15	09:16		11:55 (37)	08:13		10:02 (19)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (24)	17:31	81	15:54 (28)	18:38			20:49	21:57	22:47
16	09:15		11:55 (37)	08:10		10:01 (19)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (24)	17:33	72	15:24 (27)	18:40			20:51	22:00	22:48
17	09:13		11:55 (37)	08:07		10:00 (19)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (24)	17:35	67	15:23 (27)	18:42			20:53	22:02	22:49
18	09:12		11:57 (37)	08:05		10:00 (19)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (24)	17:38	61	15:23 (27)	18:45			20:56	22:04	22:49
19	09:10		11:57 (37)	08:02		10:00 (19)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (24)	17:40	43	15:21 (27)	18:47			20:58	22:06	22:50
20	09:08		11:58 (37)	08:00		09:59 (19)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (24)	17:43	41	15:19 (27)	18:49			21:00	22:08	22:50
21	09:07		11:59 (37)	07:57		09:59 (19)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (24)	17:45	32	15:15 (27)	18:51			21:03	22:10	22:50
22	09:05		11:59 (37)	07:54		09:59 (19)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (24)	17:48	25	10:24 (19)	18:54			21:05	22:12	22:50
23	09:03		12:01 (37)	07:52		10:00 (19)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (24)	17:50	24	10:24 (19)	18:56			21:07	22:14	22:50
24	09:02		12:03 (37)	07:49		10:01 (19)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (24)	17:53	22	10:23 (19)	18:58			21:10	22:16	22:51
25	09:00		12:05 (37)	07:46		09:00 (21)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (32)	17:55	27	10:22 (19)	19:01			21:12	22:18	22:50
26	08:58		13:21 (32)	07:43		08:57 (21)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (32)	17:57	30	10:20 (19)	19:03			21:14	22:20	22:50
27	08:56		13:20 (32)	07:41		08:55 (21)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (32)	18:00	28	10:17 (19)	19:05			21:17	22:22	22:50
28	08:54		13:19 (32)	07:38		08:54 (21)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (32)	18:02	22	10:13 (19)	19:07			21:19	22:24	22:50
29	08:52		13:19 (32)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (32)				20:10			21:21	22:25	22:50
30	08:50		13:18 (32)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (32)				20:12			21:24	22:27	22:49
31	08:48		13:18 (32)				07:10				04:41	
	16:53	34	13:52 (32)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		12:48 (32)	09:00		11:36 (37)
	22:49		22:01		20:40		19:13			16:49	83	15:30 (28)	15:51	22	11:58 (37)
2	04:33		05:26		06:35		07:42			07:54		12:48 (32)	09:02		11:36 (37)
	22:48		21:58		20:37		19:10			16:46	76	15:28 (28)	15:50	22	11:58 (37)
3	04:34		05:28		06:37		07:44			07:56		12:48 (32)	09:03		11:36 (37)
	22:47		21:56		20:34		19:07			16:44	71	15:20 (28)	15:49	22	11:58 (37)
4	04:35		05:31		06:40		07:46		09:34 (21)	07:59		12:47 (32)	09:05		11:37 (37)
	22:47		21:54		20:31		19:04	7	09:41 (21)	16:41	66	15:15 (28)	15:48	21	11:58 (37)
5	04:36		05:33		06:42		07:48		09:32 (21)	08:01		12:47 (32)	09:07		11:37 (37)
	22:46		21:51		20:28		19:01	12	09:44 (21)	16:39	62	15:13 (28)	15:47	21	11:58 (37)
6	04:37		05:35		06:44		07:51		09:30 (21)	08:03		12:48 (32)	09:09		11:38 (37)
	22:45		21:49		20:25		18:59	15	09:45 (21)	16:37	57	14:51 (27)	15:46	21	11:59 (37)
7	04:38		05:37		06:46		07:53		09:28 (21)	08:06		12:47 (32)	09:10		11:39 (37)
	22:44		21:47		20:22		18:56	18	09:46 (21)	16:34	55	14:50 (27)	15:45	20	11:59 (37)
8	04:40		05:39		06:48		07:55		09:28 (21)	08:08		12:48 (32)	09:12		11:40 (37)
	22:43		21:44		20:20		18:53	19	09:47 (21)	16:32	50	14:48 (27)	15:45	19	11:59 (37)
9	04:41		05:42		06:51		07:57		09:27 (21)	08:11		12:48 (32)	09:13		11:41 (37)
	22:42		21:42		20:17		18:50	20	09:47 (21)	16:30	42	14:43 (27)	15:44	19	12:00 (37)
10	04:43		05:44		06:53		08:00		09:27 (21)	08:13		12:49 (32)	09:15		11:41 (37)
	22:40		21:39		20:14		18:47	20	09:47 (21)	16:28	35	13:24 (32)	15:43	18	11:59 (37)
11	04:44		05:46		06:55		08:02		09:26 (21)	08:15		12:49 (32)	09:16		11:42 (37)
	22:39		21:37		20:11		18:45	20	09:46 (21)	16:25	34	13:23 (32)	15:43	18	12:00 (37)
12	04:46		05:48		06:57		08:04		09:26 (21)	08:18		12:50 (32)	09:18		11:42 (37)
	22:38		21:34		20:08		18:42	19	09:45 (21)	16:23	33	13:23 (32)	15:43	17	11:59 (37)
13	04:47		05:51		07:00		08:06		09:27 (21)	08:20		12:51 (32)	09:19		11:43 (37)
	22:37		21:31		20:05		18:39	18	09:45 (21)	16:21	32	13:23 (32)	15:42	17	12:00 (37)
14	04:49		05:53		07:02		08:09		09:27 (21)	08:22		12:51 (32)	09:20		11:44 (37)
	22:35		21:29		20:02		18:36	26	10:48 (19)	16:19	31	13:22 (32)	15:42	16	12:00 (37)
15	04:51		05:55		07:04		08:11		09:29 (21)	08:25		12:53 (32)	09:21		11:44 (37)
	22:34		21:26		19:59		18:33	29	10:51 (19)	16:17	28	13:21 (32)	15:42	16	12:00 (37)
16	04:52		05:57		07:06		08:13		09:30 (21)	08:27		12:54 (32)	09:22		11:45 (37)
	22:32		21:24		19:56		18:31	28	10:52 (19)	16:15	27	13:21 (32)	15:42	15	12:00 (37)
17	04:54		05:59		07:08		08:16		10:33 (19)	08:29		11:38 (37)	09:23		11:45 (37)
	22:30		21:21		19:54		18:28	21	10:54 (19)	16:13	32	13:19 (32)	15:42	15	12:00 (37)
18	04:56		06:02		07:10		08:18		10:31 (19)	08:32		11:36 (37)	09:24		11:46 (37)
	22:29		21:18		19:51		18:25	23	10:54 (19)	16:11	35	13:20 (24)	15:42	15	12:01 (37)
19	04:58		06:04		07:13		08:20		10:31 (19)	08:34		11:36 (37)	09:25		11:47 (37)
	22:27		21:16		19:48		18:22	24	10:55 (19)	16:09	36	13:21 (24)	15:42	14	12:01 (37)
20	05:00		06:06		07:15		08:23		10:30 (19)	08:36		11:34 (37)	09:26		11:48 (37)
	22:25		21:13		19:45		18:20	25	10:55 (19)	16:08	40	13:21 (24)	15:42	14	12:02 (37)
21	05:01		06:08		07:17		08:25		10:30 (19)	08:39		11:34 (37)	09:26		11:48 (37)
	22:24		21:10		19:42		18:17	37	15:48 (27)	16:06	40	13:21 (24)	15:43	14	12:02 (37)
22	05:03		06:11		07:19		08:27		10:29 (19)	08:41		11:34 (37)	09:27		11:49 (37)
	22:22		21:08		19:39		18:14	42	15:50 (27)	16:04	43	13:22 (24)	15:43	14	12:03 (37)
23	05:05		06:13		07:22		08:30		10:30 (19)	08:43		11:33 (37)	09:27		11:49 (37)
	22:20		21:05		19:36		18:12	50	15:52 (27)	16:02	44	13:22 (24)	15:44	14	12:03 (37)
24	05:07		06:15		07:24		08:32		10:29 (19)	08:45		11:34 (37)	09:28		11:50 (37)
	22:18		21:02		19:33		18:09	63	15:52 (27)	16:01	44	13:23 (24)	15:44	14	12:04 (37)
25	05:09		06:17		07:26		07:35		09:30 (19)	08:47		11:33 (37)	09:28		11:50 (37)
	22:16		20:59		19:30		17:06	69	14:54 (27)	15:59	44	13:22 (24)	15:45	14	12:04 (37)
26	05:11		06:20		07:28		07:37		09:30 (19)	08:50		11:34 (37)	09:28		11:50 (37)
	22:14		20:56		19:27		17:04	74	14:54 (27)	15:58	44	13:23 (24)	15:46	15	12:05 (37)
27	05:13		06:22		07:30		07:39		09:31 (19)	08:52		11:34 (37)	09:28		11:50 (37)
	22:12		20:54		19:24		17:01	82	15:24 (28)	15:56	44	13:23 (24)	15:47	16	12:06 (37)
28	05:16		06:24		07:33		07:42		09:33 (19)	08:54		11:35 (37)	09:28		11:50 (37)
	22:10		20:51		19:22		16:59	89	15:27 (28)	15:55	37	13:17 (24)	15:48	16	12:06 (37)
29	05:18		06:26		07:35		07:44		09:34 (19)	08:56		11:35 (37)	09:28		11:50 (37)
	22:07		20:48		19:19		16:56	90	15:28 (28)	15:54	29	13:09 (24)	15:49	16	12:06 (37)
30	05:20		06:29		07:37		07:47		09:36 (19)	08:58		11:35 (37)	09:28		11:51 (37)
	22:05		20:45		19:16		16:54	90	15:29 (28)	15:52	23	13:03 (24)	15:50	17	12:08 (37)
31	05:22		06:31				07:49		12:49 (32)				09:28		11:51 (37)
	22:03		20:42				16:51	81	15:30 (28)				15:51	17	12:08 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								1111			1317			529	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,64			0,59			0,64	
Total reduction								0,26			0,23			0,26	
Total, real								286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (37)	07:35		10:14 (21)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (24)	18:05	73	16:49 (27)	20:17	21:26	22:30
2	09:27			08:43		15:15 (24)	07:32		10:15 (21)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (24)	18:07	70	16:50 (27)	20:19	21:28	22:32
3	09:27			08:41		15:14 (24)	07:30		10:16 (21)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (24)	18:09	63	16:48 (27)	20:21	21:30	22:34
4	09:26			08:39		12:33 (19)	07:27		10:16 (21)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (24)	18:12	54	16:47 (27)	20:23	21:33	22:35
5	09:26			08:37		12:30 (19)	07:24		09:25 (16)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (24)	18:14	37	16:44 (27)	20:26	21:35	22:36
6	09:25			08:34		12:29 (19)	07:21		09:21 (16)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (24)	18:16	27	10:42 (21)	20:28	21:37	22:38
7	09:24			08:32		12:27 (19)	07:18		10:19 (21)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (24)	18:19	20	10:39 (21)	20:30	21:40	22:39
8	09:24			08:30		12:26 (19)	07:16		10:21 (21)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (24)	18:21	15	10:36 (21)	20:33	21:42	22:40
9	09:23			08:27		12:25 (19)	07:13		10:24 (21)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (24)	18:24	8	10:32 (21)	20:35	21:44	22:42
10	09:22			08:25		12:24 (19)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (24)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (19)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (19)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (19)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (19)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (19)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (19)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (19)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (19)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (19)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (32)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (19)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (32)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (19)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (32)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (19)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (32)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (19)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (32)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (19)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (32)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (19)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (27)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (19)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (27)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (21)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (27)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (21)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (27)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (21)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (27)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (21)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (27)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (21)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (27)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (37)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (37)				20:12			21:23	22:27	22:49
31	08:48		14:08 (37)				07:10				04:41	
	16:53	21	15:27 (24)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (19)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (24)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (19)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (19)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (24)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (19)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (24)	15:48
5	04:36	05:33	06:42	07:48		10:59 (21)	08:01		11:58 (19)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (21)	16:39	41	15:03 (24)	15:47
6	04:37	05:35	06:44	07:50		10:56 (21)	08:03		12:01 (19)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (21)	16:37	36	15:04 (24)	15:46
7	04:38	05:37	06:46	07:53		09:54 (16)	08:06		12:03 (19)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (21)	16:34	31	15:03 (24)	15:45
8	04:40	05:39	06:48	07:55		09:58 (16)	08:08		14:45 (24)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (27)	16:32	18	15:03 (24)	15:45
9	04:41	05:42	06:51	07:57		10:01 (16)	08:10		14:46 (24)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (27)	16:30	17	15:03 (24)	15:44
10	04:43	05:44	06:53	08:00		10:49 (21)	08:13		13:42 (37)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (27)	16:28	20	15:03 (24)	15:43
11	04:44	05:46	06:55	08:02		10:49 (21)	08:15		13:39 (37)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (27)	16:25	20	14:58 (24)	15:43
12	04:46	05:48	06:57	08:04		10:48 (21)	08:18		13:48 (37)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (27)	16:23	3	13:51 (37)	15:43
13	04:47	05:50	06:59	08:06		10:48 (21)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (27)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (21)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (27)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (21)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (27)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (21)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (27)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (21)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (27)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (19)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (27)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (19)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (27)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (19)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (27)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (19)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (32)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (19)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (32)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (19)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (32)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (19)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (32)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (19)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (32)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (19)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (32)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (19)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (19)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (19)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (19)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (19)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (19)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (19)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (24)	15:52			15:50
31	05:22	06:31		07:49		11:53 (19)				09:28
	22:03	20:42		16:51	44	15:00 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	11:38 (21)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:44 (16)	09:00
	15:53	16:56 63	13:43 (19)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49 56	15:37 (32)	15:51
2	09:27	08:43	11:39 (21)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:56 (16)	09:01
	15:54	16:58 59	13:43 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46 51	15:37 (32)	15:50
3	09:27	08:41	11:38 (21)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	09:57 (16)	09:03
	15:55	17:01 51	13:42 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07	16:44 55	15:36 (32)	15:49
4	09:26	08:39	11:39 (21)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46	07:58	10:02 (16)	09:05
	15:57	17:03 51	15:59 (32)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41 56	15:35 (32)	15:48
5	09:26	08:37	11:39 (21)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:04 (16)	09:07
	15:58	17:06 56	16:02 (32)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39 58	15:34 (32)	15:47
6	09:25	08:34	10:34 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	11:10 (21)	09:09
	16:00	17:08 57	16:05 (32)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 55	15:33 (32)	15:46
7	09:24	08:32	10:32 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53	08:06	11:09 (21)	09:10
	16:02	17:11 55	16:05 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56	16:34 49	13:12 (19)	15:45
8	09:24	08:30	10:27 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55	08:08	11:09 (21)	09:12
	16:03	17:13 53	16:07 (32)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32 50	13:13 (19)	15:45
9	09:23	08:27	10:26 (16)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:10	11:09 (21)	09:13
	16:05	17:16 49	16:07 (32)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 60	13:14 (19)	15:44
10	09:22	08:25	10:15 (16)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	11:10 (21)	09:15
	16:07	17:18 58	16:07 (32)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:28 61	13:14 (19)	15:43
11	09:21	08:22	10:16 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	11:10 (21)	09:16
	16:09	17:21 55	16:08 (32)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44	16:25 63	13:14 (19)	15:43
12	09:20	08:20	10:17 (16)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	11:10 (21)	09:17
	16:11	17:23 48	16:08 (32)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 66	13:15 (19)	15:43
13	09:18	08:17	10:18 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	11:11 (21)	09:19
	16:13	17:26 33	16:07 (32)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 65	13:15 (19)	15:42
14	09:17	12:02 (13) 08:15	10:21 (16)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09	08:22	11:11 (21)	09:20
	16:15 8	12:10 (13) 17:28 28	16:08 (32)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 66	13:15 (19)	15:42
15	09:16	12:02 (13) 08:12	15:50 (32)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	11:13 (21)	09:21
	16:17 9	12:11 (13) 17:30 17	16:07 (32)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17 64	13:15 (19)	15:42
16	09:14	12:02 (13) 08:10	15:51 (32)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	11:14 (21)	09:22
	16:19 11	12:13 (13) 17:33 14	16:05 (32)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 62	13:15 (19)	15:42
17	09:13	12:02 (13) 08:07	15:52 (32)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	11:15 (21)	09:23
	16:21 20	13:30 (19) 17:35 12	16:04 (32)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 61	13:14 (19)	15:42
18	09:12	11:58 (13) 08:05	15:56 (32)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:32	11:16 (21)	09:24
	16:23 30	13:34 (19) 17:38 6	16:02 (32)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 60	13:14 (19)	15:42
19	09:10	11:58 (13) 08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20	08:34	11:19 (21)	09:25
	16:25 33	13:35 (19) 17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22	16:09 55	13:14 (19)	15:42
20	09:08	11:58 (13) 08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	11:21 (21)	09:25
	16:27 36	13:37 (19) 17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 47	13:13 (19)	15:42
21	09:07	11:58 (13) 07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	11:33 (13)	09:26
	16:30 39	13:38 (19) 17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 39	13:13 (19)	15:43
22	09:05	11:46 (21) 07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41	11:34 (13)	09:27
	16:32 47	13:38 (19) 17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 36	13:13 (19)	15:43
23	09:03	11:44 (21) 07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	11:34 (13)	09:27
	16:34 55	13:39 (19) 17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 33	13:12 (19)	15:44
24	09:01	11:42 (21) 07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (32) 08:45	11:35 (13)	09:28
	16:37 60	13:40 (19) 17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09 8	16:32 (32) 16:01	30	13:11 (19)	15:44
25	09:00	11:42 (21) 07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (32) 08:47	11:41 (13)	09:28
	16:39 61	13:41 (19) 17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06 12	15:34 (32) 15:59	20	13:09 (19)	15:45
26	08:58	11:41 (21) 07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (32) 08:49	11:41 (13)	09:28
	16:41 62	13:42 (19) 17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 15	15:35 (32) 15:58	11	11:52 (13)	15:46
27	08:56	11:40 (21) 07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (32) 08:52	11:41 (13)	09:28
	16:44 64	13:42 (19) 18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01 17	15:36 (32) 15:56	10	11:51 (13)	15:47
28	08:54	11:40 (21) 07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (16) 08:54	11:42 (13)	09:28
	16:46 65	13:43 (19) 18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59 28	15:37 (32) 15:55	8	11:50 (13)	15:48
29	08:52	11:39 (21)		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (16) 08:56		09:28
	16:49 65	13:43 (19)		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56 37	15:37 (32) 15:53		15:49
30	08:50	11:39 (21)		07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (16) 08:58		09:28
	16:51 65	13:43 (19)		20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54 49	15:37 (32) 15:52		15:50
31	08:48	11:39 (21)		07:09		04:41		05:22	06:31		07:49	09:46 (16)		09:28
	16:53 63	13:43 (19)		20:14		22:29		22:03	20:42		16:51 55	15:38 (32)		15:51
Potential sun hours	221	260	365	432	521	547	546	478	386	319	236		199
Total, worst case	793	765								221	1347		
Sun reduction	0,50	0,50								0,50	0,50		
Oper. time red.	0,80	0,80								0,80	0,80		
Wind dir. red.	0,62	0,61								0,60	0,62		
Total reduction	0,25	0,24								0,24	0,25		
Total, real	197	187								53	334		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (16)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (16)	09:00
	15:53		16:56	74	14:26 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (19)	15:51
2	09:27		08:43		10:51 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (16)	09:01
	15:54		16:58	73	14:27 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (19)	15:50
3	09:27		08:41		10:50 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (16)	09:03
	15:55		17:01	74	14:27 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (19)	15:49
4	09:26		08:39		10:51 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (16)	09:05
	15:57		17:03	71	14:27 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (19)	15:48
5	09:26		08:37		10:51 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (16)	09:07
	15:58		17:06	68	14:26 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (19)	15:47
6	09:25		08:34		10:53 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (16)	09:09
	16:00		17:08	64	14:26 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (19)	15:46
7	09:24		08:32		10:53 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (16)	09:10
	16:02		17:11	59	14:25 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (19)	15:45
8	09:24		08:30		10:55 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (16)	09:12
	16:03		17:13	52	14:24 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (19)	15:45
9	09:23		08:27		10:56 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (16)	09:13
	16:05		17:16	43	14:22 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (19)	15:44
10	09:22		08:25		10:58 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (16)	09:15
	16:07		17:18	26	14:18 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (19)	15:43
11	09:21		08:22		12:44 (21)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (16)	09:16
	16:09		17:21	5	12:49 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (19)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (16)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (19)	15:42
13	09:18	12:39 (13)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (16)	09:19
	16:13	5 12:44 (13)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (19)	15:42
14	09:17	12:39 (13)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (16)	09:20
	16:15	7 12:46 (13)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (19)	15:42
15	09:16	12:39 (13)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (16)	09:21
	16:17	15 12:54 (13)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (19)	15:42
16	09:14	12:38 (13)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (16)	09:22
	16:19	17 12:55 (13)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (19)	15:42
17	09:13	12:38 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (21)	09:23
	16:21	18 12:56 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (19)	15:42
18	09:12	12:37 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (21)	09:24
	16:23	19 12:56 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (19)	15:42
19	09:10	12:38 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (21)	09:25
	16:25	20 12:58 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (19)	15:42
20	09:08	12:37 (21)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (21)	09:25
	16:27	22 12:59 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (19)	15:42
21	09:07	12:35 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (21)	09:26
	16:30	23 12:58 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (13)	15:43
22	09:05	12:34 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (21)	09:27
	16:32	33 14:16 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (13)	15:43
23	09:03	12:33 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (13)	09:27
	16:34	39 14:19 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (13)	15:44
24	09:01	12:33 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (13)	09:28
	16:37	42 14:21 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (13)	15:44
25	09:00	12:32 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (13)	09:28
	16:39	45 14:22 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (13)	15:45
26	08:58	10:57 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (13)	09:28
	16:41	50 14:24 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (13)	15:46
27	08:56	10:51 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (13)	09:28
	16:44	64 14:24 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (13)	15:47
28	08:54	10:51 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (13)	09:28
	16:46	69 14:25 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (13)	15:48
29	08:52	10:51 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (13)	09:28
	16:49	70 14:26 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (13)	15:49
30	08:50	10:50 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (16)				07:09		04:41		05:22	06:31		07:49	12:13 (21)			09:28
	16:53	74 14:27 (19)				20:14		22:29		22:03	20:42		16:51	7 12:20 (21)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236			199
Total, worst case		704		609									7		1322		
Sun reduction		0,50		0,50									0,50		0,50		
Oper. time red.		0,80		0,80									0,80		0,80		
Wind dir. red.		0,62		0,63									0,63		0,62		
Total reduction		0,25		0,25									0,25		0,25		
Total, real		174		153									2		328		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (16)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (16)	09:00
	15:53		16:56	73	14:22 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (19)	15:51
2	09:27		08:43		10:46 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (16)	09:01
	15:54		16:58	74	14:23 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (19)	15:50
3	09:27		08:41		10:45 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (16)	09:03
	15:55		17:01	74	14:22 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (19)	15:49
4	09:26		08:39		10:46 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (16)	09:05
	15:57		17:03	73	14:23 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (19)	15:48
5	09:26		08:37		10:46 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (16)	09:07
	15:58		17:06	71	14:22 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (19)	15:47
6	09:25		08:34		10:47 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (16)	09:09
	16:00		17:08	68	14:22 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (19)	15:46
7	09:24		08:32		10:47 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (16)	09:10
	16:02		17:11	65	14:21 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (19)	15:45
8	09:24		08:30		10:48 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (16)	09:12
	16:03		17:13	58	14:20 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (19)	15:45
9	09:23		08:27		10:49 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (16)	09:13
	16:05		17:16	50	14:18 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (19)	15:44
10	09:22		08:25		10:50 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (16)	09:15
	16:07		17:18	40	14:16 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (19)	15:43
11	09:21		08:22		10:53 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (16)	09:16
	16:09		17:21	22	12:47 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (19)	15:43
12	09:20		08:20		12:38 (21)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (16)	09:17
	16:11		17:23	4	12:42 (21)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (19)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (16)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (19)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (21)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (19)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (21)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (19)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (21)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (19)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (21)	09:23
	16:21	5	12:50 (13)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (19)	15:42
18	09:12		12:33 (13)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (21)	09:24
	16:23	18	12:51 (13)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (19)	15:42
19	09:10		12:34 (13)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (21)	09:25
	16:25	19	12:53 (13)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (19)	15:42
20	09:08		12:34 (13)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (21)	09:25
	16:27	20	12:54 (13)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (19)	15:42
21	09:07		12:31 (21)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (21)	09:26
	16:30	22	12:53 (13)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (13)	15:43
22	09:05		12:29 (21)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (13)	09:27
	16:32	27	14:06 (19)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (13)	15:43
23	09:03		12:28 (21)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (13)	09:27
	16:34	38	14:14 (19)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (13)	15:44
24	09:01		12:27 (21)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (13)	09:28
	16:37	43	14:16 (19)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (13)	15:44
25	09:00		12:27 (21)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (13)	09:28
	16:39	45	14:17 (19)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (13)	15:45
26	08:58		12:26 (21)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (19)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (21)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (19)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (21)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (19)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (16)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (19)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (21)	08:58			09:28
	16:51	55	14:21 (19)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (21)	15:52			15:50
31	08:48		10:46 (16)			07:09		04:41		05:22	06:31		07:49	10:22 (16)				09:28
	16:53	69	14:22 (19)			20:14		22:29		22:03	20:42		16:51	25 12:17 (21)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319			236			199
Total, worst case		564		672									32			1221		
Sun reduction		0,50		0,50									0,50			0,50		
Oper. time red.		0,80		0,80									0,80			0,80		
Wind dir. red.		0,61		0,63									0,66			0,62		
Total reduction		0,24		0,25									0,26			0,25		
Total, real		138		169									8			303		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (30)	08:45	14:59 (21)	07:35	07:07	05:44	04:39
	15:52	20 12:23 (30)	16:56	18 15:17 (21)	18:04	20:16	21:26	22:30
2	09:27	12:03 (30)	08:43	14:59 (21)	07:32	07:04	05:41	04:38
	15:54	20 12:23 (30)	16:58	19 15:18 (21)	18:07	20:19	21:28	22:32
3	09:27	12:03 (30)	08:41	14:58 (21)	07:30	07:01	05:38	04:37
	15:55	20 12:23 (30)	17:01	19 15:17 (21)	18:09	20:21	21:30	22:33
4	09:26	12:03 (30)	08:39	14:59 (21)	07:27	06:58	05:36	04:36
	15:57	21 12:24 (30)	17:03	19 15:18 (21)	18:12	20:23	21:33	22:35
5	09:26	12:04 (30)	08:37	14:59 (21)	07:24	06:55	05:33	04:34
	15:58	26 13:33 (16)	17:06	19 15:18 (21)	18:14	20:26	21:35	22:36
6	09:25	12:04 (30)	08:34	15:00 (21)	07:21	06:52	05:31	04:33
	16:00	29 13:35 (16)	17:08	18 15:18 (21)	18:16	20:28	21:37	22:38
7	09:24	12:05 (30)	08:32	15:00 (21)	07:18	06:49	05:29	04:32
	16:01	31 13:37 (16)	17:11	17 15:17 (21)	18:19	20:30	21:39	22:39
8	09:23	12:06 (30)	08:30	15:00 (21)	07:16	06:46	05:26	04:31
	16:03	33 13:39 (16)	17:13	16 15:16 (21)	18:21	20:33	21:42	22:40
9	09:23	12:06 (30)	08:27	15:02 (21)	07:13	06:44	05:24	04:31
	16:05	33 13:39 (16)	17:15	14 15:16 (21)	18:23	20:35	21:44	22:42
10	09:22	12:07 (30)	08:25	15:03 (21)	07:10	06:41	05:21	04:30
	16:07	35 13:41 (16)	17:18	11 15:14 (21)	18:26	20:37	21:46	22:43
11	09:21	12:07 (30)	08:22	15:07 (21)	07:07	06:38	05:19	04:29
	16:09	35 13:41 (16)	17:20	5 15:12 (21)	18:28	20:39	21:49	22:44
12	09:19	12:08 (30)	08:20		07:04	06:35	05:17	04:29
	16:11	35 13:42 (16)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (30)	08:17		07:01	06:32	05:15	04:28
	16:12	35 13:43 (16)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (30)	08:15		06:58	06:29	05:12	04:28
	16:14	35 13:44 (16)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (30)	08:12		06:56	06:27	05:10	04:27
	16:17	34 13:45 (16)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (30)	08:10		06:53	06:24	05:08	04:27
	16:19	32 13:45 (16)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (30)	08:07		06:50	06:21	05:06	04:27
	16:21	29 13:45 (16)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (30)	08:05		06:47	06:18	05:04	04:26
	16:23	26 13:46 (16)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (16)	08:02		06:44	06:16	05:02	04:26
	16:25	21 13:46 (16)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (16)	07:59		06:41	06:13	05:00	04:26
	16:27	22 13:47 (16)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (16)	07:57		06:38	06:10	04:58	04:26
	16:30	21 13:47 (16)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (16)	07:54		06:35	06:07	04:56	04:27
	16:32	21 13:47 (16)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (16)	07:51		06:33	06:05	04:54	04:27
	16:34	20 13:47 (16)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (16)	07:49		06:30	06:02	04:52	04:27
	16:37	19 13:47 (16)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (16)	07:46		06:27	05:59	04:50	04:28
	16:39	18 13:47 (16)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (16)	07:43		06:24	05:57	04:49	04:28
	16:41	17 13:47 (16)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (16)	07:41		06:21	05:54	04:47	04:29
	16:44	20 15:09 (21)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (16)	07:38		06:18	05:51	04:45	04:29
	16:46	23 15:12 (21)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (16)			07:15	05:49	04:44	04:30
	16:48	21 15:14 (21)			20:10	21:21	22:25	22:49
30	08:50	15:00 (21)			07:12	05:46	04:42	04:31
	16:51	15 15:15 (21)			20:12	21:23	22:27	22:49
31	08:48	15:00 (21)			07:09		04:41	
	16:53	16 15:16 (21)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (21)	08:59		11:49 (30)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (21)	15:51	35	13:23 (16)
2	04:33	05:26	06:35	07:41			07:54		14:31 (21)	09:01		11:50 (30)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (21)	15:50	35	13:24 (16)
3	04:34	05:28	06:37	07:44			07:56		14:31 (21)	09:03		11:50 (30)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (21)	15:49	33	13:23 (16)
4	04:35	05:30	06:39	07:46			07:58		14:29 (21)	09:05		11:50 (30)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (21)	15:48	33	13:23 (16)
5	04:36	05:33	06:42	07:48			08:01		14:29 (21)	09:07		11:50 (30)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (21)	15:47	31	13:22 (16)
6	04:37	05:35	06:44	07:50			08:03		14:29 (21)	09:08		11:50 (30)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (21)	15:46	30	13:22 (16)
7	04:38	05:37	06:46	07:53			08:06		14:29 (21)	09:10		11:51 (30)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (21)	15:45	27	13:21 (16)
8	04:40	05:39	06:48	07:55			08:08		14:29 (21)	09:12		11:51 (30)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (21)	15:44	21	12:12 (30)
9	04:41	05:41	06:51	07:57			08:10		14:30 (21)	09:13		11:51 (30)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (21)	15:44	21	12:12 (30)
10	04:42	05:44	06:53	07:59			08:13		14:29 (21)	09:15		11:52 (30)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (21)	15:43	20	12:12 (30)
11	04:44	05:46	06:55	08:02			08:15		14:30 (21)	09:16		11:53 (30)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (21)	15:43	20	12:13 (30)
12	04:45	05:48	06:57	08:04			08:18		14:32 (21)	09:17		11:53 (30)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (21)	15:42	20	12:13 (30)
13	04:47	05:50	06:59	08:06			08:20		13:07 (16)	09:19		11:54 (30)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (21)	15:42	20	12:14 (30)
14	04:49	05:53	07:02	08:09			08:22		13:04 (16)	09:20		11:54 (30)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (21)	15:42	20	12:14 (30)
15	04:50	05:55	07:04	08:11			08:25		13:03 (16)	09:21		11:54 (30)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (21)	15:42	20	12:14 (30)
16	04:52	05:57	07:06	08:13			08:27		13:03 (16)	09:22		11:55 (30)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (16)	15:42	20	12:15 (30)
17	04:54	05:59	07:08	08:16			08:29		13:02 (16)	09:23		11:55 (30)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (16)	15:42	20	12:15 (30)
18	04:56	06:02	07:10	08:18			08:32		13:02 (16)	09:24		11:56 (30)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (16)	15:42	19	12:15 (30)
19	04:57	06:04	07:13	08:20			08:34		13:02 (16)	09:25		11:56 (30)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (16)	15:42	20	12:16 (30)
20	04:59	06:06	07:15	08:23			08:36		13:01 (16)	09:25		11:57 (30)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (16)	15:42	20	12:17 (30)
21	05:01	06:08	07:17	08:25			08:38		13:02 (16)	09:26		11:57 (30)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (16)	15:43	20	12:17 (30)
22	05:03	06:10	07:19	08:27			08:41		13:02 (16)	09:27		11:58 (30)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (16)	15:43	20	12:18 (30)
23	05:05	06:13	07:21	08:30			08:43		13:02 (16)	09:27		11:58 (30)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (16)	15:44	20	12:18 (30)
24	05:07	06:15	07:24	08:32			08:45		11:55 (30)	09:27		11:58 (30)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (16)	15:44	20	12:18 (30)
25	05:09	06:17	07:26	07:34			08:47		11:52 (30)	09:28		11:59 (30)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (16)	15:45	20	12:19 (30)
26	05:11	06:19	07:28	07:37			08:49		11:51 (30)	09:28		12:00 (30)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (16)	15:46	20	12:20 (30)
27	05:13	06:22	07:30	07:39			08:51		11:50 (30)	09:28		12:00 (30)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (16)	15:47	20	12:20 (30)
28	05:15	06:24	07:32	07:42			08:54		11:49 (30)	09:28		12:00 (30)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (16)	15:48	20	12:20 (30)
29	05:17	06:26	07:35	07:44			08:56		11:50 (30)	09:28		12:01 (30)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (16)	15:49	20	12:21 (30)
30	05:20	06:28	07:37	07:46			08:58		11:49 (30)	09:28		12:01 (30)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (16)	15:50	21	12:22 (30)
31	05:22	06:31		07:49		14:35 (21)				09:28		12:01 (30)
	22:03	20:42		16:51	6	14:41 (21)				15:51	21	12:22 (30)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (30)	08:45	14:09 (16)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (30)
	15:52 20	12:55 (30)	16:56 5	14:14 (16)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (30)
2	09:27	12:36 (30)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (30)
	15:54 21	12:57 (30)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (30)
3	09:27	12:36 (30)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (30)
	15:55 21	12:57 (30)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (30)
4	09:26	12:37 (30)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (30)
	15:57 20	12:57 (30)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (30)
5	09:26	12:37 (30)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (30)
	15:58 20	12:57 (30)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (30)
6	09:25	12:38 (30)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (30)
	16:00 20	12:58 (30)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (30)
7	09:24	12:38 (30)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (30)
	16:01 20	12:58 (30)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (30)
8	09:23	12:39 (30)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (30)
	16:03 20	12:59 (30)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (30)
9	09:23	12:39 (30)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (30)
	16:05 19	12:58 (30)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (30)
10	09:22	12:40 (30)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (16)	09:15		12:25 (30)
	16:07 19	12:59 (30)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (16)	15:43	21	12:46 (30)
11	09:21	12:40 (30)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (16)	09:16		12:26 (30)
	16:09 19	12:59 (30)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (16)	15:43	21	12:47 (30)
12	09:19	12:42 (30)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (16)	09:17		12:26 (30)
	16:10 24	14:10 (16)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (16)	15:42	20	12:46 (30)
13	09:18	12:42 (30)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (16)	09:19		12:27 (30)
	16:12 27	14:11 (16)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (16)	15:42	20	12:47 (30)
14	09:17	12:44 (30)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (16)	09:20		12:27 (30)
	16:14 27	14:13 (16)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (16)	15:42	21	12:48 (30)
15	09:16	12:45 (30)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (16)	09:21		12:27 (30)
	16:17 27	14:14 (16)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (16)	15:42	21	12:48 (30)
16	09:14	12:46 (30)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (16)	09:22		12:28 (30)
	16:19 27	14:15 (16)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (16)	15:42	20	12:48 (30)
17	09:13	12:48 (30)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (16)	09:23		12:28 (30)
	16:21 25	14:16 (16)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (16)	15:42	20	12:48 (30)
18	09:11	13:59 (16)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (16)	09:24		12:29 (30)
	16:23 18	14:17 (16)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (16)	15:42	20	12:49 (30)
19	09:10	13:59 (16)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (16)	09:25		12:30 (30)
	16:25 19	14:18 (16)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (16)	15:42	20	12:50 (30)
20	09:08	13:59 (16)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (16)	09:25		12:30 (30)
	16:27 19	14:18 (16)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (16)	15:42	20	12:50 (30)
21	09:07	13:59 (16)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (16)	09:26		12:30 (30)
	16:30 20	14:19 (16)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (16)	15:43	20	12:50 (30)
22	09:05	13:59 (16)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (16)	09:27		12:31 (30)
	16:32 20	14:19 (16)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (16)	15:43	20	12:51 (30)
23	09:03	13:59 (16)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (16)	09:27		12:31 (30)
	16:34 21	14:20 (16)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (16)	15:44	20	12:51 (30)
24	09:01	14:00 (16)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (16)	09:27		12:31 (30)
	16:36 20	14:20 (16)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (16)	15:44	21	12:52 (30)
25	09:00	14:00 (16)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (30)	09:28		12:33 (30)
	16:39 21	14:21 (16)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (16)	15:45	20	12:53 (30)
26	08:58	14:01 (16)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (30)	09:28		12:33 (30)
	16:41 20	14:21 (16)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (16)	15:46	20	12:53 (30)
27	08:56	14:01 (16)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (30)	09:28		12:34 (30)
	16:44 19	14:20 (16)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (16)	15:47	20	12:54 (30)
28	08:54	14:02 (16)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (30)	09:28		12:33 (30)
	16:46 18	14:20 (16)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (16)	15:47	21	12:54 (30)
29	08:52	14:04 (16)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (30)	09:28		12:34 (30)
	16:48 16	14:20 (16)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (16)	15:49	20	12:54 (30)
30	08:50	14:04 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (30)	09:28		12:35 (30)
	16:51 14	14:18 (16)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (16)	15:50	20	12:55 (30)
31	08:48	14:07 (16)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (30)
	16:53 10	14:17 (16)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (30)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (30)	08:45		15:12 (16)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (30)	16:56	14	15:26 (16)	18:04	20:16	21:26	22:30
2	09:27		13:54 (30)	08:43		15:12 (16)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (30)	16:58	16	15:28 (16)	18:07	20:19	21:28	22:32
3	09:27		13:54 (30)	08:41		15:11 (16)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (30)	17:01	17	15:28 (16)	18:09	20:21	21:30	22:33
4	09:26		13:54 (30)	08:39		15:11 (16)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (30)	17:03	18	15:29 (16)	18:12	20:23	21:33	22:35
5	09:26		13:53 (30)	08:37		15:11 (16)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (30)	17:06	18	15:29 (16)	18:14	20:26	21:35	22:36
6	09:25		13:53 (30)	08:34		15:11 (16)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (30)	17:08	19	15:30 (16)	18:16	20:28	21:37	22:38
7	09:24		13:54 (30)	08:32		15:11 (16)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (30)	17:10	19	15:30 (16)	18:19	20:30	21:39	22:39
8	09:23		13:54 (30)	08:30		15:11 (16)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (30)	17:13	18	15:29 (16)	18:21	20:32	21:42	22:40
9	09:23		13:53 (30)	08:27		15:12 (16)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (30)	17:15	18	15:30 (16)	18:23	20:35	21:44	22:41
10	09:22		13:53 (30)	08:25		15:12 (16)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (30)	17:18	17	15:29 (16)	18:26	20:37	21:46	22:43
11	09:20		13:53 (30)	08:22		15:13 (16)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (30)	17:20	14	15:27 (16)	18:28	20:39	21:48	22:44
12	09:19		13:54 (30)	08:20		15:16 (16)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (30)	17:23	11	15:27 (16)	18:30	20:42	21:51	22:45
13	09:18		13:53 (30)	08:17		15:18 (16)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (30)	17:25	5	15:23 (16)	18:33	20:44	21:53	22:45
14	09:17		13:54 (30)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (30)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (30)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (30)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (30)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (30)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (30)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (30)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (30)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (30)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (30)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (30)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (30)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (30)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (30)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (30)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (30)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (30)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (30)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (30)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (30)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (30)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (30)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (30)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (30)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (16)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (16)				20:12	21:23	22:27	22:49
31	08:48		15:14 (16)				07:09		04:41	
	16:53	11	15:25 (16)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		14:42 (16)	08:59		13:35 (30)
	22:48		22:01		20:39		19:13			16:48	16	14:58 (16)	15:51	19	13:54 (30)
2	04:33		05:26		06:35		07:41			07:53		14:41 (16)	09:01		13:37 (30)
	22:48		21:58		20:37		19:10			16:46	18	14:59 (16)	15:50	18	13:55 (30)
3	04:34		05:28		06:37		07:44			07:56		14:40 (16)	09:03		13:37 (30)
	22:47		21:56		20:34		19:07			16:44	19	14:59 (16)	15:49	18	13:55 (30)
4	04:35		05:30		06:39		07:46			07:58		14:40 (16)	09:05		13:38 (30)
	22:46		21:54		20:31		19:04			16:41	20	15:00 (16)	15:48	17	13:55 (30)
5	04:36		05:32		06:42		07:48			08:01		14:41 (16)	09:07		13:39 (30)
	22:45		21:51		20:28		19:01			16:39	19	15:00 (16)	15:47	16	13:55 (30)
6	04:37		05:35		06:44		07:50			08:03		14:41 (16)	09:08		13:40 (30)
	22:45		21:49		20:25		18:58			16:36	19	15:00 (16)	15:46	15	13:55 (30)
7	04:38		05:37		06:46		07:53			08:06		14:41 (16)	09:10		13:41 (30)
	22:44		21:46		20:22		18:56			16:34	18	14:59 (16)	15:45	14	13:55 (30)
8	04:40		05:39		06:48		07:55			08:08		14:42 (16)	09:12		13:42 (30)
	22:43		21:44		20:19		18:53			16:32	17	14:59 (16)	15:44	13	13:55 (30)
9	04:41		05:41		06:50		07:57			08:10		14:43 (16)	09:13		13:42 (30)
	22:41		21:41		20:16		18:50			16:30	16	14:59 (16)	15:44	12	13:54 (30)
10	04:42		05:44		06:53		07:59			08:13		14:43 (16)	09:15		13:43 (30)
	22:40		21:39		20:14		18:47			16:27	14	14:57 (16)	15:43	11	13:54 (30)
11	04:44		05:46		06:55		08:02			08:15		14:45 (16)	09:16		13:45 (30)
	22:39		21:36		20:11		18:44			16:25	11	14:56 (16)	15:43	9	13:54 (30)
12	04:45		05:48		06:57		08:04			08:18		14:47 (16)	09:17		13:46 (30)
	22:38		21:34		20:08		18:41			16:23	7	14:54 (16)	15:42	7	13:53 (30)
13	04:47		05:50		06:59		08:06			08:20			09:19		13:48 (30)
	22:36		21:31		20:05		18:39			16:21			15:42	5	13:53 (30)
14	04:49		05:53		07:01		08:09			08:22			09:20		13:49 (30)
	22:35		21:29		20:02		18:36			16:19			15:42	3	13:52 (30)
15	04:50		05:55		07:04		08:11			08:25		13:37 (30)	09:21		
	22:33		21:26		19:59		18:33			16:17	7	13:44 (30)	15:42		
16	04:52		05:57		07:06		08:13			08:27		13:36 (30)	09:22		
	22:32		21:23		19:56		18:30			16:15	11	13:47 (30)	15:42		
17	04:54		05:59		07:08		08:16			08:29		13:34 (30)	09:23		
	22:30		21:21		19:53		18:28			16:13	14	13:48 (30)	15:42		
18	04:56		06:01		07:10		08:18			08:32		13:33 (30)	09:24		
	22:29		21:18		19:50		18:25			16:11	17	13:50 (30)	15:42		
19	04:57		06:04		07:12		08:20			08:34		13:33 (30)	09:25		
	22:27		21:15		19:47		18:22			16:09	18	13:51 (30)	15:42		
20	04:59		06:06		07:15		08:23			08:36		13:32 (30)	09:25		
	22:25		21:13		19:45		18:19			16:07	19	13:51 (30)	15:42		
21	05:01		06:08		07:17		08:25			08:38		13:32 (30)	09:26		
	22:23		21:10		19:42		18:17			16:06	20	13:52 (30)	15:43		
22	05:03		06:10		07:19		08:27			08:41		13:32 (30)	09:27		
	22:21		21:07		19:39		18:14			16:04	20	13:52 (30)	15:43		
23	05:05		06:13		07:21		08:30			08:43		13:32 (30)	09:27		
	22:20		21:05		19:36		18:11			16:02	21	13:53 (30)	15:44		
24	05:07		06:15		07:23		08:32			08:45		13:33 (30)	09:27		
	22:18		21:02		19:33		18:09			16:00	21	13:54 (30)	15:44		
25	05:09		06:17		07:26		07:34			08:47		13:33 (30)	09:28		
	22:16		20:59		19:30		17:06			15:59	21	13:54 (30)	15:45		
26	05:11		06:19		07:28		07:37			08:49		13:33 (30)	09:28		
	22:14		20:56		19:27		17:04			15:57	21	13:54 (30)	15:46		
27	05:13		06:22		07:30		07:39			08:51		13:33 (30)	09:28		
	22:11		20:53		19:24		17:01			15:56	21	13:54 (30)	15:47		
28	05:15		06:24		07:32		07:41			08:53		13:33 (30)	09:28		
	22:09		20:51		19:21		16:58			15:55	21	13:54 (30)	15:47		
29	05:17		06:26		07:35		07:44		14:47 (16)	08:55		13:35 (30)	09:28		
	22:07		20:48		19:18		16:56	7	14:54 (16)	15:53	20	13:55 (30)	15:48		
30	05:19		06:28		07:37		07:46		14:45 (16)	08:57		13:35 (30)	09:28		13:56 (30)
	22:05		20:45		19:16		16:53	11	14:56 (16)	15:52	20	13:55 (30)	15:50	4	14:00 (30)
31	05:22		06:31				07:49		14:42 (16)				09:28		13:55 (30)
	22:03		20:42				16:51	15	14:57 (16)				15:51	6	14:01 (30)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								33			486			187	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,55			0,55			0,55	
Total reduction								0,22			0,22			0,22	
Total, real								7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:45		10:57 (41)	07:35		16:28 (21)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (30)	18:04	11	16:39 (21)	20:16	21:26	22:30
2	09:27			08:43		10:59 (41)	07:32		16:27 (21)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (30)	18:07	13	16:40 (21)	20:19	21:28	22:32
3	09:27			08:41		11:02 (41)	07:30		16:27 (21)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (30)	18:09	14	16:41 (21)	20:21	21:30	22:33
4	09:26			08:39		13:29 (30)	07:27		16:27 (21)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (30)	18:12	17	16:44 (21)	20:23	21:33	22:35
5	09:26			08:37		13:30 (30)	07:24		16:27 (21)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (30)	18:14	19	16:46 (21)	20:26	21:35	22:36
6	09:25			08:34		13:33 (30)	07:21		16:28 (21)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (30)	18:16	17	16:45 (21)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (21)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (21)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (21)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (21)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (21)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (21)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (11)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (11)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (11)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (11)	18:33			20:44	21:53	22:45
14	09:17		11:05 (41)	08:15		15:02 (11)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (41)	17:28	12	15:14 (16)	18:35			20:46	21:55	22:46
15	09:16		10:59 (41)	08:12		15:06 (16)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (41)	17:30	12	15:18 (16)	18:37			20:49	21:57	22:47
16	09:14		10:52 (41)	08:10		15:06 (16)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (41)	17:33	15	15:21 (16)	18:40			20:51	21:59	22:48
17	09:13		10:51 (41)	08:07		15:05 (16)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (41)	17:35	16	15:21 (16)	18:42			20:53	22:02	22:48
18	09:11		10:51 (41)	08:05		15:05 (16)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (41)	17:38	15	15:20 (16)	18:44			20:56	22:04	22:49
19	09:10		10:51 (41)	08:02		15:06 (16)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (41)	17:40	16	15:22 (16)	18:47			20:58	22:06	22:49
20	09:08		10:51 (41)	07:59		15:07 (16)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (41)	17:43	17	15:24 (16)	18:49			21:00	22:08	22:50
21	09:07		10:51 (41)	07:57		15:07 (16)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (41)	17:45	20	15:27 (16)	18:51			21:02	22:10	22:50
22	09:05		10:51 (41)	07:54		15:08 (16)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (36)	17:47	20	15:28 (16)	18:53			21:05	22:12	22:50
23	09:03		10:51 (41)	07:51		15:09 (16)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (36)	17:50	18	15:27 (16)	18:56			21:07	22:14	22:50
24	09:01		10:52 (41)	07:49		15:12 (16)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (36)	17:52	13	15:25 (16)	18:58			21:09	22:16	22:50
25	08:59		10:52 (41)	07:46		15:16 (16)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (36)	17:55	5	15:21 (16)	19:00			21:12	22:18	22:50
26	08:58		10:52 (41)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (30)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (41)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (30)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (41)	07:38		16:32 (21)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (30)	18:02	4	16:36 (21)	19:07			21:19	22:23	22:50
29	08:52		10:54 (41)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (30)				20:10			21:21	22:25	22:49
30	08:50		10:55 (41)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (30)				20:12			21:23	22:27	22:49
31	08:48		10:56 (41)				07:09				04:41	
	16:53	42	13:49 (30)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,67			0,57			0,57				
Total reduction		0,27			0,23			0,23				
Total, real		139			81			28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (30)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (30)	15:48
5	04:36	05:33	06:42	07:48		17:09 (21)	08:01		13:02 (30)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (21)	16:39	13	13:15 (30)	15:47
6	04:37	05:35	06:44	07:50		17:06 (21)	08:03		13:01 (30)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (21)	16:36	17	13:18 (30)	15:46
7	04:38	05:37	06:46	07:53		17:04 (21)	08:06		12:58 (30)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (21)	16:34	21	13:19 (30)	15:45
8	04:40	05:39	06:48	07:55		17:03 (21)	08:08		10:32 (41)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (21)	16:32	29	13:20 (30)	15:44
9	04:41	05:41	06:50	07:57		17:02 (21)	08:10		10:30 (41)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (21)	16:30	37	13:22 (30)	15:44
10	04:42	05:44	06:53	07:59		17:01 (21)	08:13		10:28 (41)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (21)	16:27	40	13:21 (30)	15:43
11	04:44	05:46	06:55	08:02		17:01 (21)	08:15		10:27 (41)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (21)	16:25	41	13:19 (30)	15:43
12	04:45	05:48	06:57	08:04		17:01 (21)	08:18		10:27 (41)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (21)	16:23	42	13:19 (30)	15:42
13	04:47	05:50	06:59	08:06		17:02 (21)	08:20		10:25 (41)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (21)	16:21	41	13:15 (30)	15:42
14	04:49	05:53	07:01	08:09		17:06 (21)	08:22		10:25 (41)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (21)	16:19	41	13:07 (30)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (41)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (30)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (41)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (30)	15:42
17	04:54	05:59	07:08	08:16		15:45 (16)	08:29		10:25 (41)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (16)	16:13	39	12:37 (36)	15:42
18	04:56	06:02	07:10	08:18		15:42 (16)	08:32		10:26 (41)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (16)	16:11	40	12:38 (36)	15:42
19	04:57	06:04	07:12	08:20		15:40 (16)	08:34		10:26 (41)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (16)	16:09	39	12:37 (36)	15:42
20	04:59	06:06	07:15	08:23		15:39 (16)	08:36		10:26 (41)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (16)	16:07	28	12:25 (36)	15:42
21	05:01	06:08	07:17	08:25		15:37 (16)	08:38		10:27 (41)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (16)	16:06	22	10:49 (41)	15:43
22	05:03	06:10	07:19	08:27		15:37 (16)	08:41		10:27 (41)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (16)	16:04	22	10:49 (41)	15:43
23	05:05	06:13	07:21	08:30		15:36 (16)	08:43		10:28 (41)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (16)	16:02	21	10:49 (41)	15:44
24	05:07	06:15	07:24	08:32		15:35 (16)	08:45		10:29 (41)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (16)	16:01	20	10:49 (41)	15:44
25	05:09	06:17	07:26	07:34		14:36 (16)	08:47		10:29 (41)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (16)	15:59	19	10:48 (41)	15:45
26	05:11	06:19	07:28	07:37		14:35 (16)	08:49		10:31 (41)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (16)	15:57	18	10:49 (41)	15:46
27	05:13	06:22	07:30	07:39		14:35 (16)	08:51		10:38 (41)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (16)	15:56	10	10:48 (41)	15:47
28	05:15	06:24	07:32	07:41		14:30 (11)	08:53		10:44 (41)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (16)	15:55	3	10:47 (41)	15:48
29	05:17	06:26	07:35	07:44		14:27 (11)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (11)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (11)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (11)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June
1	09:27			08:45		15:29 (12)	07:35		15:43 (17)	07:06			05:43		18:54 (41)	04:39
	15:52			16:56	22	15:51 (12)	18:04	38	16:21 (17)	20:16			21:25	25	19:19 (41)	22:30
2	09:27			08:43		15:29 (12)	07:32		15:44 (17)	07:04			05:41		18:56 (41)	04:38
	15:54			16:58	23	15:52 (12)	18:07	36	16:20 (17)	20:19			21:28	20	19:16 (41)	22:32
3	09:27			08:41		15:29 (12)	07:29		15:44 (17)	07:01		19:08 (41)	05:38		18:59 (41)	04:37
	15:55			17:01	23	15:52 (12)	18:09	35	16:19 (17)	20:21	9	19:17 (41)	21:30	15	19:14 (41)	22:33
4	09:26			08:39		15:29 (12)	07:27		15:45 (17)	06:58		19:03 (41)	05:36		19:04 (41)	04:36
	15:57			17:03	24	15:53 (12)	18:11	33	16:18 (17)	20:23	18	19:21 (41)	21:32	5	19:09 (41)	22:35
5	09:25			08:36		15:29 (12)	07:24		15:46 (17)	06:55		18:59 (41)	05:33			04:35
	15:58			17:06	23	15:52 (12)	18:14	32	16:18 (17)	20:25	24	19:23 (41)	21:35			22:36
6	09:25			08:34		15:28 (12)	07:21		15:48 (17)	06:52		18:57 (41)	05:31			04:33
	16:00			17:08	24	15:52 (12)	18:16	28	16:16 (17)	20:28	28	19:25 (41)	21:37			22:37
7	09:24			08:32		15:29 (12)	07:18		15:49 (17)	06:49		18:55 (41)	05:29			04:32
	16:01			17:10	24	15:53 (12)	18:19	25	16:14 (17)	20:30	31	19:26 (41)	21:39			22:39
8	09:23			08:29		15:29 (12)	07:15		15:51 (17)	06:46		18:53 (41)	05:26			04:32
	16:03			17:13	23	15:52 (12)	18:21	21	16:12 (17)	20:32	35	19:42 (30)	21:42			22:40
9	09:22			08:27		15:31 (12)	07:13		15:54 (17)	06:43		18:52 (41)	05:24			04:31
	16:05			17:15	21	15:52 (12)	18:23	15	16:09 (17)	20:35	54	19:59 (30)	21:44			22:41
10	09:21			08:25		15:31 (12)	07:10			06:41		18:51 (41)	05:21			04:30
	16:07			17:18	20	15:51 (12)	18:26			20:37	57	19:59 (30)	21:46			22:42
11	09:20			08:22		15:32 (12)	07:07			06:38		18:49 (41)	05:19			04:29
	16:09			17:20	18	15:50 (12)	18:28			20:39	60	19:59 (30)	21:48			22:43
12	09:19			08:20		15:34 (12)	07:04			06:35		18:48 (41)	05:17			04:29
	16:11			17:23	15	15:49 (12)	18:30			20:42	62	19:58 (30)	21:50			22:44
13	09:18			08:17		15:36 (12)	07:01			06:32		18:48 (41)	05:15			04:28
	16:12			17:25	22	16:09 (17)	18:33			20:44	64	19:59 (30)	21:53			22:45
14	09:17			08:15		15:54 (17)	06:58			06:29		18:47 (41)	05:12			04:28
	16:14			17:28	18	16:12 (17)	18:35			20:46	63	19:58 (30)	21:55			22:46
15	09:15			08:12		15:52 (17)	06:55			06:27		18:46 (41)	05:10			04:27
	16:17			17:30	22	16:14 (17)	18:37			20:48	63	19:57 (30)	21:57			22:47
16	09:14			08:10		15:51 (17)	06:53		17:30 (36)	06:24		18:47 (41)	05:08			04:27
	16:19			17:33	26	16:17 (17)	18:40	8	17:38 (36)	20:51	62	19:57 (30)	21:59			22:47
17	09:13			08:07		15:49 (17)	06:50		17:27 (36)	06:21		18:46 (41)	05:06			04:27
	16:21			17:35	29	16:18 (17)	18:42	13	17:40 (36)	20:53	60	19:55 (30)	22:01			22:48
18	09:11			08:04		15:47 (17)	06:47		17:25 (36)	06:18		18:45 (41)	05:04			04:26
	16:23			17:38	32	16:19 (17)	18:44	17	17:42 (36)	20:55	58	19:53 (30)	22:04			22:49
19	09:10			08:02		15:46 (17)	06:44		17:23 (36)	06:15		18:46 (41)	05:02			04:26
	16:25			17:40	33	16:19 (17)	18:46	19	17:42 (36)	20:58	53	19:52 (30)	22:06			22:49
20	09:08			07:59		15:46 (17)	06:41		17:22 (36)	06:13		18:45 (41)	05:00			04:26
	16:27			17:43	35	16:21 (17)	18:49	21	17:43 (36)	21:00	44	19:29 (41)	22:08			22:49
21	09:06			07:57		15:45 (17)	06:38		17:21 (36)	06:10		18:45 (41)	04:58			04:26
	16:30			17:45	36	16:21 (17)	18:51	22	17:43 (36)	21:02	43	19:28 (41)	22:10			22:50
22	09:05			07:54		15:44 (17)	06:35		17:21 (36)	06:07		18:46 (41)	04:56			04:27
	16:32			17:47	37	16:21 (17)	18:53	22	17:43 (36)	21:05	43	19:29 (41)	22:12			22:50
23	09:03			07:51		15:44 (17)	06:32		17:20 (36)	06:05		18:46 (41)	04:54			04:27
	16:34			17:50	38	16:22 (17)	18:56	22	17:42 (36)	21:07	41	19:27 (41)	22:14			22:50
24	09:01			07:49		15:43 (17)	06:29		17:20 (36)	06:02		18:47 (41)	04:52			04:27
	16:36			17:52	39	16:22 (17)	18:58	22	17:42 (36)	21:09	40	19:27 (41)	22:16			22:50
25	08:59			07:46		15:44 (17)	06:27		17:20 (36)	05:59		18:47 (41)	04:50			04:28
	16:39			17:55	38	16:22 (17)	19:00	21	17:41 (36)	21:12	39	19:26 (41)	22:18			22:50
26	08:57			07:43		15:43 (17)	06:24		17:20 (36)	05:57		18:48 (41)	04:49			04:28
	16:41			17:57	39	16:22 (17)	19:03	20	17:40 (36)	21:14	37	19:25 (41)	22:20			22:50
27	08:55		15:34 (12)	07:40		15:43 (17)	06:21		17:22 (36)	05:54		18:48 (41)	04:47			04:29
	16:44	10	15:44 (12)	18:00	39	16:22 (17)	19:05	17	17:39 (36)	21:16	36	19:24 (41)	22:21			22:50
28	08:54		15:33 (12)	07:38		15:43 (17)	06:18		17:24 (36)	05:51		18:50 (41)	04:45			04:29
	16:46	13	15:46 (12)	18:02	38	16:21 (17)	19:07	13	17:37 (36)	21:19	33	19:23 (41)	22:23			22:49
29	08:51		15:31 (12)				07:15		18:26 (36)	05:49		18:50 (41)	04:44			04:30
	16:48	16	15:47 (12)				20:09	8	18:34 (36)	21:21	31	19:21 (41)	22:25			22:49
30	08:49		15:31 (12)				07:12			05:46		18:52 (41)	04:42			04:31
	16:51	18	15:49 (12)				20:12			21:23	28	19:20 (41)	22:27			22:49
31	08:47		15:29 (12)				07:09						04:41			
	16:53	20	15:49 (12)				20:14						22:28			
Potential sun hours	221			260			365			432			521			547
Total, worst case		77			781			508			1216			65		
Sun reduction		0,50			0,50			0,50			0,50			0,50		
Oper. time red.		0,80			0,80			0,80			0,80			0,80		
Wind dir. red.		0,53			0,54			0,58			0,68			0,68		
Total reduction		0,21			0,22			0,23			0,27			0,27		
Total, real		16			169			118			331			18		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (41)	07:39			07:51		15:00 (12)	08:59
	22:48	22:00			20:39	60	19:58 (30)	19:13			16:48	21	15:21 (12)	15:51
2	04:33	05:26			06:35		18:49 (41)	07:41			07:53		15:00 (12)	09:01
	22:47	21:58			20:36	57	19:57 (30)	19:10			16:46	22	15:22 (12)	15:50
3	04:34	05:28			06:37		18:49 (41)	07:43			07:56		14:59 (12)	09:03
	22:47	21:56			20:34	54	19:56 (30)	19:07			16:44	23	15:22 (12)	15:49
4	04:35	05:30			06:39		18:51 (41)	07:46		16:33 (17)	07:58		14:59 (12)	09:05
	22:46	21:53			20:31	35	19:40 (30)	19:04	11	16:44 (17)	16:41	23	15:22 (12)	15:48
5	04:36	05:33			06:42		18:52 (41)	07:48		16:29 (17)	08:01		14:59 (12)	09:07
	22:45	21:51			20:28	31	19:23 (41)	19:01	18	16:47 (17)	16:39	24	15:23 (12)	15:47
6	04:37	05:35			06:44		18:53 (41)	07:50		16:26 (17)	08:03		14:58 (12)	09:08
	22:44	21:49			20:25	28	19:21 (41)	18:58	24	16:50 (17)	16:36	24	15:22 (12)	15:46
7	04:38	05:37			06:46		18:54 (41)	07:52		16:24 (17)	08:05		14:59 (12)	09:10
	22:43	21:46			20:22	25	19:19 (41)	18:55	27	16:51 (17)	16:34	23	15:22 (12)	15:45
8	04:40	05:39			06:48		18:57 (41)	07:55		16:21 (17)	08:08		14:59 (12)	09:11
	22:42	21:44			20:19	18	19:15 (41)	18:53	30	16:51 (17)	16:32	23	15:22 (12)	15:44
9	04:41	05:41		19:10 (41)	06:50		19:00 (41)	07:57		16:21 (17)	08:10		14:59 (12)	09:13
	22:41	21:41	10	19:20 (41)	20:16	11	19:11 (41)	18:50	32	16:53 (17)	16:30	23	15:22 (12)	15:44
10	04:42	05:44		19:07 (41)	06:53			07:59		16:19 (17)	08:13		15:00 (12)	09:14
	22:40	21:39	17	19:24 (41)	20:13			18:47	34	16:53 (17)	16:27	21	15:21 (12)	15:43
11	04:44	05:46		19:04 (41)	06:55			08:02		16:18 (17)	08:15		15:01 (12)	09:16
	22:39	21:36	22	19:26 (41)	20:11			18:44	36	16:54 (17)	16:25	20	15:21 (12)	15:43
12	04:45	05:48		19:02 (41)	06:57			08:04		16:17 (17)	08:17		15:02 (12)	09:17
	22:37	21:34	26	19:28 (41)	20:08			18:41	37	16:54 (17)	16:23	19	15:21 (12)	15:42
13	04:47	05:50		19:00 (41)	06:59			08:06		16:16 (17)	08:20		15:03 (12)	09:18
	22:36	21:31	29	19:29 (41)	20:05			18:39	38	16:54 (17)	16:21	16	15:19 (12)	15:42
14	04:49	05:53		18:58 (41)	07:01		18:17 (36)	08:08		16:16 (17)	08:22		15:05 (12)	09:20
	22:35	21:28	32	19:30 (41)	20:02	7	18:24 (36)	18:36	38	16:54 (17)	16:19	13	15:18 (12)	15:42
15	04:50	05:55		18:57 (41)	07:04		18:13 (36)	08:11		16:15 (17)	08:24		15:07 (12)	09:21
	22:33	21:26	34	19:31 (41)	19:59	13	18:26 (36)	18:33	39	16:54 (17)	16:17	10	15:17 (12)	15:42
16	04:52	05:57		18:56 (41)	07:06		18:11 (36)	08:13		16:15 (17)	08:27			09:22
	22:32	21:23	36	19:32 (41)	19:56	16	18:27 (36)	18:30	39	16:54 (17)	16:15			15:42
17	04:54	05:59		18:54 (41)	07:08		18:09 (36)	08:15		16:15 (17)	08:29			09:23
	22:30	21:21	38	19:32 (41)	19:53	19	18:28 (36)	18:28	38	16:53 (17)	16:13			15:42
18	04:56	06:01		18:53 (41)	07:10		18:08 (36)	08:18		16:15 (17)	08:31			09:24
	22:28	21:18	40	19:33 (41)	19:50	20	18:28 (36)	18:25	39	16:54 (17)	16:11			15:42
19	04:57	06:04		18:52 (41)	07:12		18:08 (36)	08:20		16:15 (17)	08:34			09:24
	22:27	21:15	41	19:33 (41)	19:47	21	18:29 (36)	18:22	38	16:53 (17)	16:09			15:42
20	04:59	06:06		18:51 (41)	07:15		18:07 (36)	08:22		16:16 (17)	08:36			09:25
	22:25	21:13	42	19:33 (41)	19:44	22	18:29 (36)	18:19	36	16:52 (17)	16:07			15:42
21	05:01	06:08		18:50 (41)	07:17		18:06 (36)	08:25		16:16 (17)	08:38			09:26
	22:23	21:10	43	19:33 (41)	19:42	22	18:28 (36)	18:17	35	16:51 (17)	16:06			15:43
22	05:03	06:10		18:50 (41)	07:19		18:06 (36)	08:27		16:17 (17)	08:40			09:26
	22:21	21:07	43	19:33 (41)	19:39	22	18:28 (36)	18:14	34	16:51 (17)	16:04			15:43
23	05:05	06:13		18:49 (41)	07:21		18:06 (36)	08:29		16:17 (17)	08:43			09:27
	22:19	21:04	44	19:33 (41)	19:36	21	18:27 (36)	18:11	32	16:49 (17)	16:02			15:44
24	05:07	06:15		18:49 (41)	07:23		18:07 (36)	08:32		16:18 (17)	08:45			09:27
	22:17	21:02	54	19:55 (30)	19:33	19	18:26 (36)	18:09	31	16:49 (17)	16:01			15:44
25	05:09	06:17		18:49 (41)	07:26		18:07 (36)	07:34		15:18 (17)	08:47			09:28
	22:15	20:59	58	19:57 (30)	19:30	18	18:25 (36)	17:06	29	15:47 (17)	15:59			15:45
26	05:11	06:19		18:49 (41)	07:28		18:08 (36)	07:37		15:20 (17)	08:49			09:28
	22:13	20:56	60	19:58 (30)	19:27	15	18:23 (36)	17:04	25	15:45 (17)	15:57			15:46
27	05:13	06:22		18:48 (41)	07:30		18:09 (36)	07:39		15:22 (17)	08:51			09:28
	22:11	20:53	63	19:59 (30)	19:24	11	18:20 (36)	17:01	22	15:44 (17)	15:56			15:47
28	05:15	06:24		18:48 (41)	07:32			07:41		15:08 (12)	08:53			09:28
	22:09	20:51	63	19:59 (30)	19:21			16:58	22	15:41 (17)	15:55			15:48
29	05:17	06:26		18:48 (41)	07:34			07:44		15:05 (12)	08:55			09:28
	22:07	20:48	63	19:59 (30)	19:18			16:56	21	15:37 (17)	15:53			15:49
30	05:20	06:28		18:48 (41)	07:37			07:46		15:03 (12)	08:57			09:28
	22:05	20:45	63	19:59 (30)	19:16			16:53	16	15:19 (12)	15:52			15:50
31	05:22	06:30		18:48 (41)				07:49		15:01 (12)				09:28
	22:03	20:42	62	19:58 (30)				16:51	18	15:19 (12)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (27)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (27)
	15:53	39	13:36 (28)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (28)
2	09:28		12:01 (27)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (27)
	15:54	41	13:36 (28)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (28)
3	09:27		12:01 (27)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (27)
	15:55	41	13:36 (28)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (28)
4	09:27		12:01 (27)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (27)
	15:57	41	13:36 (28)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (28)
5	09:26		12:01 (27)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (27)
	15:58	43	13:37 (28)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (28)
6	09:25		12:02 (27)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (27)
	16:00	41	13:37 (28)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (28)
7	09:25		12:02 (27)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (27)
	16:02	41	13:37 (28)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (28)
8	09:24		12:02 (27)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (27)
	16:03	42	13:38 (28)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (28)
9	09:23		12:03 (27)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (27)
	16:05	41	13:38 (28)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (28)
10	09:22		12:03 (27)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (27)
	16:07	40	13:37 (28)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (28)
11	09:21		12:03 (27)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (27)
	16:09	41	13:38 (28)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (28)
12	09:20		12:03 (27)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (27)
	16:11	39	13:37 (28)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (28)
13	09:19		12:04 (27)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (27)
	16:13	37	13:37 (28)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (28)
14	09:17		12:04 (27)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (27)
	16:15	35	13:36 (28)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (28)
15	09:16		12:04 (27)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (27)	09:21		11:54 (27)
	16:17	32	13:35 (28)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (27)	15:42	38	13:27 (28)
16	09:15		12:04 (27)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (27)	09:22		11:55 (27)
	16:19	24	12:28 (27)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (27)	15:42	37	13:28 (28)
17	09:13		12:06 (27)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (27)	09:23		11:55 (27)
	16:21	24	12:30 (27)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (27)	15:42	37	13:28 (28)
18	09:12		12:06 (27)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (27)	09:24		11:56 (27)
	16:23	24	12:30 (27)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (27)	15:42	36	13:29 (28)
19	09:10		12:06 (27)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (27)	09:25		11:57 (27)
	16:25	24	12:30 (27)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (27)	15:42	36	13:29 (28)
20	09:09		12:07 (27)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (27)	09:26		11:58 (27)
	16:28	23	12:30 (27)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (27)	15:43	36	13:30 (28)
21	09:07		12:08 (27)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (27)	09:26		11:59 (27)
	16:30	21	12:29 (27)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (27)	15:43	35	13:31 (28)
22	09:05		12:09 (27)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (27)	09:27		11:58 (27)
	16:32	20	12:29 (27)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (27)	15:43	36	13:31 (28)
23	09:03		12:09 (27)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (27)	09:27		11:59 (27)
	16:34	19	12:28 (27)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (27)	15:44	36	13:31 (28)
24	09:02		12:10 (27)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (27)	09:28		12:00 (27)
	16:37	17	12:27 (27)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (27)	15:44	36	13:32 (28)
25	09:00		12:12 (27)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (27)	09:28		12:00 (27)
	16:39	15	12:27 (27)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (27)	15:45	37	13:33 (28)
26	08:58		12:14 (27)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (27)	09:28		12:00 (27)
	16:41	11	12:25 (27)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (27)	15:46	37	13:33 (28)
27	08:56		12:17 (27)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (27)	09:28		12:00 (27)
	16:44	4	12:21 (27)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (28)	15:47	38	13:33 (28)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (27)	09:29		12:01 (27)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (28)	15:48	37	13:34 (28)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (27)	09:28		12:00 (27)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (28)	15:49	38	13:34 (28)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (27)	09:28		12:01 (27)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (28)	15:50	39	13:35 (28)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (27)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (28)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (27)	08:46	10:11 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (27)
	15:53 31	12:43 (28)	16:56 18	10:29 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (27)
2	09:28	11:14 (27)	08:44	10:11 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (27)
	15:54 30	12:43 (28)	16:58 17	10:28 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (27)
3	09:27	11:13 (27)	08:41	10:13 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (27)
	15:55 31	12:43 (28)	17:01 14	10:27 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (27)
4	09:27	11:13 (27)	08:39	10:14 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (27)
	15:57 30	12:43 (28)	17:03 11	10:25 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (27)
5	09:26	11:14 (27)	08:37	10:17 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (27)
	15:58 28	12:42 (28)	17:06 7	10:24 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (28)
6	09:25	11:14 (27)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (32)	09:09		11:00 (27)
	16:00 28	12:42 (28)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (32)	15:46	28	12:28 (28)
7	09:25	11:14 (27)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (32)	09:10		11:01 (27)
	16:02 26	12:41 (28)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (32)	15:45	29	12:30 (28)
8	09:24	11:14 (27)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (32)	09:12		11:02 (27)
	16:03 21	11:35 (27)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (32)	15:45	30	12:31 (28)
9	09:23	11:15 (27)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (32)	09:14		11:03 (27)
	16:05 21	11:36 (27)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (32)	15:44	30	12:32 (28)
10	09:22	11:15 (27)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (32)	09:15		11:03 (27)
	16:07 21	11:36 (27)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (32)	15:44	30	12:32 (28)
11	09:21	11:15 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (32)	09:16		11:04 (27)
	16:09 22	11:37 (27)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (32)	15:43	30	12:33 (28)
12	09:20	11:15 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (32)	09:18		11:04 (27)
	16:11 22	11:37 (27)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (32)	15:43	31	12:34 (28)
13	09:19	11:16 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (32)	09:19		11:05 (27)
	16:13 22	11:38 (27)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (32)	15:42	31	12:35 (28)
14	09:17	11:16 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (32)	09:20		11:06 (27)
	16:15 22	11:38 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (32)	15:42	30	12:35 (28)
15	09:16	11:16 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (32)	09:21		11:06 (27)
	16:17 22	11:38 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (32)	15:42	31	12:36 (28)
16	09:15	11:16 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (32)	09:22		11:08 (27)
	16:19 22	11:38 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (32)	15:42	30	12:37 (28)
17	09:13	11:18 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (32)	09:23		11:09 (27)
	16:21 21	11:39 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (27)	15:42	30	12:38 (28)
18	09:12	11:18 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (32)	09:24		11:08 (27)
	16:23 21	11:39 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (27)	15:42	30	12:37 (28)
19	09:10	10:13 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (32)	09:25		11:09 (27)
	16:25 27	11:39 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (27)	15:42	29	12:38 (28)
20	09:09	10:12 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (32)	09:26		11:10 (27)
	16:28 30	11:39 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (27)	15:43	30	12:39 (28)
21	09:07	10:11 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (32)	09:26		11:11 (27)
	16:30 32	11:39 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (27)	15:43	29	12:40 (28)
22	09:05	10:10 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (32)	09:27		11:11 (27)
	16:32 32	11:38 (27)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (27)	15:43	29	12:40 (28)
23	09:03	10:09 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (32)	09:27		11:11 (27)
	16:34 31	11:37 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (27)	15:44	30	12:40 (28)
24	09:02	10:09 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (27)	09:28		11:12 (27)
	16:37 29	11:36 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (27)	15:45	30	12:41 (28)
25	09:00	10:09 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (27)	09:28		11:12 (27)
	16:39 26	11:34 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (27)	15:45	29	12:41 (28)
26	08:58	10:09 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (27)	09:28		11:13 (27)
	16:41 19	10:28 (32)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (27)	15:46	30	12:42 (28)
27	08:56	10:09 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (27)	09:28		11:13 (27)
	16:44 20	10:29 (32)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (27)	15:47	30	12:42 (28)
28	08:54	10:09 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (27)	09:29		11:13 (27)
	16:46 19	10:28 (32)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (27)	15:48	31	12:43 (28)
29	08:52	10:09 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (27)	09:29		11:13 (27)
	16:49 20	10:29 (32)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (27)	15:49	30	12:42 (28)
30	08:50	10:09 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (27)	09:28		11:13 (27)
	16:51 19	10:28 (32)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (27)	15:50	31	12:43 (28)
31	08:48	10:10 (32)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (27)
	16:54 19	10:29 (32)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (28)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (16)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (16)
	15:52	16	13:11 (16)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (16)
2	09:27		12:55 (16)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (16)
	15:54	16	13:11 (16)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (16)
3	09:27		12:55 (16)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (16)
	15:55	17	13:12 (16)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (16)
4	09:26		12:55 (16)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (16)
	15:57	17	13:12 (16)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (16)
5	09:26		12:55 (16)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (16)
	15:58	18	13:13 (16)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (16)
6	09:25		12:55 (16)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (16)
	16:00	19	13:14 (16)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (16)
7	09:24		12:55 (16)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (16)
	16:01	20	13:15 (16)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (16)
8	09:24		12:56 (16)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (16)
	16:03	19	13:15 (16)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (16)
9	09:23		12:55 (16)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (16)
	16:05	20	13:15 (16)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (16)
10	09:22		12:56 (16)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (16)
	16:07	20	13:16 (16)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (16)
11	09:21		12:57 (16)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (16)
	16:09	20	13:17 (16)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (16)
12	09:19		12:57 (16)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (16)
	16:11	20	13:17 (16)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (16)
13	09:18		12:57 (16)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (16)
	16:12	20	13:17 (16)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (16)
14	09:17		12:58 (16)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (16)
	16:14	20	13:18 (16)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (16)
15	09:16		12:58 (16)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (16)
	16:17	20	13:18 (16)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (16)
16	09:14		12:58 (16)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (16)
	16:19	20	13:18 (16)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (16)
17	09:13		12:59 (16)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (16)
	16:21	19	13:18 (16)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (16)
18	09:11		12:59 (16)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (16)
	16:23	19	13:18 (16)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (16)
19	09:10		13:01 (16)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (16)	09:25		12:50 (16)
	16:25	18	13:19 (16)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (16)	15:42	13	13:03 (16)
20	09:08		13:02 (16)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (16)	09:25		12:51 (16)
	16:27	16	13:18 (16)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (16)	15:42	12	13:03 (16)
21	09:07		13:02 (16)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (16)	09:26		12:51 (16)
	16:30	15	13:17 (16)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (16)	15:43	12	13:03 (16)
22	09:05		13:04 (16)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (16)	09:27		12:52 (16)
	16:32	12	13:16 (16)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (16)	15:43	12	13:04 (16)
23	09:03		13:06 (16)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (16)	09:27		12:52 (16)
	16:34	9	13:15 (16)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (16)	15:44	12	13:04 (16)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (16)	09:28		12:52 (16)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (16)	15:44	12	13:04 (16)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (16)	09:28		12:53 (16)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (16)	15:45	13	13:06 (16)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (16)	09:28		12:53 (16)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (16)	15:46	13	13:06 (16)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (16)	09:28		12:54 (16)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (16)	15:47	13	13:07 (16)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (16)	09:28		12:53 (16)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (16)	15:48	14	13:07 (16)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (16)	09:28		12:53 (16)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (16)	15:49	15	13:08 (16)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (16)	09:28		12:54 (16)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (16)	15:50	15	13:09 (16)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (16)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (16)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (30)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (16)	08:59
	15:52		16:56 19	14:13 (30)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (16)	15:51
2	09:27		08:43	13:56 (30)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (16)	09:01
	15:54		16:58 16	14:12 (30)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (16)	15:50
3	09:27		08:41	13:58 (30)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (16)	09:03
	15:55		17:01 12	14:10 (30)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (16)	15:49
4	09:26		08:39	14:02 (30)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (16)	09:05
	15:57		17:03 5	14:07 (30)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (16)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (16)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (16)	15:47
6	09:25		08:34	15:25 (16)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (16)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (16)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (30)	09:10
	16:01		17:11 11	15:33 (16)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (30)	15:45
8	09:23		08:30	15:20 (16)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (30)	09:12
	16:03		17:13 15	15:35 (16)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (30)	15:44
9	09:23		08:27	15:19 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (30)	09:13
	16:05		17:15 18	15:37 (16)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (30)	15:44
10	09:22		08:25	15:18 (16)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (30)	09:15
	16:07		17:18 19	15:37 (16)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (30)	15:43
11	09:20		08:22	15:17 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (30)	09:16
	16:09		17:20 21	15:38 (16)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (30)	15:43
12	09:19		08:20	15:17 (16)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (30)	09:17
	16:10		17:23 22	15:39 (16)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (30)	15:42
13	09:18	13:53 (30)	08:17	15:17 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (30)	09:19
	16:12 5	13:58 (30)	17:25 22	15:39 (16)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (30)	15:42
14	09:17	13:51 (30)	08:15	15:16 (16)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (30)	09:20
	16:14 9	14:00 (30)	17:28 23	15:39 (16)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (30)	15:42
15	09:16	13:50 (30)	08:12	15:17 (16)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (41)	09:21
	16:17 11	14:01 (30)	17:30 22	15:39 (16)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (30)	15:42
16	09:14	13:50 (30)	08:10	15:17 (16)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (41)	09:22
	16:19 17	14:07 (30)	17:33 22	15:39 (16)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (30)	15:42
17	09:13	13:49 (30)	08:07	15:17 (16)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (41)	09:23
	16:21 21	14:10 (30)	17:35 21	15:38 (16)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (30)	15:42
18	09:11	11:38 (41)	08:05	15:18 (16)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (41)	09:24
	16:23 27	14:11 (30)	17:38 19	15:37 (16)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (30)	15:42
19	09:10	11:35 (41)	08:02	15:20 (16)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (41)	09:25
	16:25 32	14:12 (30)	17:40 17	15:37 (16)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (30)	15:42
20	09:08	11:32 (41)	07:59	15:21 (16)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (41)	09:25
	16:27 36	14:12 (30)	17:43 14	15:35 (16)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (30)	15:42
21	09:07	11:29 (41)	07:57	15:24 (16)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (16)	08:38	11:05 (41)	09:26
	16:30 42	14:13 (30)	17:45 8	15:32 (16)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (16)	16:06 42	13:49 (30)	15:43
22	09:05	11:27 (41)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (16)	08:41	11:08 (41)	09:27
	16:32 45	14:14 (30)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (16)	16:04 36	13:48 (30)	15:43
23	09:03	11:28 (41)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (16)	08:43	11:12 (41)	09:27
	16:34 44	14:14 (30)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (16)	16:02 32	13:49 (30)	15:44
24	09:01	11:29 (41)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (16)	08:45	11:16 (41)	09:27
	16:36 42	14:15 (30)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (16)	16:01 28	13:49 (30)	15:44
25	08:59	11:31 (41)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (16)	08:47	13:27 (30)	09:28
	16:39 40	14:15 (30)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (16)	15:59 21	13:48 (30)	15:45
26	08:58	11:32 (41)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (16)	08:49	13:29 (30)	09:28
	16:41 37	14:15 (30)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (16)	15:57 17	13:46 (30)	15:46
27	08:56	11:34 (41)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (16)	08:51	13:29 (30)	09:28
	16:44 33	14:15 (30)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (16)	15:56 12	13:41 (30)	15:47
28	08:54	13:51 (30)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (16)	08:53	13:30 (30)	09:28
	16:46 24	14:15 (30)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (16)	15:55 9	13:39 (30)	15:47
29	08:52	13:51 (30)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (16)	08:55	13:35 (30)	09:28
	16:48 23	14:14 (30)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (16)	15:53 5	13:40 (30)	15:49
30	08:50	13:52 (30)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (16)	08:57		09:28
	16:51 22	14:14 (30)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (16)	15:52		15:50
31	08:48	13:54 (30)			07:09		04:41		05:22	06:31		07:49	14:47 (16)			09:28
	16:53 20	14:14 (30)			20:14		22:29		22:03	20:42		16:51 20	15:07 (16)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (36) | 08:45		10:15 (17) | 07:35		13:26 (30) | 07:07		18:42 (21) | 05:44	| 04:39
	15:52	47	14:26 (18) | 16:56	119	15:37 (39) | 18:04	35	17:05 (13) | 20:16	19	19:01 (21) | 21:26	| 22:30
2	09:27		12:11 (36) | 08:43		12:16 (36) | 07:32		15:45 (11) | 07:04		18:43 (21) | 05:41	| 04:38
	15:54	53	14:28 (18) | 16:58	114	15:38 (39) | 18:07	27	17:09 (13) | 20:19	16	18:59 (21) | 21:28	| 22:32
3	09:27		12:10 (36) | 08:41		12:17 (36) | 07:30		16:34 (16) | 07:01		18:46 (21) | 05:38	| 04:37
	15:55	58	14:29 (18) | 17:01	113	15:38 (39) | 18:09	33	17:12 (13) | 20:21	11	18:57 (21) | 21:30	| 22:33
4	09:26		12:10 (36) | 08:39		09:39 (41) | 07:27		16:31 (16) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (18) | 17:03	109	15:39 (39) | 18:12	43	17:15 (13) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (36) | 08:36		09:39 (41) | 07:24		16:29 (16) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (18) | 17:06	105	15:39 (39) | 18:14	46	17:15 (13) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (36) | 08:34		09:40 (41) | 07:21		16:26 (16) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (18) | 17:08	95	15:39 (39) | 18:16	49	17:15 (13) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (17) | 08:32		09:40 (41) | 07:18		16:25 (16) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (18) | 17:11	96	15:39 (39) | 18:19	50	17:15 (13) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (17) | 08:30		09:38 (41) | 07:15		16:23 (16) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (18) | 17:13	96	15:38 (39) | 18:21	52	17:15 (13) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (17) | 08:27		09:36 (41) | 07:13		16:22 (16) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (18) | 17:16	98	15:38 (39) | 18:23	53	17:15 (13) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (17) | 08:25		09:33 (41) | 07:10		16:20 (16) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (18) | 17:18	107	15:57 (11) | 18:26	54	17:14 (13) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (17) | 08:22		09:29 (41) | 07:07		16:19 (16) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (18) | 17:20	114	16:00 (11) | 18:28	54	17:13 (13) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (17) | 08:20		09:27 (41) | 07:04		16:18 (16) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (18) | 17:23	118	16:03 (11) | 18:30	54	17:12 (13) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (17) | 08:17		09:24 (41) | 07:01		16:18 (16) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (18) | 17:25	118	16:04 (11) | 18:33	52	17:10 (13) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (17) | 08:15		09:21 (41) | 06:58		16:17 (16) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (18) | 17:28	114	16:05 (11) | 18:35	51	17:08 (13) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (17) | 08:12		09:18 (41) | 06:56		16:17 (16) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (18) | 17:30	120	16:07 (11) | 18:37	47	17:04 (13) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (17) | 08:10		09:13 (41) | 06:53		16:17 (16) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (18) | 17:33	125	16:08 (11) | 18:40	46	17:03 (16) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (17) | 08:07		09:13 (41) | 06:50		16:17 (16) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (18) | 17:35	123	16:08 (11) | 18:42	46	17:03 (16) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (17) | 08:05		09:13 (41) | 06:47		16:16 (16) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (18) | 17:38	121	16:08 (11) | 18:44	46	17:02 (16) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (17) | 08:02		09:15 (41) | 06:44		16:16 (16) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (18) | 17:40	118	16:09 (11) | 18:47	56	18:01 (21) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (17) | 07:59		09:16 (41) | 06:41		16:16 (16) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (18) | 17:43	114	16:09 (11) | 18:49	60	18:03 (21) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (17) | 07:57		09:17 (41) | 06:38		16:16 (16) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (18) | 17:45	110	16:09 (11) | 18:51	64	18:05 (21) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (17) | 07:54		09:18 (41) | 06:35		16:17 (16) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (18) | 17:48	104	16:08 (11) | 18:54	63	18:05 (21) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (17) | 07:51		09:20 (41) | 06:32		16:17 (16) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (18) | 17:50	95	16:08 (11) | 18:56	64	18:06 (21) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (17) | 07:49		13:09 (30) | 06:30		16:18 (16) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (18) | 17:52	77	16:08 (11) | 18:58	64	18:06 (21) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (17) | 07:46		13:11 (30) | 06:27		16:18 (16) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (18) | 17:55	71	16:07 (11) | 19:00	62	18:06 (21) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (17) | 07:43		13:13 (30) | 06:24		16:20 (16) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (39) | 17:57	66	16:06 (11) | 19:03	61	18:07 (21) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (17) | 07:41		13:16 (30) | 06:21		16:22 (16) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (39) | 18:00	58	16:05 (11) | 19:05	57	18:07 (21) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (17) | 07:38		13:19 (30) | 06:18		16:23 (16) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (39) | 18:02	49	16:04 (11) | 19:07	54	18:06 (21) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (17) |		| 07:15		17:26 (16) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (39) |		| 20:10	47	19:05 (21) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (17) |		| 07:12		17:29 (16) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (39) |		| 20:12	38	19:04 (21) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (17) |		| 07:09		18:41 (21) |			| 04:41	|
	16:53	126	15:37 (39) |		| 20:14	22	19:03 (21) |			| 22:29	|
Potential sun hours	221		260		365		432		521	547
Total, worst case		3257		2867		1550		46		
Sun reduction		0,50		0,50		0,50		0,50		
Oper. time red.		0,80		0,80		0,80		0,80		
Wind dir. red.		0,60		0,59		0,58		0,62		
Total reduction		0,24		0,24		0,23		0,25		
Total, real		786		675		361		11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October			November			December		
1	04:32		05:24		06:33			07:39			16:57 (16)	07:51		09:03 (41)	08:59		09:52 (17)
	22:48		22:01		20:39			19:13	53		17:50 (13)	16:49	107	15:26 (11)	15:51	96	14:16 (18)
2	04:33		05:26		06:35			07:41			16:58 (16)	07:53		09:06 (41)	09:01		09:53 (17)
	22:48		21:58		20:37			19:10	54		17:52 (13)	16:46	98	15:08 (39)	15:50	91	14:16 (18)
3	04:34		05:28		06:37			07:44			16:58 (16)	07:56		09:08 (41)	09:03		09:54 (17)
	22:47		21:56		20:34			19:07	54		17:52 (13)	16:44	96	15:08 (39)	15:49	88	14:17 (18)
4	04:35		05:30		06:39			07:46			16:58 (16)	07:58		09:10 (41)	09:05		09:54 (17)
	22:46		21:54		20:31			19:04	54		17:52 (13)	16:41	94	15:08 (39)	15:48	83	14:17 (18)
5	04:36		05:33		06:42			07:48			17:00 (16)	08:01		09:10 (41)	09:07		09:55 (17)
	22:45		21:51		20:28			19:01	52		17:52 (13)	16:39	95	15:09 (39)	15:47	77	14:17 (18)
6	04:37		05:35		06:44			07:50			17:00 (16)	08:03		09:10 (41)	09:08		09:57 (17)
	22:45		21:49		20:25			18:58	52		17:52 (13)	16:37	105	15:09 (39)	15:46	71	14:17 (18)
7	04:38		05:37		06:46			07:53			17:01 (16)	08:06		09:08 (41)	09:10		11:57 (36)
	22:44		21:46		20:22			18:56	50		17:51 (13)	16:34	111	15:09 (39)	15:45	64	14:17 (18)
8	04:40		05:39		06:48			07:55			17:03 (16)	08:08		11:48 (36)	09:12		11:57 (36)
	22:43		21:44		20:19			18:53	48		17:51 (13)	16:32	112	15:09 (39)	15:44	62	14:17 (18)
9	04:41		05:41		06:51		18:40 (21)	07:57			17:04 (16)	08:10		11:47 (36)	09:13		11:59 (36)
	22:41		21:41		20:16	10	18:50 (21)	18:50	46		17:50 (13)	16:30	113	15:09 (39)	15:44	57	14:17 (18)
10	04:42		05:44		06:53		18:37 (21)	07:59			17:06 (16)	08:13		09:45 (17)	09:15		12:00 (36)
	22:40		21:39		20:14	15	18:52 (21)	18:47	40		17:48 (13)	16:27	121	15:08 (39)	15:43	53	14:17 (18)
11	04:44		05:46		06:55		18:35 (21)	08:02			16:22 (11)	08:15		09:42 (17)	09:16		12:01 (36)
	22:39		21:36		20:11	19	18:54 (21)	18:44	36		17:45 (13)	16:25	127	15:08 (39)	15:43	47	14:16 (18)
12	04:45		05:48		06:57		18:34 (21)	08:04			16:18 (11)	08:17		09:41 (17)	09:17		12:03 (36)
	22:38		21:34		20:08	21	18:55 (21)	18:42	25		17:41 (13)	16:23	130	15:08 (39)	15:42	44	14:17 (18)
13	04:47		05:50		06:59		17:21 (16)	08:06			13:56 (30)	08:20		09:39 (17)	09:19		12:04 (36)
	22:36		21:31		20:05	37	18:55 (21)	18:39	42		17:38 (13)	16:21	131	15:06 (39)	15:42	39	14:17 (18)
14	04:49		05:53		07:02		17:17 (16)	08:09			13:50 (30)	08:22		09:39 (17)	09:20		12:07 (36)
	22:35		21:29		20:02	45	18:55 (21)	18:36	53		16:37 (11)	16:19	131	15:05 (39)	15:42	34	14:17 (18)
15	04:50		05:55		07:04		17:13 (16)	08:11			13:46 (30)	08:25		09:39 (17)	09:21		13:06 (30)
	22:33		21:26		19:59	52	18:55 (21)	18:33	62		16:37 (11)	16:17	128	15:03 (39)	15:42	26	14:16 (18)
16	04:52		05:57		07:06		17:11 (16)	08:13			13:44 (30)	08:27		09:39 (17)	09:22		13:08 (30)
	22:32		21:23		19:56	56	18:55 (21)	18:30	69		16:39 (11)	16:15	124	15:02 (39)	15:42	22	14:15 (18)
17	04:54		05:59		07:08		17:08 (16)	08:16			13:41 (30)	08:29		09:38 (17)	09:23		13:10 (30)
	22:30		21:21		19:53	59	18:54 (21)	18:28	75		16:39 (11)	16:13	125	14:07 (18)	15:42	18	14:15 (18)
18	04:56		06:02		07:10		17:07 (16)	08:18			09:55 (41)	08:32		09:38 (17)	09:24		13:12 (30)
	22:29		21:18		19:50	63	18:55 (21)	18:25	86		16:39 (11)	16:11	129	14:09 (18)	15:42	16	14:15 (18)
19	04:58		06:04		07:12		17:06 (16)	08:20			09:51 (41)	08:34		09:39 (17)	09:25		13:16 (7)
	22:27		21:15		19:47	63	18:54 (21)	18:22	98		16:39 (11)	16:09	131	14:11 (18)	15:42	11	14:15 (18)
20	04:59		06:06		07:15		17:04 (16)	08:23			09:49 (41)	08:36		09:38 (17)	09:25		13:16 (7)
	22:25		21:13		19:45	65	18:53 (21)	18:20	106		16:40 (11)	16:07	129	14:11 (18)	15:42	9	14:14 (18)
21	05:01		06:08		07:17		17:03 (16)	08:25			09:46 (41)	08:38		09:39 (17)	09:26		13:17 (7)
	22:23		21:10		19:42	64	18:51 (21)	18:17	113		16:39 (11)	16:06	131	14:13 (18)	15:43	9	14:15 (18)
22	05:03		06:11		07:19		17:01 (16)	08:27			09:45 (41)	08:41		09:38 (17)	09:26		13:18 (7)
	22:21		21:07		19:39	64	18:50 (21)	18:14	116		16:39 (11)	16:04	131	14:13 (18)	15:43	9	14:16 (18)
23	05:05		06:13		07:21		17:00 (16)	08:30			09:44 (41)	08:43		09:39 (17)	09:27		13:18 (7)
	22:19		21:05		19:36	62	18:48 (21)	18:12	119		16:38 (11)	16:02	128	14:14 (18)	15:44	9	14:16 (18)
24	05:07		06:15		07:24		17:00 (16)	08:32			09:43 (41)	08:45		09:39 (17)	09:27		13:18 (7)
	22:18		21:02		19:33	58	18:46 (21)	18:09	122		16:38 (11)	16:01	127	14:14 (18)	15:44	11	14:17 (18)
25	05:09		06:17		07:26		16:59 (16)	07:34			08:43 (41)	08:47		09:40 (17)	09:28		13:15 (30)
	22:16		20:59		19:30	46	17:45 (16)	17:06	123		15:38 (11)	15:59	124	14:15 (18)	15:45	14	14:17 (18)
26	05:11		06:19		07:28		16:58 (16)	07:37			08:44 (41)	08:49		09:40 (17)	09:28		13:14 (30)
	22:14		20:56		19:27	47	17:45 (16)	17:04	122		15:37 (11)	15:58	119	14:15 (18)	15:46	17	14:18 (18)
27	05:13		06:22		07:30		16:58 (16)	07:39			08:48 (41)	08:51		09:49 (17)	09:28		13:13 (30)
	22:11		20:53		19:24	46	17:44 (16)	17:01	118		15:36 (11)	15:56	112	14:16 (18)	15:47	20	14:19 (18)
28	05:15		06:24		07:32		16:58 (16)	07:41			08:51 (41)	08:53		09:49 (17)	09:28		13:12 (30)
	22:09		20:51		19:21	46	17:44 (16)	16:59	115		15:35 (11)	15:55	109	14:16 (18)	15:48	24	14:21 (18)
29	05:17		06:26		07:35		16:58 (16)	07:44			08:54 (41)	08:55		09:50 (17)	09:28		12:14 (36)
	22:07		20:48		19:19	50	17:48 (13)	16:56	119		15:34 (11)	15:53	106	14:16 (18)	15:49	31	14:23 (18)
30	05:20		06:28		07:37		16:57 (16)	07:46			08:57 (41)	08:57		09:50 (17)	09:28		12:13 (36)
	22:05		20:45		19:16	52	17:49 (13)	16:53	117		15:32 (11)	15:52	103	14:16 (18)	15:50	37	14:25 (18)
31	05:22		06:31					07:49			08:59 (41)				09:28		12:12 (36)
	22:03		20:42					16:51	115		15:29 (11)				15:51	41	14:25 (18)
Potential sun hours	546		478		386			319				236			199		
Total, worst case						1040			2454				3527			1230	
Sun reduction						0,50			0,50				0,50			0,50	
Oper. time red.						0,80			0,80				0,80			0,80	
Wind dir. red.						0,59			0,59				0,60			0,59	
Total reduction						0,24			0,24				0,24			0,24	
Total, real						245			577				846			289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (5)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43 1	20:40 (5)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (5)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44 1	20:41 (5)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (5)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45 1	20:40 (5)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (5)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46 1	20:41 (5)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47 2	20:42 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47 2	20:42 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48 2	20:42 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48 2	20:43 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (5)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49 2	20:43 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49 2	20:43 (5)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49 2	20:43 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50 2	20:43 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50 2	20:44 (5)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50 2	20:44 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50 2	20:44 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50 2	20:44 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49 2	20:44 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49 1	20:44 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49 2	20:45 (5)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48 1	20:44 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (5) 04:32	20:33 (5) 05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (5) 22:48	15 20:48 (5) 22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (5) 04:33	20:33 (5) 05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (5) 22:47	15 20:48 (5) 21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (5) 04:34	20:33 (5) 05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (5) 22:47	15 20:48 (5) 21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (5) 04:35	20:33 (5) 05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (5) 22:46	14 20:47 (5) 21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (5) 04:36	20:33 (5) 05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (5) 22:45	14 20:47 (5) 21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (5) 04:37	20:34 (5) 05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (5) 22:44	13 20:47 (5) 21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (5) 04:39	20:34 (5) 05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (5) 22:43	12 20:46 (5) 21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (5) 04:40	20:34 (5) 05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (5) 22:42	12 20:46 (5) 21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (5) 04:41	20:35 (5) 05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (5) 22:41	11 20:46 (5) 21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (5) 04:43	20:35 (5) 05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (5) 22:40	11 20:46 (5) 21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (5) 04:44	20:35 (5) 05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (5) 22:39	9 20:44 (5) 21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (5) 04:46	20:35 (5) 05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (5) 22:37	4 20:39 (5) 21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (5) 04:47	20:35 (5) 05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (5) 22:36	3 20:38 (5) 21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (5) 04:49	20:35 (5) 05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (5) 22:34	2 20:37 (5) 21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (5) 04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (5) 22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (5) 04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (5) 22:31	21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (5) 04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (5) 22:30	21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (5) 04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (5) 22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (5) 04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (5) 22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (5) 05:00	06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (5) 22:25	21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (5) 05:01	06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (5) 22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (5) 05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (5) 22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (5) 05:05	06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (5) 22:19	21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (5) 05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (5) 22:17	21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (5) 05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (5) 22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (5) 05:11	06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (5) 22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (5) 05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (5) 22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (5) 05:15	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (5) 22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (5) 05:18	06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (5) 22:07	20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (5) 04:31	20:32 (5) 05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (5) 22:48	17 20:49 (5) 22:05	20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (5)	05:22	06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (5)	22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					5	469	150					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,73	0,73	0,73					
Total reduction					0,29	0,29	0,29					
Total, real					1	138	44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April		May		June	
1	09:28	08:46	07:35	07:07		05:44	07:31 (42)	04:40	06:17 (40)
	15:53	16:56	18:05	20:17		21:26	31 08:02 (42)	22:30	23 06:40 (40)
2	09:27	08:43	07:33	07:04		05:42	07:32 (42)	04:39	06:16 (40)
	15:54	16:59	18:07	20:19		21:28	29 08:01 (42)	22:32	24 06:40 (40)
3	09:27	08:41	07:30	07:01		05:39	07:32 (42)	04:37	06:16 (40)
	15:56	17:01	18:10	20:21		21:31	27 07:59 (42)	22:34	25 06:41 (40)
4	09:26	08:39	07:27	06:58		05:36	07:34 (42)	04:36	06:16 (40)
	15:57	17:04	18:12	20:24		21:33	24 07:58 (42)	22:35	26 06:42 (40)
5	09:26	08:37	07:24	06:55		05:34	07:36 (42)	04:35	06:16 (40)
	15:59	17:06	18:14	20:26		21:35	20 07:56 (42)	22:36	27 06:43 (40)
6	09:25	08:34	07:21	06:53		05:32	07:38 (42)	04:34	06:16 (40)
	16:00	17:09	18:17	20:28		21:37	16 07:54 (42)	22:38	27 06:43 (40)
7	09:24	08:32	07:19	06:50		05:29	07:40 (42)	04:33	06:16 (40)
	16:02	17:11	18:19	20:31		21:40	10 07:50 (42)	22:39	27 06:43 (40)
8	09:24	08:30	07:16	06:47		05:27		04:32	06:15 (40)
	16:04	17:14	18:21	20:33		21:42		22:40	29 06:44 (40)
9	09:23	08:27	07:13	06:44		05:24		04:31	06:16 (40)
	16:06	17:16	18:24	20:35		21:44		22:42	29 06:45 (40)
10	09:22	08:25	07:10	06:41	07:48 (42)	05:22		04:31	06:15 (40)
	16:07	17:18	18:26	20:37	10 07:58 (42)	21:46		22:43	30 06:45 (40)
11	09:21	08:23	07:07	06:38	07:45 (42)	05:20		04:30	06:16 (40)
	16:09	17:21	18:28	20:40	17 08:02 (42)	21:49		22:44	29 06:45 (40)
12	09:20	08:20	07:04	06:36	07:41 (42)	05:17		04:29	06:15 (40)
	16:11	17:23	18:31	20:42	22 08:03 (42)	21:51		22:45	30 06:45 (40)
13	09:18	08:18	07:02	06:33	07:37 (42)	05:15		04:29	06:16 (40)
	16:13	17:26	18:33	20:44	27 08:04 (42)	21:53		22:46	30 06:46 (40)
14	09:17	08:15	06:59	06:30	07:35 (42)	05:13		04:28	06:16 (40)
	16:15	17:28	18:35	20:47	30 08:05 (42)	21:55		22:46	30 06:46 (40)
15	09:16	08:13	06:56	06:27	07:34 (42)	05:11		04:28	06:15 (40)
	16:17	17:31	18:38	20:49	33 08:07 (42)	21:57		22:47	31 06:46 (40)
16	09:14	08:10	06:53	06:24	07:33 (42)	05:09		04:28	06:16 (40)
	16:19	17:33	18:40	20:51	34 08:07 (42)	22:00		22:48	30 06:46 (40)
17	09:13	08:07	06:50	06:22	07:32 (42)	05:06		04:27	06:16 (40)
	16:21	17:36	18:42	20:54	35 08:07 (42)	22:02		22:48	31 06:47 (40)
18	09:12	08:05	06:47	06:19	07:31 (42)	05:04		04:27	06:16 (40)
	16:24	17:38	18:45	20:56	37 08:08 (42)	22:04		22:49	31 06:47 (40)
19	09:10	08:02	06:44	06:16	07:30 (42)	05:02		04:27	06:16 (40)
	16:26	17:41	18:47	20:58	38 08:08 (42)	22:06		22:49	31 06:47 (40)
20	09:08	08:00	06:42	06:13	07:30 (42)	05:00		04:27	06:16 (40)
	16:28	17:43	18:49	21:00	39 08:09 (42)	22:08		22:50	31 06:47 (40)
21	09:07	07:57	06:39	06:11	07:30 (42)	04:58		04:27	06:16 (40)
	16:30	17:46	18:52	21:03	38 08:08 (42)	22:10		22:50	31 06:47 (40)
22	09:05	07:54	06:36	06:08	07:29 (42)	04:56		04:27	06:17 (40)
	16:32	17:48	18:54	21:05	39 08:08 (42)	22:12		22:50	31 06:48 (40)
23	09:03	07:52	06:33	06:05	07:29 (42)	04:55		04:28	06:17 (40)
	16:35	17:50	18:56	21:07	39 08:08 (42)	22:14		22:50	31 06:48 (40)
24	09:02	07:49	06:30	06:02	07:29 (42)	04:53		04:28	06:17 (40)
	16:37	17:53	18:58	21:10	38 08:07 (42)	22:16		22:50	31 06:48 (40)
25	09:00	07:46	06:27	06:00	07:29 (42)	04:51		04:28	06:18 (40)
	16:39	17:55	19:01	21:12	38 08:07 (42)	22:18		22:50	31 06:49 (40)
26	08:58	07:44	06:24	05:57	07:29 (42)	04:49	06:24 (40)	04:29	06:18 (40)
	16:42	17:58	19:03	21:14	37 08:06 (42)	22:20	8 06:32 (40)	22:50	31 06:49 (40)
27	08:56	07:41	06:21	05:54	07:29 (42)	04:48	06:21 (40)	04:29	06:19 (40)
	16:44	18:00	19:05	21:17	37 08:06 (42)	22:22	13 06:34 (40)	22:50	30 06:49 (40)
28	08:54	07:38	06:18	05:52	07:29 (42)	04:46	06:20 (40)	04:30	06:18 (40)
	16:47	18:02	19:08	21:19	36 08:05 (42)	22:24	16 06:36 (40)	22:50	31 06:49 (40)
29	08:52		07:16	05:49	07:30 (42)	04:44	06:19 (40)	04:31	06:19 (40)
	16:49		20:10	21:21	34 08:04 (42)	22:25	18 06:37 (40)	22:49	30 06:49 (40)
30	08:50		07:13	05:47	07:30 (42)	04:43	06:19 (40)	04:31	06:19 (40)
	16:51		20:12	21:24	33 08:03 (42)	22:27	20 06:39 (40)	22:49	30 06:49 (40)
31	08:48		07:10			04:41	06:17 (40)		
	16:54		20:14			22:29	22 06:39 (40)		
Potential sun hours	221	260	365	432		521		547	
Total, worst case					691		254		878
Sun reduction					0,50		0,50		0,50
Oper. time red.					0,80		0,80		0,80
Wind dir. red.					0,65		0,62		0,58
Total reduction					0,26		0,25		0,23
Total, real					178		63		204

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October	November	December
1	04:32		06:20 (40)	05:24			06:33		07:44 (42)	07:39	07:51	09:00
	22:48	30	06:50 (40)	22:01			20:40	17	08:01 (42)	19:13	16:49	15:51
2	04:33		06:20 (40)	05:27			06:35		07:47 (42)	07:42	07:54	09:01
	22:48	30	06:50 (40)	21:58			20:37	10	07:57 (42)	19:10	16:47	15:50
3	04:34		06:20 (40)	05:29			06:38			07:44	07:56	09:03
	22:47	29	06:49 (40)	21:56			20:34			19:07	16:44	15:49
4	04:35		06:20 (40)	05:31			06:40			07:46	07:59	09:05
	22:46	29	06:49 (40)	21:54			20:31			19:05	16:42	15:48
5	04:36		06:21 (40)	05:33			06:42			07:48	08:01	09:07
	22:46	28	06:49 (40)	21:51			20:28			19:02	16:39	15:47
6	04:38		06:21 (40)	05:35		07:49 (42)	06:44			07:51	08:03	09:09
	22:45	28	06:49 (40)	21:49	13	08:02 (42)	20:25			18:59	16:37	15:47
7	04:39		06:23 (40)	05:38		07:46 (42)	06:47			07:53	08:06	09:10
	22:44	27	06:50 (40)	21:47	18	08:04 (42)	20:23			18:56	16:35	15:46
8	04:40		06:23 (40)	05:40		07:44 (42)	06:49			07:55	08:08	09:12
	22:43	26	06:49 (40)	21:44	22	08:06 (42)	20:20			18:53	16:32	15:45
9	04:42		06:23 (40)	05:42		07:43 (42)	06:51			07:57	08:11	09:13
	22:42	26	06:49 (40)	21:42	25	08:08 (42)	20:17			18:50	16:30	15:44
10	04:43		06:24 (40)	05:44		07:41 (42)	06:53			08:00	08:13	09:15
	22:40	24	06:48 (40)	21:39	28	08:09 (42)	20:14			18:48	16:28	15:44
11	04:45		06:25 (40)	05:46		07:40 (42)	06:55			08:02	08:15	09:16
	22:39	23	06:48 (40)	21:37	30	08:10 (42)	20:11			18:45	16:26	15:43
12	04:46		06:25 (40)	05:49		07:39 (42)	06:58			08:04	08:18	09:17
	22:38	23	06:48 (40)	21:34	32	08:11 (42)	20:08			18:42	16:24	15:43
13	04:48		06:26 (40)	05:51		07:38 (42)	07:00			08:07	08:20	09:19
	22:36	21	06:47 (40)	21:32	33	08:11 (42)	20:05			18:39	16:22	15:43
14	04:49		06:28 (40)	05:53		07:37 (42)	07:02			08:09	08:22	09:20
	22:35	18	06:46 (40)	21:29	35	08:12 (42)	20:02			18:36	16:19	15:43
15	04:51		06:28 (40)	05:55		07:36 (42)	07:04			08:11	08:25	09:21
	22:34	17	06:45 (40)	21:26	36	08:12 (42)	19:59			18:34	16:17	15:42
16	04:53		06:30 (40)	05:58		07:36 (42)	07:06			08:14	08:27	09:22
	22:32	14	06:44 (40)	21:24	37	08:13 (42)	19:57			18:31	16:15	15:42
17	04:54		06:31 (40)	06:00		07:35 (42)	07:09			08:16	08:29	09:23
	22:30	11	06:42 (40)	21:21	38	08:13 (42)	19:54			18:28	16:13	15:42
18	04:56		06:35 (40)	06:02		07:36 (42)	07:11			08:18	08:32	09:24
	22:29	5	06:40 (40)	21:18	38	08:14 (42)	19:51			18:25	16:12	15:42
19	04:58			06:04		07:35 (42)	07:13			08:21	08:34	09:25
	22:27			21:16	39	08:14 (42)	19:48			18:23	16:10	15:43
20	05:00			06:07		07:35 (42)	07:15			08:23	08:36	09:25
	22:25			21:13	38	08:13 (42)	19:45			18:20	16:08	15:43
21	05:02			06:09		07:34 (42)	07:17			08:25	08:39	09:26
	22:23			21:10	39	08:13 (42)	19:42			18:17	16:06	15:43
22	05:04			06:11		07:34 (42)	07:20			08:28	08:41	09:27
	22:22			21:08	39	08:13 (42)	19:39			18:15	16:04	15:44
23	05:06			06:13		07:34 (42)	07:22			08:30	08:43	09:27
	22:20			21:05	38	08:12 (42)	19:36			18:12	16:03	15:44
24	05:08			06:15		07:34 (42)	07:24			08:32	08:45	09:28
	22:18			21:02	37	08:11 (42)	19:33			18:09	16:01	15:45
25	05:10			06:18		07:34 (42)	07:26			07:35	08:47	09:28
	22:16			20:59	37	08:11 (42)	19:30			17:07	16:00	15:46
26	05:12			06:20		07:34 (42)	07:28			07:37	08:50	09:28
	22:14			20:57	36	08:10 (42)	19:28			17:04	15:58	15:46
27	05:14			06:22		07:35 (42)	07:31			07:39	08:52	09:28
	22:12			20:54	34	08:09 (42)	19:25			17:02	15:57	15:47
28	05:16			06:24		07:35 (42)	07:33			07:42	08:54	09:28
	22:10			20:51	32	08:07 (42)	19:22			16:59	15:55	15:48
29	05:18			06:27		07:36 (42)	07:35			07:44	08:56	09:28
	22:07			20:48	30	08:06 (42)	19:19			16:56	15:54	15:49
30	05:20			06:29		07:38 (42)	07:37			07:47	08:58	09:28
	22:05			20:45	27	08:05 (42)	19:16			16:54	15:53	15:50
31	05:22			06:31		07:41 (42)				07:49		09:28
	22:03			20:43	22	08:03 (42)				16:51		15:51
Potential sun hours	545			478			386			319	236	200
Total, worst case		409			833			27				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,58			0,65			0,65				
Total reduction		0,23			0,26			0,26				
Total, real		95			215			7				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		06:01 (42)	04:32	06:06 (42)	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	34	06:35 (42)	22:48	37 06:43 (42)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:01 (42)	04:33	06:07 (42)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	35	06:36 (42)	22:48	36 06:43 (42)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:01 (42)	04:34	06:06 (42)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30		22:33	35	06:36 (42)	22:47	37 06:43 (42)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:00 (42)	04:35	06:06 (42)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	36	06:36 (42)	22:46	37 06:43 (42)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:01 (42)	04:37	06:06 (42)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	36	06:37 (42)	22:46	37 06:43 (42)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:01 (42)	04:38	06:08 (42)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	36	06:37 (42)	22:45	36 06:44 (42)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:01 (42)	04:39	06:08 (42)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	36	06:37 (42)	22:44	36 06:44 (42)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:01 (42)	04:40	06:08 (42)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	36	06:37 (42)	22:43	36 06:44 (42)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:02 (42)	04:42	06:08 (42)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	36	06:38 (42)	22:42	36 06:44 (42)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:01 (42)	04:43	06:08 (42)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	37	06:38 (42)	22:40	35 06:43 (42)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:02 (42)	04:45	06:09 (42)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	37	06:39 (42)	22:39	35 06:44 (42)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:02 (42)	04:46	06:09 (42)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	36	06:38 (42)	22:38	35 06:44 (42)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:02 (42)	04:48	06:09 (42)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	37	06:39 (42)	22:36	34 06:43 (42)	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:03 (42)	04:49	06:10 (42)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	36	06:39 (42)	22:35	33 06:43 (42)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:02 (42)	04:51	06:10 (42)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	37	06:39 (42)	22:34	33 06:43 (42)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		04:28		06:02 (42)	04:53	06:11 (42)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00		22:48	37	06:39 (42)	22:32	32 06:43 (42)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	06:12 (42)	04:27		06:03 (42)	04:54	06:11 (42)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	10 06:22 (42)	22:48	37	06:40 (42)	22:30	31 06:42 (42)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	06:11 (42)	04:27		06:03 (42)	04:56	06:12 (42)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	14 06:25 (42)	22:49	37	06:40 (42)	22:29	30 06:42 (42)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	06:09 (42)	04:27		06:03 (42)	04:58	06:13 (42)	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	18 06:27 (42)	22:49	37	06:40 (42)	22:27	29 06:42 (42)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	06:08 (42)	04:27		06:03 (42)	05:00	06:13 (42)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	20 06:28 (42)	22:50	37	06:40 (42)	22:25	28 06:41 (42)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	06:06 (42)	04:27		06:03 (42)	05:02	06:14 (42)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	23 06:29 (42)	22:50	37	06:40 (42)	22:23	27 06:41 (42)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	06:05 (42)	04:27		06:04 (42)	05:04	06:16 (42)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	25 06:30 (42)	22:50	37	06:41 (42)	22:22	24 06:40 (42)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	06:03 (42)	04:28		06:04 (42)	05:06	06:17 (42)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	28 06:31 (42)	22:50	37	06:41 (42)	22:20	21 06:38 (42)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	06:03 (42)	04:28		06:04 (42)	05:08	06:18 (42)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	29 06:32 (42)	22:50	37	06:41 (42)	22:18	19 06:37 (42)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	06:02 (42)	04:28		06:05 (42)	05:10	06:20 (42)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	30 06:32 (42)	22:50	37	06:42 (42)	22:16	16 06:36 (42)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	06:02 (42)	04:29		06:05 (42)	05:12	06:22 (42)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	31 06:33 (42)	22:50	36	06:41 (42)	22:14	12 06:34 (42)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	06:01 (42)	04:29		06:05 (42)	05:14	06:25 (42)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	32 06:33 (42)	22:50	37	06:42 (42)	22:12	6 06:31 (42)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	06:01 (42)	04:30		06:05 (42)	05:16		06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	33 06:34 (42)	22:50	37	06:42 (42)	22:10		20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	06:01 (42)	04:31		06:05 (42)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	34 06:35 (42)	22:49	37	06:42 (42)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	06:01 (42)	04:32		06:06 (42)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34 06:35 (42)	22:49	37	06:43 (42)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41	06:01 (42)				05:22		06:31		07:49		09:28
	16:54		20:14		22:29	34 06:35 (42)				22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						395		1094		808						
Sun reduction						0,50		0,50		0,50						
Oper. time red.						0,80		0,80		0,80						
Wind dir. red.						0,58		0,58		0,58						
Total reduction						0,23		0,23		0,23						
Total, real						91		252		186						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		04:32		05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:46 (42)	33	06:51 (42)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (42)		06:19 (42)	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	28	06:46 (42)	33	06:52 (42)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:17 (42)		06:18 (42)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:46 (42)	33	06:51 (42)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:16 (42)		06:18 (42)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:46 (42)	33	06:51 (42)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:16 (42)		06:19 (42)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:47 (42)	33	06:52 (42)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:15 (42)		06:21 (42)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:47 (42)	32	06:53 (42)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:14 (42)		06:22 (42)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:46 (42)	31	06:53 (42)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:13 (42)		06:23 (42)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	33	06:46 (42)	30	06:53 (42)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:14 (42)		06:24 (42)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	33	06:47 (42)	29	06:53 (42)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:13 (42)		06:25 (42)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:46 (42)	28	06:53 (42)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:14 (42)		06:26 (42)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:47 (42)	28	06:54 (42)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (42)		06:27 (42)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	32	06:46 (42)	27	06:54 (42)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:14 (42)		06:28 (42)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	33	06:47 (42)	26	06:54 (42)	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:15 (42)		06:30 (42)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	32	06:47 (42)	24	06:54 (42)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:15 (42)		06:31 (42)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	32	06:47 (42)	23	06:54 (42)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:39 (42)		04:28		06:15 (42)	04:53	06:33 (42)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	2	06:41 (42)		22:48	32	06:47 (42)	22:32	22	06:55 (42)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:37 (42)		04:27		06:15 (42)	04:54	06:33 (42)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	4	06:41 (42)		22:48	32	06:47 (42)	22:30	21	06:54 (42)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04		06:36 (42)		04:27		06:16 (42)	04:56	06:35 (42)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	7	06:43 (42)		22:49	31	06:47 (42)	22:29	20	06:55 (42)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:35 (42)		04:27		06:16 (42)	04:58	06:37 (42)	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	8	06:43 (42)		22:49	31	06:47 (42)	22:27	18	06:55 (42)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:33 (42)		04:27		06:16 (42)	05:00	06:38 (42)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	10	06:43 (42)		22:50	31	06:47 (42)	22:25	16	06:54 (42)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:31 (42)		04:27		06:16 (42)	05:02	06:39 (42)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	12	06:43 (42)		22:50	31	06:47 (42)	22:23	15	06:54 (42)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:30 (42)		04:27		06:17 (42)	05:04	06:41 (42)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	14	06:44 (42)		22:50	31	06:48 (42)	22:22	13	06:54 (42)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:29 (42)		04:28		06:17 (42)	05:06	06:42 (42)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	15	06:44 (42)		22:50	31	06:48 (42)	22:20	11	06:53 (42)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:28 (42)		04:28		06:17 (42)	05:08	06:44 (42)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	17	06:45 (42)		22:50	31	06:48 (42)	22:18	9	06:53 (42)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:26 (42)		04:28		06:18 (42)	05:10	06:45 (42)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	19	06:45 (42)		22:50	31	06:49 (42)	22:16	8	06:53 (42)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:25 (42)		04:29		06:17 (42)	05:12	06:47 (42)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	20	06:45 (42)		22:50	32	06:49 (42)	22:14	6	06:53 (42)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:23 (42)		04:29		06:18 (42)	05:14	06:49 (42)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22	06:45 (42)		22:50	32	06:50 (42)	22:12	3	06:52 (42)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:23 (42)		04:30		06:17 (42)	05:16	06:51 (42)	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	22	06:45 (42)		22:50	32	06:49 (42)	22:10	1	06:52 (42)	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:22 (42)		04:31		06:18 (42)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	24	06:46 (42)		22:49	32	06:50 (42)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:21 (42)		04:32		06:18 (42)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	25	06:46 (42)		22:49	33	06:51 (42)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:19 (42)					05:22		06:31		07:49		09:28
	16:54		20:14		22:29	26	06:45 (42)					22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521			547		545			478	386	319	236	200
Total, worst case						247			944		606							
Sun reduction						0,50			0,50		0,50							
Oper. time red.						0,80			0,80		0,80							
Wind dir. red.						0,58			0,58		0,58							
Total reduction						0,23			0,23		0,23							
Total, real						58			220		141							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	07:08 (42)	04:40	06:45 (42)	04:32	06:56 (42)	05:24	06:57 (42)	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	1	07:09 (42)	22:30	32	07:17 (42)	22:48	23	07:19 (42)	22:01	33	07:30 (42)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		07:06 (42)	04:39		06:46 (42)	04:33		06:56 (42)	05:27		06:59 (42)	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	6	07:12 (42)	22:32	31	07:17 (42)	22:48	24	07:20 (42)	21:58	31	07:30 (42)	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		07:04 (42)	04:38		06:46 (42)	04:34		06:55 (42)	05:29		07:01 (42)	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31	9	07:13 (42)	22:33	31	07:17 (42)	22:47	25	07:20 (42)	21:56	28	07:29 (42)	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		07:02 (42)	04:36		06:47 (42)	04:35		06:55 (42)	05:31		07:03 (42)	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	13	07:15 (42)	22:35	29	07:16 (42)	22:46	25	07:20 (42)	21:54	26	07:29 (42)	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		07:00 (42)	04:35		06:48 (42)	04:37		06:54 (42)	05:33		07:05 (42)	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	16	07:16 (42)	22:36	29	07:17 (42)	22:46	27	07:21 (42)	21:51	23	07:28 (42)	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		06:58 (42)	04:34		06:49 (42)	04:38		06:55 (42)	05:35		07:06 (42)	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37	19	07:17 (42)	22:38	27	07:16 (42)	22:45	28	07:23 (42)	21:49	21	07:27 (42)	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		06:55 (42)	04:33		06:49 (42)	04:39		06:55 (42)	05:38		07:08 (42)	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22	07:17 (42)	22:39	27	07:16 (42)	22:44	28	07:23 (42)	21:47	18	07:26 (42)	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		06:54 (42)	04:32		06:49 (42)	04:40		06:54 (42)	05:40		07:10 (42)	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	24	07:18 (42)	22:40	26	07:15 (42)	22:43	30	07:24 (42)	21:44	15	07:25 (42)	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		06:52 (42)	04:31		06:50 (42)	04:42		06:54 (42)	05:42		07:12 (42)	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	27	07:19 (42)	22:42	26	07:16 (42)	22:42	30	07:24 (42)	21:42	12	07:24 (42)	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		06:50 (42)	04:31		06:51 (42)	04:43		06:53 (42)	05:44		07:13 (42)	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	29	07:19 (42)	22:43	24	07:15 (42)	22:40	31	07:24 (42)	21:39	9	07:22 (42)	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		06:48 (42)	04:30		06:52 (42)	04:45		06:54 (42)	05:46		07:15 (42)	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	32	07:20 (42)	22:44	23	07:15 (42)	22:39	32	07:26 (42)	21:37	5	07:20 (42)	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		06:46 (42)	04:29		06:52 (42)	04:46		06:53 (42)	05:49			06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	34	07:20 (42)	22:45	22	07:14 (42)	22:38	33	07:26 (42)	21:34			20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		06:45 (42)	04:29		06:53 (42)	04:48		06:53 (42)	05:51			07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	35	07:20 (42)	22:46	21	07:14 (42)	22:36	33	07:26 (42)	21:32			20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		06:43 (42)	04:28		06:53 (42)	04:49		06:53 (42)	05:53			07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	37	07:20 (42)	22:46	22	07:15 (42)	22:35	34	07:27 (42)	21:29			20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		06:41 (42)	04:28		06:53 (42)	04:51		06:52 (42)	05:55			07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	39	07:20 (42)	22:47	21	07:14 (42)	22:34	35	07:27 (42)	21:26			19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:41 (42)	04:28		06:54 (42)	04:53		06:52 (42)	05:58			07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	39	07:20 (42)	22:48	20	07:14 (42)	22:32	36	07:28 (42)	21:24			19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:40 (42)	04:27		06:54 (42)	04:54		06:52 (42)	06:00			07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	40	07:20 (42)	22:48	20	07:14 (42)	22:30	36	07:28 (42)	21:21			19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04		06:41 (42)	04:27		06:55 (42)	04:56		06:52 (42)	06:02			07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	40	07:21 (42)	22:49	19	07:14 (42)	22:29	37	07:29 (42)	21:18			19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:41 (42)	04:27		06:55 (42)	04:58		06:52 (42)	06:04			07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	40	07:21 (42)	22:49	19	07:14 (42)	22:27	38	07:30 (42)	21:16			19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:41 (42)	04:27		06:55 (42)	05:00		06:51 (42)	06:07			07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	39	07:20 (42)	22:50	19	07:14 (42)	22:25	38	07:29 (42)	21:13			19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:41 (42)	04:27		06:55 (42)	05:02		06:51 (42)	06:09			07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	39	07:20 (42)	22:50	19	07:14 (42)	22:23	39	07:30 (42)	21:10			19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:41 (42)	04:27		06:56 (42)	05:04		06:52 (42)	06:11			07:19	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	39	07:20 (42)	22:50	19	07:15 (42)	22:22	39	07:31 (42)	21:08			19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:41 (42)	04:28		06:56 (42)	05:06		06:51 (42)	06:13			07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	39	07:20 (42)	22:50	19	07:15 (42)	22:20	39	07:30 (42)	21:05			19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:42 (42)	04:28		06:56 (42)	05:08		06:51 (42)	06:15			07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	38	07:20 (42)	22:50	19	07:15 (42)	22:18	40	07:31 (42)	21:02			19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:42 (42)	04:28		06:57 (42)	05:10		06:51 (42)	06:18			07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	37	07:19 (42)	22:50	19	07:16 (42)	22:16	40	07:31 (42)	20:59			19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:43 (42)	04:29		06:56 (42)	05:12		06:51 (42)	06:20			07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	37	07:20 (42)	22:50	20	07:16 (42)	22:14	40	07:31 (42)	20:57			19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:43 (42)	04:29		06:56 (42)	05:14		06:52 (42)	06:22			07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	36	07:19 (42)	22:50	21	07:17 (42)	22:12	39	07:31 (42)	20:54			19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:43 (42)	04:30		06:56 (42)	05:16		06:52 (42)	06:24			07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	36	07:19 (42)	22:50	21	07:17 (42)	22:10	39	07:31 (42)	20:51			19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:44 (42)	04:31		06:56 (42)	05:18		06:52 (42)	06:27			07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	35	07:19 (42)	22:49	21	07:17 (42)	22:07	38	07:30 (42)	20:48			19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:45 (42)	04:32		06:56 (42)	05:20		06:54 (42)	06:29			07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34	07:19 (42)	22:49	22	07:18 (42)	22:05	36	07:30 (42)	20:45			19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:44 (42)				05:22		06:55 (42)	06:31				07:49		09:28
	16:54		20:14		22:29	34	07:18 (42)				22:03	35	07:30 (42)	20:43				16:51		15:51
Potential sun hours	221	260	365	432	521		547		545		478		386	319	236	200
Total, worst case						945		688		1047		221				
Sun reduction						0,50		0,50		0,50		0,50				
Oper. time red.						0,80		0,80		0,80		0,80				
Wind dir. red.						0,59		0,59		0,59		0,59				
Total reduction						0,24		0,24		0,24		0,24				
Total, real						224		163		248		52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:24 (2)	08:46	10:12 (1)	07:35	08:22 (26)	07:07	05:44	04:40
	15:53 50	12:55 (4)	16:56 65	13:08 (4)	18:05 42	09:51 (3)	20:17	21:26	22:31
2	09:28	11:22 (2)	08:44	10:12 (1)	07:33	08:21 (26)	07:04	05:41	04:39
	15:54 54	12:56 (4)	16:59 63	13:07 (4)	18:07 37	09:47 (3)	20:19	21:28	22:32
3	09:27	11:20 (2)	08:41	10:13 (1)	07:30	08:21 (26)	07:01	05:39	04:37
	15:56 57	12:56 (4)	17:01 61	13:07 (4)	18:10 24	08:45 (26)	20:21	21:31	22:34
4	09:27	11:20 (2)	08:39	10:13 (1)	07:27	08:20 (26)	06:58	05:36	04:36
	15:57 58	12:57 (4)	17:04 57	13:05 (4)	18:12 25	08:45 (26)	20:24	21:33	22:35
5	09:26	11:20 (2)	08:37	10:14 (1)	07:24	08:20 (26)	06:55	05:34	04:35
	15:59 60	12:58 (4)	17:06 54	13:05 (4)	18:14 24	08:44 (26)	20:26	21:35	22:37
6	09:25	11:20 (2)	08:35	10:15 (1)	07:22	08:20 (26)	06:53	05:31	04:34
	16:00 61	12:58 (4)	17:09 49	13:03 (4)	18:17 24	08:44 (26)	20:28	21:38	22:38
7	09:25	11:20 (2)	08:32	09:40 (3)	07:19	08:20 (26)	06:50	05:29	04:33
	16:02 62	12:59 (4)	17:11 47	13:01 (4)	18:19 23	08:43 (26)	20:31	21:40	22:39
8	09:24	11:21 (2)	08:30	09:36 (3)	07:16	08:21 (26)	06:47	05:27	04:32
	16:04 63	13:00 (4)	17:13 49	12:59 (4)	18:21 20	08:41 (26)	20:33	21:42	22:41
9	09:23	11:21 (2)	08:28	09:21 (6)	07:13	08:22 (26)	06:44	05:24	04:31
	16:05 65	13:01 (4)	17:16 44	12:56 (4)	18:24 19	08:41 (26)	20:35	21:44	22:42
10	09:22	11:21 (2)	08:25	09:18 (6)	07:10	08:24 (26)	06:41	05:22	04:30
	16:07 65	13:01 (4)	17:18 32	09:54 (3)	18:26 15	08:39 (26)	20:38	21:47	22:43
11	09:21	11:21 (2)	08:23	09:16 (6)	07:07	08:26 (26)	06:38	05:20	04:30
	16:09 68	13:03 (4)	17:21 39	09:56 (3)	18:28 10	08:36 (26)	20:40	21:49	22:44
12	09:20	11:21 (2)	08:20	09:14 (6)	07:05		06:36	05:17	04:29
	16:11 68	13:03 (4)	17:23 42	09:56 (3)	18:31		20:42	21:51	22:45
13	09:19	11:22 (2)	08:18	09:13 (6)	07:02		06:33	05:15	04:29
	16:13 68	13:04 (4)	17:26 44	09:57 (3)	18:33		20:44	21:53	22:46
14	09:17	11:22 (2)	08:15	09:13 (6)	06:59	07:37 (28)	06:30	05:13	04:28
	16:15 68	13:04 (4)	17:28 46	09:59 (3)	18:35 4	07:41 (28)	20:47	21:55	22:47
15	09:16	11:22 (2)	08:13	09:13 (6)	06:56	07:33 (28)	06:27	05:11	04:28
	16:17 70	13:05 (4)	17:31 46	09:59 (3)	18:38 11	07:44 (28)	20:49	21:58	22:47
16	09:15	11:22 (2)	08:10	09:12 (6)	06:53	07:31 (28)	06:24	05:08	04:27
	16:19 71	13:05 (4)	17:33 47	09:59 (3)	18:40 15	07:46 (28)	20:51	22:00	22:48
17	09:13	11:23 (2)	08:08	09:13 (6)	06:50	07:30 (28)	06:22	05:06	04:27
	16:21 71	13:06 (4)	17:36 47	10:00 (3)	18:42 16	07:46 (28)	20:54	22:02	22:49
18	09:12	11:23 (2)	08:05	09:13 (6)	06:47	07:29 (28)	06:19	05:04	04:27
	16:23 72	13:07 (4)	17:38 47	10:00 (3)	18:45 18	07:47 (28)	20:56	22:04	22:49
19	09:10	11:24 (2)	08:02	09:14 (6)	06:44	07:28 (28)	06:16	05:02	04:27
	16:26 70	13:07 (4)	17:41 46	10:00 (3)	18:47 19	07:47 (28)	20:58	22:06	22:50
20	09:09	11:24 (2)	08:00	09:14 (6)	06:42	07:27 (28)	06:13	05:00	04:27
	16:28 71	13:08 (4)	17:43 46	10:00 (3)	18:49 19	07:46 (28)	21:01	22:08	22:50
21	09:07	11:25 (2)	07:57	09:15 (6)	06:39	07:28 (28)	06:11	04:58	04:27
	16:30 70	13:08 (4)	17:46 44	09:59 (3)	18:52 19	07:47 (28)	21:03	22:10	22:50
22	09:05	11:25 (2)	07:54	09:19 (6)	06:36	07:28 (28)	06:08	04:56	04:27
	16:32 70	13:08 (4)	17:48 40	10:00 (3)	18:54 18	07:46 (28)	21:05	22:12	22:50
23	09:04	11:25 (2)	07:52	09:26 (3)	06:33	07:28 (28)	06:05	04:54	04:27
	16:35 69	13:08 (4)	17:50 33	09:59 (3)	18:56 17	07:45 (28)	21:08	22:14	22:51
24	09:02	11:26 (2)	07:49	08:32 (26)	06:30	07:29 (28)	06:02	04:53	04:28
	16:37 68	13:08 (4)	17:53 35	09:58 (3)	18:59 14	07:43 (28)	21:10	22:16	22:51
25	09:00	10:27 (1)	07:46	08:28 (26)	06:27	07:31 (28)	06:00	04:51	04:28
	16:39 72	13:09 (4)	17:55 42	09:57 (3)	19:01 10	07:41 (28)	21:12	22:18	22:51
26	08:58	10:23 (1)	07:44	08:25 (26)	06:24		05:57	04:49	04:29
	16:42 74	13:09 (4)	17:58 45	09:56 (3)	19:03		21:14	22:20	22:50
27	08:56	10:20 (1)	07:41	08:23 (26)	06:21		05:54	04:47	04:29
	16:44 75	13:09 (4)	18:00 45	09:54 (3)	19:05		21:17	22:22	22:50
28	08:54	10:15 (1)	07:38	08:23 (26)	06:18		05:52	04:46	04:30
	16:46 76	13:08 (4)	18:02 44	09:53 (3)	19:08		21:19	22:24	22:50
29	08:52	10:11 (1)			07:16		05:49	04:44	04:31
	16:49 73	13:09 (4)			20:10		21:21	22:26	22:50
30	08:50	10:11 (1)			07:13		05:47	04:43	04:31
	16:51 67	13:08 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54 67	13:08 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	2073		1299		443				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,64		0,71		0,71				
Total reduction	0,26		0,28		0,29				
Total, real	532		366		126				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:40		07:52	08:47 (6)	09:00	11:03 (2)
	22:49	22:01	20:40		19:13		16:49 36	12:20 (4)	15:51 67	12:45 (4)
2	04:33	05:26	06:35		07:42	09:06 (26)	07:54	09:03 (3)	09:02	11:04 (2)
	22:48	21:59	20:37		19:10 6	09:12 (26)	16:46 43	12:26 (4)	15:50 66	12:45 (4)
3	04:34	05:29	06:38		07:44	09:02 (26)	07:56	09:06 (3)	09:04	11:04 (2)
	22:47	21:56	20:34		19:07 13	09:15 (26)	16:44 50	12:29 (4)	15:49 64	12:44 (4)
4	04:35	05:31	06:40		07:46	09:00 (26)	07:59	09:46 (1)	09:05	11:05 (2)
	22:47	21:54	20:31		19:05 17	09:17 (26)	16:42 44	12:32 (4)	15:48 63	12:44 (4)
5	04:36	05:33	06:42		07:48	08:58 (26)	08:01	09:44 (1)	09:07	11:05 (2)
	22:46	21:52	20:28		19:02 20	09:18 (26)	16:39 51	12:33 (4)	15:47 62	12:44 (4)
6	04:38	05:35	06:44		07:51	08:57 (26)	08:04	09:44 (1)	09:09	11:06 (2)
	22:45	21:49	20:26		18:59 22	09:19 (26)	16:37 55	12:35 (4)	15:46 61	12:45 (4)
7	04:39	05:37	06:47		07:53	08:57 (26)	08:06	09:44 (1)	09:10	11:07 (2)
	22:44	21:47	20:23		18:56 23	09:20 (26)	16:35 58	12:36 (4)	15:46 60	12:45 (4)
8	04:40	05:40	06:49		07:55	08:55 (26)	08:08	09:43 (1)	09:12	11:08 (2)
	22:43	21:44	20:20		18:53 24	09:19 (26)	16:32 60	12:36 (4)	15:45 58	12:45 (4)
9	04:41	05:42	06:51		07:58	08:55 (26)	08:11	09:43 (1)	09:14	11:09 (2)
	22:42	21:42	20:17		18:50 24	09:19 (26)	16:30 64	12:38 (4)	15:44 57	12:45 (4)
10	04:43	05:44	06:53		08:00	08:55 (26)	08:13	09:43 (1)	09:15	11:11 (2)
	22:41	21:39	20:14		18:48 24	09:19 (26)	16:28 65	12:39 (4)	15:44 54	12:45 (4)
11	04:44	05:46	06:55		08:02	08:54 (26)	08:16	09:42 (1)	09:16	11:14 (2)
	22:39	21:37	20:11		18:45 32	10:18 (3)	16:26 67	12:39 (4)	15:43 51	12:45 (4)
12	04:46	05:49	06:58		08:04	08:55 (26)	08:18	09:43 (1)	09:18	11:15 (2)
	22:38	21:34	20:08		18:42 39	10:23 (3)	16:24 67	12:40 (4)	15:43 48	12:45 (4)
13	04:48	05:51	07:00		08:07	08:55 (26)	08:20	09:43 (1)	09:19	11:18 (2)
	22:37	21:32	20:05		18:39 43	10:25 (3)	16:21 73	12:41 (4)	15:43 46	12:46 (4)
14	04:49	05:53	07:02		08:09	08:55 (26)	08:23	09:48 (1)	09:20	11:20 (2)
	22:35	21:29	20:02		18:36 46	10:26 (3)	16:19 75	12:41 (4)	15:42 44	12:46 (4)
15	04:51	05:55	07:04		08:11	08:57 (26)	08:25	09:52 (1)	09:21	11:21 (2)
	22:34	21:26	20:00		18:34 46	10:28 (3)	16:17 75	12:41 (4)	15:42 42	12:46 (4)
16	04:53	05:58	07:06		08:14	08:58 (26)	08:27	09:56 (1)	09:22	11:22 (2)
	22:32	21:24	19:57		18:31 44	10:28 (3)	16:15 74	12:42 (4)	15:42 41	12:46 (4)
17	04:54	06:00	07:09		08:16	09:01 (26)	08:30	10:01 (1)	09:23	11:24 (2)
	22:31	21:21	19:54		18:28 41	10:29 (3)	16:13 71	12:42 (4)	15:42 38	12:46 (4)
18	04:56	06:02	07:11	08:19 (28)	08:18	09:57 (3)	08:32	11:00 (2)	09:24	11:25 (2)
	22:29	21:19	19:51 9	08:28 (28)	18:25 32	10:29 (3)	16:11 68	12:42 (4)	15:42 37	12:47 (4)
19	04:58	06:04	07:13	08:16 (28)	08:21	09:57 (3)	08:34	11:00 (2)	09:25	11:27 (2)
	22:27	21:16	19:48 13	08:29 (28)	18:23 33	10:30 (3)	16:10 69	12:43 (4)	15:43 36	12:47 (4)
20	05:00	06:06	07:15	08:14 (28)	08:23	09:48 (6)	08:37	11:00 (2)	09:26	11:28 (2)
	22:25	21:13	19:45 16	08:30 (28)	18:20 42	10:30 (3)	16:08 70	12:43 (4)	15:43 35	12:48 (4)
21	05:02	06:09	07:17	08:14 (28)	08:25	09:46 (6)	08:39	11:00 (2)	09:26	11:28 (2)
	22:24	21:10	19:42 17	08:31 (28)	18:17 45	10:31 (3)	16:06 70	12:43 (4)	15:43 35	12:48 (4)
22	05:04	06:11	07:20	08:13 (28)	08:28	09:44 (6)	08:41	11:00 (2)	09:27	11:29 (2)
	22:22	21:08	19:39 18	08:31 (28)	18:15 46	10:30 (3)	16:04 71	12:44 (4)	15:44 35	12:49 (4)
23	05:06	06:13	07:22	08:12 (28)	08:30	09:44 (6)	08:43	11:00 (2)	09:27	11:29 (2)
	22:20	21:05	19:36 19	08:31 (28)	18:12 46	10:30 (3)	16:03 70	12:43 (4)	15:44 35	12:49 (4)
24	05:08	06:15	07:24	08:12 (28)	08:32	09:42 (6)	08:45	11:00 (2)	09:28	11:30 (2)
	22:18	21:02	19:33 19	08:31 (28)	18:09 47	10:29 (3)	16:01 72	12:44 (4)	15:45 35	12:50 (4)
25	05:10	06:18	07:26	08:11 (28)	07:35	08:42 (6)	08:48	11:00 (2)	09:28	11:29 (2)
	22:16	20:59	19:31 19	08:30 (28)	17:07 47	09:29 (3)	15:59 71	12:43 (4)	15:45 36	12:50 (4)
26	05:12	06:20	07:28	08:12 (28)	07:37	08:43 (6)	08:50	11:01 (2)	09:28	11:29 (2)
	22:14	20:57	19:28 17	08:29 (28)	17:04 46	09:29 (3)	15:58 71	12:44 (4)	15:46 37	12:51 (4)
27	05:14	06:22	07:31	08:13 (28)	07:40	08:42 (6)	08:52	11:01 (2)	09:28	11:29 (2)
	22:12	20:54	19:25 15	08:28 (28)	17:02 46	09:28 (3)	15:57 71	12:44 (4)	15:47 39	12:52 (4)
28	05:16	06:24	07:33	08:14 (28)	07:42	08:43 (6)	08:54	11:02 (2)	09:29	11:28 (2)
	22:10	20:51	19:22 12	08:26 (28)	16:59 45	09:28 (3)	15:55 68	12:44 (4)	15:48 40	12:52 (4)
29	05:18	06:27	07:35	08:15 (28)	07:44	08:44 (6)	08:56	11:02 (2)	09:29	11:27 (2)
	22:08	20:48	19:19 8	08:23 (28)	16:56 43	09:27 (3)	15:54 68	12:44 (4)	15:49 42	12:52 (4)
30	05:20	06:29	07:37		07:47	08:44 (6)	08:58	11:02 (2)	09:28	11:26 (2)
	22:05	20:45	19:16		16:54 42	09:26 (3)	15:53 68	12:44 (4)	15:50 44	12:53 (4)
31	05:22	06:31			07:49	08:45 (6)			09:28	11:25 (2)
	22:03	20:43			16:51 38	09:25 (3)			15:51 48	12:54 (4)
Potential sun hours	545	478	386		319		236		200	
Total, worst case			182		1062		1935		1456	
Sun reduction			0,50		0,50		0,50		0,50	
Oper. time red.			0,80		0,80		0,80		0,80	
Wind dir. red.			0,70		0,73		0,65		0,63	
Total reduction			0,28		0,29		0,26		0,25	
Total, real			51		310		503		369	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:34 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	5	07:39 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:30 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	12	07:42 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:28 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	15	07:43 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:26 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:44 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50		07:25 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	19	07:44 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:24 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:16 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:44 (4)	20:56	22:04	22:49	22:29	21:19	19:51	8 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:24 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:13 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	20	07:44 (4)	20:58	22:06	22:50	22:27	21:16	19:48	13 08:26 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:25 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:11 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:45 (4)	21:01	22:08	22:50	22:26	21:13	19:45	16 08:27 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:25 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:11 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19	07:44 (4)	21:03	22:10	22:50	22:24	21:11	19:42	17 08:28 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:25 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18	07:43 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:29 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:25 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:08 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:42 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:28 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:26 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	14	07:40 (4)	21:10	22:16	22:51	22:18	21:02	19:34	20 08:28 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:28 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:07 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	9	07:37 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:27 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:29	08:08 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	19 08:27 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:08 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	18 08:26 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:08 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	17 08:25 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:09 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	14 08:23 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	8 08:21 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				206							210			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				57							58			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:25 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38 10	07:35 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:18	15:42
16	09:15	08:10	06:53	07:23 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40 13	07:36 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50	07:21 (4)	06:22	05:06	04:27	04:54	06:00	07:09	08:13 (4)	08:16	08:30	09:23
	16:21	17:36	18:43 16	07:37 (4)	20:54	22:02	22:49	22:31	21:21	19:54 4	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47	07:20 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:09 (4)	08:18	08:32	09:24
	16:24	17:38	18:45 18	07:38 (4)	20:56	22:04	22:49	22:29	21:19	19:51 11	08:20 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:19 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:07 (4)	08:21	08:34	09:25
	16:26	17:41	18:47 19	07:38 (4)	20:58	22:06	22:50	22:27	21:16	19:48 14	08:21 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:19 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (4)	08:23	08:37	09:26
	16:28	17:43	18:49 20	07:39 (4)	21:01	22:08	22:50	22:26	21:13	19:45 17	08:22 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (4)	08:25	08:39	09:26
	16:30	17:46	18:52 19	07:38 (4)	21:03	22:10	22:50	22:24	21:11	19:42 18	08:23 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:19 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:04 (4)	08:28	08:41	09:27
	16:33	17:48	18:54 18	07:37 (4)	21:05	22:12	22:51	22:22	21:08	19:39 19	08:23 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:19 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:03 (4)	08:30	08:43	09:27
	16:35	17:51	18:56 17	07:36 (4)	21:08	22:14	22:51	22:20	21:05	19:36 19	08:22 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:20 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:03 (4)	08:32	08:46	09:28
	16:37	17:53	18:59 15	07:35 (4)	21:10	22:16	22:51	22:18	21:02	19:34 19	08:22 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:21 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:02 (4)	07:35	08:48	09:28
	16:40	17:55	19:01 12	07:33 (4)	21:12	22:18	22:51	22:16	21:00	19:31 19	08:21 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24	07:23 (4)	05:57	04:49	04:29	05:12	06:20	07:29	08:04 (4)	07:37	08:50	09:28
	16:42	17:58	19:03 7	07:30 (4)	21:15	22:20	22:51	22:14	20:57	19:28 16	08:20 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:04 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25 15	08:19 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:25	07:33	08:05 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22 11	08:16 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:08 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19 4	08:12 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37		07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:06	20:46	19:16		16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49		09:28
	16:54		20:15			22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				184							186			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,28							0,28			
Total, real				51							51			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:17 (2)	08:46	10:11 (1)	07:35	08:24 (26)	07:07	05:44	04:40
	15:53 54	12:46 (4)	16:56 61	12:57 (4)	18:05 32	09:46 (3)	20:17	21:26	22:31
2	09:28	11:17 (2)	08:44	10:11 (1)	07:33	08:23 (26)	07:04	05:41	04:39
	15:54 54	12:46 (4)	16:59 58	12:56 (4)	18:07 24	08:47 (26)	20:19	21:28	22:32
3	09:27	11:17 (2)	08:41	10:12 (1)	07:30	08:23 (26)	07:01	05:39	04:37
	15:56 56	12:47 (4)	17:01 55	12:55 (4)	18:10 24	08:47 (26)	20:21	21:31	22:34
4	09:27	11:17 (2)	08:39	10:12 (1)	07:27	08:23 (26)	06:58	05:36	04:36
	15:57 57	12:48 (4)	17:04 52	12:54 (4)	18:12 23	08:46 (26)	20:24	21:33	22:35
5	09:26	11:17 (2)	08:37	10:14 (1)	07:24	08:23 (26)	06:55	05:34	04:35
	15:59 58	12:48 (4)	17:06 46	12:53 (4)	18:14 22	08:45 (26)	20:26	21:35	22:37
6	09:25	11:17 (2)	08:35	10:14 (1)	07:22	08:23 (26)	06:53	05:31	04:34
	16:00 59	12:49 (4)	17:09 41	12:50 (4)	18:17 22	08:45 (26)	20:28	21:38	22:38
7	09:25	11:17 (2)	08:32	09:37 (3)	07:19	08:24 (26)	06:50	05:29	04:33
	16:02 61	12:50 (4)	17:11 43	12:47 (4)	18:19 19	08:43 (26)	20:31	21:40	22:39
8	09:24	11:17 (2)	08:30	09:35 (3)	07:16	08:24 (26)	06:47	05:27	04:32
	16:04 63	12:51 (4)	17:13 36	12:44 (4)	18:21 18	08:42 (26)	20:33	21:42	22:41
9	09:23	11:18 (2)	08:28	09:32 (3)	07:13	08:27 (26)	06:44	05:24	04:31
	16:05 63	12:52 (4)	17:16 21	09:53 (3)	18:24 13	08:40 (26)	20:35	21:44	22:42
10	09:22	11:17 (2)	08:25	09:31 (3)	07:10	08:30 (26)	06:41	05:22	04:30
	16:07 65	12:52 (4)	17:18 24	09:55 (3)	18:26 7	08:37 (26)	20:38	21:47	22:43
11	09:21	11:18 (2)	08:23	09:30 (3)	07:07		06:38	05:20	04:30
	16:09 65	12:53 (4)	17:21 26	09:56 (3)	18:28		20:40	21:49	22:44
12	09:20	11:18 (2)	08:20	09:29 (3)	07:05		06:36	05:17	04:29
	16:11 66	12:53 (4)	17:23 28	09:57 (3)	18:31		20:42	21:51	22:45
13	09:19	11:18 (2)	08:18	09:28 (3)	07:02	07:40 (28)	06:33	05:15	04:29
	16:13 67	12:54 (4)	17:26 29	09:57 (3)	18:33 5	07:45 (28)	20:44	21:53	22:46
14	09:17	11:18 (2)	08:15	09:28 (3)	06:59	07:36 (28)	06:30	05:13	04:28
	16:15 68	12:55 (4)	17:28 31	09:59 (3)	18:35 11	07:47 (28)	20:47	21:55	22:47
15	09:16	11:18 (2)	08:13	09:27 (3)	06:56	07:34 (28)	06:27	05:11	04:28
	16:17 69	12:55 (4)	17:31 32	09:59 (3)	18:38 15	07:49 (28)	20:49	21:58	22:47
16	09:15	11:19 (2)	08:10	09:26 (3)	06:53	07:33 (28)	06:24	05:08	04:27
	16:19 68	12:55 (4)	17:33 33	09:59 (3)	18:40 16	07:49 (28)	20:51	22:00	22:48
17	09:13	11:20 (2)	08:08	09:27 (3)	06:50	07:32 (28)	06:22	05:06	04:27
	16:21 69	12:57 (4)	17:36 33	10:00 (3)	18:42 18	07:50 (28)	20:54	22:02	22:49
18	09:12	11:20 (2)	08:05	09:26 (3)	06:47	07:31 (28)	06:19	05:04	04:27
	16:23 69	12:57 (4)	17:38 34	10:00 (3)	18:45 19	07:50 (28)	20:56	22:04	22:49
19	09:10	11:20 (2)	08:02	09:26 (3)	06:44	07:31 (28)	06:16	05:02	04:27
	16:26 69	12:57 (4)	17:41 33	09:59 (3)	18:47 18	07:49 (28)	20:58	22:06	22:50
20	09:09	11:21 (2)	08:00	09:26 (3)	06:42	07:30 (28)	06:13	05:00	04:27
	16:28 69	12:58 (4)	17:43 33	09:59 (3)	18:49 19	07:49 (28)	21:01	22:08	22:50
21	09:07	11:22 (2)	07:57	09:26 (3)	06:39	07:32 (28)	06:11	04:58	04:27
	16:30 67	12:58 (4)	17:46 32	09:58 (3)	18:52 17	07:49 (28)	21:03	22:10	22:50
22	09:05	11:22 (2)	07:54	09:27 (3)	06:36	07:32 (28)	06:08	04:56	04:27
	16:32 67	12:58 (4)	17:48 32	09:59 (3)	18:54 15	07:47 (28)	21:05	22:12	22:50
23	09:04	11:22 (2)	07:52	09:27 (3)	06:33	07:33 (28)	06:05	04:54	04:27
	16:35 66	12:58 (4)	17:50 31	09:58 (3)	18:56 13	07:46 (28)	21:08	22:14	22:51
24	09:02	10:25 (1)	07:49	08:30 (26)	06:30	07:35 (28)	06:02	04:53	04:28
	16:37 70	12:58 (4)	17:53 41	09:57 (3)	18:59 8	07:43 (28)	21:10	22:16	22:51
25	09:00	10:21 (1)	07:46	08:28 (26)	06:27		06:00	04:51	04:28
	16:39 72	12:58 (4)	17:55 42	09:55 (3)	19:01		21:12	22:18	22:51
26	08:58	10:18 (1)	07:44	08:26 (26)	06:24		05:57	04:49	04:29
	16:42 74	12:59 (4)	17:58 44	09:54 (3)	19:03		21:14	22:20	22:50
27	08:56	10:14 (1)	07:41	08:25 (26)	06:21		05:54	04:47	04:29
	16:44 76	12:59 (4)	18:00 41	09:52 (3)	19:05		21:17	22:22	22:50
28	08:54	10:10 (1)	07:38	08:25 (26)	06:18		05:52	04:46	04:30
	16:46 74	12:58 (4)	18:02 38	09:50 (3)	19:08		21:19	22:24	22:50
29	08:52	10:10 (1)			07:16		05:49	04:44	04:31
	16:49 65	12:58 (4)			20:10		21:21	22:26	22:50
30	08:50	10:10 (1)			07:13		05:47	04:43	04:31
	16:51 63	12:57 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54 61	12:57 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	2024		1050		378				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,65		0,71		0,71				
Total reduction	0,26		0,28		0,29				
Total, real	524		297		108				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September			October		November			December		
1	04:32	05:24	06:33			07:40		07:52		09:00 (3)	09:00		11:00 (2)
	22:49	22:01	20:40			19:13		16:49	23	09:23 (3)	15:51	65	12:35 (4)
2	04:33	05:26	06:35			07:42		07:54		09:02 (3)	09:02		11:00 (2)
	22:48	21:59	20:37			19:10		16:46	23	09:54 (1)	15:50	65	12:35 (4)
3	04:34	05:29	06:38			07:44		07:56		09:05 (3)	09:04		11:01 (2)
	22:47	21:56	20:34			19:07		16:44	38	12:14 (4)	15:49	63	12:35 (4)
4	04:35	05:31	06:40			07:46		09:05 (26)	07:59		09:08 (3)	09:05		11:01 (2)
	22:47	21:54	20:31			19:05	11	09:16 (26)	16:42	44	12:19 (4)	15:48	63	12:35 (4)
5	04:36	05:33	06:42			07:48		09:02 (26)	08:01		09:44 (1)	09:07		11:02 (2)
	22:46	21:52	20:28			19:02	16	09:18 (26)	16:39	42	12:20 (4)	15:47	61	12:35 (4)
6	04:38	05:35	06:44			07:51		09:00 (26)	08:04		09:43 (1)	09:09		11:03 (2)
	22:45	21:49	20:26			18:59	19	09:19 (26)	16:37	48	12:23 (4)	15:46	59	12:35 (4)
7	04:39	05:37	06:47			07:53		09:00 (26)	08:06		09:43 (1)	09:10		11:04 (2)
	22:44	21:47	20:23			18:56	20	09:20 (26)	16:35	51	12:24 (4)	15:46	58	12:35 (4)
8	04:40	05:40	06:49			07:55		08:58 (26)	08:08		09:42 (1)	09:12		11:05 (2)
	22:43	21:44	20:20			18:53	23	09:21 (26)	16:32	55	12:25 (4)	15:45	58	12:36 (4)
9	04:41	05:42	06:51			07:58		08:57 (26)	08:11		09:42 (1)	09:14		11:06 (2)
	22:42	21:42	20:17			18:50	23	09:20 (26)	16:30	59	12:27 (4)	15:44	56	12:36 (4)
10	04:43	05:44	06:53			08:00		08:57 (26)	08:13		09:42 (1)	09:15		11:06 (2)
	22:41	21:39	20:14			18:48	24	09:21 (26)	16:28	60	12:28 (4)	15:44	55	12:36 (4)
11	04:44	05:46	06:55			08:02		08:57 (26)	08:16		09:41 (1)	09:16		11:07 (2)
	22:39	21:37	20:11			18:45	23	09:20 (26)	16:26	62	12:28 (4)	15:43	54	12:36 (4)
12	04:46	05:49	06:58			08:04		08:57 (26)	08:18		09:42 (1)	09:18		11:07 (2)
	22:38	21:34	20:08			18:42	24	09:21 (26)	16:24	63	12:29 (4)	15:43	52	12:36 (4)
13	04:48	05:51	07:00			08:07		08:57 (26)	08:20		09:42 (1)	09:19		11:10 (2)
	22:37	21:32	20:05			18:39	35	10:20 (3)	16:21	65	12:30 (4)	15:43	50	12:37 (4)
14	04:49	05:53	07:02			08:09		08:57 (26)	08:23		09:43 (1)	09:20		11:11 (2)
	22:35	21:29	20:02			18:36	39	10:23 (3)	16:19	74	12:31 (4)	15:42	49	12:37 (4)
15	04:51	05:55	07:04			08:11		08:58 (26)	08:25		09:46 (1)	09:21		11:13 (2)
	22:34	21:26	20:00			18:34	42	10:25 (3)	16:17	76	12:31 (4)	15:42	46	12:37 (4)
16	04:53	05:58	07:06			08:14		08:58 (26)	08:27		09:51 (1)	09:22		11:14 (2)
	22:32	21:24	19:57			18:31	43	10:26 (3)	16:15	74	12:32 (4)	15:42	45	12:37 (4)
17	04:54	06:00	07:09			08:16		09:00 (26)	08:30		09:55 (1)	09:23		11:15 (2)
	22:31	21:21	19:54			18:28	43	10:28 (3)	16:13	72	12:32 (4)	15:42	43	12:37 (4)
18	04:56	06:02	07:11			08:18		09:02 (26)	08:32		09:59 (1)	09:24		11:17 (2)
	22:29	21:19	19:51			18:25	39	10:28 (3)	16:11	70	12:32 (4)	15:42	40	12:37 (4)
19	04:58	06:04	07:13		08:22 (28)	08:21		09:58 (3)	08:34		10:57 (2)	09:25		11:18 (2)
	22:27	21:16	19:48	7	08:29 (28)	18:23	31	10:29 (3)	16:10	66	12:33 (4)	15:43	41	12:38 (4)
20	05:00	06:06	07:15		08:19 (28)	08:23		09:57 (3)	08:37		10:57 (2)	09:26		11:19 (2)
	22:25	21:13	19:45	12	08:31 (28)	18:20	32	10:29 (3)	16:08	67	12:33 (4)	15:43	40	12:39 (4)
21	05:02	06:09	07:17		08:18 (28)	08:25		09:57 (3)	08:39		10:57 (2)	09:26		11:19 (2)
	22:24	21:10	19:42	15	08:33 (28)	18:17	33	10:30 (3)	16:06	67	12:33 (4)	15:43	39	12:38 (4)
22	05:04	06:11	07:20		08:16 (28)	08:28		09:56 (3)	08:41		10:57 (2)	09:27		11:20 (2)
	22:22	21:08	19:39	17	08:33 (28)	18:15	33	10:29 (3)	16:04	68	12:34 (4)	15:44	39	12:39 (4)
23	05:06	06:13	07:22		08:15 (28)	08:30		09:56 (3)	08:43		10:57 (2)	09:27		11:20 (2)
	22:20	21:05	19:36	18	08:33 (28)	18:12	34	10:30 (3)	16:03	68	12:33 (4)	15:44	40	12:40 (4)
24	05:08	06:15	07:24		08:14 (28)	08:32		09:56 (3)	08:45		10:57 (2)	09:28		11:21 (2)
	22:18	21:02	19:33	19	08:33 (28)	18:09	33	10:29 (3)	16:01	69	12:34 (4)	15:45	41	12:41 (4)
25	05:10	06:18	07:26		08:14 (28)	07:35		08:56 (3)	08:48		10:57 (2)	09:28		11:21 (2)
	22:16	20:59	19:31	18	08:32 (28)	17:07	33	09:29 (3)	15:59	69	12:34 (4)	15:45	41	12:41 (4)
26	05:12	06:20	07:28		08:14 (28)	07:37		08:57 (3)	08:50		10:58 (2)	09:28		11:21 (2)
	22:14	20:57	19:28	19	08:33 (28)	17:04	32	09:29 (3)	15:58	68	12:34 (4)	15:46	42	12:42 (4)
27	05:14	06:22	07:31		08:14 (28)	07:40		08:56 (3)	08:52		10:57 (2)	09:28		11:20 (2)
	22:12	20:54	19:25	18	08:32 (28)	17:02	32	09:28 (3)	15:57	69	12:34 (4)	15:47	43	12:42 (4)
28	05:16	06:24	07:33		08:15 (28)	07:42		08:57 (3)	08:54		10:58 (2)	09:29		11:20 (2)
	22:10	20:51	19:22	15	08:30 (28)	16:59	31	09:28 (3)	15:55	68	12:35 (4)	15:48	44	12:43 (4)
29	05:18	06:27	07:35		08:15 (28)	07:44		08:58 (3)	08:56		10:59 (2)	09:29		11:18 (2)
	22:08	20:48	19:19	13	08:28 (28)	16:56	29	09:27 (3)	15:54	67	12:35 (4)	15:49	47	12:43 (4)
30	05:20	06:29	07:37		08:18 (28)	07:47		08:58 (3)	08:58		10:59 (2)	09:28		11:18 (2)
	22:05	20:45	19:16	8	08:26 (28)	16:54	28	09:26 (3)	15:53	65	12:34 (4)	15:50	49	12:44 (4)
31	05:22	06:31				07:49		09:00 (3)				09:28		11:16 (2)
	22:03	20:43				16:51	25	09:25 (3)				15:51	52	12:44 (4)
Potential sun hours	545	478	386			319		236			200			
Total, worst case				179			830		1810			1540		
Sun reduction				0,50			0,50		0,50			0,50		
Oper. time red.				0,80			0,80		0,80			0,80		
Wind dir. red.				0,70			0,73		0,66			0,64		
Total reduction				0,28			0,29		0,26			0,26		
Total, real				50			242		475			394		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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NO-0276 Oslo
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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:05 (4)	08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03	10	08:15 (4)	18:37	16:20	15:43
15	09:16	08:13	06:56		06:27	05:11	04:28	04:51	05:55	07:04		08:02 (4)	08:11	08:25	09:21
	16:17	17:31	18:38		20:49	21:58	22:47	22:34	21:27	20:00	14	08:16 (4)	18:34	16:18	15:42
16	09:15	08:10	06:53		06:24	05:09	04:28	04:53	05:58	07:06		08:00 (4)	08:14	08:27	09:22
	16:19	17:33	18:40		20:51	22:00	22:48	22:32	21:24	19:57	17	08:17 (4)	18:31	16:16	15:42
17	09:13	08:08	06:50		06:22	05:06	04:27	04:54	06:00	07:09		07:59 (4)	08:16	08:30	09:23
	16:21	17:36	18:43		20:54	22:02	22:49	22:31	21:21	19:54	18	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11		07:58 (4)	08:18	08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	19	08:17 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13		07:57 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	3 07:28 (4)	20:58	22:06	22:50	22:27	21:16	19:48	20	08:17 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:22 (4)	06:13	05:00	04:27	05:00	06:07	07:15		07:57 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	8 07:30 (4)	21:01	22:08	22:50	22:26	21:13	19:45	19	08:16 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:00 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	11 07:30 (4)	21:03	22:10	22:50	22:24	21:11	19:42	16	08:16 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:15 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:02 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	16 07:31 (4)	21:05	22:12	22:51	22:22	21:08	19:39	13	08:15 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:11 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:05 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	20 07:31 (4)	21:08	22:14	22:51	22:20	21:05	19:36	9	08:14 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:11 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	19 07:30 (4)	21:10	22:16	22:51	22:18	21:02	19:34	4	08:12 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:10 (4)	06:00	04:51	04:28	05:10	06:18	07:26			07:35	08:48	09:28
	16:40	17:55	19:01	20 07:30 (4)	21:12	22:18	22:51	22:16	21:00	19:31			17:07	16:00	15:46
26	08:58	07:44	06:24	07:10 (4)	05:57	04:49	04:29	05:12	06:20	07:29			07:37	08:50	09:28
	16:42	17:58	19:03	19 07:29 (4)	21:15	22:20	22:51	22:14	20:57	19:28			17:04	15:58	15:46
27	08:56	07:41	06:21	07:11 (4)	05:55	04:48	04:29	05:14	06:22	07:31			07:40	08:52	09:29
	16:44	18:00	19:06	17 07:28 (4)	21:17	22:22	22:50	22:12	20:54	19:25			17:02	15:57	15:47
28	08:54	07:38	06:19	07:12 (4)	05:52	04:46	04:30	05:16	06:25	07:33			07:42	08:54	09:29
	16:47	18:03	19:08	14 07:26 (4)	21:19	22:24	22:50	22:10	20:51	19:22			16:59	15:55	15:48
29	08:52		07:16	08:13 (4)	05:49	04:44	04:31	05:18	06:27	07:35			07:44	08:56	09:29
	16:49		20:10	11 08:24 (4)	21:22	22:26	22:50	22:08	20:48	19:19			16:57	15:54	15:49
30	08:50		07:13	08:18 (4)	05:47	04:43	04:32	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12	2 08:20 (4)	21:24	22:27	22:49	22:05	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:52
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				160							159			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,27							0,27			
Total, real				44							44			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:35 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	8	07:43 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:32 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13	07:45 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:30 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16	07:46 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	19	07:47 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:15	15:42
17	09:13	08:08	06:50		07:27 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20	07:47 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	21	07:47 (4)	20:56	22:04	22:49	22:29	21:19	19:51	9 08:27 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:26 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21	07:47 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:29 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:27 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	21	07:48 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:30 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:13 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	21	07:47 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18 08:31 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:27 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19	07:46 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:31 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:44 (4)	21:08	22:14	22:51	22:20	21:05	19:36	21 08:31 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:10 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15	07:43 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21 08:31 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	10	07:40 (4)	21:12	22:18	22:51	22:16	21:00	19:31	21 08:30 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28	08:10 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	20 08:30 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:10 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	19 08:29 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:10 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18 08:28 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:11 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	15 08:26 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	11 08:24 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				221							224			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				61							62			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:36 (4)	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	24	09:00 (4)	16:49	15:51
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:35 (4)	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	25	09:00 (4)	16:47	15:50
3	09:27	08:41	07:30	08:05 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:34 (4)	07:56	09:04
	15:56	17:01	18:10	12 08:17 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	25	08:59 (4)	16:44	15:49
4	09:27	08:39	07:27	08:02 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:34 (4)	07:59	09:05
	15:57	17:04	18:12	17 08:19 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	26	09:00 (4)	16:42	15:48
5	09:26	08:37	07:24	08:01 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:34 (4)	08:01	09:07
	15:59	17:06	18:14	19 08:20 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	25	08:59 (4)	16:39	15:47
6	09:25	08:35	07:22	07:59 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:34 (4)	08:04	09:09
	16:00	17:09	18:17	22 08:21 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	24	08:58 (4)	16:37	15:47
7	09:25	08:32	07:19	07:58 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:35 (4)	08:06	09:10
	16:02	17:11	18:19	23 08:21 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	22	08:57 (4)	16:35	15:46
8	09:24	08:30	07:16	07:58 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:35 (4)	08:08	09:12
	16:04	17:14	18:22	24 08:22 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	21	08:56 (4)	16:32	15:45
9	09:23	08:28	07:13	07:57 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:36 (4)	08:11	09:14
	16:06	17:16	18:24	25 08:22 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	08:54 (4)	16:30	15:44
10	09:22	08:25	07:10	07:57 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:38 (4)	08:13	09:15
	16:07	17:19	18:26	25 08:22 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	08:53 (4)	16:28	15:44
11	09:21	08:23	07:07	07:57 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:41 (4)	08:16	09:16
	16:09	17:21	18:29	25 08:22 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	8	08:49 (4)	16:26	15:43
12	09:20	08:20	07:05	07:57 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:24	18:31	24 08:21 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18	07:02	07:57 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07			08:20	09:19
	16:13	17:26	18:33	23 08:20 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39			16:22	15:43
14	09:17	08:15	06:59	07:57 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09			08:23	09:20
	16:15	17:28	18:36	22 08:19 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36			16:19	15:42
15	09:16	08:13	06:56	07:58 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11			08:25	09:21
	16:17	17:31	18:38	20 08:18 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34			16:17	15:42
16	09:15	08:10	06:53	07:59 (4)	06:24	05:09	04:27	04:53	05:58	07:06		08:14			08:27	09:22
	16:19	17:33	18:40	17 08:16 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31			16:15	15:42
17	09:13	08:08	06:50	08:00 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16			08:30	09:23
	16:21	17:36	18:43	14 08:14 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28			16:14	15:42
18	09:12	08:05	06:47	08:04 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:18			08:32	09:24
	16:24	17:38	18:45	5 08:09 (4)	20:56	22:04	22:49	22:29	21:19	19:51		18:25			16:12	15:42
19	09:10	08:02	06:45		06:16	05:02	04:27	04:58	06:04	07:13		08:21			08:34	09:25
	16:26	17:41	18:47		20:58	22:06	22:50	22:27	21:16	19:48		18:23			16:10	15:43
20	09:09	08:00	06:42		06:13	05:00	04:27	05:00	06:07	07:15		08:23			08:37	09:26
	16:28	17:43	18:49		21:01	22:08	22:50	22:26	21:13	19:45		18:20			16:08	15:43
21	09:07	07:57	06:39		06:11	04:58	04:27	05:02	06:09	07:17		08:25			08:39	09:26
	16:30	17:46	18:52		21:03	22:10	22:50	22:24	21:11	19:42		18:17			16:06	15:43
22	09:05	07:55	06:36		06:08	04:56	04:27	05:04	06:11	07:20		08:28			08:41	09:27
	16:32	17:48	18:54		21:05	22:12	22:51	22:22	21:08	19:39		18:15			16:04	15:44
23	09:04	07:52	06:33		06:05	04:55	04:28	05:06	06:13	07:22		08:30			08:43	09:27
	16:35	17:50	18:56		21:08	22:14	22:51	22:20	21:05	19:36		18:12			16:03	15:44
24	09:02	07:49	06:30		06:03	04:53	04:28	05:08	06:16	07:24		08:32			08:45	09:28
	16:37	17:53	18:59		21:10	22:16	22:51	22:18	21:02	19:34		18:09			16:01	15:45
25	09:00	07:47	06:27		06:00	04:51	04:28	05:10	06:18	07:26		07:35			08:48	09:28
	16:39	17:55	19:01		21:12	22:18	22:51	22:16	21:00	19:31		17:07			16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:44 (4)	07:37			08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28	11 08:55 (4)	17:04			15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:41 (4)	07:40			08:52	09:29
	16:44	18:00	19:05		21:17	22:22	22:50	22:12	20:54	19:25	16 08:57 (4)	17:02			15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:24	07:33	08:39 (4)	07:42			08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	19 08:58 (4)	16:59			15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:37 (4)	07:44			08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	22 08:59 (4)	16:57			15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:37 (4)	07:47			08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16	23 09:00 (4)	16:54			15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49				09:28
	16:54		20:15			22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236		200
Total, worst case				317							91		233			
Sun reduction				0,50							0,50		0,50			
Oper. time red.				0,80							0,80		0,80			
Wind dir. red.				0,71							0,71		0,71			
Total reduction				0,28							0,28		0,28			
Total, real				90							26		66			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 - 15:53	08:46 - 16:56	07:36 - 18:05 (4)	09:02 (2) - 09:06 (2)	07:07 - 20:17	05:44 - 21:26	04:40 - 22:31	04:32 - 22:49	05:24 - 22:01	06:33 - 20:40	07:40 - 19:13 (28)	08:45 (4) - 09:13 (4)	07:52 - 16:49	09:00 - 15:51
2	09:28 - 15:54	08:44 - 16:59	07:33 - 18:07		07:04 - 20:19	05:42 - 21:28	04:39 - 22:32	04:33 - 22:48	05:27 - 21:59	06:36 - 20:37	07:42 - 19:10 (29)	08:44 (4) - 09:13 (4)	07:54 - 16:47	09:02 - 15:50
3	09:27 - 15:56	08:41 - 17:01	07:30 - 18:10 (10)	08:17 (4) - 08:27 (4)	07:01 - 20:22	05:39 - 21:31	04:37 - 22:34	04:34 - 22:47	05:29 - 21:56	06:38 - 20:34	07:44 - 19:08 (29)	08:43 (4) - 09:12 (4)	07:56 - 16:44	09:04 - 15:49
4	09:27 - 15:57	08:39 - 17:04	07:27 - 18:12 (17)	08:13 (4) - 08:30 (4)	06:58 - 20:24	05:37 - 21:33	04:36 - 22:35	04:35 - 22:47	05:31 - 21:54	06:40 - 20:31	07:46 - 19:05 (28)	08:44 (4) - 09:12 (4)	07:59 - 16:42	09:05 - 15:48
5	09:26 - 15:59	08:37 - 17:06	07:24 - 18:14 (20)	08:11 (4) - 08:31 (4)	06:56 - 20:26	05:34 - 21:35	04:35 - 22:37	04:36 - 22:46	05:33 - 21:52	06:42 - 20:28	07:49 - 19:02 (27)	08:44 (4) - 09:11 (4)	08:01 - 16:39	09:07 - 15:47
6	09:25 - 16:00	08:35 - 17:09	07:22 - 18:17 (24)	08:09 (4) - 08:33 (4)	06:53 - 20:28	05:32 - 21:38	04:34 - 22:38	04:38 - 22:45	05:35 - 21:49	06:44 - 20:26	07:51 - 18:59 (26)	08:44 (4) - 09:10 (4)	08:04 - 16:37	09:09 - 15:47
7	09:25 - 16:02	08:32 - 17:11	07:19 - 18:19 (25)	08:08 (4) - 08:33 (4)	06:50 - 20:31	05:29 - 21:40	04:33 - 22:39	04:39 - 22:44	05:38 - 21:47	06:47 - 20:23	07:53 - 18:56 (24)	08:45 (4) - 09:09 (4)	08:06 - 16:35	09:10 - 15:46
8	09:24 - 16:04	08:30 - 17:14	07:16 - 18:22 (27)	08:07 (4) - 08:34 (4)	06:47 - 20:33	05:27 - 21:42	04:32 - 22:41	04:40 - 22:43	05:40 - 21:44	06:49 - 20:20	07:55 - 18:53 (22)	08:46 (4) - 09:08 (4)	08:08 - 16:32	09:12 - 15:45
9	09:23 - 16:06	08:28 - 17:16	07:13 - 18:24 (28)	08:07 (4) - 08:35 (4)	06:44 - 20:35	05:24 - 21:44	04:31 - 22:42	04:42 - 22:42	05:42 - 21:42	06:51 - 20:17	07:58 - 18:50 (18)	08:47 (4) - 09:05 (4)	08:11 - 16:30	09:14 - 15:44
10	09:22 - 16:07	08:25 - 17:19	07:10 - 18:26 (29)	08:06 (4) - 08:35 (4)	06:41 - 20:38	05:22 - 21:47	04:31 - 22:43	04:43 - 22:41	05:44 - 21:39	06:53 - 20:14	08:00 - 18:48 (15)	08:49 (4) - 09:04 (4)	08:13 - 16:28	09:15 - 15:44
11	09:21 - 16:09	08:23 - 17:21	07:07 - 18:29 (29)	08:06 (4) - 08:35 (4)	06:38 - 20:40	05:20 - 21:49	04:30 - 22:44	04:45 - 22:39	05:46 - 21:37	06:55 - 20:11	08:02 - 18:45 (6)	08:53 (4) - 08:59 (4)	08:16 - 16:26	09:16 - 15:43
12	09:20 - 16:11	08:20 - 17:23	07:05 - 18:31 (29)	08:05 (4) - 08:34 (4)	06:36 - 20:42	05:17 - 21:51	04:29 - 22:45	04:46 - 22:38	05:49 - 21:34	06:58 - 20:08	08:04 - 18:42		08:18 - 16:24	09:18 - 15:43
13	09:19 - 16:13	08:18 - 17:26	07:02 - 18:33 (29)	08:04 (4) - 08:34 (4)	06:33 - 20:44	05:15 - 21:53	04:29 - 22:46	04:48 - 22:37	05:51 - 21:32	07:00 - 20:05	08:07 - 18:39 (7)	09:33 (2) - 09:40 (2)	08:20 - 16:22	09:19 - 15:43
14	09:17 - 16:15	08:15 - 17:28	06:59 - 18:36 (28)	08:05 (4) - 08:33 (4)	06:30 - 20:47	05:13 - 21:56	04:28 - 22:47	04:49 - 22:35	05:53 - 21:29	07:02 - 20:03	08:09 - 18:36 (12)	09:30 (2) - 09:42 (2)	08:23 - 16:19	09:20 - 15:42
15	09:16 - 16:17	08:13 - 17:31	06:56 - 18:38 (32)	07:33 (3) - 08:32 (4)	06:27 - 20:49	05:11 - 21:58	04:28 - 22:47	04:51 - 22:34	05:55 - 21:27	07:04 - 20:00	08:11 - 18:34 (15)	09:29 (2) - 09:44 (2)	08:25 - 16:17	09:21 - 15:42
16	09:15 - 16:19	08:10 - 17:33	06:53 - 18:40 (36)	07:30 (3) - 08:31 (4)	06:24 - 20:51	05:09 - 22:00	04:27 - 22:48	04:53 - 22:32	05:58 - 21:24	07:06 - 19:57	08:14 - 18:31 (17)	09:27 (2) - 09:44 (2)	08:27 - 16:15	09:22 - 15:42
17	09:13 - 16:21	08:08 - 17:36 (9)	09:01 (2) - 09:10 (2)	06:50 - 07:28 (3) - 08:30 (4)	06:22 - 20:54	05:06 - 22:02	04:27 - 22:49	04:54 - 22:31	06:00 - 21:21	07:09 - 19:54 (5)	08:18 (3) - 08:23 (3)	08:16 - 18:28 (18)	09:27 (2) - 09:45 (2)	08:30 - 16:14	09:23 - 15:42
18	09:12 - 16:24	08:05 - 17:38 (14)	08:58 (2) - 09:12 (2)	06:47 - 07:27 (3) - 08:28 (4)	06:19 - 20:56	05:04 - 22:04	04:27 - 22:49	04:56 - 22:29	06:02 - 21:19	07:11 - 19:51 (11)	08:14 (3) - 08:25 (3)	08:18 - 18:25 (19)	09:26 (2) - 09:45 (2)	08:32 - 16:12	09:24 - 15:42
19	09:10 - 16:26	08:02 - 17:41 (16)	08:57 (2) - 09:13 (2)	06:45 - 07:25 (3) - 08:25 (4)	06:16 - 20:58	05:02 - 22:06	04:27 - 22:50	04:58 - 22:27	06:04 - 21:16	07:13 - 19:48 (14)	08:12 (3) - 08:26 (3)	08:21 - 18:23 (19)	09:26 (2) - 09:45 (2)	08:34 - 16:10	09:25 - 15:43
20	09:09 - 16:28	08:00 - 17:43 (17)	08:56 (2) - 09:13 (2)	06:42 - 07:25 (3) - 08:23 (4)	06:13 - 21:01	05:00 - 22:08	04:27 - 22:50	05:00 - 22:26	06:07 - 21:13	07:15 - 19:45 (17)	08:10 (3) - 08:27 (3)	08:23 - 18:20 (19)	09:25 (2) - 09:44 (2)	08:37 - 16:08	09:26 - 15:43
21	09:07 - 16:30	07:57 - 17:46 (18)	08:55 (2) - 09:13 (2)	06:39 - 07:25 (3) - 07:43 (3)	06:11 - 21:03	04:58 - 22:10	04:27 - 22:50	05:02 - 22:24	06:09 - 21:10	07:17 - 19:42 (18)	08:10 (3) - 08:28 (3)	08:25 - 18:17 (18)	09:26 (2) - 09:44 (2)	08:39 - 16:06	09:26 - 15:43
22	09:05 - 16:32	07:55 - 17:48 (19)	08:55 (2) - 09:14 (2)	06:36 - 07:24 (3) - 07:42 (3)	06:08 - 21:05	04:56 - 22:12	04:27 - 22:51	05:04 - 22:22	06:11 - 21:08	07:20 - 19:39 (19)	08:09 (3) - 08:28 (3)	08:28 - 18:15 (17)	09:26 (2) - 09:43 (2)	08:41 - 16:04	09:27 - 15:44
23	09:04 - 16:35	07:52 - 17:50 (19)	08:55 (2) - 09:14 (2)	06:33 - 07:25 (3) - 07:41 (3)	06:05 - 21:08	04:55 - 22:14	04:28 - 22:51	05:06 - 22:20	06:13 - 21:05	07:22 - 19:36 (27)	08:09 (3) - 09:06 (4)	08:30 - 18:12 (15)	09:27 (2) - 09:42 (2)	08:43 - 16:03	09:27 - 15:44
24	09:02 - 16:37	07:49 - 17:53 (19)	08:55 (2) - 09:14 (2)	06:30 - 07:25 (3) - 07:40 (3)	06:02 - 21:10	04:53 - 22:16	04:28 - 22:51	05:08 - 22:18	06:16 - 21:02	07:24 - 19:33 (35)	08:08 (3) - 09:09 (4)	08:32 - 18:09 (12)	09:29 (2) - 09:41 (2)	08:45 - 16:01	09:28 - 15:45
25	09:00 - 16:39	07:46 - 17:55 (18)	08:55 (2) - 09:13 (2)	06:27 - 07:26 (3) - 07:38 (3)	06:00 - 21:12	04:51 - 22:18	04:28 - 22:51	05:10 - 22:16	06:18 - 21:00	07:26 - 19:31 (35)	08:09 (3) - 09:10 (4)	07:35 - 17:07 (7)	08:31 (2) - 08:38 (2)	08:48 - 16:00	09:28 - 15:46
26	08:58 - 16:42	07:44 - 17:58 (17)	08:55 (2) - 09:12 (2)	06:24 - 07:28 (3) - 07:35 (3)	05:57 - 21:15	04:49 - 22:20	04:29 - 22:51	05:12 - 22:14	06:20 - 20:57	07:28 - 19:28 (36)	08:11 (3) - 09:12 (4)	07:37 - 17:04		08:50 - 15:58	09:28 - 15:46
27	08:56 - 16:44	07:41 - 18:00 (15)	08:56 (2) - 09:11 (2)	06:21 - 19:05	05:55 - 21:17	04:48 - 22:22	04:29 - 22:50	05:14 - 22:12	06:22 - 20:54	07:31 - 19:25 (37)	08:11 (3) - 09:13 (4)	07:40 - 17:02		08:52 - 15:57	09:29 - 15:47
28	08:54 - 16:47	07:38 - 18:03 (11)	08:58 (2) - 09:09 (2)	06:19 - 19:08	05:52 - 21:19	04:46 - 22:24	04:30 - 22:50	05:16 - 22:10	06:24 - 20:51	07:33 - 19:22 (34)	08:13 (3) - 09:13 (4)	07:42 - 16:59		08:54 - 15:55	09:29 - 15:48
29	08:52 - 16:49			07:16 - 20:10	05:49 - 21:21	04:44 - 22:26	04:31 - 22:50	05:18 - 22:08	06:27 - 20:48	07:35 - 19:19 (28)	08:45 (4) - 09:13 (4)	07:44 - 16:57		08:56 - 15:54	09:29 - 15:49
30	08:50 - 16:51			07:13 - 20:12	05:47 - 21:24	04:43 - 22:27	04:31 - 22:49	05:20 - 22:05	06:29 - 20:46	07:37 - 19:16 (29)	08:45 (4) - 09:14 (4)	07:47 - 16:54		08:58 - 15:53	09:28 - 15:50
31	08:48 - 16:54			07:10 - 20:15	04:41 - 22:29		05:22 - 22:03	06:31 - 20:43			07:49 - 16:52			09:28 - 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case		192	591						345	447		
Sun reduction		0,50	0,50						0,50	0,50		
Oper. time red.		0,80	0,80						0,80	0,80		
Wind dir. red.		0,74	0,71						0,71	0,73		
Total reduction		0,29	0,28						0,28	0,29		
Total, real		57	168						97	130		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:18 (2)	08:46	10:00 (3)	07:35	07:07	05:44	04:40
	15:53	49	12:27 (4)	16:56	25	10:25 (3)	18:05	20:17	21:26	22:31
2	09:28		11:18 (2)	08:44	09:59 (3)	07:33	07:04	05:41	04:39
	15:54	50	12:28 (4)	16:59	25	10:24 (3)	18:07	20:19	21:28	22:32
3	09:27		11:18 (2)	08:41	10:00 (3)	07:30	07:01	05:39	04:37
	15:56	51	12:28 (4)	17:01	25	10:25 (3)	18:10	20:21	21:31	22:34
4	09:27		11:18 (2)	08:39	09:59 (3)	07:27	06:58	05:36	04:36
	15:57	51	12:28 (4)	17:04	26	10:25 (3)	18:12	20:24	21:33	22:35
5	09:26		11:19 (2)	08:37	10:00 (3)	07:24	06:55	05:34	04:35
	15:59	51	12:29 (4)	17:06	26	10:26 (3)	18:14	20:26	21:35	22:37
6	09:25		11:19 (2)	08:35	10:00 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:29 (4)	17:09	25	10:25 (3)	18:17	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32	10:00 (3)	07:19	06:50	05:29	04:33
	16:02	51	12:30 (4)	17:11	25	10:25 (3)	18:19	20:31	21:40	22:39
8	09:24		11:20 (2)	08:30	10:01 (3)	07:16	06:47	05:27	04:32
	16:04	51	12:30 (4)	17:13	24	10:25 (3)	18:21	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28	10:01 (3)	07:13	06:44	05:24	04:31
	16:05	51	12:31 (4)	17:16	23	10:24 (3)	18:24	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25	10:03 (3)	07:10	06:41	05:22	04:30
	16:07	51	12:31 (4)	17:18	21	10:24 (3)	18:26	20:38	21:47	22:43
11	09:21		11:22 (2)	08:23	09:07 (26)	07:07	06:38	05:20	04:30
	16:09	50	12:31 (4)	17:21	25	10:22 (3)	18:28	20:40	21:49	22:44
12	09:20		11:22 (2)	08:20	09:04 (26)	07:05	06:36	05:17	04:29
	16:11	49	12:31 (4)	17:23	27	10:20 (3)	18:31	20:42	21:51	22:45
13	09:19		11:23 (2)	08:18	09:03 (26)	07:02	06:33	05:15	04:28
	16:13	49	12:32 (4)	17:26	26	10:18 (3)	18:33	20:44	21:53	22:46
14	09:17		11:24 (2)	08:15	09:02 (26)	06:59	06:30	05:13	04:28
	16:15	47	12:32 (4)	17:28	17	09:19 (26)	18:35	20:47	21:56	22:47
15	09:16		11:24 (2)	08:13	09:01 (26)	06:56	06:27	05:11	04:28
	16:17	47	12:32 (4)	17:31	19	09:20 (26)	18:38	20:49	21:58	22:47
16	09:15		11:25 (2)	08:10	09:00 (26)	06:53	06:24	05:08	04:27
	16:19	44	12:31 (4)	17:33	20	09:20 (26)	18:40	20:51	22:00	22:48
17	09:13		11:27 (2)	08:08	09:01 (26)	06:50	06:22	05:06	04:27
	16:21	42	12:32 (4)	17:36	20	09:21 (26)	18:42	20:54	22:02	22:49
18	09:12		11:28 (2)	08:05	09:00 (26)	06:47	06:19	05:04	04:27
	16:23	39	12:32 (4)	17:38	21	09:21 (26)	18:45	20:56	22:04	22:49
19	09:10		11:29 (2)	08:02	09:00 (26)	06:44	06:16	05:02	04:27
	16:26	35	12:31 (4)	17:41	20	09:20 (26)	18:47	20:58	22:06	22:50
20	09:09		11:31 (2)	08:00	09:00 (26)	06:42	06:13	05:00	04:27
	16:28	30	12:31 (4)	17:43	19	09:19 (26)	18:49	21:01	22:08	22:50
21	09:07		12:09 (4)	07:57	09:01 (26)	06:39	06:11	04:58	04:27
	16:30	21	12:30 (4)	17:46	17	09:18 (26)	18:52	21:03	22:10	22:50
22	09:05		12:11 (4)	07:55	09:02 (26)	06:36	06:08	04:56	04:27
	16:32	19	12:30 (4)	17:48	16	09:18 (26)	18:54	21:05	22:12	22:51
23	09:04		12:12 (4)	07:52	09:04 (26)	06:33	06:05	04:54	04:27
	16:35	17	12:29 (4)	17:50	12	09:16 (26)	18:56	21:08	22:14	22:51
24	09:02		10:08 (3)	07:49	09:06 (26)	06:30	06:02	04:53	04:28
	16:37	16	12:26 (4)	17:53	7	09:13 (26)	18:59	21:10	22:16	22:51
25	09:00		10:05 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	14	12:22 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:03 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	15	10:18 (3)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:03 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	17	10:20 (3)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:01 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	20	10:21 (3)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:01 (3)			07:16	05:49	04:44	04:31
	16:49	21	10:22 (3)			20:10	21:21	22:26	22:50
30	08:50		10:01 (3)			07:13	05:47	04:43	04:31
	16:51	22	10:23 (3)			20:12	21:24	22:27	22:49
31	08:48		10:00 (3)			07:10		04:41	
	16:54	24	10:24 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1145			511				
Sun reduction		0,50			0,50				
Oper. time red.		0,80			0,80				
Wind dir. red.		0,66			0,73				
Total reduction		0,26			0,29				
Total, real		300			149				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:40			07:52		09:32 (3)	09:00		11:04 (2)
	22:49	22:01	20:40	19:13			16:49	21	09:53 (3)	15:51	51	12:14 (4)
2	04:33	05:26	06:35	07:42			07:54		09:31 (3)	09:02		11:04 (2)
	22:48	21:59	20:37	19:10			16:46	22	09:53 (3)	15:50	51	12:14 (4)
3	04:34	05:29	06:38	07:44			07:56		09:31 (3)	09:04		11:04 (2)
	22:47	21:56	20:34	19:07			16:44	23	09:54 (3)	15:49	51	12:14 (4)
4	04:35	05:31	06:40	07:46			07:59		09:30 (3)	09:05		11:04 (2)
	22:47	21:54	20:31	19:05			16:42	25	09:55 (3)	15:48	51	12:14 (4)
5	04:36	05:33	06:42	07:49			08:01		09:29 (3)	09:07		11:05 (2)
	22:46	21:52	20:28	19:02			16:39	26	09:55 (3)	15:47	51	12:15 (4)
6	04:38	05:35	06:44	07:51			08:04		09:30 (3)	09:09		11:05 (2)
	22:45	21:49	20:26	18:59			16:37	25	09:55 (3)	15:46	51	12:15 (4)
7	04:39	05:37	06:47	07:53			08:06		09:30 (3)	09:10		11:06 (2)
	22:44	21:47	20:23	18:56			16:35	26	09:56 (3)	15:46	51	12:16 (4)
8	04:40	05:40	06:49	07:55			08:08		09:29 (3)	09:12		11:06 (2)
	22:43	21:44	20:20	18:53			16:32	26	09:55 (3)	15:45	51	12:16 (4)
9	04:41	05:42	06:51	07:58			08:11		09:30 (3)	09:14		11:07 (2)
	22:42	21:42	20:17	18:50			16:30	25	09:55 (3)	15:44	51	12:17 (4)
10	04:43	05:44	06:53	08:00			08:13		09:31 (3)	09:15		11:07 (2)
	22:41	21:39	20:14	18:48			16:28	24	09:55 (3)	15:44	51	12:17 (4)
11	04:44	05:46	06:55	08:02			08:16		09:31 (3)	09:16		11:08 (2)
	22:39	21:37	20:11	18:45			16:26	23	09:54 (3)	15:43	49	12:17 (4)
12	04:46	05:49	06:58	08:04			08:18		09:32 (3)	09:18		11:08 (2)
	22:38	21:34	20:08	18:42			16:24	22	09:54 (3)	15:43	49	12:17 (4)
13	04:48	05:51	07:00	08:07			08:20		09:33 (3)	09:19		11:09 (2)
	22:37	21:32	20:05	18:39			16:21	21	09:54 (3)	15:43	49	12:18 (4)
14	04:49	05:53	07:02	08:09			08:23		09:34 (3)	09:20		11:09 (2)
	22:35	21:29	20:02	18:36			16:19	20	09:54 (3)	15:42	49	12:18 (4)
15	04:51	05:55	07:04	08:11			08:25		09:35 (3)	09:21		11:10 (2)
	22:34	21:26	20:00	18:34			16:17	17	09:52 (3)	15:42	49	12:19 (4)
16	04:53	05:58	07:06	08:14			08:27		09:36 (3)	09:22		11:11 (2)
	22:32	21:24	19:57	18:31			16:15	15	09:51 (3)	15:42	48	12:20 (4)
17	04:54	06:00	07:09	08:16			08:30		09:39 (3)	09:23		11:12 (2)
	22:31	21:21	19:54	18:28			16:13	15	11:56 (4)	15:42	48	12:20 (4)
18	04:56	06:02	07:11	08:18		09:36 (26)	08:32		09:42 (3)	09:24		11:11 (2)
	22:29	21:19	19:51	18:25	10	09:46 (26)	16:11	16	12:00 (4)	15:42	48	12:20 (4)
19	04:58	06:04	07:13	08:21		09:34 (26)	08:34		11:46 (4)	09:25		11:12 (2)
	22:27	21:16	19:48	18:23	14	09:48 (26)	16:10	17	12:03 (4)	15:42	47	12:20 (4)
20	05:00	06:06	07:15	08:23		09:32 (26)	08:37		11:46 (4)	09:26		11:13 (2)
	22:26	21:13	19:45	18:20	17	09:49 (26)	16:08	19	12:05 (4)	15:43	48	12:21 (4)
21	05:02	06:09	07:17	08:25		09:32 (26)	08:39		11:44 (4)	09:26		11:14 (2)
	22:24	21:10	19:42	18:17	18	09:50 (26)	16:06	21	12:05 (4)	15:43	47	12:22 (4)
22	05:04	06:11	07:20	08:28		09:30 (26)	08:41		11:07 (2)	09:27		11:14 (2)
	22:22	21:08	19:39	18:15	20	09:50 (26)	16:04	30	12:07 (4)	15:44	47	12:22 (4)
23	05:06	06:13	07:22	08:30		09:30 (26)	08:43		11:05 (2)	09:27		11:14 (2)
	22:20	21:05	19:36	18:12	20	09:50 (26)	16:03	36	12:08 (4)	15:44	48	12:22 (4)
24	05:08	06:15	07:24	08:32		09:31 (26)	08:45		11:05 (2)	09:28		11:15 (2)
	22:18	21:02	19:33	18:09	20	09:51 (26)	16:01	39	12:09 (4)	15:45	48	12:23 (4)
25	05:10	06:18	07:26	07:35		08:30 (26)	08:48		11:04 (2)	09:28		11:15 (2)
	22:16	20:59	19:31	17:07	20	08:50 (26)	15:59	42	12:09 (4)	15:45	48	12:24 (4)
26	05:12	06:20	07:28	07:37		08:31 (26)	08:50		11:04 (2)	09:28		11:16 (2)
	22:14	20:57	19:28	17:04	19	08:50 (26)	15:58	43	12:10 (4)	15:46	48	12:24 (4)
27	05:14	06:22	07:31	07:40		08:30 (26)	08:52		11:03 (2)	09:29		11:16 (2)
	22:12	20:54	19:25	17:02	19	08:49 (26)	15:57	47	12:11 (4)	15:47	48	12:25 (4)
28	05:16	06:24	07:33	07:42		08:31 (26)	08:54		11:04 (2)	09:29		11:17 (2)
	22:10	20:51	19:22	16:59	17	08:48 (26)	15:55	47	12:12 (4)	15:48	48	12:25 (4)
29	05:18	06:27	07:35	07:44		08:33 (26)	08:56		11:03 (2)	09:29		11:16 (2)
	22:08	20:48	19:19	16:56	26	09:48 (3)	15:54	49	12:12 (4)	15:49	49	12:25 (4)
30	05:20	06:29	07:37	07:47		08:34 (26)	08:58		11:03 (2)	09:28		11:17 (2)
	22:05	20:45	19:16	16:54	27	09:50 (3)	15:53	50	12:12 (4)	15:50	49	12:26 (4)
31	05:22	06:31		07:49		08:37 (26)				09:28		11:18 (2)
	22:03	20:43		16:51	25	09:52 (3)				15:51	49	12:27 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					272			832			1523	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,68			0,65	
Total reduction					0,29			0,27			0,26	
Total, real					80			226			394	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:00 (1)	08:46		09:41 (26)	07:35	08:28 (28)	07:07	05:44	04:40
	15:53	67 13:34 (4)	16:56	27	11:17 (3)	18:05	19 08:47 (28)	20:17	21:26	22:31
2	09:28	11:00 (1)	08:44		09:37 (26)	07:33	08:27 (28)	07:04	05:41	04:39
	15:54	68 13:34 (4)	16:59	32	11:16 (3)	18:07	20 08:47 (28)	20:19	21:28	22:32
3	09:27	11:00 (1)	08:41		09:35 (26)	07:30	08:27 (28)	07:01	05:39	04:37
	15:56	69 13:34 (4)	17:01	35	11:15 (3)	18:10	20 08:47 (28)	20:21	21:31	22:34
4	09:27	11:00 (1)	08:39		09:34 (26)	07:27	08:27 (28)	06:58	05:36	04:36
	15:57	69 13:35 (4)	17:04	33	11:13 (3)	18:12	19 08:46 (28)	20:24	21:33	22:35
5	09:26	11:00 (1)	08:37		09:33 (26)	07:24	08:28 (28)	06:55	05:34	04:35
	15:59	69 13:35 (4)	17:06	33	11:12 (3)	18:14	17 08:45 (28)	20:26	21:35	22:37
6	09:25	11:00 (1)	08:35		09:32 (26)	07:22	08:28 (28)	06:53	05:31	04:34
	16:00	69 13:35 (4)	17:08	23	11:06 (3)	18:17	16 08:44 (28)	20:28	21:38	22:38
7	09:25	10:54 (3)	08:32		09:31 (26)	07:19	08:29 (28)	06:50	05:29	04:33
	16:02	75 13:36 (4)	17:11	22	09:53 (26)	18:19	13 08:42 (28)	20:31	21:40	22:39
8	09:24	10:53 (3)	08:30		09:32 (26)	07:16	08:31 (28)	06:47	05:27	04:32
	16:04	77 13:37 (4)	17:13	22	09:54 (26)	18:21	8 08:39 (28)	20:33	21:42	22:41
9	09:23	10:52 (3)	08:28		09:31 (26)	07:13		06:44	05:24	04:31
	16:05	76 13:37 (4)	17:16	23	09:54 (26)	18:24		20:35	21:44	22:42
10	09:22	10:51 (3)	08:25		09:32 (26)	07:10		06:41	05:22	04:30
	16:07	78 13:37 (4)	17:18	23	09:55 (26)	18:26		20:38	21:47	22:43
11	09:21	10:50 (3)	08:23		09:31 (26)	07:07		06:38	05:20	04:30
	16:09	78 13:38 (4)	17:21	24	09:55 (26)	18:28		20:40	21:49	22:44
12	09:20	10:49 (3)	08:20		09:31 (26)	07:05		06:36	05:17	04:29
	16:11	76 13:37 (4)	17:23	23	09:54 (26)	18:31		20:42	21:51	22:45
13	09:19	10:50 (3)	08:18		09:31 (26)	07:02		06:33	05:15	04:28
	16:13	74 13:38 (4)	17:26	23	09:54 (26)	18:33		20:44	21:53	22:46
14	09:17	10:49 (3)	08:15		09:33 (26)	06:59		06:30	05:13	04:28
	16:15	73 13:38 (4)	17:28	21	09:54 (26)	18:35		20:47	21:55	22:47
15	09:16	10:48 (3)	08:13		09:33 (26)	06:56		06:27	05:11	04:28
	16:17	69 13:38 (4)	17:31	20	09:53 (26)	18:38		20:49	21:58	22:47
16	09:15	10:48 (3)	08:10		09:34 (26)	06:53		06:24	05:08	04:27
	16:19	62 13:37 (4)	17:33	17	09:51 (26)	18:40		20:51	22:00	22:48
17	09:13	10:49 (3)	08:08		09:36 (26)	06:50		06:22	05:06	04:27
	16:21	61 13:38 (4)	17:36	14	09:50 (26)	18:42		20:54	22:02	22:49
18	09:12	10:48 (3)	08:05		09:39 (26)	06:47		06:19	05:04	04:27
	16:23	61 13:38 (4)	17:38	8	09:47 (26)	18:45		20:56	22:04	22:49
19	09:10	10:48 (3)	08:02			06:44		06:16	05:02	04:27
	16:26	58 13:37 (4)	17:41			18:47		20:58	22:06	22:50
20	09:09	10:48 (3)	08:00			06:42		06:13	05:00	04:27
	16:28	57 13:37 (4)	17:43			18:49		21:01	22:08	22:50
21	09:07	10:48 (3)	07:57			06:39		06:10	04:58	04:27
	16:30	53 13:36 (4)	17:45			18:52		21:03	22:10	22:50
22	09:05	10:49 (3)	07:54			06:36		06:08	04:56	04:27
	16:32	49 13:35 (4)	17:48			18:54		21:05	22:12	22:51
23	09:04	10:49 (3)	07:52			06:33		06:05	04:54	04:27
	16:35	43 13:33 (4)	17:50			18:56		21:08	22:14	22:51
24	09:02	10:48 (3)	07:49		08:36 (28)	06:30		06:02	04:53	04:28
	16:37	29 11:17 (3)	17:53	5	08:41 (28)	18:59		21:10	22:16	22:51
25	09:00	10:49 (3)	07:46		08:32 (28)	06:27		06:00	04:51	04:28
	16:39	29 11:18 (3)	17:55	12	08:44 (28)	19:01		21:12	22:18	22:51
26	08:58	10:49 (3)	07:44		08:30 (28)	06:24		05:57	04:49	04:29
	16:42	29 11:18 (3)	17:58	15	08:45 (28)	19:03		21:14	22:20	22:51
27	08:56	10:50 (3)	07:41		08:29 (28)	06:21		05:54	04:47	04:29
	16:44	29 11:19 (3)	18:00	17	08:46 (28)	19:05		21:17	22:22	22:50
28	08:54	10:50 (3)	07:38		08:29 (28)	06:18		05:52	04:46	04:30
	16:46	28 11:18 (3)	18:02	18	08:47 (28)	19:08		21:19	22:24	22:50
29	08:52	10:51 (3)				07:16		05:49	04:44	04:30
	16:49	27 11:18 (3)				20:10		21:21	22:26	22:50
30	08:50	10:51 (3)				07:13		05:47	04:43	04:31
	16:51	26 11:17 (3)				20:12		21:24	22:27	22:49
31	08:48	10:52 (3)				07:10			04:41	
	16:54	25 11:17 (3)				20:15			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1753		490			132			
Sun reduction		0,50		0,50			0,50			
Oper. time red.		0,80		0,80			0,80			
Wind dir. red.		0,65		0,72			0,73			
Total reduction		0,26		0,29			0,29			
Total, real		456		141			38			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:52		09:00 (26)	09:00		10:33 (3)
	22:49	22:01	20:40	19:13			16:49	24	09:24 (26)	15:51	76	13:20 (4)
2	04:33	05:26	06:35	07:42			07:54		09:01 (26)	09:02		10:34 (3)
	22:48	21:59	20:37	19:10			16:46	23	09:24 (26)	15:50	78	13:20 (4)
3	04:34	05:29	06:38	07:44			07:56		09:01 (26)	09:04		10:35 (3)
	22:47	21:56	20:34	19:07			16:44	23	09:24 (26)	15:49	78	13:20 (4)
4	04:35	05:31	06:40	07:46			07:59		09:02 (26)	09:05		10:37 (3)
	22:47	21:54	20:31	19:05			16:42	22	09:24 (26)	15:48	77	13:21 (4)
5	04:36	05:33	06:42	07:48		09:11 (28)	08:01		09:02 (26)	09:07		10:39 (3)
	22:46	21:52	20:28	19:02	3	09:14 (28)	16:39	26	10:37 (3)	15:47	76	13:21 (4)
6	04:37	05:35	06:44	07:51		09:06 (28)	08:04		09:03 (26)	09:09		10:46 (1)
	22:45	21:49	20:26	18:59	11	09:17 (28)	16:37	32	10:42 (3)	15:46	70	13:22 (4)
7	04:39	05:37	06:47	07:53		09:05 (28)	08:06		09:05 (26)	09:10		10:47 (1)
	22:44	21:47	20:23	18:56	15	09:20 (28)	16:35	34	10:44 (3)	15:46	69	13:22 (4)
8	04:40	05:40	06:49	07:55		09:03 (28)	08:08		09:05 (26)	09:12		10:48 (1)
	22:43	21:44	20:20	18:53	17	09:20 (28)	16:32	35	10:45 (3)	15:45	69	13:23 (4)
9	04:41	05:42	06:51	07:58		09:02 (28)	08:11		09:08 (26)	09:14		10:49 (1)
	22:42	21:42	20:17	18:50	18	09:20 (28)	16:30	33	10:47 (3)	15:44	68	13:23 (4)
10	04:43	05:44	06:53	08:00		09:02 (28)	08:13		09:13 (26)	09:15		10:49 (1)
	22:41	21:39	20:14	18:48	19	09:21 (28)	16:28	25	10:48 (3)	15:44	69	13:23 (4)
11	04:44	05:46	06:55	08:02		09:01 (28)	08:16		10:22 (3)	09:16		10:50 (1)
	22:39	21:37	20:11	18:45	20	09:21 (28)	16:26	26	10:48 (3)	15:43	69	13:24 (4)
12	04:46	05:49	06:58	08:04		09:01 (28)	08:18		10:22 (3)	09:18		10:50 (1)
	22:38	21:34	20:08	18:42	20	09:21 (28)	16:24	27	10:49 (3)	15:43	67	13:24 (4)
13	04:47	05:51	07:00	08:07		09:01 (28)	08:20		10:22 (3)	09:19		10:51 (1)
	22:37	21:32	20:05	18:39	19	09:20 (28)	16:21	28	10:50 (3)	15:43	68	13:25 (4)
14	04:49	05:53	07:02	08:09		09:01 (28)	08:23		10:23 (3)	09:20		10:52 (1)
	22:35	21:29	20:02	18:36	18	09:19 (28)	16:19	28	10:51 (3)	15:42	67	13:25 (4)
15	04:51	05:55	07:04	08:11		09:02 (28)	08:25		10:22 (3)	09:21		10:52 (1)
	22:34	21:26	20:00	18:34	16	09:18 (28)	16:17	29	10:51 (3)	15:42	66	13:25 (4)
16	04:53	05:57	07:06	08:14		09:03 (28)	08:27		10:22 (3)	09:22		10:53 (1)
	22:32	21:24	19:57	18:31	13	09:16 (28)	16:15	29	10:51 (3)	15:42	64	13:25 (4)
17	04:54	06:00	07:09	08:16		09:05 (28)	08:30		10:23 (3)	09:23		10:54 (1)
	22:31	21:21	19:54	18:28	10	09:15 (28)	16:13	29	10:52 (3)	15:42	67	13:27 (4)
18	04:56	06:02	07:11	08:18			08:32		10:22 (3)	09:24		10:54 (1)
	22:29	21:19	19:51	18:25			16:11	29	10:51 (3)	15:42	64	13:26 (4)
19	04:58	06:04	07:13	08:21			08:34		10:23 (3)	09:25		10:55 (1)
	22:27	21:16	19:48	18:23			16:10	43	13:07 (4)	15:42	65	13:27 (4)
20	05:00	06:06	07:15	08:23			08:37		10:24 (3)	09:26		10:55 (1)
	22:25	21:13	19:45	18:20			16:08	49	13:10 (4)	15:43	66	13:28 (4)
21	05:02	06:09	07:17	08:25			08:39		10:23 (3)	09:26		10:56 (1)
	22:24	21:10	19:42	18:17			16:06	53	13:11 (4)	15:43	66	13:29 (4)
22	05:04	06:11	07:20	08:28			08:41		10:24 (3)	09:27		10:56 (1)
	22:22	21:08	19:39	18:15			16:04	57	13:13 (4)	15:44	65	13:28 (4)
23	05:06	06:13	07:22	08:30			08:43		10:24 (3)	09:27		10:56 (1)
	22:20	21:05	19:36	18:12			16:03	58	13:13 (4)	15:44	66	13:29 (4)
24	05:08	06:15	07:24	08:32		10:07 (26)	08:45		10:26 (3)	09:28		10:58 (1)
	22:18	21:02	19:33	18:09	10	10:17 (26)	16:01	60	13:15 (4)	15:45	64	13:30 (4)
25	05:10	06:18	07:26	07:35		09:05 (26)	08:48		10:26 (3)	09:28		10:58 (1)
	22:16	20:59	19:30	17:07	15	09:20 (26)	15:59	61	13:15 (4)	15:45	65	13:30 (4)
26	05:12	06:20	07:28	07:37		09:04 (26)	08:50		10:27 (3)	09:28		10:58 (1)
	22:14	20:57	19:28	17:04	18	09:22 (26)	15:58	62	13:16 (4)	15:46	66	13:31 (4)
27	05:14	06:22	07:31	07:40		09:02 (26)	08:52		10:28 (3)	09:28		10:58 (1)
	22:12	20:54	19:25	17:02	20	09:22 (26)	15:56	67	13:17 (4)	15:47	66	13:31 (4)
28	05:16	06:24	07:33	07:42		09:02 (26)	08:54		10:29 (3)	09:29		10:59 (1)
	22:10	20:51	19:22	16:59	21	09:23 (26)	15:55	72	13:18 (4)	15:48	67	13:32 (4)
29	05:18	06:27	07:35	07:44		09:02 (26)	08:56		10:30 (3)	09:29		10:58 (1)
	22:08	20:48	19:19	16:56	22	09:24 (26)	15:54	74	13:18 (4)	15:49	67	13:32 (4)
30	05:20	06:29	07:37	07:47		09:01 (26)	08:58		10:31 (3)	09:28		10:59 (1)
	22:05	20:45	19:16	16:54	23	09:24 (26)	15:53	75	13:18 (4)	15:50	66	13:32 (4)
31	05:22	06:31		07:49		09:01 (26)				09:28		11:00 (1)
	22:03	20:43		16:51	23	09:24 (26)				15:51	66	13:33 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					351			1233			2117	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,68			0,63	
Total reduction					0,29			0,27			0,25	
Total, real					102			333			533	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April		May	June
1	09:28		11:05 (1)	08:46		09:41 (26)	07:35		08:31 (28)	07:07		05:44	04:40
	15:53	69	13:41 (4)	16:56	36	11:24 (3)	18:05	20	08:51 (28)	20:17		21:26	22:31
2	09:28		11:05 (1)	08:44		09:40 (26)	07:33		08:31 (28)	07:04		05:41	04:39
	15:54	68	13:41 (4)	16:59	35	11:22 (3)	18:07	20	08:51 (28)	20:19		21:28	22:32
3	09:27		11:05 (1)	08:41		09:39 (26)	07:30		08:31 (28)	07:01		05:39	04:37
	15:56	69	13:41 (4)	17:01	35	11:21 (3)	18:10	19	08:50 (28)	20:21		21:31	22:34
4	09:27		11:00 (3)	08:39		09:38 (26)	07:27		08:31 (28)	06:58		05:36	04:36
	15:57	74	13:42 (4)	17:04	32	11:19 (3)	18:12	19	08:50 (28)	20:24		21:33	22:35
5	09:26		10:59 (3)	08:37		09:38 (26)	07:24		08:32 (28)	06:55		05:34	04:35
	15:59	76	13:42 (4)	17:06	22	10:00 (26)	18:14	16	08:48 (28)	20:26		21:35	22:37
6	09:25		10:58 (3)	08:35		09:37 (26)	07:22		08:33 (28)	06:53		05:31	04:34
	16:00	77	13:43 (4)	17:08	23	10:00 (26)	18:17	14	08:47 (28)	20:28		21:38	22:38
7	09:25		10:58 (3)	08:32		09:36 (26)	07:19		08:35 (28)	06:50		05:29	04:33
	16:02	76	13:43 (4)	17:11	24	10:00 (26)	18:19	9	08:44 (28)	20:31		21:40	22:39
8	09:24		10:57 (3)	08:30		09:37 (26)	07:16			06:47		05:27	04:32
	16:04	78	13:44 (4)	17:13	24	10:01 (26)	18:21			20:33		21:42	22:41
9	09:23		10:57 (3)	08:28		09:36 (26)	07:13			06:44		05:24	04:31
	16:05	77	13:44 (4)	17:16	24	10:00 (26)	18:24			20:35		21:44	22:42
10	09:22		10:56 (3)	08:25		09:37 (26)	07:10			06:41		05:22	04:30
	16:07	77	13:44 (4)	17:18	24	10:01 (26)	18:26			20:38		21:47	22:43
11	09:21		10:56 (3)	08:23		09:37 (26)	07:07			06:38		05:20	04:30
	16:09	76	13:45 (4)	17:21	23	10:00 (26)	18:28			20:40		21:49	22:44
12	09:20		10:56 (3)	08:20		09:37 (26)	07:05			06:36		05:17	04:29
	16:11	74	13:44 (4)	17:23	23	10:00 (26)	18:31			20:42		21:51	22:45
13	09:19		10:56 (3)	08:18		09:38 (26)	07:02			06:33		05:15	04:28
	16:13	73	13:45 (4)	17:26	21	09:59 (26)	18:33			20:44		21:53	22:46
14	09:17		10:56 (3)	08:15		09:39 (26)	06:59			06:30		05:13	04:28
	16:15	69	13:45 (4)	17:28	20	09:59 (26)	18:35			20:47		21:55	22:47
15	09:16		10:55 (3)	08:13		09:40 (26)	06:56			06:27		05:11	04:28
	16:17	61	13:45 (4)	17:31	17	09:57 (26)	18:38			20:49		21:58	22:47
16	09:15		10:55 (3)	08:10		09:42 (26)	06:53			06:24		05:08	04:27
	16:19	59	13:44 (4)	17:33	13	09:55 (26)	18:40			20:51		22:00	22:48
17	09:13		10:56 (3)	08:08		09:45 (26)	06:50			06:21		05:06	04:27
	16:21	59	13:45 (4)	17:36	8	09:53 (26)	18:42			20:54		22:02	22:49
18	09:12		10:56 (3)	08:05			06:47			06:19		05:04	04:27
	16:23	58	13:45 (4)	17:38			18:45			20:56		22:04	22:49
19	09:10		10:56 (3)	08:02			06:44			06:16		05:02	04:27
	16:26	55	13:44 (4)	17:41			18:47			20:58		22:06	22:50
20	09:09		10:56 (3)	08:00			06:42			06:13		05:00	04:27
	16:28	54	13:44 (4)	17:43			18:49			21:01		22:08	22:50
21	09:07		10:56 (3)	07:57			06:39			06:10		04:58	04:27
	16:30	50	13:43 (4)	17:45			18:52			21:03		22:10	22:50
22	09:05		10:56 (3)	07:54			06:36			06:08		04:56	04:27
	16:32	45	13:42 (4)	17:48			18:54			21:05		22:12	22:51
23	09:04		10:57 (3)	07:52		08:40 (28)	06:33			06:05		04:54	04:27
	16:35	40	13:40 (4)	17:50	5	08:45 (28)	18:56			21:08		22:14	22:51
24	09:02		10:56 (3)	07:49		08:36 (28)	06:30			06:02		04:53	04:28
	16:37	32	13:36 (4)	17:53	12	08:48 (28)	18:59			21:10		22:16	22:51
25	09:00		10:57 (3)	07:46		08:34 (28)	06:27			06:00		04:51	04:28
	16:39	29	11:26 (3)	17:55	15	08:49 (28)	19:01			21:12		22:18	22:51
26	08:58		10:57 (3)	07:44		08:33 (28)	06:24			05:57		04:49	04:29
	16:42	29	11:26 (3)	17:58	17	08:50 (28)	19:03			21:14		22:20	22:51
27	08:56		10:58 (3)	07:41		08:32 (28)	06:21			05:54		04:47	04:29
	16:44	28	11:26 (3)	18:00	18	08:50 (28)	19:05			21:17		22:22	22:50
28	08:54		10:58 (3)	07:38		08:32 (28)	06:18			05:52		04:46	04:30
	16:46	28	11:26 (3)	18:02	19	08:51 (28)	19:08			21:19		22:24	22:50
29	08:52		10:59 (3)				07:16			05:49		04:44	04:30
	16:49	27	11:26 (3)				20:10			21:21		22:26	22:50
30	08:50		10:59 (3)				07:13			05:47		04:43	04:31
	16:51	26	11:25 (3)				20:12			21:24		22:27	22:49
31	08:48		09:43 (26)				07:10					04:41	
	16:54	32	11:24 (3)				20:15					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		1745			490			117					
Sun reduction		0,50			0,50			0,50					
Oper. time red.		0,80			0,80			0,80					
Wind dir. red.		0,65			0,72			0,73					
Total reduction		0,26			0,29			0,29					
Total, real		452			141			34					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:06 (26)	09:00		10:39 (3)
	22:49	22:01	20:40	19:13			16:49	24	09:30 (26)	15:51	75	13:27 (4)
2	04:33	05:26	06:35	07:42			07:54		09:06 (26)	09:02		10:39 (3)
	22:48	21:59	20:37	19:10			16:46	24	09:30 (26)	15:50	77	13:27 (4)
3	04:34	05:29	06:38	07:44			07:56		09:06 (26)	09:04		10:40 (3)
	22:47	21:56	20:34	19:07			16:44	24	09:30 (26)	15:49	78	13:27 (4)
4	04:35	05:31	06:40	07:46			07:59		09:07 (26)	09:05		10:41 (3)
	22:47	21:54	20:31	19:05			16:42	23	09:30 (26)	15:48	79	13:28 (4)
5	04:36	05:33	06:42	07:48			08:01		09:07 (26)	09:07		10:43 (3)
	22:46	21:52	20:28	19:02			16:39	22	09:29 (26)	15:47	76	13:28 (4)
6	04:37	05:35	06:44	07:51		09:12 (28)	08:04		09:08 (26)	09:09		10:44 (3)
	22:45	21:49	20:26	18:59	7	09:19 (28)	16:37	21	09:29 (26)	15:46	77	13:29 (4)
7	04:39	05:37	06:47	07:53		09:10 (28)	08:06		09:09 (26)	09:10		10:46 (3)
	22:44	21:47	20:23	18:56	12	09:22 (28)	16:35	32	10:50 (3)	15:46	76	13:29 (4)
8	04:40	05:40	06:49	07:55		09:08 (28)	08:08		09:09 (26)	09:12		10:48 (3)
	22:43	21:44	20:20	18:53	15	09:23 (28)	16:32	34	10:51 (3)	15:45	74	13:30 (4)
9	04:41	05:42	06:51	07:58		09:06 (28)	08:11		09:10 (26)	09:14		10:51 (3)
	22:42	21:42	20:17	18:50	18	09:24 (28)	16:30	36	10:53 (3)	15:44	72	13:30 (4)
10	04:43	05:44	06:53	08:00		09:06 (28)	08:13		09:12 (26)	09:15		10:54 (1)
	22:41	21:39	20:14	18:48	19	09:25 (28)	16:28	35	10:55 (3)	15:44	68	13:30 (4)
11	04:44	05:46	06:55	08:02		09:05 (28)	08:16		09:14 (26)	09:16		10:55 (1)
	22:39	21:37	20:11	18:45	19	09:24 (28)	16:26	33	10:55 (3)	15:43	68	13:31 (4)
12	04:46	05:49	06:58	08:04		09:05 (28)	08:18		10:31 (3)	09:18		10:55 (1)
	22:38	21:34	20:08	18:42	20	09:25 (28)	16:24	26	10:57 (3)	15:43	68	13:31 (4)
13	04:47	05:51	07:00	08:07		09:04 (28)	08:20		10:31 (3)	09:19		10:56 (1)
	22:37	21:32	20:05	18:39	20	09:24 (28)	16:21	27	10:58 (3)	15:43	68	13:32 (4)
14	04:49	05:53	07:02	08:09		09:04 (28)	08:23		10:31 (3)	09:20		10:57 (1)
	22:35	21:29	20:02	18:36	19	09:23 (28)	16:19	28	10:59 (3)	15:42	67	13:32 (4)
15	04:51	05:55	07:04	08:11		09:05 (28)	08:25		10:30 (3)	09:21		10:57 (1)
	22:34	21:26	20:00	18:34	18	09:23 (28)	16:17	28	10:58 (3)	15:42	68	13:32 (4)
16	04:53	05:57	07:06	08:14		09:05 (28)	08:27		10:30 (3)	09:22		10:57 (1)
	22:32	21:24	19:57	18:31	16	09:21 (28)	16:15	29	10:59 (3)	15:42	68	13:32 (4)
17	04:54	06:00	07:09	08:16		09:07 (28)	08:30		10:31 (3)	09:23		10:59 (1)
	22:31	21:21	19:54	18:28	14	09:21 (28)	16:13	29	11:00 (3)	15:42	66	13:34 (4)
18	04:56	06:02	07:11	08:18		09:08 (28)	08:32		10:30 (3)	09:24		10:59 (1)
	22:29	21:19	19:51	18:25	10	09:18 (28)	16:11	32	13:10 (4)	15:42	66	13:33 (4)
19	04:58	06:04	07:13	08:21			08:34		10:31 (3)	09:25		10:59 (1)
	22:27	21:16	19:48	18:23			16:10	40	13:14 (4)	15:42	67	13:34 (4)
20	05:00	06:06	07:15	08:23			08:37		10:31 (3)	09:26		11:00 (1)
	22:25	21:13	19:45	18:20			16:08	45	13:17 (4)	15:43	66	13:35 (4)
21	05:02	06:09	07:17	08:25			08:39		10:31 (3)	09:26		11:01 (1)
	22:24	21:10	19:42	18:17			16:06	50	13:18 (4)	15:43	66	13:35 (4)
22	05:04	06:11	07:20	08:28			08:41		10:32 (3)	09:27		11:01 (1)
	22:22	21:08	19:39	18:15			16:04	54	13:20 (4)	15:44	66	13:35 (4)
23	05:06	06:13	07:22	08:30			08:43		10:32 (3)	09:27		11:01 (1)
	22:20	21:05	19:36	18:12			16:03	55	13:20 (4)	15:44	66	13:36 (4)
24	05:08	06:15	07:24	08:32			08:45		10:33 (3)	09:28		11:02 (1)
	22:18	21:02	19:33	18:09			16:01	58	13:22 (4)	15:45	66	13:37 (4)
25	05:10	06:18	07:26	07:35		09:13 (26)	08:48		10:33 (3)	09:28		11:03 (1)
	22:16	20:59	19:30	17:07	10	09:23 (26)	15:59	59	13:22 (4)	15:45	66	13:37 (4)
26	05:12	06:20	07:28	07:37		09:11 (26)	08:50		10:34 (3)	09:28		11:03 (1)
	22:14	20:57	19:28	17:04	15	09:26 (26)	15:58	60	13:24 (4)	15:46	67	13:38 (4)
27	05:14	06:22	07:31	07:40		09:09 (26)	08:52		10:34 (3)	09:28		11:03 (1)
	22:12	20:54	19:25	17:01	18	09:27 (26)	15:56	62	13:24 (4)	15:47	68	13:38 (4)
28	05:16	06:24	07:33	07:42		09:08 (26)	08:54		10:36 (3)	09:29		11:04 (1)
	22:10	20:51	19:22	16:59	20	09:28 (26)	15:55	69	13:25 (4)	15:48	66	13:39 (4)
29	05:18	06:27	07:35	07:44		09:08 (26)	08:56		10:36 (3)	09:29		11:03 (1)
	22:08	20:48	19:19	16:56	21	09:29 (26)	15:54	72	13:25 (4)	15:49	68	13:39 (4)
30	05:20	06:29	07:37	07:47		09:07 (26)	08:58		10:37 (3)	09:28		11:04 (1)
	22:05	20:45	19:16	16:54	22	09:29 (26)	15:53	74	13:26 (4)	15:50	68	13:39 (4)
31	05:22	06:31		07:49		09:07 (26)				09:28		11:05 (1)
	22:03	20:43		16:51	23	09:30 (26)				15:51	68	13:40 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					336			1205			2159	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,67			0,63	
Total reduction					0,29			0,27			0,25	
Total, real					98			324			541	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	3	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08		16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46		07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05		16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02		16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59		16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56		16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53		16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51		16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48		16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45		16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05		08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:19	08:18	07:02		07:33 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07		08:20	09:19
	16:13	17:26	18:33	9	07:42 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39		16:22	15:43
14	09:17	08:15	06:59		07:31 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09		08:23	09:20
	16:15	17:28	18:36	13	07:44 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37		16:20	15:43
15	09:16	08:13	06:56		07:29 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11		08:25	09:21
	16:17	17:31	18:38	16	07:45 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34		16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14		08:27	09:22
	16:19	17:33	18:40	18	07:46 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31		16:15	15:42
17	09:13	08:08	06:50		07:26 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16		08:30	09:23
	16:21	17:36	18:43	20	07:46 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28		16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:19 (4)	08:18		08:32	09:24
	16:24	17:38	18:45	20	07:46 (4)	20:56	22:04	22:49	22:29	21:19	19:51	5 08:24 (4)	18:26		16:12	15:42
19	09:10	08:03	06:45		07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:15 (4)	08:21		08:34	09:25
	16:26	17:41	18:47	21	07:46 (4)	20:58	22:06	22:50	22:27	21:16	19:48	12 08:27 (4)	18:23		16:10	15:43
20	09:09	08:00	06:42		07:26 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:13 (4)	08:23		08:37	09:26
	16:28	17:43	18:49	20	07:46 (4)	21:01	22:08	22:50	22:26	21:13	19:45	15 08:28 (4)	18:20		16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:12 (4)	08:25		08:39	09:26
	16:30	17:46	18:52	20	07:46 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18 08:30 (4)	18:17		16:06	15:43
22	09:05	07:55	06:36		07:26 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:11 (4)	08:28		08:41	09:27
	16:33	17:48	18:54	19	07:45 (4)	21:05	22:12	22:51	22:22	21:08	19:39	19 08:30 (4)	18:15		16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:10 (4)	08:30		08:43	09:27
	16:35	17:51	18:56	16	07:43 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:30 (4)	18:12		16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:09 (4)	08:32		08:46	09:28
	16:37	17:53	18:59	13	07:41 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21 08:30 (4)	18:09		16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (4)	07:35		08:48	09:28
	16:39	17:55	19:01	8	07:38 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:29 (4)	17:07		16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28	08:09 (4)	07:37		08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	20 08:29 (4)	17:04		15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:09 (4)	07:40		08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	19 08:28 (4)	17:02		15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:09 (4)	07:42		08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18 08:27 (4)	16:59		15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:10 (4)	07:44		08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	15 08:25 (4)	16:57		15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:12 (4)	07:47		08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	12 08:24 (4)	16:54		15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49			09:28
	16:54		20:15				22:29		22:03	20:43			16:52			15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200
Total, worst case				213							214		3		
Sun reduction				0,50							0,50		0,50		
Oper. time red.				0,80							0,80		0,80		
Wind dir. red.				0,70							0,70		0,70		
Total reduction				0,28							0,28		0,28		
Total, real				59							59		1		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		11:26 (2)	08:46		10:08 (3)	07:35	07:07	05:44	04:40
	15:53	51	12:42 (4)	16:56	26	10:34 (3)	18:05	20:17	21:26	22:31
2	09:28		11:26 (2)	08:44		10:07 (3)	07:33	07:04	05:41	04:39
	15:54	51	12:42 (4)	16:59	27	10:34 (3)	18:07	20:19	21:28	22:32
3	09:27		11:26 (2)	08:41		10:08 (3)	07:30	07:01	05:39	04:37
	15:56	52	12:42 (4)	17:01	26	10:34 (3)	18:10	20:21	21:31	22:34
4	09:27		11:27 (2)	08:39		10:07 (3)	07:27	06:58	05:36	04:36
	15:57	52	12:43 (4)	17:04	27	10:34 (3)	18:12	20:24	21:33	22:35
5	09:26		11:27 (2)	08:37		10:08 (3)	07:24	06:55	05:34	04:35
	15:59	52	12:43 (4)	17:06	26	10:34 (3)	18:14	20:26	21:35	22:37
6	09:25		11:28 (2)	08:35		10:08 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:43 (4)	17:09	26	10:34 (3)	18:17	20:28	21:38	22:38
7	09:25		11:28 (2)	08:32		10:08 (3)	07:19	06:50	05:29	04:33
	16:02	52	12:44 (4)	17:11	25	10:33 (3)	18:19	20:31	21:40	22:39
8	09:24		10:35 (1)	08:30		10:10 (3)	07:16	06:47	05:27	04:32
	16:04	58	12:45 (4)	17:13	23	10:33 (3)	18:21	20:33	21:42	22:41
9	09:23		10:34 (1)	08:28		10:10 (3)	07:13	06:44	05:24	04:31
	16:05	60	12:45 (4)	17:16	22	10:32 (3)	18:24	20:35	21:44	22:42
10	09:22		10:33 (1)	08:25		09:11 (26)	07:10	06:41	05:22	04:30
	16:07	62	12:45 (4)	17:18	27	10:31 (3)	18:26	20:38	21:47	22:43
11	09:21		10:33 (1)	08:23		09:09 (26)	07:07	06:38	05:20	04:30
	16:09	63	12:46 (4)	17:21	28	10:29 (3)	18:28	20:40	21:49	22:44
12	09:20		10:32 (1)	08:20		09:07 (26)	07:05	06:36	05:17	04:29
	16:11	64	12:46 (4)	17:23	27	10:27 (3)	18:31	20:42	21:51	22:45
13	09:19		10:33 (1)	08:18		09:06 (26)	07:02	06:33	05:15	04:28
	16:13	64	12:46 (4)	17:26	18	09:24 (26)	18:33	20:44	21:53	22:46
14	09:17		10:32 (1)	08:15		09:05 (26)	06:59	06:30	05:13	04:28
	16:15	64	12:46 (4)	17:28	20	09:25 (26)	18:35	20:47	21:56	22:47
15	09:16		10:32 (1)	08:13		09:05 (26)	06:56	06:27	05:11	04:28
	16:17	63	12:46 (4)	17:31	20	09:25 (26)	18:38	20:49	21:58	22:47
16	09:15		10:31 (1)	08:10		09:04 (26)	06:53	06:24	05:08	04:27
	16:19	63	12:46 (4)	17:33	21	09:25 (26)	18:40	20:51	22:00	22:48
17	09:13		10:32 (1)	08:08		09:05 (26)	06:50	06:22	05:06	04:27
	16:21	60	12:46 (4)	17:36	21	09:26 (26)	18:42	20:54	22:02	22:49
18	09:12		10:32 (1)	08:05		09:05 (26)	06:47	06:19	05:04	04:27
	16:23	58	12:46 (4)	17:38	20	09:25 (26)	18:45	20:56	22:04	22:49
19	09:10		10:32 (1)	08:02		09:05 (26)	06:44	06:16	05:02	04:27
	16:26	53	12:46 (4)	17:41	20	09:25 (26)	18:47	20:58	22:06	22:50
20	09:09		10:33 (1)	08:00		09:05 (26)	06:42	06:13	05:00	04:27
	16:28	42	12:45 (4)	17:43	19	09:24 (26)	18:49	21:01	22:08	22:50
21	09:07		10:33 (1)	07:57		09:05 (26)	06:39	06:11	04:58	04:27
	16:30	42	12:45 (4)	17:46	18	09:23 (26)	18:52	21:03	22:10	22:50
22	09:05		10:16 (3)	07:54		09:07 (26)	06:36	06:08	04:56	04:27
	16:32	44	12:44 (4)	17:48	15	09:22 (26)	18:54	21:05	22:12	22:51
23	09:04		10:13 (3)	07:52		09:09 (26)	06:33	06:05	04:54	04:27
	16:35	48	12:43 (4)	17:50	11	09:20 (26)	18:56	21:08	22:14	22:51
24	09:02		10:11 (3)	07:49		09:13 (26)	06:30	06:02	04:53	04:28
	16:37	45	12:40 (4)	17:53	3	09:16 (26)	18:59	21:10	22:16	22:51
25	09:00		10:10 (3)	07:46			06:27	06:00	04:51	04:28
	16:39	40	12:37 (4)	17:55			19:01	21:12	22:18	22:51
26	08:58		10:09 (3)	07:44			06:24	05:57	04:49	04:29
	16:42	36	10:52 (1)	17:58			19:03	21:15	22:20	22:51
27	08:56		10:09 (3)	07:41			06:21	05:54	04:47	04:29
	16:44	37	10:52 (1)	18:00			19:05	21:17	22:22	22:50
28	08:54		10:08 (3)	07:38			06:18	05:52	04:46	04:30
	16:46	35	10:50 (1)	18:02			19:08	21:19	22:24	22:50
29	08:52		10:08 (3)				07:16	05:49	04:44	04:30
	16:49	33	10:49 (1)				20:10	21:21	22:26	22:50
30	08:50		10:08 (3)				07:13	05:47	04:43	04:31
	16:51	25	10:33 (3)				20:12	21:24	22:27	22:49
31	08:48		10:07 (3)				07:10		04:41	
	16:54	26	10:33 (3)				20:15		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1546			516					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,67			0,73					
Total reduction		0,27			0,29					
Total, real		411			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:40			07:52		08:41 (26)	09:00		10:15 (1)
	22:49		22:01		20:40		19:13			16:49	27	10:01 (3)	15:51	63	12:28 (4)
2	04:33		05:26		06:35		07:42			07:54		09:40 (3)	09:02		10:16 (1)
	22:48		21:59		20:37		19:10			16:46	22	10:02 (3)	15:50	62	12:28 (4)
3	04:34		05:29		06:38		07:44			07:56		09:39 (3)	09:04		10:17 (1)
	22:47		21:56		20:34		19:07			16:44	24	10:03 (3)	15:49	60	12:28 (4)
4	04:35		05:31		06:40		07:46			07:59		09:39 (3)	09:05		10:19 (1)
	22:47		21:54		20:31		19:05			16:42	25	10:04 (3)	15:48	57	12:29 (4)
5	04:36		05:33		06:42		07:48			08:01		09:38 (3)	09:07		11:13 (2)
	22:46		21:52		20:28		19:02			16:39	26	10:04 (3)	15:47	52	12:29 (4)
6	04:37		05:35		06:44		07:51			08:04		09:38 (3)	09:09		11:14 (2)
	22:45		21:49		20:26		18:59			16:37	26	10:04 (3)	15:46	52	12:30 (4)
7	04:39		05:37		06:47		07:53			08:06		09:38 (3)	09:10		11:14 (2)
	22:44		21:47		20:23		18:56			16:35	27	10:05 (3)	15:46	52	12:30 (4)
8	04:40		05:40		06:49		07:55			08:08		09:37 (3)	09:12		11:15 (2)
	22:43		21:44		20:20		18:53			16:32	27	10:04 (3)	15:45	52	12:31 (4)
9	04:41		05:42		06:51		07:58			08:11		09:38 (3)	09:14		11:16 (2)
	22:42		21:42		20:17		18:50			16:30	26	10:04 (3)	15:44	51	12:31 (4)
10	04:43		05:44		06:53		08:00			08:13		09:38 (3)	09:15		11:15 (2)
	22:41		21:39		20:14		18:48			16:28	27	10:05 (3)	15:44	52	12:31 (4)
11	04:44		05:46		06:55		08:02			08:16		09:38 (3)	09:16		11:16 (2)
	22:39		21:37		20:11		18:45			16:26	26	10:04 (3)	15:43	51	12:32 (4)
12	04:46		05:49		06:58		08:04			08:18		09:39 (3)	09:18		11:16 (2)
	22:38		21:34		20:08		18:42			16:24	25	10:04 (3)	15:43	51	12:32 (4)
13	04:48		05:51		07:00		08:07			08:20		09:40 (3)	09:19		11:17 (2)
	22:37		21:32		20:05		18:39			16:21	33	10:21 (1)	15:43	51	12:33 (4)
14	04:49		05:53		07:02		08:09			08:23		09:41 (3)	09:20		11:18 (2)
	22:35		21:29		20:02		18:36			16:19	35	10:23 (1)	15:42	50	12:33 (4)
15	04:51		05:55		07:04		08:11			08:25		09:41 (3)	09:21		11:18 (2)
	22:34		21:26		20:00		18:34			16:17	37	10:24 (1)	15:42	50	12:33 (4)
16	04:53		05:58		07:06		08:14			08:27		09:42 (3)	09:22		11:19 (2)
	22:32		21:24		19:57		18:31			16:15	36	10:25 (1)	15:42	50	12:34 (4)
17	04:54		06:00		07:09		08:16			08:30		09:44 (3)	09:23		11:20 (2)
	22:31		21:21		19:54		18:28			16:13	40	12:11 (4)	15:42	50	12:35 (4)
18	04:56		06:02		07:11		08:18		09:42 (26)	08:32		09:45 (3)	09:24		11:19 (2)
	22:29		21:19		19:51		18:25	7	09:49 (26)	16:11	45	12:14 (4)	15:42	49	12:34 (4)
19	04:58		06:04		07:13		08:21		09:39 (26)	08:34		09:47 (3)	09:25		11:20 (2)
	22:27		21:16		19:48		18:23	13	09:52 (26)	16:10	48	12:17 (4)	15:42	50	12:35 (4)
20	05:00		06:06		07:15		08:23		09:37 (26)	08:37		09:51 (3)	09:26		11:21 (2)
	22:26		21:13		19:45		18:20	16	09:53 (26)	16:08	44	12:19 (4)	15:43	50	12:36 (4)
21	05:02		06:09		07:17		08:25		09:36 (26)	08:39		10:08 (1)	09:26		11:22 (2)
	22:24		21:10		19:42		18:17	18	09:54 (26)	16:06	42	12:20 (4)	15:43	49	12:36 (4)
22	05:04		06:11		07:20		08:28		09:35 (26)	08:41		10:09 (1)	09:27		11:22 (2)
	22:22		21:08		19:39		18:15	19	09:54 (26)	16:04	42	12:21 (4)	15:44	49	12:36 (4)
23	05:06		06:13		07:22		08:30		09:35 (26)	08:43		10:08 (1)	09:27		11:22 (2)
	22:20		21:05		19:36		18:12	20	09:55 (26)	16:03	54	12:22 (4)	15:44	49	12:36 (4)
24	05:08		06:15		07:24		08:32		09:34 (26)	08:45		10:09 (1)	09:28		11:23 (2)
	22:18		21:02		19:33		18:09	21	09:55 (26)	16:01	58	12:23 (4)	15:45	50	12:38 (4)
25	05:10		06:18		07:26		07:35		08:34 (26)	08:48		10:09 (1)	09:28		11:23 (2)
	22:16		20:59		19:31		17:07	21	08:55 (26)	15:59	61	12:24 (4)	15:45	49	12:38 (4)
26	05:12		06:20		07:28		07:37		08:34 (26)	08:50		10:10 (1)	09:28		11:24 (2)
	22:14		20:57		19:28		17:04	21	08:55 (26)	15:58	62	12:25 (4)	15:46	49	12:38 (4)
27	05:14		06:22		07:31		07:40		08:34 (26)	08:52		10:11 (1)	09:29		11:24 (2)
	22:12		20:54		19:25		17:02	20	08:54 (26)	15:57	63	12:25 (4)	15:47	50	12:39 (4)
28	05:16		06:24		07:33		07:42		08:35 (26)	08:54		10:12 (1)	09:29		11:25 (2)
	22:10		20:51		19:22		16:59	19	08:54 (26)	15:55	63	12:26 (4)	15:48	50	12:40 (4)
29	05:18		06:27		07:35		07:44		08:36 (26)	08:56		10:13 (1)	09:29		11:24 (2)
	22:08		20:48		19:19		16:56	21	09:53 (3)	15:54	64	12:26 (4)	15:49	50	12:39 (4)
30	05:20		06:29		07:37		07:47		08:36 (26)	08:58		10:13 (1)	09:28		11:25 (2)
	22:05		20:45		19:16		16:54	29	09:57 (3)	15:53	65	12:27 (4)	15:50	50	12:40 (4)
31	05:22		06:31				07:49		08:38 (26)				09:28		11:26 (2)
	22:03		20:43				16:51	29	09:59 (3)				15:51	51	12:41 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								274			1200			1601	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,69			0,64	
Total reduction								0,29			0,27			0,26	
Total, real								80			329			411	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 - 15:53	08:46 - 16:56	07:36 - 08:20 (4), 18:05 - 08:33 (4) 13	07:07 - 20:17	05:44 - 21:26	04:40 - 22:31	04:32 - 22:49	05:24 - 22:01	06:33 - 20:40	07:40 - 19:13 25	08:51 (4) - 09:16 (4)	07:52 - 16:49	09:00 - 15:51
2	09:28 - 15:54	08:44 - 16:59	07:33 - 08:18 (4), 18:07 - 08:35 (4) 17	07:04 - 20:19	05:42 - 21:28	04:39 - 22:32	04:33 - 22:48	05:27 - 21:59	06:36 - 20:37	07:42 - 19:10 27	08:49 (4) - 09:16 (4)	07:54 - 16:47	09:02 - 15:50
3	09:27 - 15:56	08:41 - 17:01	07:30 - 08:16 (4), 18:10 - 08:36 (4) 20	07:01 - 20:22	05:39 - 21:31	04:37 - 22:34	04:34 - 22:47	05:29 - 21:56	06:38 - 20:34	07:44 - 19:08 28	08:48 (4) - 09:16 (4)	07:56 - 16:44	09:04 - 15:49
4	09:27 - 15:57	08:39 - 17:04	07:27 - 08:14 (4), 18:12 - 08:37 (4) 23	06:58 - 20:24	05:37 - 21:33	04:36 - 22:35	04:35 - 22:47	05:31 - 21:54	06:40 - 20:31	07:46 - 19:05 27	08:49 (4) - 09:16 (4)	07:59 - 16:42	09:05 - 15:48
5	09:26 - 15:59	08:37 - 17:06	07:24 - 08:13 (4), 18:14 - 08:38 (4) 25	06:56 - 20:26	05:34 - 21:35	04:35 - 22:37	04:36 - 22:46	05:33 - 21:52	06:42 - 20:28	07:49 - 19:02 28	08:48 (4) - 09:16 (4)	08:01 - 16:39	09:07 - 15:47
6	09:25 - 16:00	08:35 - 17:09	07:22 - 08:12 (4), 18:17 - 08:38 (4) 26	06:53 - 20:28	05:32 - 21:38	04:34 - 22:38	04:38 - 22:45	05:35 - 21:49	06:44 - 20:26	07:51 - 18:59 28	08:47 (4) - 09:15 (4)	08:04 - 16:37	09:09 - 15:47
7	09:25 - 16:02	08:32 - 17:11	07:19 - 08:11 (4), 18:19 - 08:38 (4) 27	06:50 - 20:31	05:29 - 21:40	04:33 - 22:39	04:39 - 22:44	05:38 - 21:47	06:47 - 20:23	07:53 - 18:56 27	08:48 (4) - 09:15 (4)	08:06 - 16:35	09:10 - 15:46
8	09:24 - 16:04	08:30 - 17:14	07:16 - 08:11 (4), 18:22 - 08:38 (4) 27	06:47 - 20:33	05:27 - 21:42	04:32 - 22:41	04:40 - 22:43	05:40 - 21:44	06:49 - 20:20	07:55 - 18:53 26	08:48 (4) - 09:14 (4)	08:08 - 16:32	09:12 - 15:45
9	09:23 - 16:06	08:28 - 17:16	07:13 - 08:11 (4), 18:24 - 08:39 (4) 28	06:44 - 20:35	05:24 - 21:44	04:31 - 22:42	04:42 - 22:42	05:42 - 21:42	06:51 - 20:17	07:58 - 18:50 24	08:48 (4) - 09:12 (4)	08:11 - 16:30	09:14 - 15:44
10	09:22 - 16:07	08:25 - 17:19	07:10 - 08:11 (4), 18:26 - 08:39 (4) 28	06:41 - 20:38	05:22 - 21:47	04:31 - 22:43	04:43 - 22:41	05:44 - 21:39	06:53 - 20:14	08:00 - 18:48 22	08:50 (4) - 09:12 (4)	08:13 - 16:28	09:15 - 15:44
11	09:21 - 16:09	08:23 - 17:21	07:07 - 08:11 (4), 18:29 - 08:38 (4) 27	06:38 - 20:40	05:20 - 21:49	04:30 - 22:44	04:45 - 22:39	05:46 - 21:37	06:55 - 20:11	08:02 - 18:45 20	08:50 (4) - 09:10 (4)	08:16 - 16:26	09:16 - 15:43
12	09:20 - 16:11	08:20 - 17:23	07:05 - 08:11 (4), 18:31 - 08:37 (4) 26	06:36 - 20:42	05:17 - 21:51	04:29 - 22:45	04:46 - 22:38	05:49 - 21:34	06:58 - 20:08	08:04 - 18:42 15	08:53 (4) - 09:08 (4)	08:18 - 16:24	09:18 - 15:43
13	09:19 - 16:13	08:18 - 17:26	07:02 - 08:12 (4), 18:33 - 08:36 (4) 24	06:33 - 20:45	05:15 - 21:53	04:29 - 22:46	04:48 - 22:37	05:51 - 21:32	07:00 - 20:05	08:07 - 18:39 10	08:55 (4) - 09:05 (4)	08:20 - 16:22	09:19 - 15:43
14	09:17 - 16:15	08:15 - 17:28	06:59 - 08:12 (4), 18:36 - 08:35 (4) 23	06:30 - 20:47	05:13 - 21:56	04:28 - 22:47	04:49 - 22:35	05:53 - 21:29	07:02 - 20:03	08:09 - 18:36		08:23 - 16:19	09:20 - 15:42
15	09:16 - 16:17	08:13 - 17:31	06:56 - 08:13 (4), 18:38 - 08:33 (4) 20	06:27 - 20:49	05:11 - 21:58	04:28 - 22:47	04:51 - 22:34	05:55 - 21:27	07:04 - 20:00	08:11 - 18:34		08:25 - 16:17	09:21 - 15:42
16	09:15 - 16:19	08:10 - 17:33	06:53 - 08:15 (4), 18:40 - 08:30 (4) 15	06:24 - 20:51	05:09 - 22:00	04:27 - 22:48	04:53 - 22:32	05:58 - 21:24	07:06 - 19:57	08:14 - 18:31		08:27 - 16:15	09:22 - 15:42
17	09:13 - 16:21	08:08 - 17:36	06:50 - 08:17 (4), 18:43 - 08:27 (4) 10	06:22 - 20:54	05:06 - 22:02	04:27 - 22:49	04:54 - 22:31	06:00 - 21:21	07:09 - 19:54	08:16 - 18:28		08:30 - 16:14	09:23 - 15:42
18	09:12 - 16:24	08:05 - 17:38	06:47 - 18:45	06:19 - 20:56	05:04 - 22:04	04:27 - 22:49	04:56 - 22:29	06:02 - 21:19	07:11 - 19:51	08:18 - 18:25		08:32 - 16:12	09:24 - 15:42
19	09:10 - 16:26	08:02 - 17:41	06:45 - 18:47	06:16 - 20:58	05:02 - 22:06	04:27 - 22:50	04:58 - 22:27	06:04 - 21:16	07:13 - 19:48	08:21 - 18:23		08:34 - 16:10	09:25 - 15:43
20	09:09 - 16:28	08:00 - 17:43	06:42 - 18:49	06:13 - 21:01	05:00 - 22:08	04:27 - 22:50	05:00 - 22:26	06:07 - 21:13	07:15 - 19:45	08:23 - 18:20		08:37 - 16:08	09:26 - 15:43
21	09:07 - 16:30	07:57 - 17:46	06:39 - 18:52	06:11 - 21:03	04:58 - 22:10	04:27 - 22:50	05:02 - 22:24	06:09 - 21:10	07:17 - 19:42	08:25 - 18:17		08:39 - 16:06	09:26 - 15:43
22	09:05 - 16:32	07:55 - 17:48	06:36 - 18:54	06:08 - 21:05	04:56 - 22:12	04:27 - 22:51	05:04 - 22:22	06:11 - 21:08	07:20 - 19:39	08:28 - 18:15		08:41 - 16:04	09:27 - 15:44
23	09:04 - 16:35	07:52 - 17:50	06:33 - 18:56	06:05 - 21:08	04:55 - 22:14	04:28 - 22:51	05:06 - 22:20	06:13 - 21:05	07:22 - 19:36	08:30 - 18:12		08:43 - 16:03	09:27 - 15:44
24	09:02 - 16:37	07:49 - 17:53	06:30 - 18:59	06:02 - 21:10	04:53 - 22:16	04:28 - 22:51	05:08 - 22:18	06:16 - 21:02	07:24 - 19:33	08:32 - 18:09		08:45 - 16:01	09:28 - 15:45
25	09:00 - 16:39	07:46 - 17:55	06:27 - 19:01	06:00 - 21:12	04:51 - 22:18	04:28 - 22:51	05:10 - 22:16	06:18 - 21:00	07:26 - 19:31	07:35 - 17:07		08:48 - 16:00	09:28 - 15:46
26	08:58 - 16:42	07:44 - 17:58	06:24 - 19:03	05:57 - 21:15	04:49 - 22:20	04:29 - 22:51	05:12 - 22:14	06:20 - 20:57	07:28 - 19:28 6	09:02 (4) - 09:08 (4) 17:04		08:50 - 15:58	09:28 - 15:46
27	08:56 - 16:44	07:41 - 18:00	06:21 - 19:05	05:55 - 21:17	04:48 - 22:22	04:29 - 22:50	05:14 - 22:12	06:22 - 20:54	07:31 - 19:25 14	08:57 (4) - 09:11 (4) 17:02		08:52 - 15:57	09:29 - 15:47
28	08:54 - 16:47	07:38 - 18:03 2	08:26 (4) - 08:28 (4) 19:08	06:19 - 21:19	05:52 - 22:24	04:46 - 22:50	04:30 - 22:10	05:16 - 20:51	06:24 - 19:22 18	07:33 - 09:13 (4) 16:59	08:55 (4) - 07:42	08:54 - 15:55	09:29 - 15:48
29	08:52 - 16:49		07:16 - 20:10	05:49 - 21:21	04:44 - 22:26	04:31 - 22:50	05:18 - 22:08	06:27 - 20:48	07:35 - 19:19 21	08:53 (4) - 09:14 (4) 16:57	07:44	08:56 - 15:54	09:29 - 15:49
30	08:50 - 16:51		07:13 - 20:12	05:47 - 21:24	04:43 - 22:27	04:31 - 22:49	05:20 - 22:05	06:29 - 20:46	07:37 - 19:16 24	08:52 (4) - 09:16 (4) 16:54	07:47	08:58 - 15:53	09:28 - 15:50
31	08:48 - 16:54		07:10 - 20:15	04:41 -	22:29		05:22 - 22:03	06:31 - 20:43		07:49 - 16:52			09:28 - 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236		200
Total, worst case		2	379						83	307			
Sun reduction		0,50	0,50						0,50	0,50			
Oper. time red.		0,80	0,80						0,80	0,80			
Wind dir. red.		0,72	0,72						0,72	0,72			
Total reduction		0,29	0,29						0,29	0,29			
Total, real		1	109						24	88			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (28)	08:46	10:00 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (32)	09:00	10:51 (27)	
	15:53	20 12:41 (28)	16:56	20 10:20 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (32)	15:51	28 12:23 (28)	
2	09:28	12:22 (28)	08:44	09:59 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (32)	09:02	10:51 (27)	
	15:54	19 12:41 (28)	16:58	21 10:20 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (32)	15:50	30 12:24 (28)	
3	09:27	12:22 (28)	08:41	10:00 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (32)	09:04	10:52 (27)	
	15:55	19 12:41 (28)	17:01	20 10:20 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (32)	15:49	29 12:25 (28)	
4	09:27	11:12 (27)	08:39	10:00 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (32)	09:05	10:53 (27)	
	15:57	22 12:41 (28)	17:03	20 10:20 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (32)	15:48	30 12:26 (28)	
5	09:26	11:11 (27)	08:37	10:01 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (32)	09:07	10:54 (27)	
	15:58	26 12:42 (28)	17:06	19 10:20 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (32)	15:47	29 12:27 (28)	
6	09:25	11:10 (27)	08:35	10:01 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (32)	09:09	10:56 (27)	
	16:00	28 12:42 (28)	17:08	18 10:19 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (32)	15:46	28 12:28 (28)	
7	09:25	11:09 (27)	08:32	10:01 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (32)	09:10	10:58 (27)	
	16:02	29 12:42 (28)	17:11	17 10:18 (32)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (32)	15:45	26 12:29 (28)	
8	09:24	11:09 (27)	08:30	10:03 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (32)	09:12	11:00 (27)	
	16:03	30 12:42 (28)	17:13	15 10:18 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (32)	15:45	23 12:30 (28)	
9	09:23	11:09 (27)	08:27	10:04 (32)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (32)	09:13	12:11 (28)	
	16:05	30 12:42 (28)	17:16	12 10:16 (32)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (32)	15:44	19 12:30 (28)	
10	09:22	11:08 (27)	08:25	10:07 (32)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (32)	09:15	12:11 (28)	
	16:07	30 12:41 (28)	17:18	5 10:12 (32)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (32)	15:44	19 12:30 (28)	
11	09:21	11:09 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (32)	09:16	12:11 (28)	
	16:09	28 12:41 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (32)	15:43	20 12:31 (28)	
12	09:20	11:08 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (32)	09:18	12:11 (28)	
	16:11	27 12:40 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (27)	15:43	20 12:31 (28)	
13	09:19	11:08 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (32)	09:19	12:12 (28)	
	16:13	25 12:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (27)	15:42	21 12:33 (28)	
14	09:17	11:08 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (32)	09:20	12:12 (28)	
	16:15	20 11:28 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (27)	15:42	21 12:33 (28)	
15	09:16	11:08 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (32)	09:21	12:12 (28)	
	16:17	21 11:29 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (27)	15:42	21 12:33 (28)	
16	09:15	11:08 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (32)	09:22	12:13 (28)	
	16:19	21 11:29 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (27)	15:42	20 12:33 (28)	
17	09:13	11:09 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (32)	09:23	12:14 (28)	
	16:21	22 11:31 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (27)	15:42	21 12:35 (28)	
18	09:12	11:09 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (27)	09:24	12:14 (28)	
	16:23	22 11:31 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (27)	15:42	21 12:35 (28)	
19	09:10	11:09 (27)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (27)	09:25	12:14 (28)	
	16:25	22 11:31 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (27)	15:42	21 12:35 (28)	
20	09:09	11:09 (27)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (27)	09:26	12:15 (28)	
	16:28	23 11:32 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (27)	15:43	21 12:36 (28)	
21	09:07	11:09 (27)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (27)	09:26	12:16 (28)	
	16:30	23 11:32 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (27)	15:43	21 12:37 (28)	
22	09:05	11:10 (27)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (27)	09:27	12:16 (28)	
	16:32	22 11:32 (27)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (27)	15:43	21 12:37 (28)	
23	09:03	11:10 (27)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (27)	09:27	12:16 (28)	
	16:34	22 11:32 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (27)	15:44	21 12:37 (28)	
24	09:02	11:10 (27)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (27)	09:28	12:17 (28)	
	16:37	22 11:32 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (27)	15:45	21 12:38 (28)	
25	09:00	10:04 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (27)	09:28	12:17 (28)	
	16:39	28 11:32 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (27)	15:45	21 12:38 (28)	
26	08:58	10:03 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (27)	09:28	12:18 (28)	
	16:42	31 11:32 (27)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (27)	15:46	21 12:39 (28)	
27	08:56	10:02 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (27)	09:28	12:18 (28)	
	16:44	31 11:31 (27)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (27)	15:47	21 12:39 (28)	
28	08:54	10:00 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (27)	09:29	12:19 (28)	
	16:46	32 11:30 (27)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (27)	15:48	21 12:40 (28)	
29	08:52	10:00 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (27)	09:29	12:19 (28)	
	16:49	31 11:29 (27)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (28)	15:49	21 12:40 (28)	
30	08:50	09:59 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (27)	09:28	12:20 (28)	
	16:51	27 11:26 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (28)	15:50	20 12:40 (28)	
31	08:48	09:59 (32)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (28)	
	16:54	20 10:19 (32)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (28)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	22:07	20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:43	04:31	05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
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	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
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24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
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	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
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	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 2.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

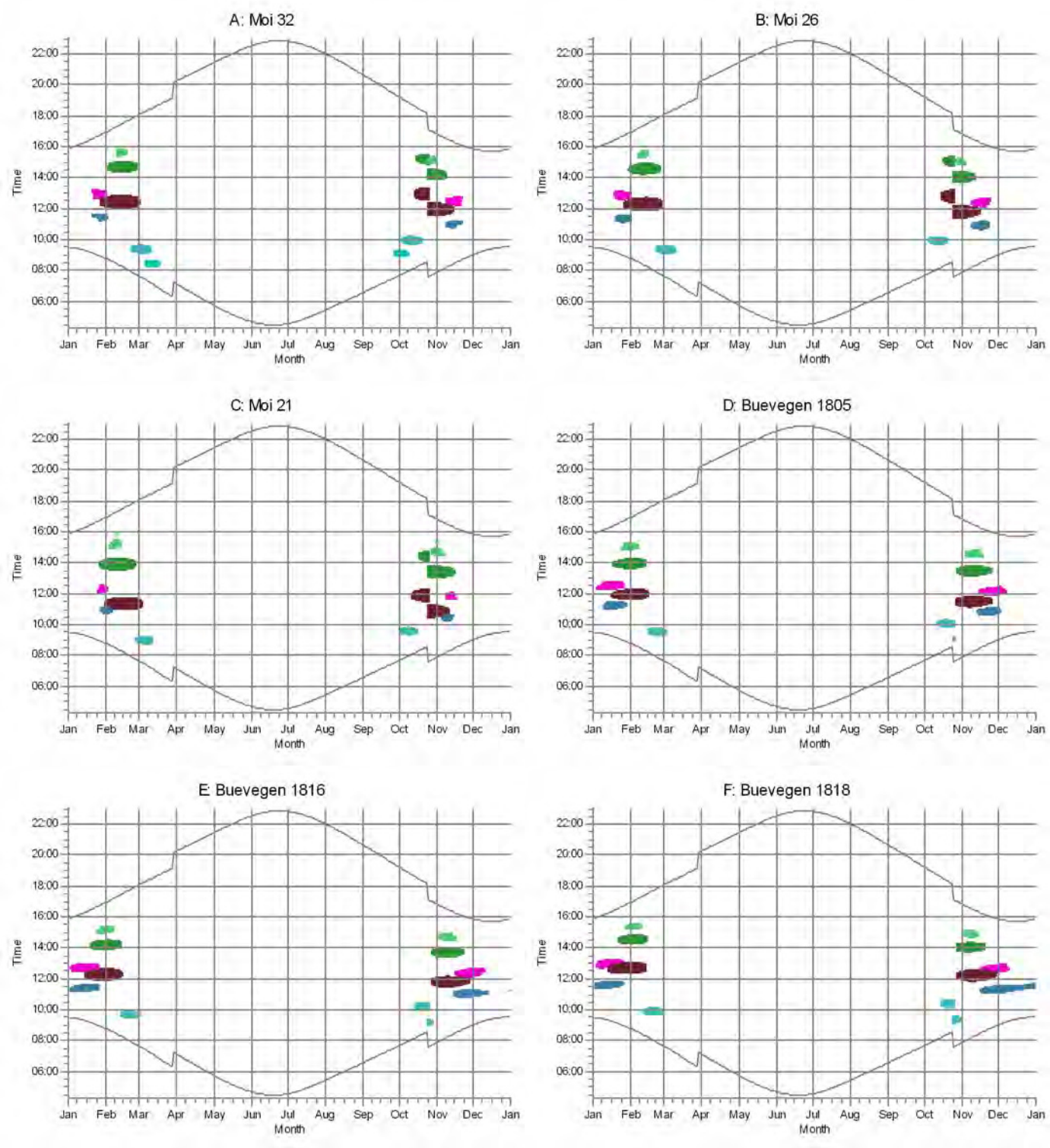
realistic case

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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

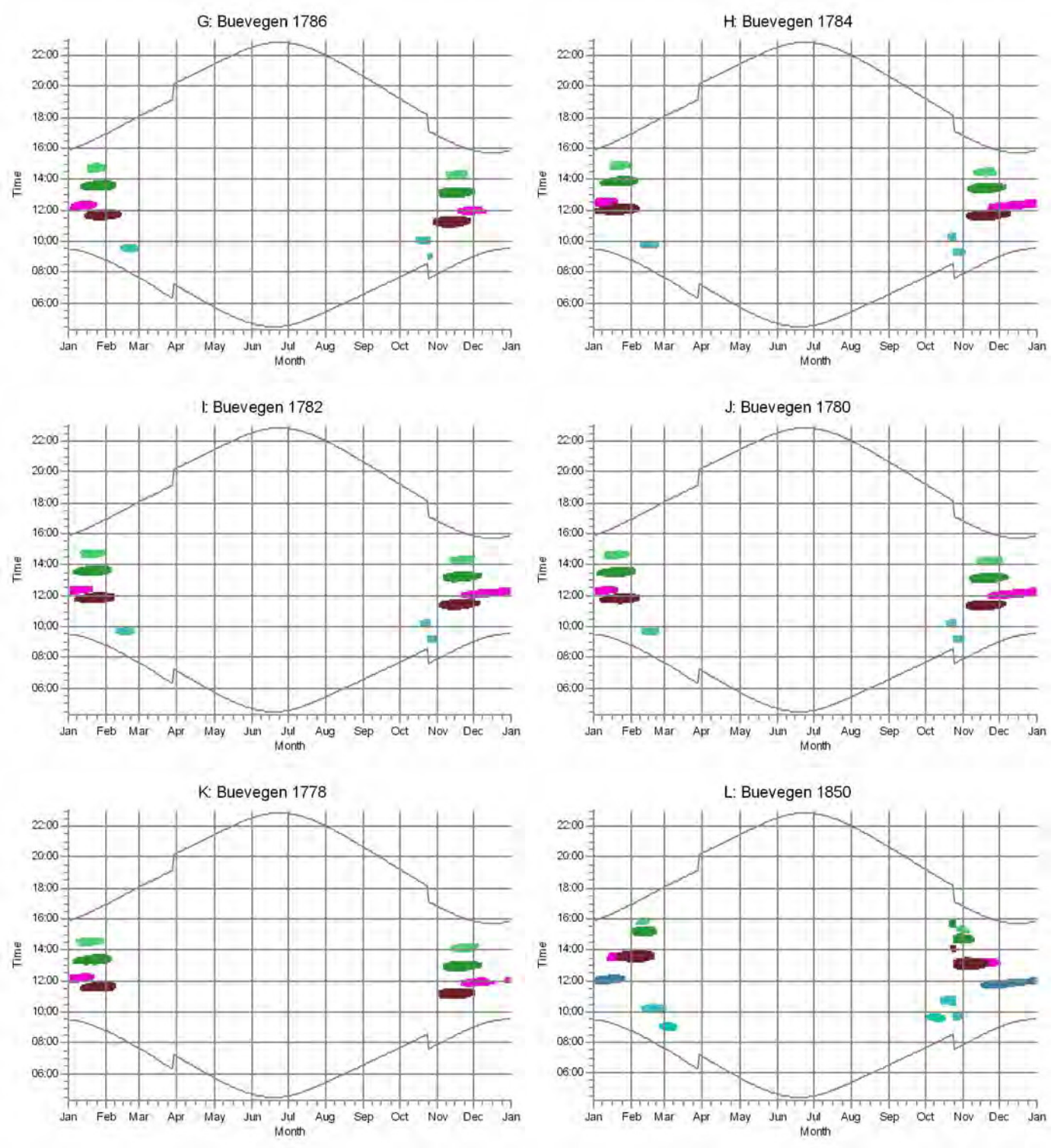


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

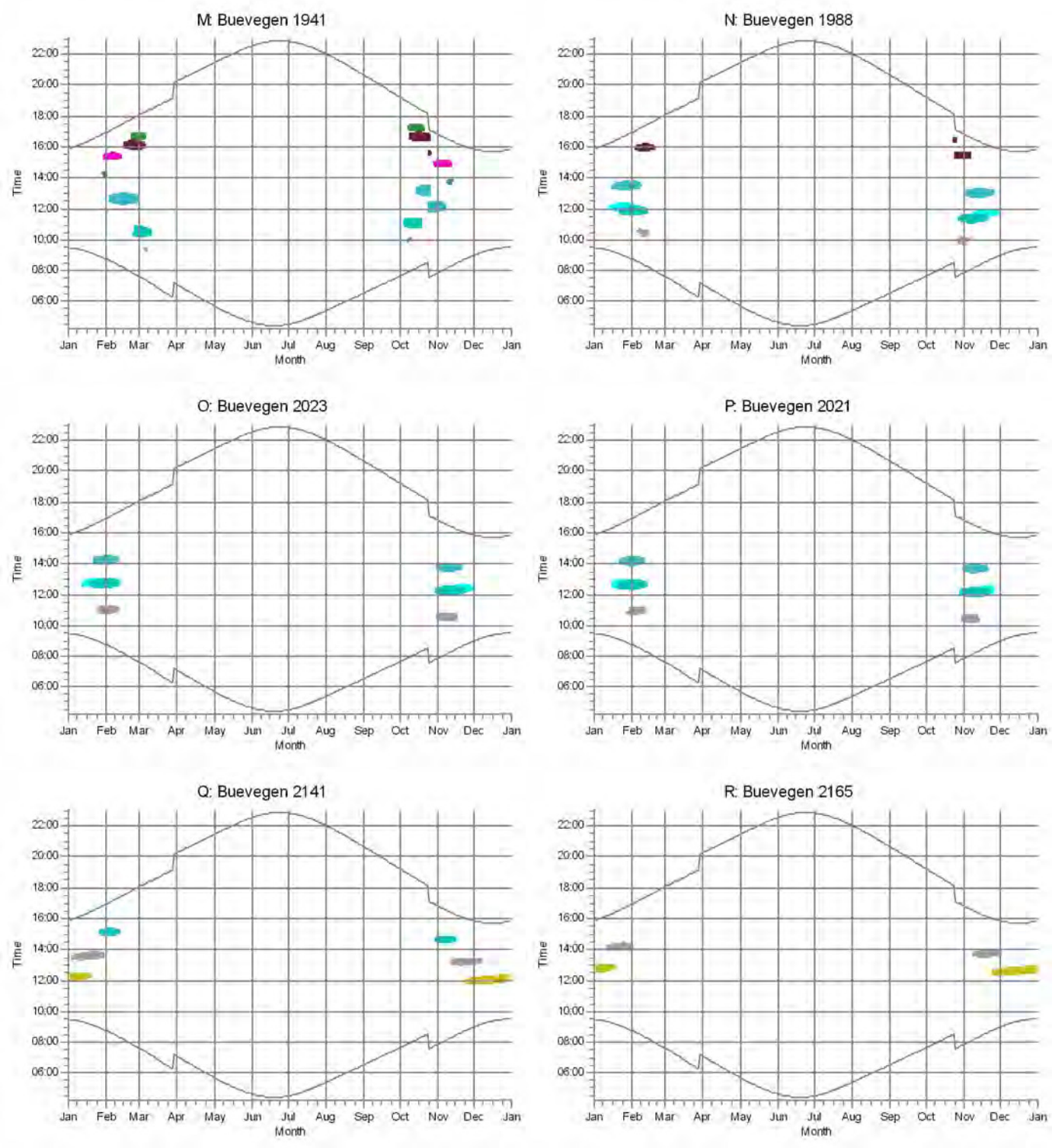


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

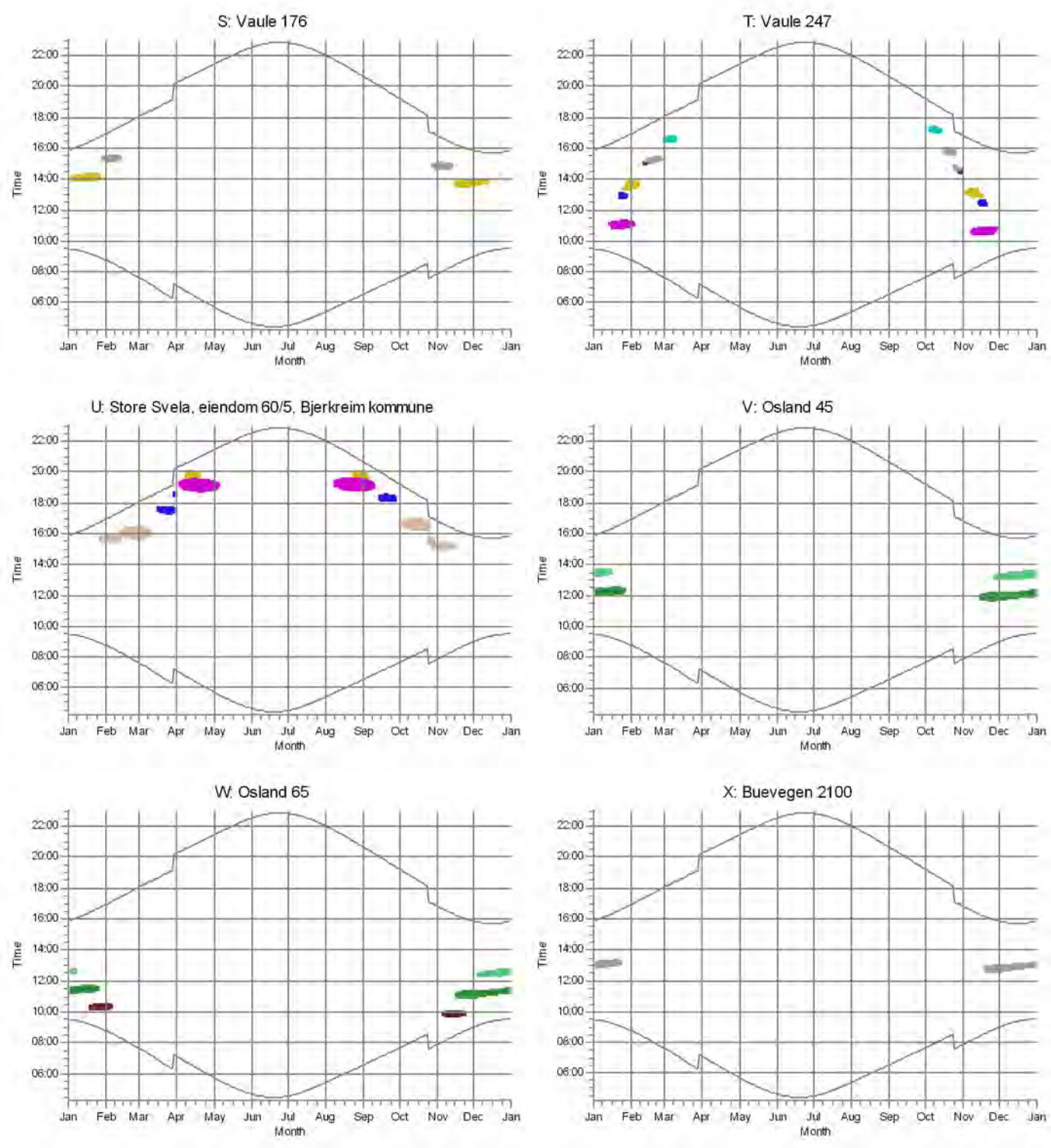


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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere



WTGs

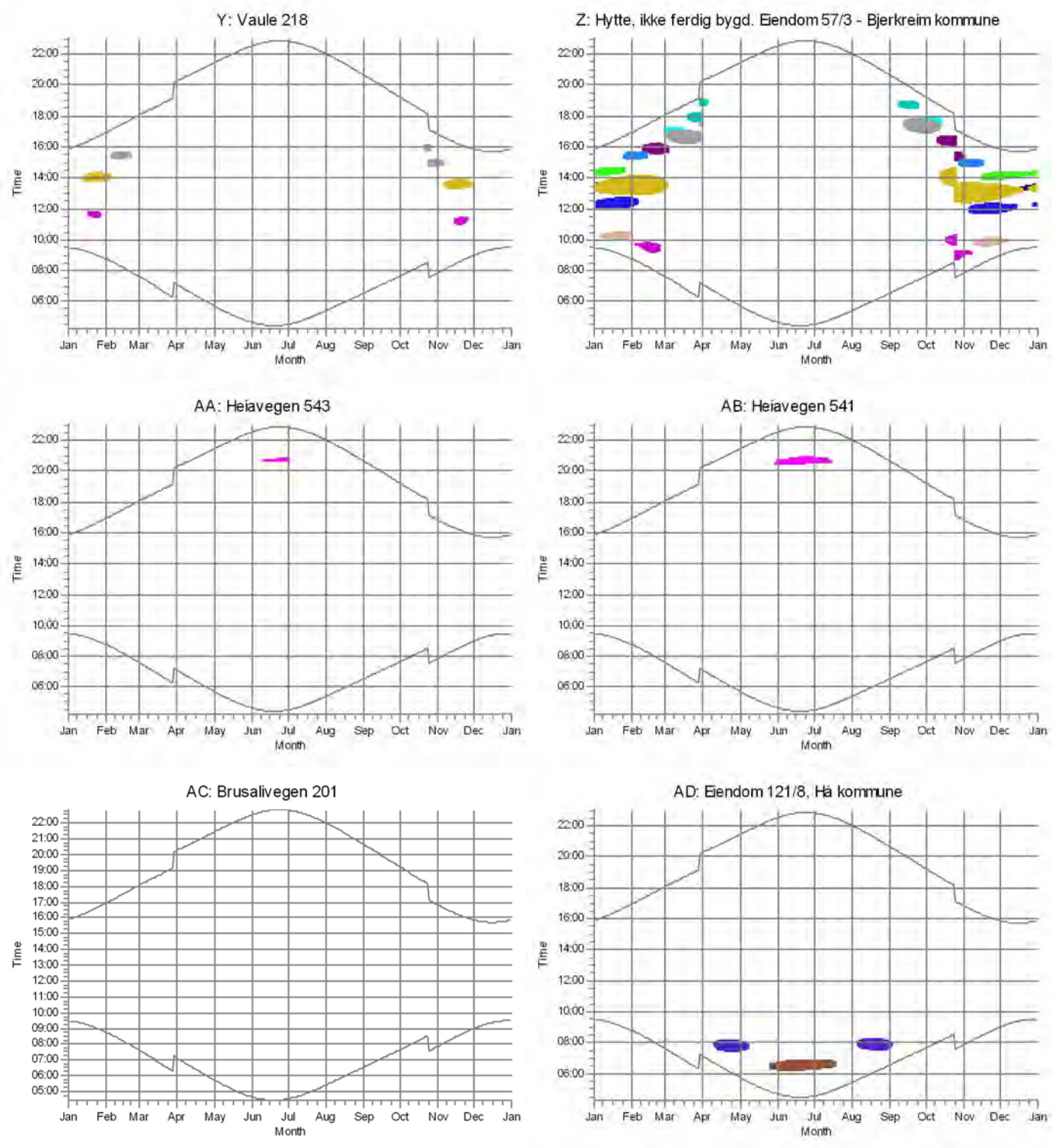
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
27: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere



WTGs

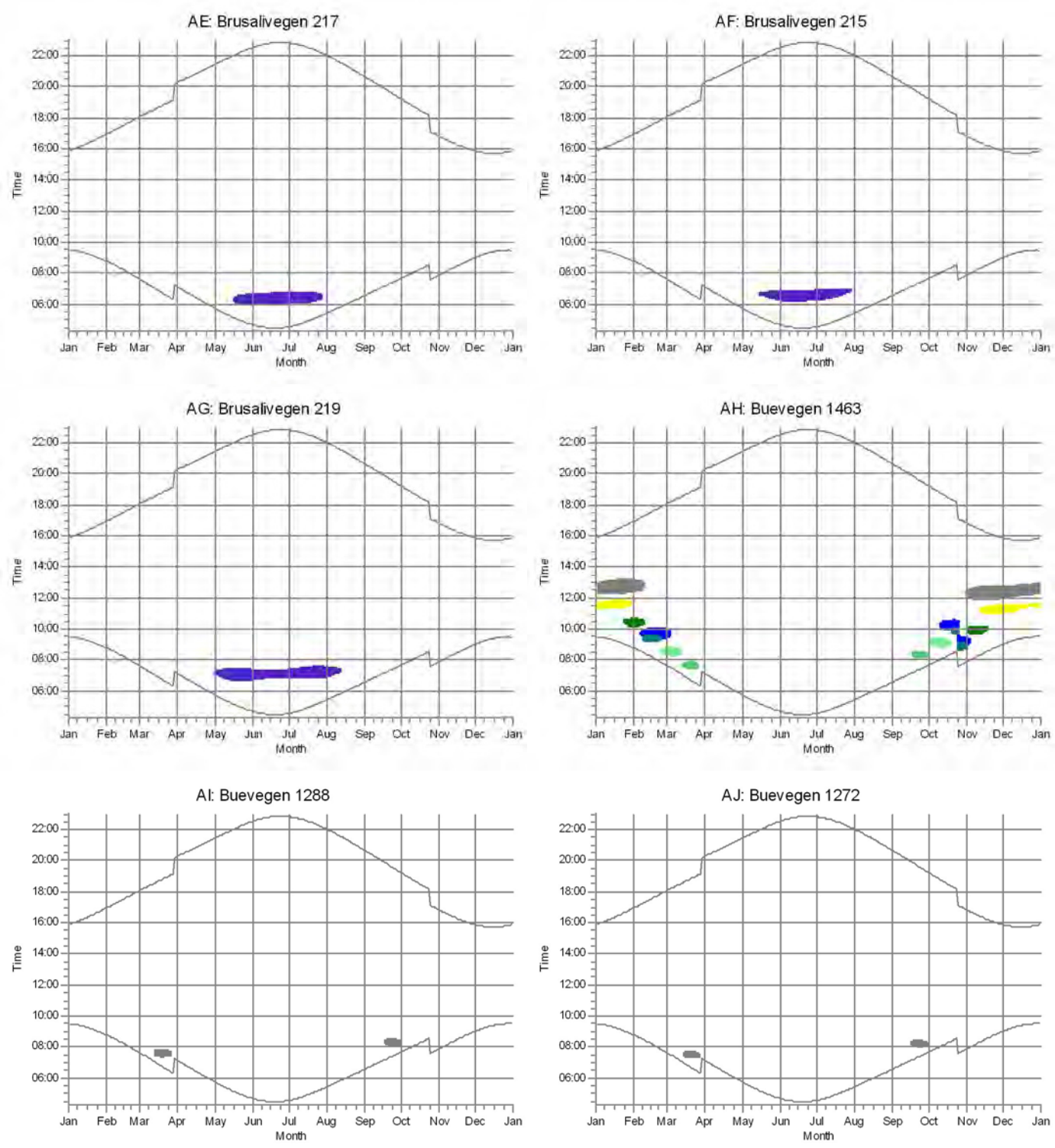
5: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544	17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556	39: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546	18: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557	40: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
11: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550	21: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560	41: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552	30: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569	42: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543
16: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555	36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575	

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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

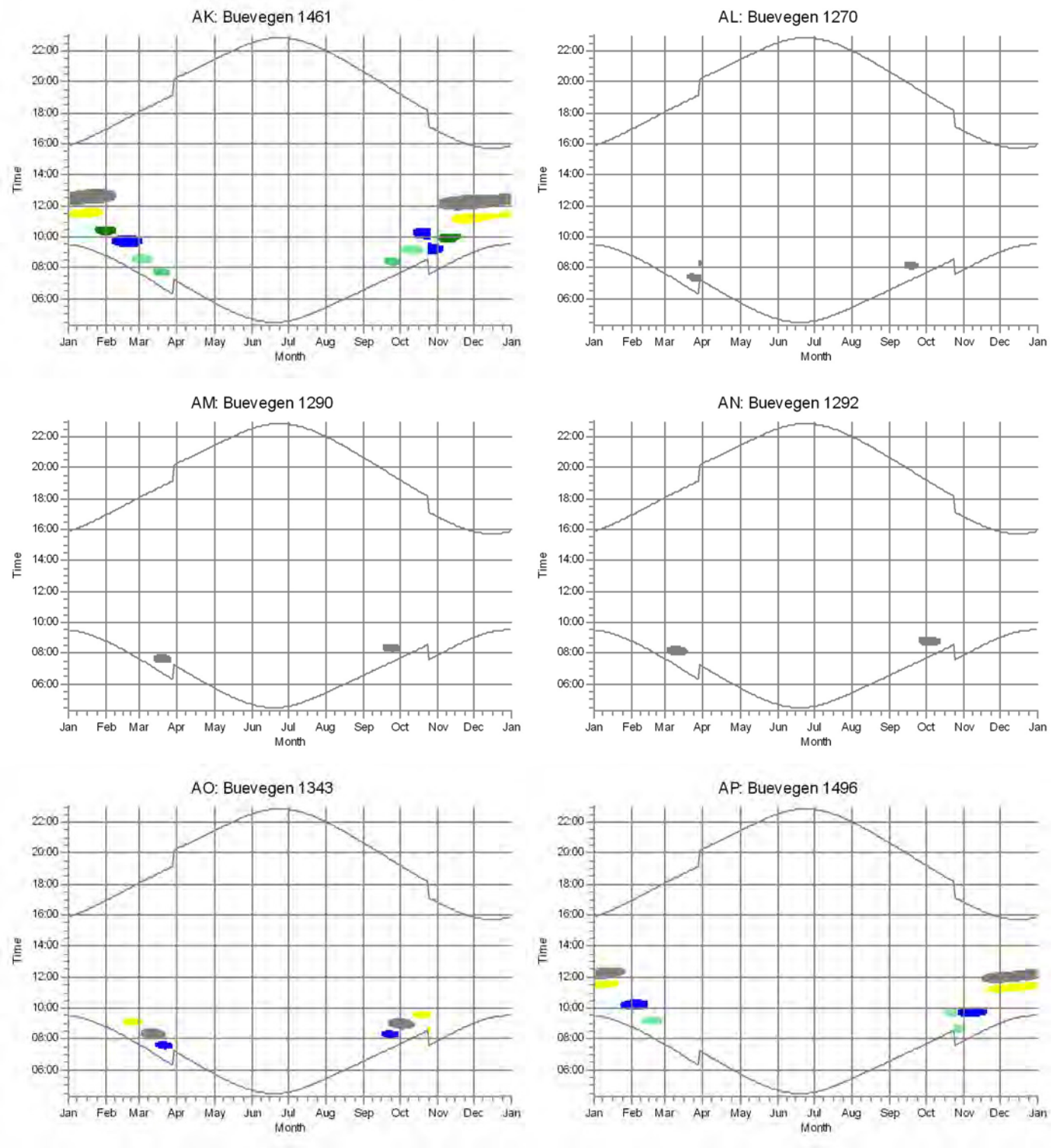


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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

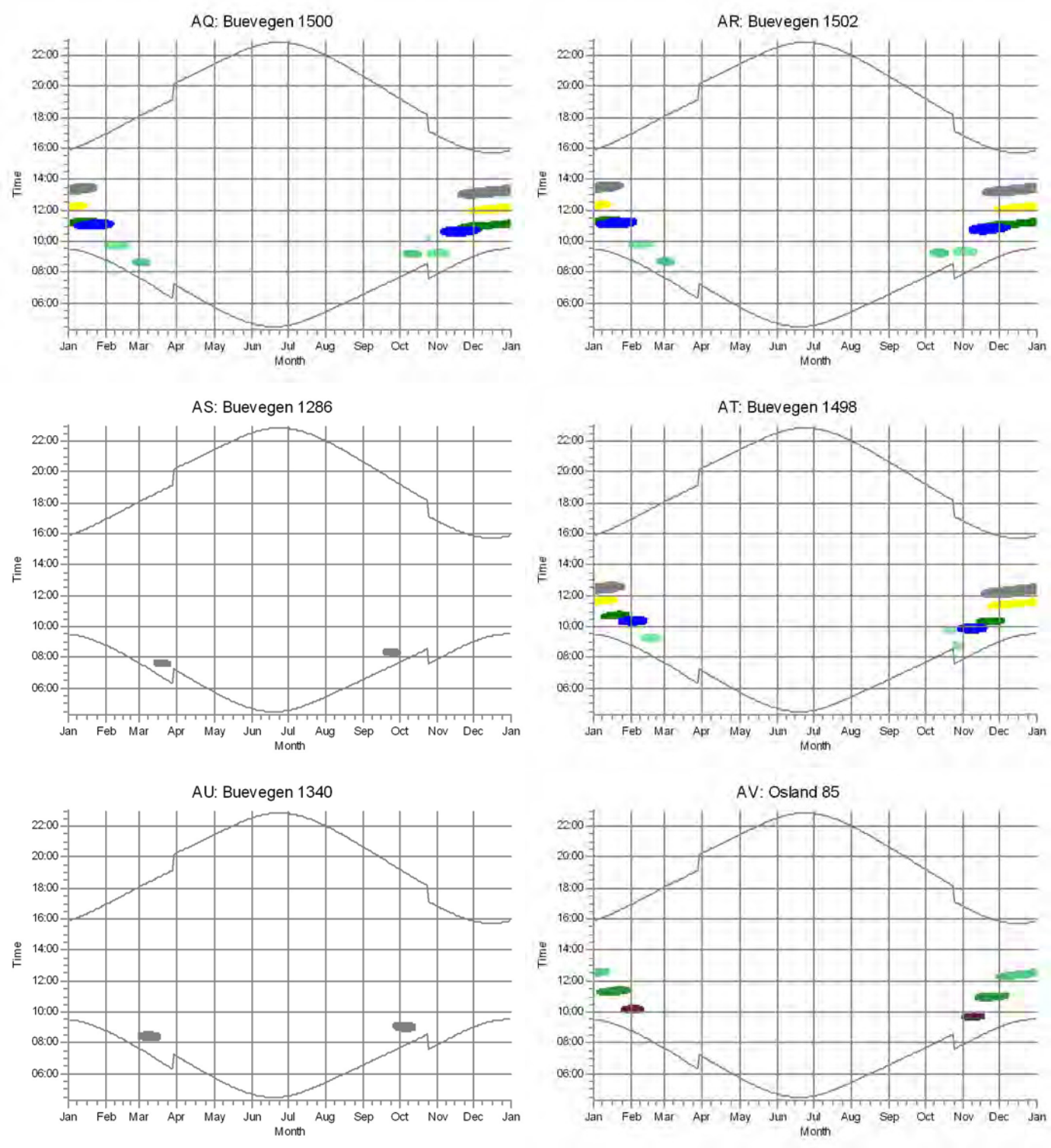


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Calculated:
19.11.2025 14:30/4.2.271

SHADOW - Calendar, graphical

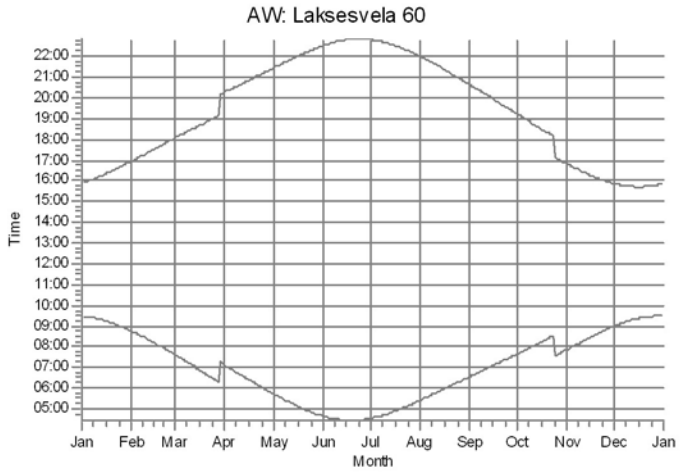
Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere

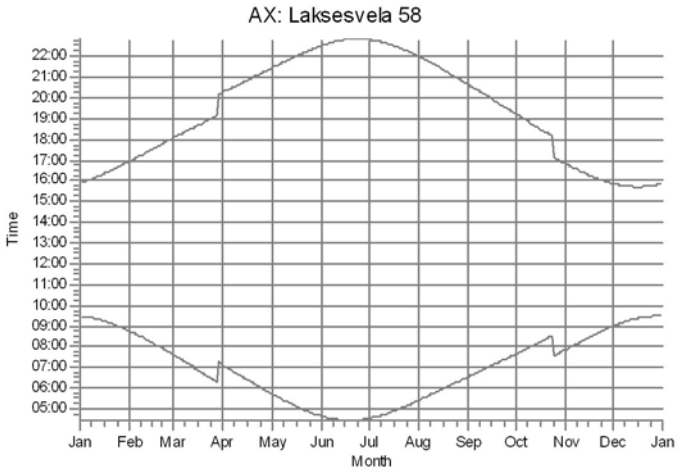


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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand uten eksisterende vkv - real case - mottakere





WTGs

Vedlegg 3.1

Tabell Moifjellet og Mellomstrand vindkraftverk

Med nærliggende – worst case

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:19 (37)	07:35		09:10 (19)	07:07		05:44	04:40
	15:53			16:56	51	13:02 (24)	18:05	24	09:34 (19)	20:17		21:26	22:30
2	09:27			08:43		11:24 (37)	07:33		09:10 (19)	07:04		05:41	04:38
	15:54			16:58	34	12:41 (32)	18:07	25	09:35 (19)	20:19		21:28	22:32
3	09:27			08:41		12:08 (32)	07:30		09:10 (19)	07:01		05:39	04:37
	15:55			17:01	43	14:41 (27)	18:09	24	09:34 (19)	20:21		21:30	22:34
4	09:26			08:39		12:07 (32)	07:27		09:10 (19)	06:58		05:36	04:36
	15:57			17:03	56	14:50 (27)	18:12	24	09:34 (19)	20:24		21:33	22:35
5	09:26			08:37		12:06 (32)	07:24		09:10 (19)	06:55		05:34	04:35
	15:58			17:06	61	14:52 (27)	18:14	23	09:33 (19)	20:26		21:35	22:37
6	09:25			08:34		12:06 (32)	07:21		08:24 (21)	06:52		05:31	04:34
	16:00			17:08	66	14:54 (27)	18:17	28	09:32 (19)	20:28		21:37	22:38
7	09:24			08:32		12:05 (32)	07:19		08:21 (21)	06:50		05:29	04:33
	16:02			17:11	69	14:54 (27)	18:19	32	09:30 (19)	20:30		21:40	22:39
8	09:24			08:30		12:05 (32)	07:16		08:19 (21)	06:47		05:26	04:32
	16:03			17:13	72	14:56 (27)	18:21	32	09:28 (19)	20:33		21:42	22:40
9	09:23			08:27		12:04 (32)	07:13		08:18 (21)	06:44		05:24	04:31
	16:05			17:16	75	14:57 (27)	18:24	29	09:26 (19)	20:35		21:44	22:42
10	09:22			08:25		12:04 (32)	07:10		08:17 (21)	06:41		05:22	04:30
	16:07			17:18	80	15:35 (28)	18:26	18	08:35 (21)	20:37		21:46	22:43
11	09:21			08:23		12:04 (32)	07:07		08:17 (21)	06:38		05:19	04:29
	16:09			17:21	91	15:40 (28)	18:28	18	08:35 (21)	20:40		21:49	22:44
12	09:20			08:20		12:04 (32)	07:04		08:17 (21)	06:35		05:17	04:29
	16:11			17:23	99	15:47 (28)	18:31	19	08:36 (21)	20:42		21:51	22:45
13	09:18			08:18		12:03 (32)	07:01		08:17 (21)	06:32		05:15	04:28
	16:13			17:26	101	15:48 (28)	18:33	18	08:35 (21)	20:44		21:53	22:46
14	09:17			08:15		12:04 (32)	06:59		08:17 (21)	06:30		05:13	04:28
	16:15			17:28	99	15:48 (28)	18:35	17	08:34 (21)	20:47		21:55	22:47
15	09:16			08:13		12:04 (32)	06:56		08:18 (21)	06:27		05:10	04:27
	16:17			17:31	96	15:46 (28)	18:38	15	08:33 (21)	20:49		21:58	22:47
16	09:15			08:10		12:03 (32)	06:53		08:19 (21)	06:24		05:08	04:27
	16:19			17:33	92	15:44 (28)	18:40	12	08:31 (21)	20:51		22:00	22:48
17	09:13			08:07		12:03 (32)	06:50		08:22 (21)	06:21		05:06	04:27
	16:21			17:36	86	15:41 (28)	18:42	5	08:27 (21)	20:53		22:02	22:49
18	09:12			08:05		12:04 (32)	06:47			06:19		05:04	04:27
	16:23			17:38	78	14:58 (27)	18:45			20:56		22:04	22:49
19	09:10			08:02		12:05 (32)	06:44			06:16		05:02	04:27
	16:25			17:40	76	14:58 (27)	18:47			20:58		22:06	22:50
20	09:08			08:00		12:05 (32)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:57 (27)	18:49			21:00		22:08	22:50
21	09:07		11:29 (37)	07:57		12:05 (32)	06:38			06:10		04:58	04:27
	16:30	8	13:08 (24)	17:45	71	14:56 (27)	18:51			21:03		22:10	22:50
22	09:05		11:28 (37)	07:54		12:06 (32)	06:36			06:08		04:56	04:27
	16:32	22	13:07 (24)	17:48	66	14:55 (27)	18:54			21:05		22:12	22:50
23	09:03		11:29 (37)	07:52		09:20 (19)	06:33			06:05		04:54	04:27
	16:34	21	13:08 (24)	17:50	69	14:54 (27)	18:56			21:07		22:14	22:50
24	09:02		11:28 (37)	07:49		09:16 (19)	06:30			06:02		04:52	04:27
	16:37	33	13:08 (24)	17:53	69	14:52 (27)	18:58			21:10		22:16	22:51
25	09:00		11:27 (37)	07:46		09:14 (19)	06:27			05:59		04:51	04:28
	16:39	33	13:08 (24)	17:55	64	14:49 (27)	19:01			21:12		22:18	22:50
26	08:58		11:22 (37)	07:44		09:13 (19)	06:24			05:57		04:49	04:28
	16:41	37	13:08 (24)	17:57	54	14:45 (27)	19:03			21:14		22:20	22:50
27	08:56		11:14 (37)	07:41		09:12 (19)	06:21			05:54		04:47	04:29
	16:44	43	13:07 (24)	18:00	41	12:35 (32)	19:05			21:17		22:22	22:50
28	08:54		11:14 (37)	07:38		09:11 (19)	06:18			05:52		04:46	04:30
	16:46	52	13:07 (24)	18:02	33	12:29 (32)	19:07			21:19		22:24	22:50
29	08:52		11:15 (37)				07:15			05:49		04:44	04:30
	16:49	56	13:07 (24)				20:10			21:21		22:25	22:50
30	08:50		11:15 (37)				07:12			05:46		04:43	04:31
	16:51	59	13:06 (24)				20:12			21:24		22:27	22:49
31	08:48		11:17 (37)				07:10					04:41	
	16:54	57	13:05 (24)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		421			1966			363					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October		November		December
1	04:32	05:24	06:33			07:39		08:56 (21)	07:51	11:33 (32)	09:00
	22:49	22:01	20:40			19:13	19	09:15 (21)	16:49	78	14:57 (28)	15:51
2	04:33	05:26	06:35			07:42		08:56 (21)	07:54	11:34 (32)	09:02
	22:48	21:58	20:37			19:10	18	09:14 (21)	16:46	74	14:26 (27)	15:50
3	04:34	05:28	06:37			07:44		08:55 (21)	07:56	11:35 (32)	09:03
	22:47	21:56	20:34			19:07	19	09:14 (21)	16:44	71	14:25 (27)	15:49
4	04:35	05:31	06:40			07:46		08:55 (21)	07:59	11:35 (32)	09:05
	22:47	21:54	20:31			19:04	26	10:01 (19)	16:41	69	14:24 (27)	15:48
5	04:36	05:33	06:42			07:48		08:56 (21)	08:01	11:36 (32)	09:07
	22:46	21:51	20:28			19:02	31	10:05 (19)	16:39	64	14:23 (27)	15:47
6	04:37	05:35	06:44			07:51		08:57 (21)	08:03	11:37 (32)	09:09
	22:45	21:49	20:25			18:59	32	10:06 (19)	16:37	61	14:22 (27)	15:46
7	04:39	05:37	06:46			07:53		08:58 (21)	08:06	11:37 (32)	09:10
	22:44	21:47	20:22			18:56	31	10:07 (19)	16:34	53	14:17 (27)	15:45
8	04:40	05:39	06:49			07:55		09:03 (21)	08:08	11:39 (32)	09:12
	22:43	21:44	20:20			18:53	23	10:08 (19)	16:32	42	14:11 (27)	15:45
9	04:41	05:42	06:51			07:57		09:45 (19)	08:11	10:53 (37)	09:13
	22:42	21:42	20:17			18:50	23	10:08 (19)	16:30	37	12:12 (32)	15:44
10	04:43	05:44	06:53			08:00		09:45 (19)	08:13	10:50 (37)	09:15
	22:40	21:39	20:14			18:47	24	10:09 (19)	16:28	52	12:34 (24)	15:44
11	04:44	05:46	06:55			08:02		09:44 (19)	08:15	10:48 (37)	09:16
	22:39	21:37	20:11			18:45	24	10:08 (19)	16:25	57	12:36 (24)	15:43
12	04:46	05:48	06:57			08:04		09:43 (19)	08:18	10:47 (37)	09:18
	22:38	21:34	20:08			18:42	24	10:07 (19)	16:23	58	12:37 (24)	15:43
13	04:47	05:51	07:00			08:07		09:44 (19)	08:20	10:47 (37)	09:19
	22:37	21:31	20:05			18:39	23	10:07 (19)	16:21	57	12:39 (24)	15:42
14	04:49	05:53	07:02			08:09		09:44 (19)	08:22	10:46 (37)	09:20
	22:35	21:29	20:02			18:36	37	13:05 (32)	16:19	52	12:39 (24)	15:42
15	04:51	05:55	07:04			08:11		09:45 (19)	08:25	10:47 (37)	09:21
	22:34	21:26	19:59			18:33	44	13:09 (32)	16:17	43	12:40 (24)	15:42
16	04:52	05:57	07:06			08:13		09:45 (19)	08:27	10:55 (37)	09:22
	22:32	21:24	19:56			18:31	59	15:19 (27)	16:15	37	12:41 (24)	15:42
17	04:54	06:00	07:08			08:16		09:47 (19)	08:29	11:00 (37)	09:23
	22:30	21:21	19:54			18:28	66	15:22 (27)	16:13	33	12:41 (24)	15:42
18	04:56	06:02	07:11			08:18		09:48 (19)	08:32	11:02 (37)	09:24
	22:29	21:18	19:51			18:25	71	15:24 (27)	16:11	33	12:42 (24)	15:42
19	04:58	06:04	07:13			08:20		09:52 (19)	08:34	11:04 (37)	09:25
	22:27	21:16	19:48			18:22	70	15:26 (27)	16:09	21	12:43 (24)	15:42
20	05:00	06:06	07:15			08:23		12:37 (32)	08:36	11:03 (37)	09:26
	22:25	21:13	19:45			18:20	68	15:26 (27)	16:08	22	12:42 (24)	15:43
21	05:01	06:08	07:17			08:25		12:36 (32)	08:39	11:04 (37)	09:26
	22:24	21:10	19:42			18:17	71	15:27 (27)	16:06	8	12:43 (24)	15:43
22	05:03	06:11	07:19			08:27		12:35 (32)	08:41			09:27
	22:22	21:08	19:39			18:14	74	15:27 (27)	16:04			15:43
23	05:05	06:13	07:22			08:30		12:35 (32)	08:43			09:27
	22:20	21:05	19:36			18:12	76	15:28 (27)	16:02			15:44
24	05:07	06:15	07:24			08:32		12:34 (32)	08:45			09:28
	22:18	21:02	19:33			18:09	78	15:28 (27)	16:01			15:44
25	05:09	06:17	07:26			07:35		11:34 (32)	08:47			09:28
	22:16	20:59	19:30			17:06	86	15:12 (28)	15:59			15:45
26	05:11	06:20	07:28			07:37		11:33 (32)	08:50			09:28
	22:14	20:56	19:27			17:04	94	15:14 (28)	15:58			15:46
27	05:13	06:22	07:30		09:02 (21)	07:39		11:33 (32)	08:52			09:28
	22:12	20:54	19:25	10	09:12 (21)	17:01	97	15:16 (28)	15:56			15:47
28	05:16	06:24	07:33		09:00 (21)	07:42		11:33 (32)	08:54			09:28
	22:10	20:51	19:22	13	09:13 (21)	16:59	101	15:18 (28)	15:55			15:48
29	05:18	06:26	07:35		08:58 (21)	07:44		11:33 (32)	08:56			09:28
	22:07	20:48	19:19	16	09:14 (21)	16:56	102	15:18 (28)	15:54			15:49
30	05:20	06:29	07:37		08:56 (21)	07:47		11:33 (32)	08:58			09:28
	22:05	20:45	19:16	18	09:14 (21)	16:54	99	15:15 (28)	15:52			15:50
31	05:22	06:31				07:49		11:34 (32)				09:28
	22:03	20:42				16:51	90	15:09 (28)				15:51
Potential sun hours	546	478	386			319			236			199
Total, worst case				57			1700			1022		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		11:16 (37)	07:35		09:09 (19)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (27)	18:05	23	09:32 (19)	20:17	21:26	22:30
2	09:27			08:43		12:00 (32)	07:33		09:09 (19)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (27)	18:07	24	09:33 (19)	20:19	21:28	22:32
3	09:27			08:41		11:58 (32)	07:30		09:09 (19)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (27)	18:09	24	09:33 (19)	20:21	21:30	22:34
4	09:26			08:39		11:58 (32)	07:27		09:09 (19)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (27)	18:12	23	09:32 (19)	20:24	21:33	22:35
5	09:26			08:37		11:57 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (27)	18:14	21	09:31 (19)	20:26	21:35	22:37
6	09:25			08:34		11:57 (32)	07:21		09:10 (19)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (27)	18:17	20	09:30 (19)	20:28	21:37	22:38
7	09:24			08:32		11:56 (32)	07:19		09:11 (19)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (27)	18:19	17	09:28 (19)	20:30	21:40	22:39
8	09:24			08:30		11:56 (32)	07:16		09:13 (19)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (28)	18:21	12	09:25 (19)	20:33	21:42	22:40
9	09:23			08:27		11:56 (32)	07:13		09:16 (19)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (28)	18:24	5	09:21 (19)	20:35	21:44	22:42
10	09:22			08:25		11:55 (32)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (28)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (32)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (28)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (32)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (28)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (28)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (27)	18:45			20:56	22:04	22:49
19	09:10		12:54 (24)	08:02		11:57 (32)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (24)	17:40	70	14:48 (27)	18:47			20:58	22:06	22:50
20	09:08		11:12 (37)	08:00		11:57 (32)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (24)	17:43	68	14:47 (27)	18:49			21:00	22:08	22:50
21	09:07		11:11 (37)	07:57		11:58 (32)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (24)	17:45	64	14:46 (27)	18:51			21:03	22:10	22:50
22	09:05		11:11 (37)	07:54		11:59 (32)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (24)	17:48	58	14:44 (27)	18:54			21:05	22:12	22:50
23	09:03		11:11 (37)	07:52		09:17 (19)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (24)	17:50	62	14:43 (27)	18:56			21:07	22:14	22:50
24	09:02		11:10 (37)	07:49		09:14 (19)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (24)	17:53	57	14:39 (27)	18:58			21:10	22:16	22:51
25	09:00		11:08 (37)	07:46		09:13 (19)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (24)	17:55	42	12:28 (32)	19:01			21:12	22:18	22:50
26	08:58		11:09 (37)	07:44		09:11 (19)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (24)	17:57	38	12:24 (32)	19:03			21:14	22:20	22:50
27	08:56		11:09 (37)	07:41		09:10 (19)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (24)	18:00	22	09:32 (19)	19:05			21:17	22:22	22:50
28	08:54		11:10 (37)	07:38		09:09 (19)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (24)	18:02	23	09:32 (19)	19:07			21:19	22:24	22:50
29	08:52		11:12 (37)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (24)				20:10			21:21	22:25	22:50
30	08:50		11:12 (37)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (24)				20:12			21:24	22:27	22:49
31	08:48		11:14 (37)				07:10				04:41	
	16:54	56	14:29 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		09:00
	22:49	22:01	20:40	19:13		16:49	96	15:51
2	04:33	05:26	06:35	07:42		07:54		09:02
	22:48	21:58	20:37	19:10		16:46	90	15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44	82	14:58 (28)	15:49
4	04:35	05:31	06:40	07:46		07:59		09:05
	22:47	21:54	20:31	19:04		16:41	72	14:17 (27)	15:48
5	04:36	05:33	06:42	07:48		09:51 (19)	08:01		09:07
	22:46	21:51	20:28	19:02	10	10:01 (19)	16:39	70	14:17 (27)	15:47
6	04:37	05:35	06:44	07:51		09:48 (19)	08:03		09:09
	22:45	21:49	20:25	18:59	15	10:03 (19)	16:37	65	14:16 (27)	15:46
7	04:39	05:37	06:46	07:53		09:46 (19)	08:06		09:10
	22:44	21:47	20:22	18:56	18	10:04 (19)	16:34	62	14:14 (27)	15:45
8	04:40	05:39	06:49	07:55		09:45 (19)	08:08		09:12
	22:43	21:44	20:20	18:53	21	10:06 (19)	16:32	57	14:13 (27)	15:45
9	04:41	05:42	06:51	07:57		09:44 (19)	08:11		09:13
	22:42	21:42	20:17	18:50	22	10:06 (19)	16:30	53	14:12 (27)	15:44
10	04:43	05:44	06:53	08:00		09:44 (19)	08:13		10:47 (37)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (19)	16:28	58	14:10 (27)	15:44
11	04:44	05:46	06:55	08:02		09:43 (19)	08:15		10:45 (37)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (19)	16:25	55	13:59 (27)	15:43
12	04:46	05:48	06:57	08:04		09:42 (19)	08:18		10:44 (37)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (19)	16:23	57	12:31 (24)	15:43
13	04:47	05:51	07:00	08:07		09:43 (19)	08:20		10:43 (37)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (19)	16:21	59	12:32 (24)	15:42
14	04:49	05:53	07:02	08:09		09:42 (19)	08:22		10:42 (37)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (19)	16:19	58	12:33 (24)	15:42
15	04:51	05:55	07:04	08:11		09:43 (19)	08:25		10:42 (37)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (32)	16:17	53	12:34 (24)	15:42
16	04:52	05:57	07:06	08:13		09:44 (19)	08:27		10:42 (37)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (32)	16:15	45	12:35 (24)	15:42
17	04:54	06:00	07:08	08:16		09:45 (19)	08:29		10:41 (37)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (27)	16:13	47	12:35 (24)	15:42
18	04:56	06:02	07:11	08:18		09:46 (19)	08:32		10:44 (37)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (27)	16:11	46	12:36 (24)	15:42
19	04:58	06:04	07:13	08:20		09:49 (19)	08:34		10:46 (37)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (27)	16:09	45	12:37 (24)	15:42
20	05:00	06:06	07:15	08:23		12:30 (32)	08:36		10:46 (37)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (27)	16:08	45	12:37 (24)	15:43
21	05:01	06:08	07:17	08:25		12:29 (32)	08:39		10:46 (37)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (27)	16:06	36	12:37 (24)	15:43
22	05:03	06:11	07:19	08:27		12:27 (32)	08:41		10:48 (37)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (27)	16:04	30	12:38 (24)	15:43
23	05:05	06:13	07:22	08:30		12:27 (32)	08:43		12:30 (24)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (27)	16:02	5	12:35 (24)	15:44
24	05:07	06:15	07:24	08:32		12:26 (32)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (27)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (32)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (27)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (32)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (32)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (28)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (32)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (28)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (32)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (28)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (32)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (28)	15:52			15:50
31	05:22	06:31		07:49		11:25 (32)				09:28
	22:03	20:42		16:51	101	15:13 (28)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		10:42 (37)	07:35		08:50 (19)	07:07		05:44	04:40
	15:53			16:56	72	14:06 (27)	18:05	39	11:29 (32)	20:17		21:26	22:30
2	09:27			08:43		10:44 (37)	07:33		08:50 (19)	07:04		05:41	04:38
	15:54			16:58	72	14:08 (27)	18:07	31	11:25 (32)	20:19		21:28	22:32
3	09:27			08:41		10:46 (37)	07:30		08:49 (19)	07:01		05:39	04:37
	15:55			17:01	71	14:10 (27)	18:09	21	09:10 (19)	20:21		21:31	22:34
4	09:26			08:39		10:47 (37)	07:27		08:48 (19)	06:58		05:36	04:36
	15:57			17:03	77	15:02 (28)	18:12	22	09:10 (19)	20:24		21:33	22:35
5	09:26			08:37		10:50 (37)	07:24		08:48 (19)	06:55		05:34	04:35
	15:58			17:06	77	15:05 (28)	18:14	21	09:09 (19)	20:26		21:35	22:37
6	09:25			08:34		11:05 (32)	07:21		08:48 (19)	06:52		05:31	04:34
	16:00			17:08	82	15:12 (28)	18:17	21	09:09 (19)	20:28		21:37	22:38
7	09:24			08:32		11:03 (32)	07:19		08:48 (19)	06:50		05:29	04:33
	16:02			17:11	92	15:18 (28)	18:19	20	09:08 (19)	20:30		21:40	22:39
8	09:24			08:30		11:03 (32)	07:16		08:48 (19)	06:47		05:26	04:32
	16:03			17:13	101	15:25 (28)	18:21	19	09:07 (19)	20:33		21:42	22:40
9	09:23			08:27		11:02 (32)	07:13		08:48 (19)	06:44		05:24	04:31
	16:05			17:16	112	15:55 (26)	18:24	18	09:06 (19)	20:35		21:44	22:42
10	09:22			08:25		11:01 (32)	07:10		08:49 (19)	06:41		05:22	04:30
	16:07			17:18	104	15:51 (26)	18:26	15	09:04 (19)	20:37		21:46	22:43
11	09:21			08:23		11:01 (32)	07:07		08:51 (19)	06:38		05:19	04:29
	16:09			17:21	101	15:23 (28)	18:28	10	09:01 (19)	20:40		21:49	22:44
12	09:20			08:20		11:00 (32)	07:04			06:35		05:17	04:29
	16:11			17:23	98	15:21 (28)	18:31			20:42		21:51	22:45
13	09:18			08:18		10:59 (32)	07:02			06:33		05:15	04:28
	16:13			17:26	94	15:18 (28)	18:33			20:44		21:53	22:46
14	09:17			08:15		11:00 (32)	06:59			06:30		05:13	04:28
	16:15			17:28	83	14:14 (27)	18:35			20:47		21:55	22:47
15	09:16			08:13		10:59 (32)	06:56			06:27		05:10	04:27
	16:17			17:31	83	14:13 (27)	18:38			20:49		21:58	22:47
16	09:15			08:10		10:59 (32)	06:53			06:24		05:08	04:27
	16:19			17:33	81	14:12 (27)	18:40			20:51		22:00	22:48
17	09:13			08:07		10:59 (32)	06:50			06:21		05:06	04:27
	16:21			17:36	81	14:12 (27)	18:42			20:53		22:02	22:49
18	09:12			08:05		10:59 (32)	06:47			06:19		05:04	04:27
	16:23			17:38	80	14:12 (27)	18:45			20:56		22:04	22:49
19	09:10			08:02		10:59 (32)	06:44			06:16		05:02	04:27
	16:25			17:40	78	14:11 (27)	18:47			20:58		22:06	22:50
20	09:08			08:00		10:59 (32)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:09 (27)	18:49			21:00		22:08	22:50
21	09:07			07:57		10:59 (32)	06:39			06:10		04:58	04:27
	16:30			17:45	71	14:08 (27)	18:51			21:03		22:10	22:50
22	09:05			07:54		11:00 (32)	06:36			06:08		04:56	04:27
	16:32			17:48	66	14:06 (27)	18:54			21:05		22:12	22:50
23	09:03			07:52		11:01 (32)	06:33			06:05		04:54	04:27
	16:34			17:50	60	14:04 (27)	18:56			21:07		22:14	22:50
24	09:02			07:49		11:01 (32)	06:30			06:02		04:52	04:27
	16:37			17:53	50	14:00 (27)	18:58			21:10		22:16	22:51
25	09:00			07:46		11:02 (32)	06:27			06:00		04:51	04:28
	16:39			17:55	36	11:38 (32)	19:01			21:12		22:18	22:50
26	08:58		12:05 (24)	07:44		08:58 (19)	06:24			05:57		04:49	04:28
	16:41	5	12:10 (24)	17:57	36	11:36 (32)	19:03			21:14		22:20	22:50
27	08:56		12:05 (24)	07:41		08:54 (19)	06:21			05:54		04:47	04:29
	16:44	19	13:53 (27)	18:00	41	11:34 (32)	19:05			21:17		22:22	22:50
28	08:54		11:00 (37)	07:38		08:52 (19)	06:18			05:52		04:46	04:30
	16:46	40	13:59 (27)	18:02	41	11:32 (32)	19:08			21:19		22:24	22:50
29	08:52		10:56 (37)				07:15			05:49		04:44	04:30
	16:49	47	14:02 (27)				20:10			21:21		22:25	22:50
30	08:50		10:50 (37)				07:13			05:46		04:43	04:31
	16:51	55	14:03 (27)				20:12			21:24		22:27	22:49
31	08:48		10:44 (37)				07:10					04:41	
	16:54	62	14:05 (27)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		228			2114			237					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (32)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (26)	15:51
2	04:33		05:26		06:35		07:42		09:32 (19)	07:54		10:32 (32)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (19)	16:46	110	15:25 (26)	15:50
3	04:34		05:28		06:37		07:44		09:28 (19)	07:56		10:33 (32)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (19)	16:44	97	14:53 (28)	15:49
4	04:35		05:31		06:40		07:46		09:26 (19)	07:59		10:33 (32)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (19)	16:41	89	14:46 (28)	15:48
5	04:36		05:33		06:42		07:48		09:25 (19)	08:01		10:35 (32)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (19)	16:39	81	14:41 (28)	15:47
6	04:37		05:35		06:44		07:51		09:24 (19)	08:03		10:20 (37)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (19)	16:37	77	14:35 (28)	15:46
7	04:39		05:37		06:46		07:53		09:23 (19)	08:06		10:16 (37)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (19)	16:34	77	14:32 (28)	15:45
8	04:40		05:39		06:49		07:55		09:23 (19)	08:08		10:15 (37)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (19)	16:32	71	13:39 (27)	15:45
9	04:41		05:42		06:51		07:57		09:22 (19)	08:11		10:15 (37)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (19)	16:30	72	13:39 (27)	15:44
10	04:43		05:44		06:53		08:00		09:23 (19)	08:13		10:14 (37)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (19)	16:28	71	13:38 (27)	15:44
11	04:44		05:46		06:55		08:02		09:23 (19)	08:15		10:15 (37)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (19)	16:25	61	13:36 (27)	15:43
12	04:46		05:48		06:57		08:04		09:23 (19)	08:18		10:24 (37)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (32)	16:23	52	13:35 (27)	15:43
13	04:47		05:51		07:00		08:07		09:24 (19)	08:20		10:28 (37)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (32)	16:21	47	13:33 (27)	15:42
14	04:49		05:53		07:02		08:09		09:25 (19)	08:22		10:32 (37)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (32)	16:19	39	13:30 (27)	15:42
15	04:51		05:55		07:04		08:11		09:28 (19)	08:25		11:38 (24)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (32)	16:17	19	13:26 (27)	15:42
16	04:52		05:57		07:06		08:13		11:35 (32)	08:27		11:38 (24)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (32)	16:15	4	11:42 (24)	15:42
17	04:54		06:00		07:08		08:16		11:34 (32)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (32)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (32)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (27)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (32)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (27)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (32)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (27)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (32)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (27)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (32)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (27)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (32)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (27)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (32)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (27)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (32)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (27)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (32)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (27)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (32)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (27)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (32)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (28)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (32)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (28)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (32)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (28)	15:52			15:50
31	05:22		06:31				07:49		10:31 (32)				09:28
	22:03		20:42				16:51	99	14:52 (28)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:39 (32)	07:35		09:25 (19)	07:07		05:44	04:40
	15:53			16:56	88	15:12 (28)	18:05	9	09:34 (19)	20:17		21:26	22:31
2	09:27			08:43		11:39 (32)	07:33			07:04		05:41	04:38
	15:54			16:58	88	15:13 (28)	18:07			20:19		21:28	22:32
3	09:27			08:41		11:40 (32)	07:30			07:01		05:39	04:37
	15:55			17:01	85	15:12 (28)	18:09			20:21		21:31	22:34
4	09:27			08:39		11:39 (32)	07:27			06:58		05:36	04:36
	15:57			17:03	83	15:11 (28)	18:12			20:24		21:33	22:35
5	09:26		12:20 (24)	08:37		11:39 (32)	07:24			06:55		05:34	04:35
	15:58	1	12:21 (24)	17:06	80	15:09 (28)	18:14			20:26		21:35	22:37
6	09:25		12:19 (24)	08:34		11:40 (32)	07:21			06:52		05:31	04:34
	16:00	5	12:24 (24)	17:08	74	15:08 (28)	18:17			20:28		21:37	22:38
7	09:24		12:17 (24)	08:32		11:40 (32)	07:19			06:50		05:29	04:33
	16:02	11	12:28 (24)	17:11	62	14:11 (27)	18:19			20:30		21:40	22:39
8	09:24		12:17 (24)	08:30		11:41 (32)	07:16			06:47		05:26	04:32
	16:03	13	12:30 (24)	17:13	61	14:11 (27)	18:21			20:33		21:42	22:40
9	09:23		12:18 (24)	08:27		11:42 (32)	07:13			06:44		05:24	04:31
	16:05	16	12:34 (24)	17:16	57	14:10 (27)	18:24			20:35		21:44	22:42
10	09:22		11:06 (37)	08:25		11:42 (32)	07:10			06:41		05:22	04:30
	16:07	25	12:39 (24)	17:18	54	14:09 (27)	18:26			20:37		21:46	22:43
11	09:21		11:02 (37)	08:23		11:44 (32)	07:07			06:38		05:19	04:29
	16:09	31	12:41 (24)	17:21	48	14:08 (27)	18:28			20:40		21:49	22:44
12	09:20		11:01 (37)	08:20		11:45 (32)	07:04			06:35		05:17	04:29
	16:11	40	12:41 (24)	17:23	42	14:06 (27)	18:31			20:42		21:51	22:45
13	09:18		11:02 (37)	08:18		11:46 (32)	07:02			06:32		05:15	04:28
	16:13	42	12:42 (24)	17:26	32	14:02 (27)	18:33			20:44		21:53	22:46
14	09:17		11:02 (37)	08:15		11:49 (32)	06:59			06:30		05:13	04:28
	16:15	42	12:42 (24)	17:28	18	12:07 (32)	18:35			20:47		21:55	22:47
15	09:16		11:02 (37)	08:13		11:52 (32)	06:56			06:27		05:10	04:27
	16:17	43	12:42 (24)	17:31	12	12:04 (32)	18:38			20:49		21:58	22:47
16	09:15		11:02 (37)	08:10		09:29 (19)	06:53			06:24		05:08	04:27
	16:19	43	12:42 (24)	17:33	5	09:34 (19)	18:40			20:51		22:00	22:48
17	09:13		11:02 (37)	08:07		09:25 (19)	06:50			06:21		05:06	04:27
	16:21	45	12:42 (24)	17:36	12	09:37 (19)	18:42			20:53		22:02	22:49
18	09:12		11:03 (37)	08:05		09:24 (19)	06:47			06:19		05:04	04:27
	16:23	57	13:55 (27)	17:38	16	09:40 (19)	18:45			20:56		22:04	22:49
19	09:10		11:03 (37)	08:02		09:23 (19)	06:44			06:16		05:02	04:27
	16:25	70	13:59 (27)	17:40	17	09:40 (19)	18:47			20:58		22:06	22:50
20	09:08		11:04 (37)	08:00		09:22 (19)	06:41			06:13		05:00	04:27
	16:28	75	14:01 (27)	17:43	19	09:41 (19)	18:49			21:00		22:08	22:50
21	09:07		11:04 (37)	07:57		09:21 (19)	06:39			06:10		04:58	04:27
	16:30	80	14:03 (27)	17:45	20	09:41 (19)	18:51			21:03		22:10	22:50
22	09:05		11:05 (37)	07:54		09:20 (19)	06:36			06:08		04:56	04:27
	16:32	82	14:05 (27)	17:48	21	09:41 (19)	18:54			21:05		22:12	22:50
23	09:03		11:05 (37)	07:52		09:21 (19)	06:33			06:05		04:54	04:27
	16:34	83	14:05 (27)	17:50	21	09:42 (19)	18:56			21:07		22:14	22:51
24	09:02		11:06 (37)	07:49		09:21 (19)	06:30			06:02		04:52	04:27
	16:37	84	14:07 (27)	17:53	20	09:41 (19)	18:58			21:10		22:16	22:51
25	09:00		11:07 (37)	07:46		09:21 (19)	06:27			05:59		04:51	04:28
	16:39	84	14:52 (28)	17:55	20	09:41 (19)	19:01			21:12		22:18	22:51
26	08:58		11:09 (37)	07:44		09:21 (19)	06:24			05:57		04:49	04:28
	16:41	79	14:57 (28)	17:57	19	09:40 (19)	19:03			21:14		22:20	22:50
27	08:56		11:10 (37)	07:41		09:22 (19)	06:21			05:54		04:47	04:29
	16:44	86	15:12 (28)	18:00	16	09:38 (19)	19:05			21:17		22:22	22:50
28	08:54		11:13 (37)	07:38		09:23 (19)	06:18			05:52		04:46	04:30
	16:46	90	15:13 (28)	18:02	14	09:37 (19)	19:08			21:19		22:24	22:50
29	08:52		11:40 (32)				07:15			05:49		04:44	04:30
	16:49	88	15:14 (28)				20:10			21:21		22:25	22:50
30	08:50		11:39 (32)				07:12			05:46		04:42	04:31
	16:51	88	15:13 (28)				20:12			21:24		22:27	22:49
31	08:48		11:39 (32)				07:10					04:41	
	16:54	88	15:13 (28)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		1491			1104			9					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (32)	09:00		10:44 (37)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (27)	15:51	31	12:23 (24)
2	04:33	05:26	06:35	07:42			07:54		11:11 (32)	09:02		10:48 (37)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (27)	15:50	27	12:23 (24)
3	04:34	05:28	06:37	07:44			07:56		11:11 (32)	09:03		12:01 (24)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (27)	15:49	17	12:18 (24)
4	04:35	05:31	06:40	07:46			07:59		11:10 (32)	09:05		12:01 (24)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (27)	15:48	13	12:14 (24)
5	04:36	05:33	06:42	07:48			08:01		11:10 (32)	09:07		12:02 (24)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (28)	15:47	11	12:13 (24)
6	04:37	05:35	06:44	07:51			08:03		11:10 (32)	09:09		12:05 (24)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (28)	15:46	5	12:10 (24)
7	04:39	05:37	06:46	07:53			08:06		11:09 (32)	09:10		12:07 (24)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (28)	15:45	2	12:09 (24)
8	04:40	05:39	06:49	07:55			08:08		11:09 (32)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (28)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (28)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (28)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (28)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (19)	08:18		11:11 (32)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (19)	16:23	88	14:45 (28)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (19)	08:20		11:12 (32)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (19)	16:21	86	14:45 (28)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (19)	08:22		10:45 (37)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (19)	16:19	89	14:45 (28)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (19)	08:25		10:42 (37)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (19)	16:17	87	14:45 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (19)	08:27		10:41 (37)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (19)	16:15	81	14:30 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (19)	08:30		10:41 (37)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (19)	16:13	83	14:25 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (19)	08:32		10:40 (37)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (19)	16:11	84	13:41 (27)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (19)	08:34		10:40 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (19)	16:09	83	13:40 (27)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (19)	08:36		10:39 (37)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (19)	16:08	82	13:39 (27)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (19)	08:39		10:39 (37)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (19)	16:06	80	13:38 (27)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		10:40 (37)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (19)	16:04	75	13:37 (27)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		10:39 (37)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (19)	16:02	69	13:35 (27)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (19)	08:45		10:40 (37)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (19)	16:01	58	13:32 (27)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (19)	08:47		10:40 (37)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (19)	15:59	45	12:20 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		10:41 (37)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (19)	15:58	43	12:21 (24)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (32)	08:52		10:41 (37)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (32)	15:56	43	12:21 (24)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (32)	08:54		10:42 (37)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (32)	15:55	42	12:22 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (32)	08:56		10:42 (37)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (27)	15:54	42	12:22 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (32)	08:58		10:42 (37)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (27)	15:52	40	12:22 (24)	15:50		
31	05:22	06:31		07:49		11:13 (32)				09:28		
	22:03	20:42		16:51	50	13:38 (27)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:12 (37)	08:46		11:58 (32)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (37)	16:56	88	15:21 (28)	18:05	20:17	21:26	22:30
2	09:27		11:11 (37)	08:43		11:59 (32)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (37)	16:58	85	15:21 (28)	18:07	20:19	21:28	22:32
3	09:27		11:11 (37)	08:41		12:00 (32)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (24)	17:01	84	15:21 (28)	18:09	20:21	21:31	22:34
4	09:27		11:11 (37)	08:39		11:59 (32)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (24)	17:03	82	15:20 (28)	18:12	20:24	21:33	22:35
5	09:26		11:11 (37)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (24)	17:06	81	15:19 (28)	18:14	20:26	21:35	22:37
6	09:25		11:11 (37)	08:34		12:00 (32)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (24)	17:08	75	15:18 (28)	18:17	20:28	21:37	22:38
7	09:24		11:11 (37)	08:32		12:01 (32)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (24)	17:11	64	15:14 (28)	18:19	20:30	21:40	22:39
8	09:24		11:11 (37)	08:30		12:02 (32)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (24)	17:13	57	14:25 (27)	18:21	20:33	21:42	22:40
9	09:23		11:12 (37)	08:27		12:03 (32)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (24)	17:16	53	14:24 (27)	18:24	20:35	21:44	22:42
10	09:22		11:11 (37)	08:25		12:04 (32)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (24)	17:18	48	14:23 (27)	18:26	20:37	21:46	22:43
11	09:21		11:12 (37)	08:23		12:06 (32)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (24)	17:21	43	14:22 (27)	18:28	20:40	21:49	22:44
12	09:20		11:12 (37)	08:20		12:07 (32)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (24)	17:23	35	14:20 (27)	18:31	20:42	21:51	22:45
13	09:18		11:12 (37)	08:18		12:10 (32)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (24)	17:26	22	14:16 (27)	18:33	20:44	21:53	22:46
14	09:17		11:12 (37)	08:15		09:38 (19)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (24)	17:28	10	12:19 (32)	18:35	20:47	21:55	22:47
15	09:16		11:12 (37)	08:13		09:35 (19)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (24)	17:31	12	09:47 (19)	18:38	20:49	21:58	22:47
16	09:15		11:12 (37)	08:10		09:33 (19)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (24)	17:33	16	09:49 (19)	18:40	20:51	22:00	22:48
17	09:13		11:13 (37)	08:07		09:32 (19)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (24)	17:36	18	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:14 (37)	08:05		09:31 (19)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (24)	17:38	20	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:15 (37)	08:02		09:31 (19)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (24)	17:40	20	09:51 (19)	18:47	20:58	22:06	22:50
20	09:08		11:15 (37)	08:00		09:30 (19)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (27)	17:43	21	09:51 (19)	18:49	21:00	22:08	22:50
21	09:07		11:16 (37)	07:57		09:30 (19)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (27)	17:45	21	09:51 (19)	18:51	21:03	22:10	22:50
22	09:05		11:16 (37)	07:54		09:29 (19)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (27)	17:48	22	09:51 (19)	18:54	21:05	22:12	22:50
23	09:03		11:17 (37)	07:52		09:30 (19)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (27)	17:50	21	09:51 (19)	18:56	21:07	22:14	22:51
24	09:02		11:19 (37)	07:49		09:31 (19)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (27)	17:53	19	09:50 (19)	18:58	21:10	22:16	22:51
25	09:00		11:20 (37)	07:46		09:31 (19)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (27)	17:55	18	09:49 (19)	19:01	21:12	22:18	22:51
26	08:58		11:23 (37)	07:44		09:32 (19)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (28)	17:57	15	09:47 (19)	19:03	21:14	22:20	22:50
27	08:56		11:58 (32)	07:41		09:34 (19)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (28)	18:00	11	09:45 (19)	19:05	21:17	22:22	22:50
28	08:54		11:58 (32)	07:38		09:38 (19)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (28)	18:02	2	09:40 (19)	19:07	21:19	22:24	22:50
29	08:52		11:59 (32)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (28)				20:10	21:21	22:25	22:50
30	08:50		11:58 (32)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (28)				20:12	21:24	22:27	22:49
31	08:48		11:58 (32)				07:10		04:41	
	16:54	88	15:22 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:33 (32)	09:00		10:54 (37)
	22:49	22:01	20:40	19:13			16:49	50	13:53 (27)	15:51	43	12:35 (24)
2	04:33	05:26	06:35	07:42			07:54		11:32 (32)	09:02		10:54 (37)
	22:48	21:58	20:37	19:10			16:46	54	13:54 (27)	15:50	42	12:35 (24)
3	04:34	05:28	06:37	07:44			07:56		11:32 (32)	09:03		10:55 (37)
	22:47	21:56	20:34	19:07			16:44	57	13:55 (27)	15:49	40	12:35 (24)
4	04:35	05:31	06:40	07:46			07:59		11:30 (32)	09:05		10:56 (37)
	22:47	21:54	20:31	19:04			16:41	68	14:45 (28)	15:48	39	12:35 (24)
5	04:36	05:33	06:42	07:48			08:01		11:30 (32)	09:07		10:56 (37)
	22:46	21:51	20:28	19:02			16:39	76	14:48 (28)	15:47	39	12:36 (24)
6	04:37	05:35	06:44	07:51			08:03		11:30 (32)	09:09		10:57 (37)
	22:45	21:49	20:25	18:59			16:37	78	14:49 (28)	15:46	30	12:36 (24)
7	04:39	05:37	06:46	07:53			08:06		11:29 (32)	09:10		10:58 (37)
	22:44	21:47	20:22	18:56			16:34	83	14:50 (28)	15:45	29	12:36 (24)
8	04:40	05:39	06:49	07:55			08:08		11:29 (32)	09:12		10:59 (37)
	22:43	21:44	20:20	18:53			16:32	86	14:51 (28)	15:45	15	12:33 (24)
9	04:41	05:42	06:51	07:57			08:11		11:29 (32)	09:13		11:00 (37)
	22:42	21:42	20:17	18:50			16:30	87	14:52 (28)	15:44	12	12:34 (24)
10	04:43	05:44	06:53	08:00			08:13		11:30 (32)	09:15		11:00 (37)
	22:41	21:39	20:14	18:47			16:28	88	14:53 (28)	15:43	4	12:31 (24)
11	04:44	05:46	06:55	08:02			08:15		11:29 (32)	09:16		11:02 (37)
	22:39	21:37	20:11	18:45			16:25	87	14:52 (28)	15:43	2	11:04 (37)
12	04:46	05:48	06:57	08:04			08:18		11:30 (32)	09:18		11:02 (37)
	22:38	21:34	20:08	18:42			16:23	87	14:53 (28)	15:43	2	11:04 (37)
13	04:47	05:51	07:00	08:07			08:20		11:30 (32)	09:19		
	22:37	21:31	20:05	18:39			16:21	83	14:50 (28)	15:42		
14	04:49	05:53	07:02	08:09		10:08 (19)	08:22		11:30 (32)	09:20		
	22:35	21:29	20:02	18:36	8	10:16 (19)	16:19	74	14:42 (28)	15:42		
15	04:51	05:55	07:04	08:11		10:06 (19)	08:25		11:31 (32)	09:21		
	22:34	21:26	19:59	18:33	13	10:19 (19)	16:17	68	14:38 (28)	15:42		
16	04:52	05:57	07:06	08:13		10:04 (19)	08:27		10:56 (37)	09:22		
	22:32	21:24	19:56	18:31	16	10:20 (19)	16:15	69	14:36 (28)	15:42		
17	04:54	06:00	07:08	08:16		10:03 (19)	08:30		10:54 (37)	09:23		
	22:30	21:21	19:54	18:28	18	10:21 (19)	16:13	73	13:55 (27)	15:42		
18	04:56	06:02	07:11	08:18		10:02 (19)	08:32		10:52 (37)	09:24		
	22:29	21:18	19:51	18:25	20	10:22 (19)	16:11	78	13:54 (27)	15:42		
19	04:58	06:04	07:13	08:20		10:01 (19)	08:34		10:52 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:22 (19)	16:09	81	13:54 (27)	15:42		
20	05:00	06:06	07:15	08:23		10:01 (19)	08:36		10:51 (37)	09:26		
	22:25	21:13	19:45	18:20	21	10:22 (19)	16:08	80	13:52 (27)	15:43		
21	05:01	06:08	07:17	08:25		10:01 (19)	08:39		10:51 (37)	09:26		
	22:24	21:10	19:42	18:17	21	10:22 (19)	16:06	78	13:51 (27)	15:43		
22	05:03	06:11	07:19	08:27		10:00 (19)	08:41		10:51 (37)	09:27		
	22:22	21:08	19:39	18:14	21	10:21 (19)	16:04	75	13:50 (27)	15:43		
23	05:05	06:13	07:22	08:30		10:01 (19)	08:43		10:51 (37)	09:27		
	22:20	21:05	19:36	18:12	20	10:21 (19)	16:02	64	12:31 (24)	15:44		
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		10:51 (37)	09:28		
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	63	12:32 (24)	15:44		
25	05:09	06:17	07:26	07:35		09:02 (19)	08:47		10:51 (37)	09:28		
	22:16	20:59	19:30	17:06	18	09:20 (19)	15:59	60	12:32 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:03 (19)	08:50		10:52 (37)	09:28		
	22:14	20:57	19:27	17:04	15	09:18 (19)	15:58	56	12:33 (24)	15:46		
27	05:13	06:22	07:30	07:39		09:05 (19)	08:52		10:51 (37)	09:28		
	22:12	20:54	19:25	17:01	11	09:16 (19)	15:56	53	12:33 (24)	15:47		
28	05:16	06:24	07:33	07:42		09:08 (19)	08:54		10:52 (37)	09:28		
	22:10	20:51	19:22	16:59	13	11:51 (32)	15:55	44	12:34 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:38 (32)	08:56		10:53 (37)	09:28		
	22:07	20:48	19:19	16:56	26	13:46 (27)	15:54	43	12:34 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:36 (32)	08:58		10:53 (37)	09:28		
	22:05	20:45	19:16	16:54	37	13:50 (27)	15:52	43	12:34 (24)	15:50		
31	05:22	06:31		07:49		11:35 (32)				09:28		11:11 (37)
	22:03	20:42		16:51	44	13:52 (27)				15:51	1	11:12 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					362			2086			298	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:23 (37)	08:46	12:23 (32)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (37)	16:56	82	15:30 (28)	18:05	20:17	21:26	22:30
2	09:27		11:23 (37)	08:43	12:24 (32)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (37)	16:58	86	15:34 (28)	18:07	20:19	21:28	22:32
3	09:27		11:23 (37)	08:41	12:25 (32)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (37)	17:01	84	15:34 (28)	18:09	20:21	21:31	22:34
4	09:26		11:23 (37)	08:39	12:25 (32)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (24)	17:03	85	15:34 (28)	18:12	20:24	21:33	22:35
5	09:26		11:23 (37)	08:37	12:25 (32)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (24)	17:06	82	15:33 (28)	18:14	20:26	21:35	22:37
6	09:25		11:24 (37)	08:34	12:26 (32)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (24)	17:08	79	15:33 (28)	18:17	20:28	21:37	22:38
7	09:24		11:24 (37)	08:32	12:26 (32)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (24)	17:11	74	15:31 (28)	18:19	20:30	21:40	22:39
8	09:24		11:24 (37)	08:30	12:28 (32)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (24)	17:13	68	15:30 (28)	18:21	20:33	21:42	22:40
9	09:23		11:24 (37)	08:27	12:28 (32)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (24)	17:16	60	15:26 (28)	18:24	20:35	21:44	22:42
10	09:22		11:25 (37)	08:25	12:29 (32)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (24)	17:18	51	14:44 (27)	18:26	20:37	21:46	22:43
11	09:21		11:25 (37)	08:23	12:32 (32)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (24)	17:21	45	14:43 (27)	18:28	20:40	21:49	22:44
12	09:20		11:25 (37)	08:20	09:49 (19)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (24)	17:23	45	14:42 (27)	18:31	20:42	21:51	22:45
13	09:18		11:26 (37)	08:18	09:45 (19)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (24)	17:26	43	14:40 (27)	18:33	20:44	21:53	22:46
14	09:17		11:26 (37)	08:15	09:44 (19)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (24)	17:28	27	14:38 (27)	18:35	20:47	21:55	22:47
15	09:16		11:26 (37)	08:13	09:43 (19)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (24)	17:31	18	10:01 (19)	18:38	20:49	21:58	22:47
16	09:15		11:27 (37)	08:10	09:42 (19)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (24)	17:33	20	10:02 (19)	18:40	20:51	22:00	22:48
17	09:13		11:27 (37)	08:07	09:41 (19)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (24)	17:35	21	10:02 (19)	18:42	20:53	22:02	22:49
18	09:12		11:28 (37)	08:05	09:41 (19)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (24)	17:38	22	10:03 (19)	18:45	20:56	22:04	22:49
19	09:10		11:29 (37)	08:02	09:40 (19)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (24)	17:40	23	10:03 (19)	18:47	20:58	22:06	22:50
20	09:08		11:30 (37)	08:00	09:40 (19)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (24)	17:43	23	10:03 (19)	18:49	21:00	22:08	22:50
21	09:07		11:31 (37)	07:57	09:40 (19)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (24)	17:45	22	10:02 (19)	18:51	21:03	22:10	22:50
22	09:05		11:31 (37)	07:54	09:40 (19)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (24)	17:48	22	10:02 (19)	18:54	21:05	22:12	22:50
23	09:03		11:33 (37)	07:52	09:42 (19)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (27)	17:50	20	10:02 (19)	18:56	21:07	22:14	22:50
24	09:02		11:35 (37)	07:49	09:42 (19)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (27)	17:53	18	10:00 (19)	18:58	21:10	22:16	22:51
25	09:00		11:39 (37)	07:46	09:43 (19)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (27)	17:55	16	09:59 (19)	19:01	21:12	22:18	22:50
26	08:58		12:24 (32)	07:44	09:45 (19)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (27)	17:57	11	09:56 (19)	19:03	21:14	22:20	22:50
27	08:56		12:23 (32)	07:41	09:49 (19)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (27)	18:00	2	09:51 (19)	19:05	21:17	22:22	22:50
28	08:54		12:23 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (28)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (32)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (28)				20:10	21:21	22:25	22:50
30	08:50		12:23 (32)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (28)				20:12	21:24	22:27	22:49
31	08:48		12:24 (32)				07:10		04:41	
	16:53	77	15:26 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

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The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:59 (32)	09:00		11:07 (37)
	22:49	22:01	20:40	19:13			16:49	51	14:13 (27)	15:51	43	12:51 (24)
2	04:33	05:26	06:35	07:42			07:54		11:58 (32)	09:02		11:08 (37)
	22:48	21:58	20:37	19:10			16:46	61	14:57 (28)	15:50	42	12:51 (24)
3	04:34	05:28	06:37	07:44			07:56		11:57 (32)	09:03		11:08 (37)
	22:47	21:56	20:34	19:07			16:44	71	15:00 (28)	15:49	42	12:51 (24)
4	04:35	05:31	06:40	07:46			07:59		11:56 (32)	09:05		11:09 (37)
	22:47	21:54	20:31	19:04			16:41	76	15:01 (28)	15:48	41	12:52 (24)
5	04:36	05:33	06:42	07:48			08:01		11:55 (32)	09:07		11:09 (37)
	22:46	21:51	20:28	19:02			16:39	80	15:02 (28)	15:47	35	12:52 (24)
6	04:37	05:35	06:44	07:51			08:03		11:55 (32)	09:09		11:10 (37)
	22:45	21:49	20:25	18:59			16:37	82	15:03 (28)	15:46	31	12:52 (24)
7	04:38	05:37	06:46	07:53			08:06		11:54 (32)	09:10		11:11 (37)
	22:44	21:47	20:22	18:56			16:34	84	15:03 (28)	15:45	24	12:40 (24)
8	04:40	05:39	06:49	07:55			08:08		11:54 (32)	09:12		11:11 (37)
	22:43	21:44	20:20	18:53			16:32	87	15:04 (28)	15:45	24	12:41 (24)
9	04:41	05:42	06:51	07:57			08:11		11:55 (32)	09:13		11:12 (37)
	22:42	21:42	20:17	18:50			16:30	87	15:05 (28)	15:44	20	12:37 (24)
10	04:43	05:44	06:53	08:00			08:13		11:55 (32)	09:15		11:12 (37)
	22:40	21:39	20:14	18:47			16:28	81	15:01 (28)	15:43	17	11:29 (37)
11	04:44	05:46	06:55	08:02			08:15		11:54 (32)	09:16		11:14 (37)
	22:39	21:37	20:11	18:45			16:25	78	14:57 (28)	15:43	16	11:30 (37)
12	04:46	05:48	06:57	08:04			08:18		11:55 (32)	09:18		11:14 (37)
	22:38	21:34	20:08	18:42			16:23	74	14:55 (28)	15:43	15	11:29 (37)
13	04:47	05:51	07:00	08:07			08:20		11:56 (32)	09:19		11:15 (37)
	22:37	21:31	20:05	18:39			16:21	67	14:51 (28)	15:42	15	11:30 (37)
14	04:49	05:53	07:02	08:09			08:22		11:55 (32)	09:20		11:16 (37)
	22:35	21:29	20:02	18:36			16:19	62	14:47 (28)	15:42	14	11:30 (37)
15	04:51	05:55	07:04	08:11		10:19 (19)	08:25		11:56 (32)	09:21		11:16 (37)
	22:34	21:26	19:59	18:33	8	10:27 (19)	16:17	57	14:13 (27)	15:42	14	11:30 (37)
16	04:52	05:57	07:06	08:13		10:16 (19)	08:27		11:57 (32)	09:22		11:17 (37)
	22:32	21:24	19:56	18:31	13	10:29 (19)	16:15	54	14:12 (27)	15:42	12	11:29 (37)
17	04:54	06:00	07:08	08:16		10:15 (19)	08:29		11:12 (37)	09:23		11:17 (37)
	22:30	21:21	19:54	18:28	16	10:31 (19)	16:13	58	14:11 (27)	15:42	12	11:29 (37)
18	04:56	06:02	07:11	08:18		10:13 (19)	08:32		11:09 (37)	09:24		11:18 (37)
	22:29	21:18	19:51	18:25	19	10:32 (19)	16:11	67	14:10 (27)	15:42	11	11:29 (37)
19	04:58	06:04	07:13	08:20		10:12 (19)	08:34		11:08 (37)	09:25		11:19 (37)
	22:27	21:16	19:48	18:22	21	10:33 (19)	16:09	66	14:08 (27)	15:42	11	11:30 (37)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:06 (37)	09:26		11:20 (37)
	22:25	21:13	19:45	18:20	22	10:33 (19)	16:08	60	12:44 (24)	15:43	10	11:30 (37)
21	05:01	06:08	07:17	08:25		10:11 (19)	08:39		11:06 (37)	09:26		11:20 (37)
	22:24	21:10	19:42	18:17	23	10:34 (19)	16:06	62	12:46 (24)	15:43	10	11:30 (37)
22	05:03	06:11	07:19	08:27		10:10 (19)	08:41		11:06 (37)	09:27		11:21 (37)
	22:22	21:08	19:39	18:14	23	10:33 (19)	16:04	63	12:47 (24)	15:43	10	11:31 (37)
23	05:05	06:13	07:22	08:30		10:11 (19)	08:43		11:05 (37)	09:27		11:21 (37)
	22:20	21:05	19:36	18:12	22	10:33 (19)	16:02	63	12:47 (24)	15:44	10	11:31 (37)
24	05:07	06:15	07:24	08:32		10:10 (19)	08:45		11:05 (37)	09:28		11:22 (37)
	22:18	21:02	19:33	18:09	22	10:32 (19)	16:01	64	12:48 (24)	15:44	10	11:32 (37)
25	05:09	06:17	07:26	07:35		09:11 (19)	08:47		11:05 (37)	09:28		11:22 (37)
	22:16	20:59	19:30	17:06	21	09:32 (19)	15:59	63	12:48 (24)	15:45	11	11:33 (37)
26	05:11	06:20	07:28	07:37		09:11 (19)	08:50		11:06 (37)	09:28		11:22 (37)
	22:14	20:56	19:27	17:04	20	09:31 (19)	15:58	59	12:49 (24)	15:46	12	11:34 (37)
27	05:13	06:22	07:30	07:39		09:12 (19)	08:52		11:05 (37)	09:28		11:23 (37)
	22:12	20:54	19:25	17:01	18	09:30 (19)	15:56	57	12:49 (24)	15:47	11	11:34 (37)
28	05:16	06:24	07:33	07:42		09:14 (19)	08:54		11:06 (37)	09:28		11:23 (37)
	22:10	20:51	19:22	16:59	28	14:08 (27)	15:55	53	12:50 (24)	15:48	13	11:36 (37)
29	05:18	06:26	07:35	07:44		09:15 (19)	08:56		11:06 (37)	09:28		11:22 (37)
	22:07	20:48	19:19	16:56	44	14:10 (27)	15:54	44	12:50 (24)	15:49	14	11:36 (37)
30	05:20	06:29	07:37	07:47		09:19 (19)	08:58		11:06 (37)	09:28		11:23 (37)
	22:05	20:45	19:16	16:54	44	14:11 (27)	15:52	43	12:50 (24)	15:50	15	11:38 (37)
31	05:22	06:31		07:49		12:01 (32)				09:28		11:23 (37)
	22:03	20:42		16:51	46	14:13 (27)				15:51	15	11:38 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					410			1974			580	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		08:46		11:27 (32)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (28)	18:05	20:17	21:26	22:31
2	09:27	12:04 (24)	08:43		11:27 (32)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (24)	16:58	60	13:50 (27)	18:07	20:19	21:28	22:32
3	09:27	12:04 (24)	08:41		11:28 (32)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (24)	17:01	58	13:50 (27)	18:09	20:21	21:31	22:34
4	09:27	12:04 (24)	08:39		11:28 (32)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (24)	17:03	54	13:48 (27)	18:12	20:24	21:33	22:35
5	09:26	12:04 (24)	08:37		11:28 (32)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (24)	17:06	52	13:47 (27)	18:14	20:26	21:35	22:37
6	09:25	12:05 (24)	08:34		11:29 (32)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (24)	17:08	49	13:47 (27)	18:17	20:28	21:37	22:38
7	09:24	12:05 (24)	08:32		11:29 (32)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (24)	17:11	43	13:44 (27)	18:19	20:30	21:40	22:39
8	09:24	12:05 (24)	08:30		11:31 (32)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (24)	17:13	35	13:42 (27)	18:21	20:33	21:42	22:40
9	09:23	12:06 (24)	08:27		11:32 (32)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (24)	17:16	22	11:54 (32)	18:24	20:35	21:44	22:42
10	09:22	12:06 (24)	08:25		11:34 (32)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (24)	17:18	18	11:52 (32)	18:26	20:37	21:46	22:43
11	09:21	12:07 (24)	08:23		11:37 (32)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (24)	17:21	14	11:51 (32)	18:28	20:40	21:49	22:44
12	09:20	12:07 (24)	08:20		11:41 (32)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (27)	17:23	4	11:45 (32)	18:31	20:42	21:51	22:45
13	09:18	12:08 (24)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (27)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (24)	08:15		09:30 (19)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (27)	17:28	5	09:35 (19)	18:35	20:47	21:55	22:47
15	09:16	11:34 (32)	08:13		09:27 (19)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (27)	17:31	11	09:38 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10		09:25 (19)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (27)	17:33	14	09:39 (19)	18:40	20:51	22:00	22:48
17	09:13	11:31 (32)	08:07		09:23 (19)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (27)	17:36	17	09:40 (19)	18:42	20:53	22:02	22:49
18	09:12	11:30 (32)	08:05		09:23 (19)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (28)	17:38	18	09:41 (19)	18:45	20:56	22:04	22:49
19	09:10	11:29 (32)	08:02		09:22 (19)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (28)	17:40	19	09:41 (19)	18:47	20:58	22:06	22:50
20	09:09	11:28 (32)	08:00		09:22 (19)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (28)	17:43	19	09:41 (19)	18:49	21:00	22:08	22:50
21	09:07	11:28 (32)	07:57		09:22 (19)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (28)	17:45	19	09:41 (19)	18:51	21:03	22:10	22:50
22	09:05	11:28 (32)	07:54		09:22 (19)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (28)	17:48	19	09:41 (19)	18:54	21:05	22:12	22:50
23	09:03	11:26 (32)	07:52		09:23 (19)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (28)	17:50	18	09:41 (19)	18:56	21:07	22:14	22:51
24	09:02	11:26 (32)	07:49		09:23 (19)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (28)	17:53	17	09:40 (19)	18:58	21:10	22:16	22:51
25	09:00	11:26 (32)	07:46		09:24 (19)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (28)	17:55	14	09:38 (19)	19:01	21:12	22:18	22:51
26	08:58	11:26 (32)	07:44		09:25 (19)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (28)	17:57	11	09:36 (19)	19:03	21:14	22:20	22:50
27	08:56	11:25 (32)	07:41		09:30 (19)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (28)	18:00	1	09:31 (19)	19:05	21:17	22:22	22:50
28	08:54	11:26 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (32)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (28)				20:10	21:21	22:25	22:50
30	08:50	11:26 (32)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (28)				20:12	21:24	22:27	22:49
31	08:48	11:26 (32)				07:10		04:41	
	16:54	76 14:52 (28)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		11:03 (32)	09:00		11:49 (24)
	22:49	22:01	20:40	19:13		16:49	19	11:22 (32)	15:51	22	12:11 (24)
2	04:33	05:26	06:35	07:42		07:54		11:01 (32)	09:02		11:49 (24)
	22:48	21:59	20:37	19:10		16:46	23	11:24 (32)	15:50	22	12:11 (24)
3	04:34	05:28	06:37	07:44		07:56		11:01 (32)	09:03		11:49 (24)
	22:47	21:56	20:34	19:07		16:44	36	13:12 (27)	15:49	22	12:11 (24)
4	04:35	05:31	06:40	07:46		07:59		10:59 (32)	09:05		11:50 (24)
	22:47	21:54	20:31	19:04		16:41	43	13:14 (27)	15:48	21	12:11 (24)
5	04:36	05:33	06:42	07:48		08:01		10:59 (32)	09:07		11:50 (24)
	22:46	21:51	20:28	19:02		16:39	48	13:16 (27)	15:47	21	12:11 (24)
6	04:37	05:35	06:44	07:51		08:03		10:58 (32)	09:09		11:51 (24)
	22:45	21:49	20:25	18:59		16:37	53	13:18 (27)	15:46	16	12:07 (24)
7	04:39	05:37	06:46	07:53		08:06		10:57 (32)	09:10		11:51 (24)
	22:44	21:47	20:23	18:56		16:34	55	13:18 (27)	15:45	17	12:08 (24)
8	04:40	05:39	06:49	07:55		08:08		10:57 (32)	09:12		11:52 (24)
	22:43	21:44	20:20	18:53		16:32	58	13:19 (27)	15:45	8	12:00 (24)
9	04:41	05:42	06:51	07:57		08:11		10:57 (32)	09:13		11:53 (24)
	22:42	21:42	20:17	18:50		16:30	63	14:18 (28)	15:44	4	11:57 (24)
10	04:43	05:44	06:53	08:00		08:13		10:58 (32)	09:15		11:53 (24)
	22:41	21:39	20:14	18:47		16:28	71	14:22 (28)	15:43	1	11:54 (24)
11	04:44	05:46	06:55	08:02		08:15		10:57 (32)	09:16		
	22:39	21:37	20:11	18:45		16:25	76	14:23 (28)	15:43		
12	04:46	05:48	06:57	08:04		08:18		10:57 (32)	09:18		
	22:38	21:34	20:08	18:42		16:23	80	14:25 (28)	15:43		
13	04:47	05:51	07:00	08:07		08:20		10:58 (32)	09:19		
	22:37	21:32	20:05	18:39		16:21	81	14:26 (28)	15:42		
14	04:49	05:53	07:02	08:09		08:22		10:58 (32)	09:20		
	22:35	21:29	20:02	18:36		16:19	82	14:26 (28)	15:42		
15	04:51	05:55	07:04	08:11	10:00 (19)	08:25		10:58 (32)	09:21		
	22:34	21:26	19:59	18:33	7 10:07 (19)	16:17	83	14:27 (28)	15:42		
16	04:52	05:57	07:06	08:13	09:57 (19)	08:27		10:59 (32)	09:22		
	22:32	21:24	19:56	18:31	12 10:09 (19)	16:15	83	14:28 (28)	15:42		
17	04:54	06:00	07:08	08:16	09:56 (19)	08:30		11:00 (32)	09:23		
	22:31	21:21	19:54	18:28	15 10:11 (19)	16:13	83	14:29 (28)	15:42		
18	04:56	06:02	07:11	08:18	09:54 (19)	08:32		11:00 (32)	09:24		
	22:29	21:18	19:51	18:25	17 10:11 (19)	16:11	81	14:29 (28)	15:42		
19	04:58	06:04	07:13	08:20	09:54 (19)	08:34		11:01 (32)	09:25		
	22:27	21:16	19:48	18:22	18 10:12 (19)	16:09	87	14:29 (28)	15:42		
20	05:00	06:06	07:15	08:23	09:53 (19)	08:36		11:02 (32)	09:26		
	22:25	21:13	19:45	18:20	19 10:12 (19)	16:08	88	14:29 (28)	15:43		
21	05:01	06:08	07:17	08:25	09:53 (19)	08:39		11:03 (32)	09:26		
	22:24	21:10	19:42	18:17	19 10:12 (19)	16:06	88	14:29 (28)	15:43		
22	05:03	06:11	07:19	08:27	09:52 (19)	08:41		11:04 (32)	09:27		
	22:22	21:08	19:39	18:14	20 10:12 (19)	16:04	88	14:30 (28)	15:43		
23	05:05	06:13	07:22	08:30	09:53 (19)	08:43		11:05 (32)	09:27		
	22:20	21:05	19:36	18:12	19 10:12 (19)	16:02	84	14:29 (28)	15:44		
24	05:07	06:15	07:24	08:32	09:53 (19)	08:45		11:07 (32)	09:28		
	22:18	21:02	19:33	18:09	17 10:10 (19)	16:01	72	14:30 (28)	15:44		
25	05:09	06:17	07:26	07:35	08:54 (19)	08:47		11:08 (32)	09:28		
	22:16	20:59	19:30	17:06	16 09:10 (19)	15:59	58	13:20 (27)	15:45		
26	05:11	06:20	07:28	07:37	08:55 (19)	08:50		11:11 (32)	09:28		
	22:14	20:57	19:27	17:04	14 09:09 (19)	15:58	53	13:20 (27)	15:46		
27	05:13	06:22	07:30	07:39	08:56 (19)	08:52		11:13 (32)	09:28		
	22:12	20:54	19:25	17:01	10 09:06 (19)	15:56	47	13:19 (27)	15:47		
28	05:16	06:24	07:33	07:42		08:54		11:48 (24)	09:28		
	22:10	20:51	19:22	16:59		15:55	35	13:18 (27)	15:48		
29	05:18	06:26	07:35	07:44		08:56		11:48 (24)	09:28		
	22:07	20:48	19:19	16:56		15:54	33	13:17 (27)	15:49		
30	05:20	06:29	07:37	07:47	11:09 (32)	08:58		11:48 (24)	09:28		
	22:05	20:45	19:16	16:54	7 11:16 (32)	15:52	30	13:15 (27)	15:50		
31	05:22	06:31		07:49	11:06 (32)				09:28		
	22:03	20:42		16:51	15 11:21 (32)				15:51		
Potential sun hours	546	478	386	319		236			199		
Total, worst case					225		1881			154	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		12:18 (24)	08:46		11:53 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (24)	16:56	49	14:04 (27)	18:05	20:17	21:26	22:31
2	09:27		12:18 (24)	08:43		11:54 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (24)	16:58	44	14:02 (27)	18:07	20:19	21:28	22:32
3	09:27		11:54 (32)	08:41		11:56 (32)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (24)	17:01	39	14:01 (27)	18:09	20:21	21:31	22:34
4	09:27		11:52 (32)	08:39		11:57 (32)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (24)	17:03	32	13:59 (27)	18:12	20:24	21:33	22:35
5	09:26		11:51 (32)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (24)	17:06	19	13:55 (27)	18:14	20:26	21:35	22:37
6	09:25		11:50 (32)	08:34		12:04 (32)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (24)	17:08	5	12:09 (32)	18:17	20:28	21:37	22:38
7	09:24		11:50 (32)	08:32			07:19	06:50	05:29	04:33
	16:02	42	13:46 (27)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (32)	08:30			07:16	06:47	05:26	04:32
	16:03	48	13:49 (27)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (32)	08:27		09:42 (19)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (27)	17:16	7	09:49 (19)	18:24	20:35	21:44	22:42
10	09:22		11:49 (32)	08:25		09:40 (19)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (27)	17:18	12	09:52 (19)	18:26	20:37	21:46	22:43
11	09:21		11:49 (32)	08:23		09:39 (19)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (27)	17:21	15	09:54 (19)	18:28	20:40	21:49	22:44
12	09:20		11:48 (32)	08:20		09:37 (19)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (27)	17:23	17	09:54 (19)	18:31	20:42	21:51	22:45
13	09:18		11:49 (32)	08:18		09:36 (19)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (27)	17:26	19	09:55 (19)	18:33	20:44	21:53	22:46
14	09:17		11:48 (32)	08:15		09:37 (19)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (27)	17:28	19	09:56 (19)	18:35	20:47	21:55	22:47
15	09:16		11:48 (32)	08:13		09:36 (19)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (28)	17:31	20	09:56 (19)	18:38	20:49	21:58	22:47
16	09:15		11:47 (32)	08:10		09:36 (19)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (28)	17:33	20	09:56 (19)	18:40	20:51	22:00	22:48
17	09:13		11:48 (32)	08:07		09:36 (19)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (28)	17:36	19	09:55 (19)	18:42	20:53	22:02	22:49
18	09:12		11:48 (32)	08:05		09:37 (19)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (28)	17:38	19	09:56 (19)	18:45	20:56	22:04	22:49
19	09:10		11:48 (32)	08:02		09:37 (19)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (28)	17:40	18	09:55 (19)	18:47	20:58	22:06	22:50
20	09:08		11:48 (32)	08:00		09:38 (19)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (28)	17:43	15	09:53 (19)	18:49	21:00	22:08	22:50
21	09:07		11:48 (32)	07:57		09:39 (19)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (28)	17:45	13	09:52 (19)	18:51	21:03	22:10	22:50
22	09:05		11:48 (32)	07:54		09:41 (19)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (28)	17:48	8	09:49 (19)	18:54	21:05	22:12	22:50
23	09:03		11:48 (32)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (28)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (32)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (28)				20:10	21:21	22:25	22:50
30	08:50		11:51 (32)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (28)				20:12	21:24	22:27	22:49
31	08:48		11:52 (32)				07:10		04:41	
	16:54	55	14:55 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1930			409					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (19)	09:00		11:31 (32)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (19)	15:51	60	13:37 (27)
2	04:33	05:26	06:35	07:42			07:54		09:12 (19)	09:02		11:32 (32)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (19)	15:50	56	13:36 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (27)
5	04:36	05:33	06:42	07:48			08:01		11:32 (32)	09:07		11:35 (32)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (32)	15:47	43	13:32 (27)
6	04:37	05:35	06:44	07:51			08:03		11:29 (32)	09:09		11:37 (32)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (27)	15:46	36	12:27 (24)
7	04:38	05:37	06:46	07:53			08:06		11:27 (32)	09:10		11:38 (32)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (27)	15:45	34	12:27 (24)
8	04:40	05:39	06:49	07:55			08:08		11:25 (32)	09:12		11:40 (32)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (27)	15:45	32	12:28 (24)
9	04:41	05:42	06:51	07:57			08:11		11:25 (32)	09:13		11:42 (32)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (27)	15:44	28	12:28 (24)
10	04:43	05:44	06:53	08:00			08:13		11:24 (32)	09:15		12:07 (24)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (27)	15:43	21	12:28 (24)
11	04:44	05:46	06:55	08:02			08:15		11:23 (32)	09:16		12:08 (24)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (28)	15:43	21	12:29 (24)
12	04:46	05:48	06:57	08:04			08:18		11:23 (32)	09:18		12:08 (24)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (28)	15:43	21	12:29 (24)
13	04:47	05:51	07:00	08:07			08:20		11:23 (32)	09:19		12:09 (24)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (28)	15:42	21	12:30 (24)
14	04:49	05:53	07:02	08:09			08:22		11:22 (32)	09:20		12:09 (24)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (28)	15:42	21	12:30 (24)
15	04:51	05:55	07:04	08:11			08:25		11:22 (32)	09:21		12:09 (24)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (28)	15:42	21	12:30 (24)
16	04:52	05:57	07:06	08:13			08:27		11:22 (32)	09:22		12:10 (24)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (28)	15:42	20	12:30 (24)
17	04:54	06:00	07:08	08:16			08:30		11:23 (32)	09:23		12:10 (24)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (28)	15:42	21	12:31 (24)
18	04:56	06:02	07:11	08:18			08:32		11:22 (32)	09:24		12:11 (24)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (28)	15:42	20	12:31 (24)
19	04:58	06:04	07:13	08:20			08:34		11:23 (32)	09:25		12:12 (24)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (28)	15:42	20	12:32 (24)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:22 (32)	09:26		12:12 (24)
	22:25	21:13	19:45	18:20	10	10:21 (19)	16:08	82	14:37 (28)	15:43	20	12:32 (24)
21	05:01	06:08	07:17	08:25		10:10 (19)	08:39		11:23 (32)	09:26		12:12 (24)
	22:24	21:10	19:42	18:17	13	10:23 (19)	16:06	80	14:37 (28)	15:43	20	12:32 (24)
22	05:03	06:11	07:19	08:27		10:08 (19)	08:41		11:24 (32)	09:27		12:13 (24)
	22:22	21:08	19:39	18:14	16	10:24 (19)	16:04	79	14:38 (28)	15:43	20	12:33 (24)
23	05:05	06:13	07:22	08:30		10:07 (19)	08:43		11:24 (32)	09:27		12:13 (24)
	22:20	21:05	19:36	18:12	18	10:25 (19)	16:02	84	14:38 (28)	15:44	20	12:33 (24)
24	05:07	06:15	07:24	08:32		10:06 (19)	08:45		11:25 (32)	09:28		12:14 (24)
	22:18	21:02	19:33	18:09	19	10:25 (19)	16:01	88	14:38 (28)	15:44	21	12:35 (24)
25	05:09	06:17	07:26	07:35		09:06 (19)	08:47		11:25 (32)	09:28		12:15 (24)
	22:16	20:59	19:30	17:06	20	09:26 (19)	15:59	88	14:38 (28)	15:45	20	12:35 (24)
26	05:11	06:20	07:28	07:37		09:06 (19)	08:50		11:26 (32)	09:28		12:15 (24)
	22:14	20:57	19:27	17:04	20	09:26 (19)	15:58	81	14:37 (28)	15:46	20	12:35 (24)
27	05:13	06:22	07:30	07:39		09:06 (19)	08:52		11:27 (32)	09:28		12:16 (24)
	22:12	20:54	19:25	17:01	19	09:25 (19)	15:56	73	14:26 (28)	15:47	20	12:36 (24)
28	05:16	06:24	07:33	07:42		09:06 (19)	08:54		11:28 (32)	09:28		12:16 (24)
	22:10	20:51	19:22	16:59	19	09:25 (19)	15:55	65	13:38 (27)	15:48	21	12:37 (24)
29	05:18	06:26	07:35	07:44		09:06 (19)	08:56		11:29 (32)	09:28		12:16 (24)
	22:07	20:48	19:19	16:56	18	09:24 (19)	15:54	64	13:37 (27)	15:49	20	12:36 (24)
30	05:20	06:29	07:37	07:47		09:07 (19)	08:58		11:29 (32)	09:28		12:17 (24)
	22:05	20:45	19:16	16:54	17	09:24 (19)	15:52	62	13:37 (27)	15:50	20	12:37 (24)
31	05:22	06:31		07:49		09:08 (19)				09:28		12:16 (24)
	22:03	20:42		16:51	15	09:23 (19)				15:51	21	12:37 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:08 (24)	08:46		11:39 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (24)	16:56	49	13:50 (27)	18:05	20:17	21:26	22:31
2	09:27		12:08 (24)	08:43		11:40 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (24)	16:58	44	13:48 (27)	18:07	20:19	21:28	22:32
3	09:27		12:09 (24)	08:41		11:41 (32)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (24)	17:01	39	13:47 (27)	18:09	20:21	21:31	22:34
4	09:27		12:09 (24)	08:39		11:42 (32)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (24)	17:03	32	13:45 (27)	18:12	20:24	21:33	22:35
5	09:26		12:09 (24)	08:37		11:43 (32)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (24)	17:06	19	12:02 (32)	18:14	20:26	21:35	22:37
6	09:25		12:10 (24)	08:34		11:46 (32)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (27)	17:08	14	12:00 (32)	18:17	20:28	21:37	22:38
7	09:24		11:43 (32)	08:32		11:50 (32)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (27)	17:11	6	11:56 (32)	18:19	20:30	21:40	22:39
8	09:24		11:41 (32)	08:30			07:16	06:47	05:26	04:32
	16:03	41	13:37 (27)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:40 (32)	08:27			07:13	06:44	05:24	04:31
	16:05	47	13:39 (27)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:38 (32)	08:25		09:39 (19)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (27)	17:18	3	09:42 (19)	18:26	20:37	21:46	22:43
11	09:21		11:38 (32)	08:23		09:36 (19)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (27)	17:21	10	09:46 (19)	18:28	20:40	21:49	22:44
12	09:20		11:37 (32)	08:20		09:34 (19)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (28)	17:23	14	09:48 (19)	18:31	20:42	21:51	22:45
13	09:18		11:37 (32)	08:18		09:33 (19)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (28)	17:26	16	09:49 (19)	18:33	20:44	21:53	22:46
14	09:17		11:36 (32)	08:15		09:33 (19)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (28)	17:28	17	09:50 (19)	18:35	20:47	21:55	22:47
15	09:16		11:36 (32)	08:13		09:32 (19)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (28)	17:31	18	09:50 (19)	18:38	20:49	21:58	22:47
16	09:15		11:35 (32)	08:10		09:31 (19)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (28)	17:33	19	09:50 (19)	18:40	20:51	22:00	22:48
17	09:13		11:36 (32)	08:07		09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (28)	17:36	19	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:36 (32)	08:05		09:32 (19)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (28)	17:38	19	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:36 (32)	08:02		09:32 (19)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (28)	17:40	18	09:50 (19)	18:47	20:58	22:06	22:50
20	09:09		11:35 (32)	08:00		09:32 (19)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (28)	17:43	17	09:49 (19)	18:49	21:00	22:08	22:50
21	09:07		11:35 (32)	07:57		09:33 (19)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (28)	17:45	15	09:48 (19)	18:51	21:03	22:10	22:50
22	09:05		11:36 (32)	07:54		09:34 (19)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (28)	17:48	12	09:46 (19)	18:54	21:05	22:12	22:50
23	09:03		11:35 (32)	07:52		09:38 (19)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (28)	17:50	6	09:44 (19)	18:56	21:07	22:14	22:51
24	09:02		11:35 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (32)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (28)				20:10	21:21	22:25	22:50
30	08:50		11:37 (32)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (28)				20:12	21:24	22:27	22:49
31	08:48		11:38 (32)				07:10		04:41	
	16:54	51	13:50 (27)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (32)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (27)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (27)
4	04:35	05:31	06:40	07:46			07:59		11:18 (32)	09:05		11:25 (32)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (32)	15:48	42	13:22 (27)
5	04:36	05:33	06:42	07:48			08:01		11:15 (32)	09:07		11:28 (32)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (32)	15:47	34	13:21 (27)
6	04:37	05:35	06:44	07:51			08:03		11:14 (32)	09:09		11:56 (24)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (32)	15:46	26	13:19 (27)
7	04:38	05:37	06:46	07:53			08:06		11:12 (32)	09:10		11:56 (24)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (27)	15:45	21	12:17 (24)
8	04:40	05:39	06:49	07:55			08:08		11:11 (32)	09:12		11:57 (24)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (27)	15:45	21	12:18 (24)
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		11:58 (24)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (27)	15:44	20	12:18 (24)
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		11:58 (24)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (27)	15:43	20	12:18 (24)
11	04:44	05:46	06:55	08:02			08:15		11:09 (32)	09:16		11:58 (24)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (27)	15:43	21	12:19 (24)
12	04:46	05:48	06:57	08:04			08:18		11:09 (32)	09:18		11:58 (24)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (28)	15:43	21	12:19 (24)
13	04:47	05:51	07:00	08:07			08:20		11:09 (32)	09:19		12:00 (24)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (28)	15:42	20	12:20 (24)
14	04:49	05:53	07:02	08:09			08:23		11:08 (32)	09:20		12:00 (24)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (28)	15:42	20	12:20 (24)
15	04:51	05:55	07:04	08:11			08:25		11:08 (32)	09:21		12:00 (24)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (28)	15:42	20	12:20 (24)
16	04:52	05:57	07:06	08:13			08:27		11:09 (32)	09:22		12:01 (24)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (28)	15:42	19	12:20 (24)
17	04:54	06:00	07:08	08:16			08:30		11:09 (32)	09:23		12:01 (24)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (28)	15:42	20	12:21 (24)
18	04:56	06:02	07:11	08:18			08:32		11:09 (32)	09:24		12:02 (24)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (28)	15:42	19	12:21 (24)
19	04:58	06:04	07:13	08:20		10:07 (19)	08:34		11:10 (32)	09:25		12:02 (24)
	22:27	21:16	19:48	18:22	9	10:16 (19)	16:09	79	14:27 (28)	15:42	20	12:22 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:10 (32)	09:26		12:03 (24)
	22:25	21:13	19:45	18:20	13	10:18 (19)	16:08	79	14:27 (28)	15:43	19	12:22 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:10 (32)	09:26		12:03 (24)
	22:24	21:10	19:42	18:17	15	10:19 (19)	16:06	79	14:28 (28)	15:43	19	12:22 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:11 (32)	09:27		12:04 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	84	14:29 (28)	15:43	19	12:23 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:12 (32)	09:27		12:04 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:28 (28)	15:44	19	12:23 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:13 (32)	09:28		12:05 (24)
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	88	14:29 (28)	15:44	19	12:24 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:13 (32)	09:28		12:06 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	88	14:29 (28)	15:45	19	12:25 (24)
26	05:11	06:20	07:28	07:37		09:02 (19)	08:50		11:14 (32)	09:28		12:06 (24)
	22:14	20:57	19:27	17:04	19	09:21 (19)	15:58	87	14:29 (28)	15:46	19	12:25 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:15 (32)	09:28		12:06 (24)
	22:12	20:54	19:25	17:01	19	09:20 (19)	15:56	86	14:29 (28)	15:47	20	12:26 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:16 (32)	09:28		12:07 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	82	14:29 (28)	15:48	20	12:27 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:17 (32)	09:28		12:07 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	72	14:29 (28)	15:49	19	12:26 (24)
30	05:20	06:29	07:37	07:47		09:04 (19)	08:58		11:18 (32)	09:28		12:07 (24)
	22:05	20:45	19:16	16:54	13	09:17 (19)	15:52	60	14:28 (28)	15:50	20	12:27 (24)
31	05:22	06:31		07:49		09:06 (19)				09:28		12:07 (24)
	22:03	20:42		16:51	9	09:15 (19)				15:51	20	12:27 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28	12:05 (24)	08:46	11:36 (32)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (24)	16:56	45 13:44 (27)	18:05	20:17	21:26	22:31
2	09:27	12:06 (24)	08:43	11:37 (32)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (24)	16:58	40 13:42 (27)	18:07	20:19	21:28	22:32
3	09:27	12:06 (24)	08:41	11:38 (32)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (24)	17:01	34 13:40 (27)	18:09	20:21	21:31	22:34
4	09:27	12:06 (24)	08:39	11:39 (32)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (24)	17:03	20 11:59 (32)	18:12	20:24	21:33	22:35
5	09:26	12:06 (24)	08:37	11:41 (32)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (27)	17:06	16 11:57 (32)	18:14	20:26	21:35	22:37
6	09:25	12:07 (24)	08:34	11:44 (32)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (27)	17:08	11 11:55 (32)	18:17	20:28	21:37	22:38
7	09:24	11:39 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (32)	08:25	09:37 (19)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (28)	17:18	6 09:43 (19)	18:26	20:37	21:46	22:43
11	09:21	11:34 (32)	08:23	09:35 (19)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (28)	17:21	11 09:46 (19)	18:28	20:40	21:49	22:44
12	09:20	11:33 (32)	08:20	09:33 (19)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (28)	17:23	15 09:48 (19)	18:31	20:42	21:51	22:45
13	09:18	11:34 (32)	08:18	09:32 (19)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (28)	17:26	16 09:48 (19)	18:33	20:44	21:53	22:46
14	09:17	11:33 (32)	08:15	09:32 (19)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (28)	17:28	18 09:50 (19)	18:35	20:47	21:55	22:47
15	09:16	11:32 (32)	08:13	09:31 (19)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (28)	17:31	19 09:50 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (28)	17:33	19 09:50 (19)	18:40	20:51	22:00	22:48
17	09:13	11:32 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (28)	17:36	19 09:50 (19)	18:42	20:53	22:02	22:49
18	09:12	11:32 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (28)	17:38	18 09:50 (19)	18:45	20:56	22:04	22:49
19	09:10	11:32 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (28)	17:40	17 09:49 (19)	18:47	20:58	22:06	22:50
20	09:09	11:32 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (28)	17:43	16 09:48 (19)	18:49	21:00	22:08	22:50
21	09:07	11:32 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (28)	17:45	14 09:47 (19)	18:51	21:03	22:10	22:50
22	09:05	11:32 (32)	07:54	09:35 (19)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (28)	17:48	10 09:45 (19)	18:54	21:05	22:12	22:50
23	09:03	11:31 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (32)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (28)			20:10	21:21	22:25	22:50
30	08:50	11:34 (32)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (27)			20:12	21:24	22:27	22:49
31	08:48	11:35 (32)			07:10		04:41	
	16:54	48 13:44 (27)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (19)	09:00		11:16 (32)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (19)	15:51	74	14:26 (28)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (28)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (27)
5	04:36	05:33	06:42	07:48			08:01		11:13 (32)	09:07		11:23 (32)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (32)	15:47	39	13:18 (27)
6	04:37	05:35	06:44	07:51			08:03		11:11 (32)	09:09		11:53 (24)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (32)	15:46	32	13:17 (27)
7	04:38	05:37	06:46	07:53			08:06		11:10 (32)	09:10		11:54 (24)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (27)	15:45	28	13:16 (27)
8	04:40	05:39	06:49	07:55			08:08		11:08 (32)	09:12		11:54 (24)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (27)	15:45	22	13:13 (27)
9	04:41	05:42	06:51	07:57			08:11		11:07 (32)	09:13		11:55 (24)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (27)	15:44	20	12:15 (24)
10	04:43	05:44	06:53	08:00			08:13		11:07 (32)	09:15		11:55 (24)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (27)	15:43	20	12:15 (24)
11	04:44	05:46	06:55	08:02			08:15		11:06 (32)	09:16		11:56 (24)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (27)	15:43	20	12:16 (24)
12	04:46	05:48	06:57	08:04			08:18		11:06 (32)	09:18		11:56 (24)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (27)	15:43	20	12:16 (24)
13	04:47	05:51	07:00	08:07			08:20		11:06 (32)	09:19		11:57 (24)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (28)	15:42	20	12:17 (24)
14	04:49	05:53	07:02	08:09			08:23		11:05 (32)	09:20		11:57 (24)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (28)	15:42	20	12:17 (24)
15	04:51	05:55	07:04	08:11			08:25		11:05 (32)	09:21		11:57 (24)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (28)	15:42	20	12:17 (24)
16	04:52	05:57	07:06	08:13			08:27		11:06 (32)	09:22		11:58 (24)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (28)	15:42	19	12:17 (24)
17	04:54	06:00	07:08	08:16			08:30		11:06 (32)	09:23		11:58 (24)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (28)	15:42	19	12:17 (24)
18	04:56	06:02	07:11	08:18			08:32		11:06 (32)	09:24		11:59 (24)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (28)	15:42	19	12:18 (24)
19	04:58	06:04	07:13	08:20		10:09 (19)	08:34		11:06 (32)	09:25		11:59 (24)
	22:27	21:16	19:48	18:22	5	10:14 (19)	16:09	78	14:23 (28)	15:42	20	12:19 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:06 (32)	09:26		12:00 (24)
	22:25	21:13	19:45	18:20	11	10:16 (19)	16:08	79	14:23 (28)	15:43	19	12:19 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:07 (32)	09:26		12:00 (24)
	22:24	21:10	19:42	18:17	14	10:18 (19)	16:06	77	14:23 (28)	15:43	19	12:19 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:08 (32)	09:27		12:01 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	77	14:24 (28)	15:43	19	12:20 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:08 (32)	09:27		12:01 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:24 (28)	15:44	19	12:20 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:09 (32)	09:28		12:02 (24)
	22:18	21:02	19:33	18:09	18	10:19 (19)	16:01	87	14:25 (28)	15:44	19	12:21 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:10 (32)	09:28		12:03 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	87	14:25 (28)	15:45	19	12:22 (24)
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		11:11 (32)	09:28		12:03 (24)
	22:14	20:57	19:27	17:04	19	09:20 (19)	15:58	87	14:25 (28)	15:46	19	12:22 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:11 (32)	09:28		12:03 (24)
	22:12	20:54	19:25	17:01	18	09:19 (19)	15:56	86	14:25 (28)	15:47	20	12:23 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:13 (32)	09:28		12:04 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	85	14:26 (28)	15:48	20	12:24 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:14 (32)	09:28		12:04 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	82	14:25 (28)	15:49	19	12:23 (24)
30	05:20	06:29	07:37	07:47		09:03 (19)	08:58		11:14 (32)	09:28		12:04 (24)
	22:05	20:45	19:16	16:54	14	09:17 (19)	15:52	80	14:25 (28)	15:50	20	12:24 (24)
31	05:22	06:31		07:49		09:05 (19)				09:28		12:04 (24)
	22:03	20:42		16:51	11	09:16 (19)				15:51	20	12:24 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November			December		
1	09:28		11:58 (24)	08:46		11:24 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (24)
	15:53	16	12:14 (24)	16:56	49	13:35 (27)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (28)
2	09:28		11:58 (24)	08:43		11:24 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (24)
	15:54	18	12:16 (24)	16:58	47	13:34 (27)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (28)
3	09:27		11:58 (24)	08:41		11:25 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (32)	09:03		11:44 (24)
	15:55	20	12:18 (24)	17:01	42	13:33 (27)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (32)	15:49	40	14:19 (28)
4	09:27		11:58 (24)	08:39		11:26 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (32)	09:05		11:44 (24)
	15:57	21	12:19 (24)	17:03	35	13:30 (27)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (32)	15:48	34	14:19 (28)
5	09:26		11:59 (24)	08:37		11:26 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (32)	09:07		11:45 (24)
	15:58	20	12:19 (24)	17:06	23	11:49 (32)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (32)	15:47	31	13:06 (27)
6	09:25		11:59 (24)	08:34		11:28 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (32)	09:09		11:45 (24)
	16:00	26	13:18 (27)	17:08	20	11:48 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (32)	15:46	27	13:05 (27)
7	09:25		12:00 (24)	08:32		11:30 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (32)	09:10		11:46 (24)
	16:02	30	13:21 (27)	17:11	16	11:46 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (27)	15:45	20	12:06 (24)
8	09:24		12:00 (24)	08:30		11:33 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (32)	09:12		11:47 (24)
	16:03	34	14:35 (28)	17:13	11	11:44 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (27)	15:45	20	12:07 (24)
9	09:23		12:01 (24)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (32)	09:13		11:47 (24)
	16:05	41	14:36 (28)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (27)	15:44	20	12:07 (24)
10	09:22		12:01 (24)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (32)	09:15		11:47 (24)
	16:07	50	14:36 (28)	17:18			18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (27)	15:43	19	12:07 (24)
11	09:21		12:02 (24)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (32)	09:16		11:48 (24)
	16:09	57	14:37 (28)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (27)	15:43	16	12:04 (24)
12	09:20		11:28 (32)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (32)	09:18		11:48 (24)
	16:11	68	14:38 (28)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (27)	15:43	11	11:59 (24)
13	09:18		11:26 (32)	08:18			07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (32)	09:19		11:49 (24)
	16:13	75	14:39 (28)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (28)	15:42	11	12:00 (24)
14	09:17		11:25 (32)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (32)	09:20		11:50 (24)
	16:15	78	14:39 (28)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (28)	15:42	7	12:00 (24)
15	09:16		11:24 (32)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (32)	09:21		11:50 (24)
	16:17	82	14:40 (28)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (28)	15:42	3	11:53 (24)
16	09:15		11:23 (32)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (32)	09:22		11:50 (24)
	16:19	85	14:40 (28)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (28)	15:42	3	11:53 (24)
17	09:13		11:23 (32)	08:07			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (32)	09:23		11:51 (24)
	16:21	86	14:41 (28)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (28)	15:42	1	11:52 (24)
18	09:12		11:23 (32)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (32)	09:24		
	16:23	87	14:42 (28)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (28)	15:42		
19	09:10		11:22 (32)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (32)	09:25		
	16:25	88	14:42 (28)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (28)	15:42		
20	09:09		11:22 (32)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (32)	09:26		
	16:28	86	14:42 (28)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (28)	15:43		
21	09:07		11:22 (32)	07:57			06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (32)	09:26		
	16:30	83	14:42 (28)	17:45			18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (28)	15:43		
22	09:05		11:22 (32)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (32)	09:27		
	16:32	77	14:42 (28)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (28)	15:43		
23	09:03		11:21 (32)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (32)	09:27		
	16:34	77	14:41 (28)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (28)	15:44		
24	09:02		11:21 (32)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (32)	09:28		
	16:37	76	14:41 (28)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (28)	15:44		
25	09:00		11:21 (32)	07:46			06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (32)	09:28		
	16:39	77	14:41 (28)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (28)	15:45		
26	08:58		11:22 (32)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (32)	09:28		
	16:41	74	14:41 (28)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (28)	15:46		
27	08:56		11:21 (32)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (32)	09:28		11:56 (24)
	16:44	71	14:39 (28)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (28)	15:47	3	11:59 (24)
28	08:54		11:21 (32)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (32)	09:28		11:57 (24)
	16:46	69	14:38 (28)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (28)	15:48	3	12:00 (24)
29	08:52		11:22 (32)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (32)	09:28		11:56 (24)
	16:49	61	14:36 (28)				20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (28)	15:49	5	12:07 (24)
30	08:50		11:22 (32)				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (32)	09:28		11:57 (24)
	16:51	55	13:36 (27)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (28)	15:50	11	12:08 (24)
31	08:48		11:23 (32)				07:10		04:41		05:22	06:31		07:49				09:28		11:57 (24)
	16:54	53	13:36 (27)				20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		1841			243											1761			403	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:52 (37)	08:46		13:17 (32)	07:35	08:53 (21)	07:07	05:44	04:40
	15:53	17	12:09 (37)	16:56	36	13:53 (32)	18:05	19	09:12 (21)	20:17	21:26	22:30
2	09:27		11:51 (37)	08:43		13:18 (32)	07:32		08:53 (21)	07:04	05:41	04:38
	15:54	19	12:10 (37)	16:58	43	15:13 (27)	18:07	20	09:13 (21)	20:19	21:28	22:32
3	09:27		11:51 (37)	08:41		13:17 (32)	07:30		08:52 (21)	07:01	05:39	04:37
	15:55	19	12:10 (37)	17:01	52	15:18 (27)	18:09	21	09:13 (21)	20:21	21:30	22:34
4	09:26		11:51 (37)	08:39		13:18 (32)	07:27		08:52 (21)	06:58	05:36	04:36
	15:57	20	12:11 (37)	17:03	54	15:20 (27)	18:12	20	09:12 (21)	20:24	21:33	22:35
5	09:26		11:52 (37)	08:37		13:17 (32)	07:24		08:52 (21)	06:55	05:34	04:35
	15:58	20	12:12 (37)	17:06	58	15:21 (27)	18:14	20	09:12 (21)	20:26	21:35	22:37
6	09:25		11:52 (37)	08:34		13:18 (32)	07:21		08:52 (21)	06:52	05:31	04:34
	16:00	20	12:12 (37)	17:08	62	15:43 (28)	18:16	19	09:11 (21)	20:28	21:37	22:38
7	09:24		11:52 (37)	08:32		13:17 (32)	07:19		08:53 (21)	06:49	05:29	04:33
	16:02	21	12:13 (37)	17:11	68	15:46 (28)	18:19	17	09:10 (21)	20:30	21:40	22:39
8	09:24		11:53 (37)	08:30		13:18 (32)	07:16		08:54 (21)	06:47	05:26	04:32
	16:03	21	12:14 (37)	17:13	72	15:51 (28)	18:21	14	09:08 (21)	20:33	21:42	22:40
9	09:23		11:52 (37)	08:27		13:18 (32)	07:13		08:55 (21)	06:44	05:24	04:31
	16:05	22	12:14 (37)	17:16	78	15:59 (28)	18:24	10	09:05 (21)	20:35	21:44	22:42
10	09:22		11:53 (37)	08:25		13:18 (32)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (37)	17:18	82	16:00 (28)	18:26			20:37	21:46	22:43
11	09:21		11:54 (37)	08:23		10:11 (19)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (37)	17:21	84	16:00 (28)	18:28			20:40	21:49	22:44
12	09:20		11:53 (37)	08:20		10:06 (19)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (37)	17:23	89	15:59 (28)	18:31			20:42	21:51	22:45
13	09:18		11:53 (37)	08:18		10:04 (19)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (24)	17:26	90	15:58 (28)	18:33			20:44	21:53	22:46
14	09:17		11:54 (37)	08:15		10:03 (19)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (24)	17:28	87	15:57 (28)	18:35			20:47	21:55	22:46
15	09:16		11:55 (37)	08:13		10:02 (19)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (24)	17:31	81	15:54 (28)	18:38			20:49	21:57	22:47
16	09:15		11:55 (37)	08:10		10:01 (19)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (24)	17:33	72	15:24 (27)	18:40			20:51	22:00	22:48
17	09:13		11:55 (37)	08:07		10:00 (19)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (24)	17:35	67	15:23 (27)	18:42			20:53	22:02	22:49
18	09:12		11:57 (37)	08:05		10:00 (19)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (24)	17:38	61	15:23 (27)	18:45			20:56	22:04	22:49
19	09:10		11:57 (37)	08:02		10:00 (19)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (24)	17:40	43	15:21 (27)	18:47			20:58	22:06	22:50
20	09:08		11:58 (37)	08:00		09:59 (19)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (24)	17:43	41	15:19 (27)	18:49			21:00	22:08	22:50
21	09:07		11:59 (37)	07:57		09:59 (19)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (24)	17:45	32	15:15 (27)	18:51			21:03	22:10	22:50
22	09:05		11:59 (37)	07:54		09:59 (19)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (24)	17:48	25	10:24 (19)	18:54			21:05	22:12	22:50
23	09:03		12:01 (37)	07:52		10:00 (19)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (24)	17:50	24	10:24 (19)	18:56			21:07	22:14	22:50
24	09:02		12:03 (37)	07:49		10:01 (19)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (24)	17:53	22	10:23 (19)	18:58			21:10	22:16	22:51
25	09:00		12:05 (37)	07:46		09:00 (21)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (32)	17:55	27	10:22 (19)	19:01			21:12	22:18	22:50
26	08:58		13:21 (32)	07:43		08:57 (21)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (32)	17:57	30	10:20 (19)	19:03			21:14	22:20	22:50
27	08:56		13:20 (32)	07:41		08:55 (21)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (32)	18:00	28	10:17 (19)	19:05			21:17	22:22	22:50
28	08:54		13:19 (32)	07:38		08:54 (21)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (32)	18:02	22	10:13 (19)	19:07			21:19	22:24	22:50
29	08:52		13:19 (32)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (32)				20:10			21:21	22:25	22:50
30	08:50		13:18 (32)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (32)				20:12			21:24	22:27	22:49
31	08:48		13:18 (32)				07:10				04:41	
	16:53	34	13:52 (32)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		12:48 (32)	09:00		11:36 (37)
	22:49	22:01	20:40	19:13		16:49	83	15:30 (28)	15:51	22	11:58 (37)
2	04:33	05:26	06:35	07:42		07:54		12:48 (32)	09:02		11:36 (37)
	22:48	21:58	20:37	19:10		16:46	76	15:28 (28)	15:50	22	11:58 (37)
3	04:34	05:28	06:37	07:44		07:56		12:48 (32)	09:03		11:36 (37)
	22:47	21:56	20:34	19:07		16:44	71	15:20 (28)	15:49	22	11:58 (37)
4	04:35	05:31	06:40	07:46	09:34 (21)	07:59		12:47 (32)	09:05		11:37 (37)
	22:47	21:54	20:31	19:04	7 09:41 (21)	16:41	66	15:15 (28)	15:48	21	11:58 (37)
5	04:36	05:33	06:42	07:48	09:32 (21)	08:01		12:47 (32)	09:07		11:37 (37)
	22:46	21:51	20:28	19:01	12 09:44 (21)	16:39	62	15:13 (28)	15:47	21	11:58 (37)
6	04:37	05:35	06:44	07:51	09:30 (21)	08:03		12:48 (32)	09:09		11:38 (37)
	22:45	21:49	20:25	18:59	15 09:45 (21)	16:37	57	14:51 (27)	15:46	21	11:59 (37)
7	04:38	05:37	06:46	07:53	09:28 (21)	08:06		12:47 (32)	09:10		11:39 (37)
	22:44	21:47	20:22	18:56	18 09:46 (21)	16:34	55	14:50 (27)	15:45	20	11:59 (37)
8	04:40	05:39	06:48	07:55	09:28 (21)	08:08		12:48 (32)	09:12		11:40 (37)
	22:43	21:44	20:20	18:53	19 09:47 (21)	16:32	50	14:48 (27)	15:45	19	11:59 (37)
9	04:41	05:42	06:51	07:57	09:27 (21)	08:11		12:48 (32)	09:13		11:41 (37)
	22:42	21:42	20:17	18:50	20 09:47 (21)	16:30	42	14:43 (27)	15:44	19	12:00 (37)
10	04:43	05:44	06:53	08:00	09:27 (21)	08:13		12:49 (32)	09:15		11:41 (37)
	22:40	21:39	20:14	18:47	20 09:47 (21)	16:28	35	13:24 (32)	15:43	18	11:59 (37)
11	04:44	05:46	06:55	08:02	09:26 (21)	08:15		12:49 (32)	09:16		11:42 (37)
	22:39	21:37	20:11	18:45	20 09:46 (21)	16:25	34	13:23 (32)	15:43	18	12:00 (37)
12	04:46	05:48	06:57	08:04	09:26 (21)	08:18		12:50 (32)	09:18		11:42 (37)
	22:38	21:34	20:08	18:42	19 09:45 (21)	16:23	33	13:23 (32)	15:43	17	11:59 (37)
13	04:47	05:51	07:00	08:06	09:27 (21)	08:20		12:51 (32)	09:19		11:43 (37)
	22:37	21:31	20:05	18:39	18 09:45 (21)	16:21	32	13:23 (32)	15:42	17	12:00 (37)
14	04:49	05:53	07:02	08:09	09:27 (21)	08:22		12:51 (32)	09:20		11:44 (37)
	22:35	21:29	20:02	18:36	26 10:48 (19)	16:19	31	13:22 (32)	15:42	16	12:00 (37)
15	04:51	05:55	07:04	08:11	09:29 (21)	08:25		12:53 (32)	09:21		11:44 (37)
	22:34	21:26	19:59	18:33	29 10:51 (19)	16:17	28	13:21 (32)	15:42	16	12:00 (37)
16	04:52	05:57	07:06	08:13	09:30 (21)	08:27		12:54 (32)	09:22		11:45 (37)
	22:32	21:24	19:56	18:31	28 10:52 (19)	16:15	27	13:21 (32)	15:42	15	12:00 (37)
17	04:54	05:59	07:08	08:16	10:33 (19)	08:29		11:38 (37)	09:23		11:45 (37)
	22:30	21:21	19:54	18:28	21 10:54 (19)	16:13	32	13:19 (32)	15:42	15	12:00 (37)
18	04:56	06:02	07:10	08:18	10:31 (19)	08:32		11:36 (37)	09:24		11:46 (37)
	22:29	21:18	19:51	18:25	23 10:54 (19)	16:11	35	13:20 (24)	15:42	15	12:01 (37)
19	04:58	06:04	07:13	08:20	10:31 (19)	08:34		11:36 (37)	09:25		11:47 (37)
	22:27	21:16	19:48	18:22	24 10:55 (19)	16:09	36	13:21 (24)	15:42	14	12:01 (37)
20	05:00	06:06	07:15	08:23	10:30 (19)	08:36		11:34 (37)	09:26		11:48 (37)
	22:25	21:13	19:45	18:20	25 10:55 (19)	16:08	40	13:21 (24)	15:42	14	12:02 (37)
21	05:01	06:08	07:17	08:25	10:30 (19)	08:39		11:34 (37)	09:26		11:48 (37)
	22:24	21:10	19:42	18:17	37 15:48 (27)	16:06	40	13:21 (24)	15:43	14	12:02 (37)
22	05:03	06:11	07:19	08:27	10:29 (19)	08:41		11:34 (37)	09:27		11:49 (37)
	22:22	21:08	19:39	18:14	42 15:50 (27)	16:04	43	13:22 (24)	15:43	14	12:03 (37)
23	05:05	06:13	07:22	08:30	10:30 (19)	08:43		11:33 (37)	09:27		11:49 (37)
	22:20	21:05	19:36	18:12	50 15:52 (27)	16:02	44	13:22 (24)	15:44	14	12:03 (37)
24	05:07	06:15	07:24	08:32	10:29 (19)	08:45		11:34 (37)	09:28		11:50 (37)
	22:18	21:02	19:33	18:09	63 15:52 (27)	16:01	44	13:23 (24)	15:44	14	12:04 (37)
25	05:09	06:17	07:26	07:35	09:30 (19)	08:47		11:33 (37)	09:28		11:50 (37)
	22:16	20:59	19:30	17:06	69 14:54 (27)	15:59	44	13:22 (24)	15:45	14	12:04 (37)
26	05:11	06:20	07:28	07:37	09:30 (19)	08:50		11:34 (37)	09:28		11:50 (37)
	22:14	20:56	19:27	17:04	74 14:54 (27)	15:58	44	13:23 (24)	15:46	15	12:05 (37)
27	05:13	06:22	07:30	07:39	09:31 (19)	08:52		11:34 (37)	09:28		11:50 (37)
	22:12	20:54	19:24	17:01	82 15:24 (28)	15:56	44	13:23 (24)	15:47	16	12:06 (37)
28	05:16	06:24	07:33	07:42	09:33 (19)	08:54		11:35 (37)	09:28		11:50 (37)
	22:10	20:51	19:22	16:59	89 15:27 (28)	15:55	37	13:17 (24)	15:48	16	12:06 (37)
29	05:18	06:26	07:35	07:44	09:34 (19)	08:56		11:35 (37)	09:28		11:50 (37)
	22:07	20:48	19:19	16:56	90 15:28 (28)	15:54	29	13:09 (24)	15:49	16	12:06 (37)
30	05:20	06:29	07:37	07:47	09:36 (19)	08:58		11:35 (37)	09:28		11:51 (37)
	22:05	20:45	19:16	16:54	90 15:29 (28)	15:52	23	13:03 (24)	15:50	17	12:08 (37)
31	05:22	06:31		07:49	12:49 (32)				09:28		11:51 (37)
	22:03	20:42		16:51	81 15:30 (28)				15:51	17	12:08 (37)
Potential sun hours	546	478	386	319		236			199		
Total, worst case					1111		1317			529	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		14:11 (37)	07:35		10:14 (21)	07:07		05:44	04:40
	15:53			16:56	18	15:31 (24)	18:05	73	16:49 (27)	20:17		21:26	22:30
2	09:27			08:43		15:15 (24)	07:32		10:15 (21)	07:04		05:41	04:38
	15:54			16:58	17	15:32 (24)	18:07	70	16:50 (27)	20:19		21:28	22:32
3	09:27			08:41		15:14 (24)	07:30		10:16 (21)	07:01		05:39	04:37
	15:55			17:01	19	15:33 (24)	18:09	63	16:48 (27)	20:21		21:30	22:34
4	09:26			08:39		12:33 (19)	07:27		10:16 (21)	06:58		05:36	04:36
	15:57			17:03	32	15:33 (24)	18:12	54	16:47 (27)	20:23		21:33	22:35
5	09:26			08:37		12:30 (19)	07:24		09:25 (16)	06:55		05:34	04:35
	15:58			17:06	37	15:33 (24)	18:14	37	16:44 (27)	20:26		21:35	22:36
6	09:25			08:34		12:29 (19)	07:21		09:21 (16)	06:52		05:31	04:34
	16:00			17:08	40	15:34 (24)	18:16	27	10:42 (21)	20:28		21:37	22:38
7	09:24			08:32		12:27 (19)	07:18		10:19 (21)	06:49		05:29	04:33
	16:02			17:11	43	15:33 (24)	18:19	20	10:39 (21)	20:30		21:40	22:39
8	09:24			08:30		12:26 (19)	07:16		10:21 (21)	06:47		05:26	04:32
	16:03			17:13	46	15:34 (24)	18:21	15	10:36 (21)	20:33		21:42	22:40
9	09:23			08:27		12:25 (19)	07:13		10:24 (21)	06:44		05:24	04:31
	16:05			17:16	46	15:33 (24)	18:24	8	10:32 (21)	20:35		21:44	22:42
10	09:22			08:25		12:24 (19)	07:10			06:41		05:22	04:30
	16:07			17:18	45	15:31 (24)	18:26			20:37		21:46	22:43
11	09:21			08:22		12:24 (19)	07:07			06:38		05:19	04:29
	16:09			17:21	43	15:30 (24)	18:28			20:40		21:49	22:44
12	09:20			08:20		12:23 (19)	07:04			06:35		05:17	04:29
	16:11			17:23	38	15:27 (24)	18:31			20:42		21:51	22:45
13	09:18			08:18		12:22 (19)	07:01			06:32		05:15	04:28
	16:13			17:26	35	12:57 (19)	18:33			20:44		21:53	22:46
14	09:17			08:15		12:23 (19)	06:59			06:30		05:12	04:28
	16:15			17:28	35	12:58 (19)	18:35			20:46		21:55	22:46
15	09:16			08:12		12:22 (19)	06:56			06:27		05:10	04:27
	16:17			17:30	35	12:57 (19)	18:38			20:49		21:57	22:47
16	09:14			08:10		12:22 (19)	06:53			06:24		05:08	04:27
	16:19			17:33	43	16:12 (32)	18:40			20:51		22:00	22:48
17	09:13			08:07		12:22 (19)	06:50			06:21		05:06	04:27
	16:21			17:35	49	16:15 (32)	18:42			20:53		22:02	22:48
18	09:12			08:05		12:23 (19)	06:47			06:18		05:04	04:27
	16:23			17:38	51	16:17 (32)	18:44			20:56		22:04	22:49
19	09:10			08:02		12:23 (19)	06:44			06:16		05:02	04:27
	16:25			17:40	54	16:18 (32)	18:47			20:58		22:06	22:49
20	09:08			08:00		12:23 (19)	06:41			06:13		05:00	04:27
	16:28			17:43	55	16:19 (32)	18:49			21:00		22:08	22:50
21	09:07			07:57		12:23 (19)	06:38			06:10		04:58	04:27
	16:30			17:45	56	16:20 (32)	18:51			21:03		22:10	22:50
22	09:05			07:54		12:24 (19)	06:36			06:07		04:56	04:27
	16:32			17:48	61	16:42 (27)	18:54			21:05		22:12	22:50
23	09:03			07:52		12:26 (19)	06:33			06:05		04:54	04:27
	16:34			17:50	66	16:48 (27)	18:56			21:07		22:14	22:50
24	09:01			07:49		10:20 (21)	06:30			06:02		04:52	04:27
	16:37			17:52	68	16:49 (27)	18:58			21:10		22:16	22:50
25	09:00			07:46		10:16 (21)	06:27			05:59		04:51	04:28
	16:39			17:55	89	16:50 (27)	19:01			21:12		22:18	22:50
26	08:58			07:43		10:15 (21)	06:24			05:57		04:49	04:28
	16:41			17:57	92	16:50 (27)	19:03			21:14		22:20	22:50
27	08:56			07:41		10:15 (21)	06:21			05:54		04:47	04:29
	16:44			18:00	77	16:50 (27)	19:05			21:17		22:22	22:50
28	08:54			07:38		10:15 (21)	06:18			05:51		04:45	04:29
	16:46			18:02	75	16:50 (27)	19:07			21:19		22:24	22:50
29	08:52						07:15			05:49		04:44	04:30
	16:49						20:10			21:21		22:25	22:49
30	08:50		14:16 (37)				07:12			05:46		04:42	04:31
	16:51	3	14:19 (37)				20:12			21:23		22:27	22:49
31	08:48		14:08 (37)				07:10					04:41	
	16:53	21	15:27 (24)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		24			1365			367					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51	11:53 (19)	09:00
	22:48	22:01	20:40	19:13		16:49	46 15:01 (24)	15:51
2	04:33	05:26	06:35	07:41		07:54	11:55 (19)	09:01
	22:48	21:58	20:37	19:10		16:46	45 15:02 (24)	15:50
3	04:34	05:28	06:37	07:44		07:56	11:56 (19)	09:03
	22:47	21:56	20:34	19:07		16:44	45 15:03 (24)	15:49
4	04:35	05:31	06:40	07:46		07:58	11:57 (19)	09:05
	22:46	21:54	20:31	19:04		16:41	43 15:03 (24)	15:48
5	04:36	05:33	06:42	07:48	10:59 (21)	08:01	11:58 (19)	09:07
	22:46	21:51	20:28	19:01	13 11:12 (21)	16:39	41 15:03 (24)	15:47
6	04:37	05:35	06:44	07:50	10:56 (21)	08:03	12:01 (19)	09:09
	22:45	21:49	20:25	18:59	19 11:15 (21)	16:37	36 15:04 (24)	15:46
7	04:38	05:37	06:46	07:53	09:54 (16)	08:06	12:03 (19)	09:10
	22:44	21:47	20:22	18:56	24 11:16 (21)	16:34	31 15:03 (24)	15:45
8	04:40	05:39	06:48	07:55	09:58 (16)	08:08	14:45 (24)	09:12
	22:43	21:44	20:20	18:53	33 17:18 (27)	16:32	18 15:03 (24)	15:45
9	04:41	05:42	06:51	07:57	10:01 (16)	08:10	14:46 (24)	09:13
	22:42	21:42	20:17	18:50	49 17:20 (27)	16:30	17 15:03 (24)	15:44
10	04:43	05:44	06:53	08:00	10:49 (21)	08:13	13:42 (37)	09:15
	22:40	21:39	20:14	18:47	59 17:21 (27)	16:28	20 15:03 (24)	15:43
11	04:44	05:46	06:55	08:02	10:49 (21)	08:15	13:39 (37)	09:16
	22:39	21:37	20:11	18:44	67 17:23 (27)	16:25	20 14:58 (24)	15:43
12	04:46	05:48	06:57	08:04	10:48 (21)	08:18	13:48 (37)	09:17
	22:38	21:34	20:08	18:42	72 17:23 (27)	16:23	3 13:51 (37)	15:43
13	04:47	05:50	06:59	08:06	10:48 (21)	08:20		09:19
	22:36	21:31	20:05	18:39	73 17:23 (27)	16:21		15:42
14	04:49	05:53	07:02	08:09	10:47 (21)	08:22		09:20
	22:35	21:29	20:02	18:36	77 17:23 (27)	16:19		15:42
15	04:50	05:55	07:04	08:11	10:48 (21)	08:25		09:21
	22:34	21:26	19:59	18:33	86 17:23 (27)	16:17		15:42
16	04:52	05:57	07:06	08:13	10:47 (21)	08:27		09:22
	22:32	21:24	19:56	18:31	93 17:22 (27)	16:15		15:42
17	04:54	05:59	07:08	08:16	10:48 (21)	08:29		09:23
	22:30	21:21	19:53	18:28	85 17:22 (27)	16:13		15:42
18	04:56	06:02	07:10	08:18	12:58 (19)	08:32		09:24
	22:29	21:18	19:51	18:25	66 17:20 (27)	16:11		15:42
19	04:58	06:04	07:13	08:20	12:57 (19)	08:34		09:25
	22:27	21:16	19:48	18:22	64 17:17 (27)	16:09		15:42
20	04:59	06:06	07:15	08:23	12:55 (19)	08:36		09:25
	22:25	21:13	19:45	18:20	58 17:12 (27)	16:07		15:42
21	05:01	06:08	07:17	08:25	12:54 (19)	08:39		09:26
	22:23	21:10	19:42	18:17	56 16:51 (32)	16:06		15:43
22	05:03	06:11	07:19	08:27	12:53 (19)	08:41		09:27
	22:22	21:07	19:39	18:14	55 16:49 (32)	16:04		15:43
23	05:05	06:13	07:21	08:30	12:53 (19)	08:43		09:27
	22:20	21:05	19:36	18:12	53 16:48 (32)	16:02		15:44
24	05:07	06:15	07:24	08:32	12:52 (19)	08:45		09:28
	22:18	21:02	19:33	18:09	52 16:46 (32)	16:01		15:44
25	05:09	06:17	07:26	07:34	11:52 (19)	08:47		09:28
	22:16	20:59	19:30	17:06	47 15:44 (32)	15:59		15:45
26	05:11	06:20	07:28	07:37	11:51 (19)	08:49		09:28
	22:14	20:56	19:27	17:04	39 15:39 (32)	15:58		15:46
27	05:13	06:22	07:30	07:39	11:52 (19)	08:52		09:28
	22:12	20:54	19:24	17:01	35 12:27 (19)	15:56		15:47
28	05:15	06:24	07:33	07:42	11:52 (19)	08:54		09:28
	22:10	20:51	19:22	16:59	35 12:27 (19)	15:55		15:48
29	05:18	06:26	07:35	07:44	11:52 (19)	08:56		09:28
	22:07	20:48	19:19	16:56	34 12:26 (19)	15:53		15:49
30	05:20	06:29	07:37	07:46	11:53 (19)	08:58		09:28
	22:05	20:45	19:16	16:54	40 14:58 (24)	15:52		15:50
31	05:22	06:31		07:49	11:53 (19)			09:28
	22:03	20:42		16:51	44 15:00 (24)			15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					1428		365	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (21) | 07:35	07:07	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (16) | 09:00
	15:53		16:56	63	13:43 (19) | 18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	56	15:37 (32) | 15:51
2	09:27		08:43		11:39 (21) | 07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:56 (16) | 09:01
	15:54		16:58	59	13:43 (19) | 18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46	51	15:37 (32) | 15:50
3	09:27		08:41		11:38 (21) | 07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		09:57 (16) | 09:03
	15:55		17:01	51	13:42 (19) | 18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07	16:44	55	15:36 (32) | 15:49
4	09:26		08:39		11:39 (21) | 07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46	07:58		10:02 (16) | 09:05
	15:57		17:03	51	15:59 (32) | 18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41	56	15:35 (32) | 15:48
5	09:26		08:37		11:39 (21) | 07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:04 (16) | 09:07
	15:58		17:06	56	16:02 (32) | 18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39	58	15:34 (32) | 15:47
6	09:25		08:34		10:34 (16) | 07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03		11:10 (21) | 09:09
	16:00		17:08	57	16:05 (32) | 18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	55	15:33 (32) | 15:46
7	09:24		08:32		10:32 (16) | 07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53	08:06		11:09 (21) | 09:10
	16:02		17:11	55	16:05 (32) | 18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56	16:34	49	13:12 (19) | 15:45
8	09:24		08:30		10:27 (16) | 07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55	08:08		11:09 (21) | 09:12
	16:03		17:13	53	16:07 (32) | 18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	50	13:13 (19) | 15:45
9	09:23		08:27		10:26 (16) | 07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:10		11:09 (21) | 09:13
	16:05		17:16	49	16:07 (32) | 18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	60	13:14 (19) | 15:44
10	09:22		08:25		10:15 (16) | 07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		11:10 (21) | 09:15
	16:07		17:18	58	16:07 (32) | 18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:28	61	13:14 (19) | 15:43
11	09:21		08:22		10:16 (16) | 07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		11:10 (21) | 09:16
	16:09		17:21	55	16:08 (32) | 18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44	16:25	63	13:14 (19) | 15:43
12	09:20		08:20		10:17 (16) | 07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		11:10 (21) | 09:17
	16:11		17:23	48	16:08 (32) | 18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	66	13:15 (19) | 15:43
13	09:18		08:17		10:18 (16) | 07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20		11:11 (21) | 09:19
	16:13		17:26	33	16:07 (32) | 18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	65	13:15 (19) | 15:42
14	09:17		12:02 (13) | 08:15		10:21 (16) | 06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09	08:22		11:11 (21) | 09:20
	16:15	8	12:10 (13) | 17:28	28	16:08 (32) | 18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	66	13:15 (19) | 15:42
15	09:16		12:02 (13) | 08:12		15:50 (32) | 06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25		11:13 (21) | 09:21
	16:17	9	12:11 (13) | 17:30	17	16:07 (32) | 18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17	64	13:15 (19) | 15:42
16	09:14		12:02 (13) | 08:10		15:51 (32) | 06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:14 (21) | 09:22
	16:19	11	12:13 (13) | 17:33	14	16:05 (32) | 18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	62	13:15 (19) | 15:42
17	09:13		12:02 (13) | 08:07		15:52 (32) | 06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29		11:15 (21) | 09:23
	16:21	20	13:30 (19) | 17:35	12	16:04 (32) | 18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	61	13:14 (19) | 15:42
18	09:12		11:58 (13) | 08:05		15:56 (32) | 06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:32		11:16 (21) | 09:24
	16:23	30	13:34 (19) | 17:38	6	16:02 (32) | 18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	60	13:14 (19) | 15:42
19	09:10		11:58 (13) | 08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20	08:34		11:19 (21) | 09:25
	16:25	33	13:35 (19) | 17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22	16:09	55	13:14 (19) | 15:42
20	09:08		11:58 (13) | 08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		11:21 (21) | 09:25
	16:27	36	13:37 (19) | 17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	47	13:13 (19) | 15:42
21	09:07		11:58 (13) | 07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		11:33 (13) | 09:26
	16:30	39	13:38 (19) | 17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	39	13:13 (19) | 15:43
22	09:05		11:46 (21) | 07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		11:34 (13) | 09:27
	16:32	47	13:38 (19) | 17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	36	13:13 (19) | 15:43
23	09:03		11:44 (21) | 07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		11:34 (13) | 09:27
	16:34	55	13:39 (19) | 17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	33	13:12 (19) | 15:44
24	09:01		11:42 (21) | 07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (32) | 08:45		11:35 (13) | 09:28
	16:37	60	13:40 (19) | 17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 | 16:32 (32) | 16:01	30	13:11 (19) | 15:44
25	09:00		11:42 (21) | 07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (32) | 08:47		11:41 (13) | 09:28
	16:39	61	13:41 (19) | 17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 | 15:34 (32) | 15:59	20	13:09 (19) | 15:45
26	08:58		11:41 (21) | 07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (32) | 08:49		11:41 (13) | 09:28
	16:41	62	13:42 (19) | 17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 | 15:35 (32) | 15:58	11	11:52 (13) | 15:46
27	08:56		11:40 (21) | 07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (32) | 08:52		11:41 (13) | 09:28
	16:44	64	13:42 (19) | 18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 | 15:36 (32) | 15:56	10	11:51 (13) | 15:47
28	08:54		11:40 (21) | 07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (16) | 08:54		11:42 (13) | 09:28
	16:46	65	13:43 (19) | 18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 | 15:37 (32) | 15:55	8	11:50 (13) | 15:48
29	08:52		11:39 (21) |		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (16) | 08:56		09:28
	16:49	65	13:43 (19) |		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 | 15:37 (32) | 15:53		15:49
30	08:50		11:39 (21) |		07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (16) | 08:58		09:28
	16:51	65	13:43 (19) |		20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 | 15:37 (32) | 15:52		15:50
31	08:48		11:39 (21) |		07:09		04:41		05:22	06:31		07:49	09:46 (16) |		09:28
	16:53	63	13:43 (19) |		20:14		22:29		22:03	20:42		16:51	55 | 15:38 (32) |		15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		793		765									221		1347	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October			November			December
1	09:28			08:46		10:50 (16)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39			07:51		10:27 (16)	09:00
	15:53			16:56	74	14:26 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13			16:49	30	13:49 (19)	15:51
2	09:27			08:43		10:51 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:54		10:25 (16)	09:01
	15:54			16:58	73	14:27 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	45	13:52 (19)	15:50
3	09:27			08:41		10:50 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44			07:56		10:24 (16)	09:03
	15:55			17:01	74	14:27 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07			16:44	54	13:54 (19)	15:49
4	09:26			08:39		10:51 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46			07:58		10:22 (16)	09:05
	15:57			17:03	71	14:27 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	61	13:55 (19)	15:48
5	09:26			08:37		10:51 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48			08:01		10:22 (16)	09:07
	15:58			17:06	68	14:26 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01			16:39	65	13:56 (19)	15:47
6	09:25			08:34		10:53 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50			08:03		10:22 (16)	09:09
	16:00			17:08	64	14:26 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59			16:37	69	13:57 (19)	15:46
7	09:24			08:32		10:53 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53			08:06		10:21 (16)	09:10
	16:02			17:11	59	14:25 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56			16:34	72	13:57 (19)	15:45
8	09:24			08:30		10:55 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55			08:08		10:21 (16)	09:12
	16:03			17:13	52	14:24 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53			16:32	73	13:57 (19)	15:45
9	09:23			08:27		10:56 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57			08:10		10:21 (16)	09:13
	16:05			17:16	43	14:22 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50			16:30	75	13:58 (19)	15:44
10	09:22			08:25		10:58 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00			08:13		10:22 (16)	09:15
	16:07			17:18	26	14:18 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:28	72	13:58 (19)	15:43
11	09:21			08:22		12:44 (21)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		10:21 (16)	09:16
	16:09			17:21	5	12:49 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44			16:25	75	13:58 (19)	15:43
12	09:20			08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04			08:18		10:22 (16)	09:17
	16:11			17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42			16:23	72	13:58 (19)	15:42
13	09:18		12:39 (13)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		10:23 (16)	09:19
	16:13	5	12:44 (13)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39			16:21	72	13:58 (19)	15:42
14	09:17		12:39 (13)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09			08:22		10:23 (16)	09:20
	16:15	7	12:46 (13)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	68	13:57 (19)	15:42
15	09:16		12:39 (13)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		10:24 (16)	09:21
	16:17	15	12:54 (13)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33			16:17	63	13:57 (19)	15:42
16	09:14		12:38 (13)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		10:30 (16)	09:22
	16:19	17	12:55 (13)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31			16:15	50	13:57 (19)	15:42
17	09:13		12:38 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		12:05 (21)	09:23
	16:21	18	12:56 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	45	13:55 (19)	15:42
18	09:12		12:37 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18			08:32		12:07 (21)	09:24
	16:23	19	12:56 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25			16:11	42	13:55 (19)	15:42
19	09:10		12:38 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20			08:34		12:08 (21)	09:25
	16:25	20	12:58 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22			16:09	39	13:54 (19)	15:42
20	09:08		12:37 (21)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		12:09 (21)	09:25
	16:27	22	12:59 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20			16:07	33	13:51 (19)	15:42
21	09:07		12:35 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25			08:39		12:11 (21)	09:26
	16:30	23	12:58 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17			16:06	23	12:34 (13)	15:43
22	09:05		12:34 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27			08:41		12:13 (21)	09:27
	16:32	33	14:16 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14			16:04	22	12:35 (13)	15:43
23	09:03		12:33 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30			08:43		12:14 (13)	09:27
	16:34	39	14:19 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12			16:02	20	12:34 (13)	15:44
24	09:01		12:33 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32			08:45		12:15 (13)	09:28
	16:37	42	14:21 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09			16:01	20	12:35 (13)	15:44
25	09:00		12:32 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34			08:47		12:16 (13)	09:28
	16:39	45	14:22 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06			15:59	18	12:34 (13)	15:45
26	08:58		10:57 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37			08:49		12:17 (13)	09:28
	16:41	50	14:24 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04			15:58	17	12:34 (13)	15:46
27	08:56		10:51 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39			08:52		12:18 (13)	09:28
	16:44	64	14:24 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01			15:56	15	12:33 (13)	15:47
28	08:54		10:51 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42			08:54		12:19 (13)	09:28
	16:46	69	14:25 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59			15:55	7	12:26 (13)	15:48
29	08:52		10:51 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44			08:56		12:20 (13)	09:28
	16:49	70	14:26 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56			15:53	5	12:25 (13)	15:49
30	08:50		10:50 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46			08:58			09:28
	16:51	72	14:26 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54			15:52			15:50
31	08:48		10:51 (16)				07:09		04:41		05:22	06:31		07:49	12:13 (21)					09:28
	16:53	74	14:27 (19)				20:14		22:29		22:03	20:42		16:51	7 12:20 (21)					15:51
Potential sun hours	221			260			365	432	521	547	546	478	386	319			236			199
Total, worst case		704			609										7			1322		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October			November			December
1	09:28			08:46		10:45 (16)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39			07:51		10:19 (16)	09:00
	15:53			16:56	73	14:22 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13			16:49	43	13:46 (19)	15:51
2	09:27			08:43		10:46 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:54		10:18 (16)	09:01
	15:54			16:58	74	14:23 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	53	13:48 (19)	15:50
3	09:27			08:41		10:45 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44			07:56		10:18 (16)	09:03
	15:55			17:01	74	14:22 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07			16:44	59	13:50 (19)	15:49
4	09:26			08:39		10:46 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46			07:58		10:16 (16)	09:05
	15:57			17:03	73	14:23 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	65	13:51 (19)	15:48
5	09:26			08:37		10:46 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48			08:01		10:16 (16)	09:07
	15:58			17:06	71	14:22 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01			16:39	70	13:52 (19)	15:47
6	09:25			08:34		10:47 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50			08:03		10:16 (16)	09:09
	16:00			17:08	68	14:22 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59			16:37	73	13:53 (19)	15:46
7	09:24			08:32		10:47 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53			08:06		10:16 (16)	09:10
	16:02			17:11	65	14:21 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56			16:34	73	13:52 (19)	15:45
8	09:24			08:30		10:48 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55			08:08		10:16 (16)	09:12
	16:03			17:13	58	14:20 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53			16:32	73	13:53 (19)	15:45
9	09:23			08:27		10:49 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57			08:10		10:16 (16)	09:13
	16:05			17:16	50	14:18 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50			16:30	75	13:53 (19)	15:44
10	09:22			08:25		10:50 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00			08:13		10:17 (16)	09:15
	16:07			17:18	40	14:16 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:28	74	13:54 (19)	15:43
11	09:21			08:22		10:53 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		10:17 (16)	09:16
	16:09			17:21	22	12:47 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44			16:25	69	13:53 (19)	15:43
12	09:20			08:20		12:38 (21)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04			08:18		10:18 (16)	09:17
	16:11			17:23	4	12:42 (21)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42			16:23	54	13:53 (19)	15:42
13	09:18			08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		10:20 (16)	09:19
	16:13			17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39			16:21	53	13:53 (19)	15:42
14	09:17			08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09			08:22		11:57 (21)	09:20
	16:15			17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	51	13:52 (19)	15:42
15	09:16			08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:58 (21)	09:21
	16:17			17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33			16:17	50	13:52 (19)	15:42
16	09:14			08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:59 (21)	09:22
	16:19			17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31			16:15	49	13:52 (19)	15:42
17	09:13		12:33 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		12:00 (21)	09:23
	16:21	5	12:50 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	45	13:50 (19)	15:42
18	09:12		12:33 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18			08:32		12:01 (21)	09:24
	16:23	18	12:51 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25			16:11	43	13:50 (19)	15:42
19	09:10		12:34 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20			08:34		12:03 (21)	09:25
	16:25	19	12:53 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22			16:09	38	13:49 (19)	15:42
20	09:08		12:34 (13)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		12:04 (21)	09:25
	16:27	20	12:54 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20			16:07	27	13:41 (19)	15:42
21	09:07		12:31 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25			08:39		12:07 (21)	09:26
	16:30	22	12:53 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17			16:06	22	12:29 (13)	15:43
22	09:05		12:29 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27			08:41		12:10 (13)	09:27
	16:32	27	14:06 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14			16:04	20	12:30 (13)	15:43
23	09:03		12:28 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30			08:43		12:10 (13)	09:27
	16:34	38	14:14 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12			16:02	19	12:29 (13)	15:44
24	09:01		12:27 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32			08:45		12:11 (13)	09:28
	16:37	43	14:16 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09			16:01	18	12:29 (13)	15:44
25	09:00		12:27 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34			08:47		12:11 (13)	09:28
	16:39	45	14:17 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06			15:59	5	12:28 (13)	15:45
26	08:58		12:26 (21)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37			08:49			09:28
	16:41	49	14:19 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04			15:58			15:46
27	08:56		12:25 (21)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39			08:52			09:28
	16:44	50	14:19 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01			15:56			15:47
28	08:54		12:25 (21)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42			08:54			09:28
	16:46	51	14:20 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59			15:55			15:48
29	08:52		10:48 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44			08:56			09:28
	16:49	53	14:21 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56			15:53			15:49
30	08:50		10:46 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		12:06 (21)	08:58			09:28
	16:51	55	14:21 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7	12:13 (21)	15:52			15:50
31	08:48		10:46 (16)				07:09		04:41		05:22	06:31		07:49		10:22 (16)				09:28
	16:53	69	14:22 (19)				20:14		22:29		22:03	20:42		16:51	25	12:17 (21)				15:51
Potential sun hours	221			260			365	432	521	547	546	478	386	319			236			199
Total, worst case		564			672										32			1221		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:03 (30)	08:45		14:59 (21)	07:35	07:07	05:44	04:39
	15:52	20	12:23 (30)	16:56	18	15:17 (21)	18:04	20:16	21:26	22:30
2	09:27		12:03 (30)	08:43		14:59 (21)	07:32	07:04	05:41	04:38
	15:54	20	12:23 (30)	16:58	19	15:18 (21)	18:07	20:19	21:28	22:32
3	09:27		12:03 (30)	08:41		14:58 (21)	07:30	07:01	05:38	04:37
	15:55	20	12:23 (30)	17:01	19	15:17 (21)	18:09	20:21	21:30	22:33
4	09:26		12:03 (30)	08:39		14:59 (21)	07:27	06:58	05:36	04:36
	15:57	21	12:24 (30)	17:03	19	15:18 (21)	18:12	20:23	21:33	22:35
5	09:26		12:04 (30)	08:37		14:59 (21)	07:24	06:55	05:33	04:34
	15:58	26	13:33 (16)	17:06	19	15:18 (21)	18:14	20:26	21:35	22:36
6	09:25		12:04 (30)	08:34		15:00 (21)	07:21	06:52	05:31	04:33
	16:00	29	13:35 (16)	17:08	18	15:18 (21)	18:16	20:28	21:37	22:38
7	09:24		12:05 (30)	08:32		15:00 (21)	07:18	06:49	05:29	04:32
	16:01	31	13:37 (16)	17:11	17	15:17 (21)	18:19	20:30	21:39	22:39
8	09:23		12:06 (30)	08:30		15:00 (21)	07:16	06:46	05:26	04:31
	16:03	33	13:39 (16)	17:13	16	15:16 (21)	18:21	20:33	21:42	22:40
9	09:23		12:06 (30)	08:27		15:02 (21)	07:13	06:44	05:24	04:31
	16:05	33	13:39 (16)	17:15	14	15:16 (21)	18:23	20:35	21:44	22:42
10	09:22		12:07 (30)	08:25		15:03 (21)	07:10	06:41	05:21	04:30
	16:07	35	13:41 (16)	17:18	11	15:14 (21)	18:26	20:37	21:46	22:43
11	09:21		12:07 (30)	08:22		15:07 (21)	07:07	06:38	05:19	04:29
	16:09	35	13:41 (16)	17:20	5	15:12 (21)	18:28	20:39	21:49	22:44
12	09:19		12:08 (30)	08:20			07:04	06:35	05:17	04:29
	16:11	35	13:42 (16)	17:23			18:30	20:42	21:51	22:45
13	09:18		12:09 (30)	08:17			07:01	06:32	05:15	04:28
	16:12	35	13:43 (16)	17:25			18:33	20:44	21:53	22:46
14	09:17		12:10 (30)	08:15			06:58	06:29	05:12	04:28
	16:14	35	13:44 (16)	17:28			18:35	20:46	21:55	22:46
15	09:16		12:11 (30)	08:12			06:56	06:27	05:10	04:27
	16:17	34	13:45 (16)	17:30			18:37	20:49	21:57	22:47
16	09:14		12:12 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	32	13:45 (16)	17:33			18:40	20:51	22:00	22:48
17	09:13		12:14 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	29	13:45 (16)	17:35			18:42	20:53	22:02	22:48
18	09:11		12:16 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	26	13:46 (16)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:25 (16)	08:02			06:44	06:16	05:02	04:26
	16:25	21	13:46 (16)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:25 (16)	07:59			06:41	06:13	05:00	04:26
	16:27	22	13:47 (16)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:26 (16)	07:57			06:38	06:10	04:58	04:26
	16:30	21	13:47 (16)	17:45			18:51	21:03	22:10	22:50
22	09:05		13:26 (16)	07:54			06:35	06:07	04:56	04:27
	16:32	21	13:47 (16)	17:48			18:54	21:05	22:12	22:50
23	09:03		13:27 (16)	07:51			06:33	06:05	04:54	04:27
	16:34	20	13:47 (16)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:28 (16)	07:49			06:30	06:02	04:52	04:27
	16:37	19	13:47 (16)	17:52			18:58	21:09	22:16	22:50
25	09:00		13:29 (16)	07:46			06:27	05:59	04:50	04:28
	16:39	18	13:47 (16)	17:55			19:00	21:12	22:18	22:50
26	08:58		13:30 (16)	07:43			06:24	05:57	04:49	04:28
	16:41	17	13:47 (16)	17:57			19:03	21:14	22:20	22:50
27	08:56		13:30 (16)	07:41			06:21	05:54	04:47	04:29
	16:44	20	15:09 (21)	18:00			19:05	21:16	22:22	22:50
28	08:54		13:32 (16)	07:38			06:18	05:51	04:45	04:29
	16:46	23	15:12 (21)	18:02			19:07	21:19	22:23	22:50
29	08:52		13:35 (16)				07:15	05:49	04:44	04:30
	16:48	21	15:14 (21)				20:10	21:21	22:25	22:49
30	08:50		15:00 (21)				07:12	05:46	04:42	04:31
	16:51	15	15:15 (21)				20:12	21:23	22:27	22:49
31	08:48		15:00 (21)				07:09		04:41	
	16:53	16	15:16 (21)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		783			175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (21)	08:59		11:49 (30)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (21)	15:51	35	13:23 (16)
2	04:33	05:26	06:35	07:41			07:54		14:31 (21)	09:01		11:50 (30)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (21)	15:50	35	13:24 (16)
3	04:34	05:28	06:37	07:44			07:56		14:31 (21)	09:03		11:50 (30)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (21)	15:49	33	13:23 (16)
4	04:35	05:30	06:39	07:46			07:58		14:29 (21)	09:05		11:50 (30)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (21)	15:48	33	13:23 (16)
5	04:36	05:33	06:42	07:48			08:01		14:29 (21)	09:07		11:50 (30)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (21)	15:47	31	13:22 (16)
6	04:37	05:35	06:44	07:50			08:03		14:29 (21)	09:08		11:50 (30)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (21)	15:46	30	13:22 (16)
7	04:38	05:37	06:46	07:53			08:06		14:29 (21)	09:10		11:51 (30)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (21)	15:45	27	13:21 (16)
8	04:40	05:39	06:48	07:55			08:08		14:29 (21)	09:12		11:51 (30)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (21)	15:44	21	12:12 (30)
9	04:41	05:41	06:51	07:57			08:10		14:30 (21)	09:13		11:51 (30)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (21)	15:44	21	12:12 (30)
10	04:42	05:44	06:53	07:59			08:13		14:29 (21)	09:15		11:52 (30)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (21)	15:43	20	12:12 (30)
11	04:44	05:46	06:55	08:02			08:15		14:30 (21)	09:16		11:53 (30)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (21)	15:43	20	12:13 (30)
12	04:45	05:48	06:57	08:04			08:18		14:32 (21)	09:17		11:53 (30)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (21)	15:42	20	12:13 (30)
13	04:47	05:50	06:59	08:06			08:20		13:07 (16)	09:19		11:54 (30)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (21)	15:42	20	12:14 (30)
14	04:49	05:53	07:02	08:09			08:22		13:04 (16)	09:20		11:54 (30)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (21)	15:42	20	12:14 (30)
15	04:50	05:55	07:04	08:11			08:25		13:03 (16)	09:21		11:54 (30)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (21)	15:42	20	12:14 (30)
16	04:52	05:57	07:06	08:13			08:27		13:03 (16)	09:22		11:55 (30)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (16)	15:42	20	12:15 (30)
17	04:54	05:59	07:08	08:16			08:29		13:02 (16)	09:23		11:55 (30)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (16)	15:42	20	12:15 (30)
18	04:56	06:02	07:10	08:18			08:32		13:02 (16)	09:24		11:56 (30)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (16)	15:42	19	12:15 (30)
19	04:57	06:04	07:13	08:20			08:34		13:02 (16)	09:25		11:56 (30)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (16)	15:42	20	12:16 (30)
20	04:59	06:06	07:15	08:23			08:36		13:01 (16)	09:25		11:57 (30)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (16)	15:42	20	12:17 (30)
21	05:01	06:08	07:17	08:25			08:38		13:02 (16)	09:26		11:57 (30)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (16)	15:43	20	12:17 (30)
22	05:03	06:10	07:19	08:27			08:41		13:02 (16)	09:27		11:58 (30)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (16)	15:43	20	12:18 (30)
23	05:05	06:13	07:21	08:30			08:43		13:02 (16)	09:27		11:58 (30)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (16)	15:44	20	12:18 (30)
24	05:07	06:15	07:24	08:32			08:45		11:55 (30)	09:27		11:58 (30)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (16)	15:44	20	12:18 (30)
25	05:09	06:17	07:26	07:34			08:47		11:52 (30)	09:28		11:59 (30)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (16)	15:45	20	12:19 (30)
26	05:11	06:19	07:28	07:37			08:49		11:51 (30)	09:28		12:00 (30)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (16)	15:46	20	12:20 (30)
27	05:13	06:22	07:30	07:39			08:51		11:50 (30)	09:28		12:00 (30)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (16)	15:47	20	12:20 (30)
28	05:15	06:24	07:32	07:42			08:54		11:49 (30)	09:28		12:00 (30)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (16)	15:48	20	12:20 (30)
29	05:17	06:26	07:35	07:44			08:56		11:50 (30)	09:28		12:01 (30)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (16)	15:49	20	12:21 (30)
30	05:20	06:28	07:37	07:46			08:58		11:49 (30)	09:28		12:01 (30)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (16)	15:50	21	12:22 (30)
31	05:22	06:31		07:49		14:35 (21)				09:28		12:01 (30)
	22:03	20:42		16:51	6	14:41 (21)				15:51	21	12:22 (30)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November			December		
1	09:28		12:35 (30)	08:45		14:09 (16)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51			08:59		12:23 (30)
	15:52	20	12:55 (30)	16:56	5	14:14 (16)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	18	12:41 (30)
2	09:27		12:36 (30)	08:43			07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:23 (30)
	15:54	21	12:57 (30)	16:58			18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	19	12:42 (30)
3	09:27		12:36 (30)	08:41			07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:23 (30)
	15:55	21	12:57 (30)	17:01			18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	12:43 (30)
4	09:26		12:37 (30)	08:39			07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:23 (30)
	15:57	20	12:57 (30)	17:03			18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	12:43 (30)
5	09:26		12:37 (30)	08:37			07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:24 (30)
	15:58	20	12:57 (30)	17:06			18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	20	12:44 (30)
6	09:25		12:38 (30)	08:34			07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:08		12:24 (30)
	16:00	20	12:58 (30)	17:08			18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	20	12:44 (30)
7	09:24		12:38 (30)	08:32			07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:24 (30)
	16:01	20	12:58 (30)	17:11			18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34			15:45	21	12:45 (30)
8	09:23		12:39 (30)	08:30			07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:25 (30)
	16:03	20	12:59 (30)	17:13			18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	20	12:45 (30)
9	09:23		12:39 (30)	08:27			07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10			09:13		12:24 (30)
	16:05	19	12:58 (30)	17:15			18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30			15:44	21	12:45 (30)
10	09:22		12:40 (30)	08:25			07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13		13:40 (16)	09:15		12:25 (30)
	16:07	19	12:59 (30)	17:18			18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27	5	13:45 (16)	15:43	21	12:46 (30)
11	09:21		12:40 (30)	08:22			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		13:37 (16)	09:16		12:26 (30)
	16:09	19	12:59 (30)	17:20			18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25	11	13:48 (16)	15:43	21	12:47 (30)
12	09:19		12:42 (30)	08:20			07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18		13:36 (16)	09:17		12:26 (30)
	16:10	24	14:10 (16)	17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	14	13:50 (16)	15:42	20	12:46 (30)
13	09:18		12:42 (30)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20		13:35 (16)	09:19		12:27 (30)
	16:12	27	14:11 (16)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	17	13:52 (16)	15:42	20	12:47 (30)
14	09:17		12:44 (30)	08:15			06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22		13:34 (16)	09:20		12:27 (30)
	16:14	27	14:13 (16)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	18	13:52 (16)	15:42	21	12:48 (30)
15	09:16		12:45 (30)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25		13:34 (16)	09:21		12:27 (30)
	16:17	27	14:14 (16)	17:30			18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17	19	13:53 (16)	15:42	21	12:48 (30)
16	09:14		12:46 (30)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		13:34 (16)	09:22		12:28 (30)
	16:19	27	14:15 (16)	17:33			18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15	20	13:54 (16)	15:42	20	12:48 (30)
17	09:13		12:48 (30)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29		13:33 (16)	09:23		12:28 (30)
	16:21	25	14:16 (16)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	20	13:53 (16)	15:42	20	12:48 (30)
18	09:11		13:59 (16)	08:05			06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32		13:34 (16)	09:24		12:29 (30)
	16:23	18	14:17 (16)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11	20	13:54 (16)	15:42	20	12:49 (30)
19	09:10		13:59 (16)	08:02			06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34		13:34 (16)	09:25		12:30 (30)
	16:25	19	14:18 (16)	17:40			18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	21	13:55 (16)	15:42	20	12:50 (30)
20	09:08		13:59 (16)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		13:34 (16)	09:25		12:30 (30)
	16:27	19	14:18 (16)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	20	13:54 (16)	15:42	20	12:50 (30)
21	09:07		13:59 (16)	07:57			06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		13:35 (16)	09:26		12:30 (30)
	16:30	20	14:19 (16)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	20	13:55 (16)	15:43	20	12:50 (30)
22	09:05		13:59 (16)	07:54			06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41		13:35 (16)	09:27		12:31 (30)
	16:32	20	14:19 (16)	17:47			18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	19	13:54 (16)	15:43	20	12:51 (30)
23	09:03		13:59 (16)	07:51			06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		13:36 (16)	09:27		12:31 (30)
	16:34	21	14:20 (16)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02	19	13:55 (16)	15:44	20	12:51 (30)
24	09:01		14:00 (16)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		13:37 (16)	09:27		12:31 (30)
	16:36	20	14:20 (16)	17:52			18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	13:55 (16)	15:44	21	12:52 (30)
25	09:00		14:00 (16)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:26 (30)	09:28		12:33 (30)
	16:39	21	14:21 (16)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	25	13:54 (16)	15:45	20	12:53 (30)
26	08:58		14:01 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:25 (30)	09:28		12:33 (30)
	16:41	20	14:21 (16)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	26	13:54 (16)	15:46	20	12:53 (30)
27	08:56		14:01 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51		12:24 (30)	09:28		12:34 (30)
	16:44	19	14:20 (16)	18:00			19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	28	13:54 (16)	15:47	20	12:54 (30)
28	08:54		14:02 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:23 (30)	09:28		12:33 (30)
	16:46	18	14:20 (16)	18:02			19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55	28	13:53 (16)	15:47	21	12:54 (30)
29	08:52		14:04 (16)				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:23 (30)	09:28		12:34 (30)
	16:48	16	14:20 (16)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	27	13:52 (16)	15:49	20	12:54 (30)
30	08:50		14:04 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:23 (30)	09:28		12:35 (30)
	16:51	14	14:18 (16)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	24	13:51 (16)	15:50	20	12:55 (30)
31	08:48		14:07 (16)				07:09		04:41		05:22	06:31		07:49				09:28		12:35 (30)
	16:53	10	14:17 (16)				20:14		22:29		22:03	20:42		16:51				15:51	20	12:55 (30)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		631			5											419			625	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		13:54 (30)	08:45		15:12 (16)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (30)	16:56	14	15:26 (16)	18:04	20:16	21:26	22:30
2	09:27		13:54 (30)	08:43		15:12 (16)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (30)	16:58	16	15:28 (16)	18:07	20:19	21:28	22:32
3	09:27		13:54 (30)	08:41		15:11 (16)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (30)	17:01	17	15:28 (16)	18:09	20:21	21:30	22:33
4	09:26		13:54 (30)	08:39		15:11 (16)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (30)	17:03	18	15:29 (16)	18:12	20:23	21:33	22:35
5	09:26		13:53 (30)	08:37		15:11 (16)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (30)	17:06	18	15:29 (16)	18:14	20:26	21:35	22:36
6	09:25		13:53 (30)	08:34		15:11 (16)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (30)	17:08	19	15:30 (16)	18:16	20:28	21:37	22:38
7	09:24		13:54 (30)	08:32		15:11 (16)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (30)	17:10	19	15:30 (16)	18:19	20:30	21:39	22:39
8	09:23		13:54 (30)	08:30		15:11 (16)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (30)	17:13	18	15:29 (16)	18:21	20:32	21:42	22:40
9	09:23		13:53 (30)	08:27		15:12 (16)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (30)	17:15	18	15:30 (16)	18:23	20:35	21:44	22:41
10	09:22		13:53 (30)	08:25		15:12 (16)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (30)	17:18	17	15:29 (16)	18:26	20:37	21:46	22:43
11	09:20		13:53 (30)	08:22		15:13 (16)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (30)	17:20	14	15:27 (16)	18:28	20:39	21:48	22:44
12	09:19		13:54 (30)	08:20		15:16 (16)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (30)	17:23	11	15:27 (16)	18:30	20:42	21:51	22:45
13	09:18		13:53 (30)	08:17		15:18 (16)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (30)	17:25	5	15:23 (16)	18:33	20:44	21:53	22:45
14	09:17		13:54 (30)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (30)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (30)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (30)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (30)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (30)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (30)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (30)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (30)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (30)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (30)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (30)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (30)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (30)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (30)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (30)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (30)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (30)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (30)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (30)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (30)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (30)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (30)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (30)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (30)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (16)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (16)				20:12	21:23	22:27	22:49
31	08:48		15:14 (16)				07:09		04:41	
	16:53	11	15:25 (16)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		14:42 (16)	08:59		13:35 (30)
	22:48		22:01		20:39		19:13			16:48	16	14:58 (16)	15:51	19	13:54 (30)
2	04:33		05:26		06:35		07:41			07:53		14:41 (16)	09:01		13:37 (30)
	22:48		21:58		20:37		19:10			16:46	18	14:59 (16)	15:50	18	13:55 (30)
3	04:34		05:28		06:37		07:44			07:56		14:40 (16)	09:03		13:37 (30)
	22:47		21:56		20:34		19:07			16:44	19	14:59 (16)	15:49	18	13:55 (30)
4	04:35		05:30		06:39		07:46			07:58		14:40 (16)	09:05		13:38 (30)
	22:46		21:54		20:31		19:04			16:41	20	15:00 (16)	15:48	17	13:55 (30)
5	04:36		05:32		06:42		07:48			08:01		14:41 (16)	09:07		13:39 (30)
	22:45		21:51		20:28		19:01			16:39	19	15:00 (16)	15:47	16	13:55 (30)
6	04:37		05:35		06:44		07:50			08:03		14:41 (16)	09:08		13:40 (30)
	22:45		21:49		20:25		18:58			16:36	19	15:00 (16)	15:46	15	13:55 (30)
7	04:38		05:37		06:46		07:53			08:06		14:41 (16)	09:10		13:41 (30)
	22:44		21:46		20:22		18:56			16:34	18	14:59 (16)	15:45	14	13:55 (30)
8	04:40		05:39		06:48		07:55			08:08		14:42 (16)	09:12		13:42 (30)
	22:43		21:44		20:19		18:53			16:32	17	14:59 (16)	15:44	13	13:55 (30)
9	04:41		05:41		06:50		07:57			08:10		14:43 (16)	09:13		13:42 (30)
	22:41		21:41		20:16		18:50			16:30	16	14:59 (16)	15:44	12	13:54 (30)
10	04:42		05:44		06:53		07:59			08:13		14:43 (16)	09:15		13:43 (30)
	22:40		21:39		20:14		18:47			16:27	14	14:57 (16)	15:43	11	13:54 (30)
11	04:44		05:46		06:55		08:02			08:15		14:45 (16)	09:16		13:45 (30)
	22:39		21:36		20:11		18:44			16:25	11	14:56 (16)	15:43	9	13:54 (30)
12	04:45		05:48		06:57		08:04			08:18		14:47 (16)	09:17		13:46 (30)
	22:38		21:34		20:08		18:41			16:23	7	14:54 (16)	15:42	7	13:53 (30)
13	04:47		05:50		06:59		08:06			08:20			09:19		13:48 (30)
	22:36		21:31		20:05		18:39			16:21			15:42	5	13:53 (30)
14	04:49		05:53		07:01		08:09			08:22			09:20		13:49 (30)
	22:35		21:29		20:02		18:36			16:19			15:42	3	13:52 (30)
15	04:50		05:55		07:04		08:11			08:25		13:37 (30)	09:21		
	22:33		21:26		19:59		18:33			16:17	7	13:44 (30)	15:42		
16	04:52		05:57		07:06		08:13			08:27		13:36 (30)	09:22		
	22:32		21:23		19:56		18:30			16:15	11	13:47 (30)	15:42		
17	04:54		05:59		07:08		08:16			08:29		13:34 (30)	09:23		
	22:30		21:21		19:53		18:28			16:13	14	13:48 (30)	15:42		
18	04:56		06:01		07:10		08:18			08:32		13:33 (30)	09:24		
	22:29		21:18		19:50		18:25			16:11	17	13:50 (30)	15:42		
19	04:57		06:04		07:12		08:20			08:34		13:33 (30)	09:25		
	22:27		21:15		19:47		18:22			16:09	18	13:51 (30)	15:42		
20	04:59		06:06		07:15		08:23			08:36		13:32 (30)	09:25		
	22:25		21:13		19:45		18:19			16:07	19	13:51 (30)	15:42		
21	05:01		06:08		07:17		08:25			08:38		13:32 (30)	09:26		
	22:23		21:10		19:42		18:17			16:06	20	13:52 (30)	15:43		
22	05:03		06:10		07:19		08:27			08:41		13:32 (30)	09:27		
	22:21		21:07		19:39		18:14			16:04	20	13:52 (30)	15:43		
23	05:05		06:13		07:21		08:30			08:43		13:32 (30)	09:27		
	22:20		21:05		19:36		18:11			16:02	21	13:53 (30)	15:44		
24	05:07		06:15		07:23		08:32			08:45		13:33 (30)	09:27		
	22:18		21:02		19:33		18:09			16:00	21	13:54 (30)	15:44		
25	05:09		06:17		07:26		07:34			08:47		13:33 (30)	09:28		
	22:16		20:59		19:30		17:06			15:59	21	13:54 (30)	15:45		
26	05:11		06:19		07:28		07:37			08:49		13:33 (30)	09:28		
	22:14		20:56		19:27		17:04			15:57	21	13:54 (30)	15:46		
27	05:13		06:22		07:30		07:39			08:51		13:33 (30)	09:28		
	22:11		20:53		19:24		17:01			15:56	21	13:54 (30)	15:47		
28	05:15		06:24		07:32		07:41			08:53		13:33 (30)	09:28		
	22:09		20:51		19:21		16:58			15:55	21	13:54 (30)	15:47		
29	05:17		06:26		07:35		07:44		14:47 (16)	08:55		13:35 (30)	09:28		
	22:07		20:48		19:18		16:56	7	14:54 (16)	15:53	20	13:55 (30)	15:48		
30	05:19		06:28		07:37		07:46		14:45 (16)	08:57		13:35 (30)	09:28		13:56 (30)
	22:05		20:45		19:16		16:53	11	14:56 (16)	15:52	20	13:55 (30)	15:50	4	14:00 (30)
31	05:22		06:31				07:49		14:42 (16)				09:28		13:55 (30)
	22:03		20:42				16:51	15	14:57 (16)				15:51	6	14:01 (30)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								33			486			187	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:45		10:57 (41)	07:35		16:28 (21)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (30)	18:04	11	16:39 (21)	20:16	21:26	22:30
2	09:27			08:43		10:59 (41)	07:32		16:27 (21)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (30)	18:07	13	16:40 (21)	20:19	21:28	22:32
3	09:27			08:41		11:02 (41)	07:30		16:27 (21)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (30)	18:09	14	16:41 (21)	20:21	21:30	22:33
4	09:26			08:39		13:29 (30)	07:27		16:27 (21)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (30)	18:12	17	16:44 (21)	20:23	21:33	22:35
5	09:26			08:37		13:30 (30)	07:24		16:27 (21)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (30)	18:14	19	16:46 (21)	20:26	21:35	22:36
6	09:25			08:34		13:33 (30)	07:21		16:28 (21)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (30)	18:16	17	16:45 (21)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (21)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (21)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (21)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (21)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (21)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (21)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (11)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (11)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (11)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (11)	18:33			20:44	21:53	22:45
14	09:17		11:05 (41)	08:15		15:02 (11)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (41)	17:28	12	15:14 (16)	18:35			20:46	21:55	22:46
15	09:16		10:59 (41)	08:12		15:06 (16)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (41)	17:30	12	15:18 (16)	18:37			20:49	21:57	22:47
16	09:14		10:52 (41)	08:10		15:06 (16)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (41)	17:33	15	15:21 (16)	18:40			20:51	21:59	22:48
17	09:13		10:51 (41)	08:07		15:05 (16)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (41)	17:35	16	15:21 (16)	18:42			20:53	22:02	22:48
18	09:11		10:51 (41)	08:05		15:05 (16)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (41)	17:38	15	15:20 (16)	18:44			20:56	22:04	22:49
19	09:10		10:51 (41)	08:02		15:06 (16)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (41)	17:40	16	15:22 (16)	18:47			20:58	22:06	22:49
20	09:08		10:51 (41)	07:59		15:07 (16)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (41)	17:43	17	15:24 (16)	18:49			21:00	22:08	22:50
21	09:07		10:51 (41)	07:57		15:07 (16)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (41)	17:45	20	15:27 (16)	18:51			21:02	22:10	22:50
22	09:05		10:51 (41)	07:54		15:08 (16)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (36)	17:47	20	15:28 (16)	18:53			21:05	22:12	22:50
23	09:03		10:51 (41)	07:51		15:09 (16)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (36)	17:50	18	15:27 (16)	18:56			21:07	22:14	22:50
24	09:01		10:52 (41)	07:49		15:12 (16)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (36)	17:52	13	15:25 (16)	18:58			21:09	22:16	22:50
25	08:59		10:52 (41)	07:46		15:16 (16)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (36)	17:55	5	15:21 (16)	19:00			21:12	22:18	22:50
26	08:58		10:52 (41)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (30)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (41)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (30)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (41)	07:38		16:32 (21)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (30)	18:02	4	16:36 (21)	19:07			21:19	22:23	22:50
29	08:52		10:54 (41)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (30)				20:10			21:21	22:25	22:49
30	08:50		10:55 (41)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (30)				20:12			21:23	22:27	22:49
31	08:48		10:56 (41)				07:09				04:41	
	16:53	42	13:49 (30)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		08:59
	22:48	22:01	20:39	19:13		16:48		15:51
2	04:33	05:26	06:35	07:41		07:54		09:01
	22:48	21:58	20:37	19:10		16:46		15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44		15:49
4	04:35	05:30	06:39	07:46		07:58	13:07 (30)	09:05
	22:46	21:54	20:31	19:04		16:41	4 13:11 (30)	15:48
5	04:36	05:33	06:42	07:48	17:09 (21)	08:01	13:02 (30)	09:07
	22:45	21:51	20:28	19:01	9 17:18 (21)	16:39	13 13:15 (30)	15:47
6	04:37	05:35	06:44	07:50	17:06 (21)	08:03	13:01 (30)	09:08
	22:45	21:49	20:25	18:58	14 17:20 (21)	16:36	17 13:18 (30)	15:46
7	04:38	05:37	06:46	07:53	17:04 (21)	08:06	12:58 (30)	09:10
	22:44	21:46	20:22	18:56	16 17:20 (21)	16:34	21 13:19 (30)	15:45
8	04:40	05:39	06:48	07:55	17:03 (21)	08:08	10:32 (41)	09:12
	22:43	21:44	20:19	18:53	18 17:21 (21)	16:32	29 13:20 (30)	15:44
9	04:41	05:41	06:50	07:57	17:02 (21)	08:10	10:30 (41)	09:13
	22:41	21:41	20:16	18:50	18 17:20 (21)	16:30	37 13:22 (30)	15:44
10	04:42	05:44	06:53	07:59	17:01 (21)	08:13	10:28 (41)	09:15
	22:40	21:39	20:14	18:47	16 17:17 (21)	16:27	40 13:21 (30)	15:43
11	04:44	05:46	06:55	08:02	17:01 (21)	08:15	10:27 (41)	09:16
	22:39	21:36	20:11	18:44	14 17:15 (21)	16:25	41 13:19 (30)	15:43
12	04:45	05:48	06:57	08:04	17:01 (21)	08:18	10:27 (41)	09:17
	22:38	21:34	20:08	18:41	12 17:13 (21)	16:23	42 13:19 (30)	15:42
13	04:47	05:50	06:59	08:06	17:02 (21)	08:20	10:25 (41)	09:19
	22:36	21:31	20:05	18:39	10 17:12 (21)	16:21	41 13:15 (30)	15:42
14	04:49	05:53	07:01	08:09	17:06 (21)	08:22	10:25 (41)	09:20
	22:35	21:29	20:02	18:36	2 17:08 (21)	16:19	41 13:07 (30)	15:42
15	04:50	05:55	07:04	08:11		08:25	10:25 (41)	09:21
	22:33	21:26	19:59	18:33		16:17	40 13:01 (30)	15:42
16	04:52	05:57	07:06	08:13		08:27	10:26 (41)	09:22
	22:32	21:23	19:56	18:30		16:15	39 12:58 (30)	15:42
17	04:54	05:59	07:08	08:16	15:45 (16)	08:29	10:25 (41)	09:23
	22:30	21:21	19:53	18:28	9 15:54 (16)	16:13	39 12:37 (36)	15:42
18	04:56	06:02	07:10	08:18	15:42 (16)	08:32	10:26 (41)	09:24
	22:29	21:18	19:50	18:25	15 15:57 (16)	16:11	40 12:38 (36)	15:42
19	04:57	06:04	07:12	08:20	15:40 (16)	08:34	10:26 (41)	09:25
	22:27	21:15	19:47	18:22	18 15:58 (16)	16:09	39 12:37 (36)	15:42
20	04:59	06:06	07:15	08:23	15:39 (16)	08:36	10:26 (41)	09:25
	22:25	21:13	19:45	18:20	21 16:00 (16)	16:07	28 12:25 (36)	15:42
21	05:01	06:08	07:17	08:25	15:37 (16)	08:38	10:27 (41)	09:26
	22:23	21:10	19:42	18:17	18 15:55 (16)	16:06	22 10:49 (41)	15:43
22	05:03	06:10	07:19	08:27	15:37 (16)	08:41	10:27 (41)	09:27
	22:21	21:07	19:39	18:14	16 15:53 (16)	16:04	22 10:49 (41)	15:43
23	05:05	06:13	07:21	08:30	15:36 (16)	08:43	10:28 (41)	09:27
	22:20	21:05	19:36	18:12	16 15:52 (16)	16:02	21 10:49 (41)	15:44
24	05:07	06:15	07:24	08:32	15:35 (16)	08:45	10:29 (41)	09:27
	22:18	21:02	19:33	18:09	16 15:51 (16)	16:01	20 10:49 (41)	15:44
25	05:09	06:17	07:26	07:34	14:36 (16)	08:47	10:29 (41)	09:28
	22:16	20:59	19:30	17:06	15 14:51 (16)	15:59	19 10:48 (41)	15:45
26	05:11	06:19	07:28	07:37	14:35 (16)	08:49	10:31 (41)	09:28
	22:14	20:56	19:27	17:04	14 14:49 (16)	15:57	18 10:49 (41)	15:46
27	05:13	06:22	07:30	07:39	14:35 (16)	08:51	10:38 (41)	09:28
	22:11	20:53	19:24	17:01	12 14:47 (16)	15:56	10 10:48 (41)	15:47
28	05:15	06:24	07:32	07:41	14:30 (11)	08:53	10:44 (41)	09:28
	22:09	20:51	19:21	16:58	12 14:42 (16)	15:55	3 10:47 (41)	15:48
29	05:17	06:26	07:35	07:44	14:27 (11)	08:55		09:28
	22:07	20:48	19:19	16:56	11 14:38 (11)	15:53		15:49
30	05:20	06:28	07:37	07:46	14:26 (11)	08:57		09:28
	22:05	20:45	19:16	16:53	8 14:34 (11)	15:52		15:50
31	05:22	06:31		07:49				09:28
	22:03	20:42		16:51				15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					330		686	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (12)	07:35		15:43 (17)	07:06			05:43		18:54 (41)	04:39		
	15:52			16:56	22	15:51 (12)	18:04	38	16:21 (17)	20:16			21:25	25	19:19 (41)	22:30		
2	09:27			08:43		15:29 (12)	07:32		15:44 (17)	07:04			05:41		18:56 (41)	04:38		
	15:54			16:58	23	15:52 (12)	18:07	36	16:20 (17)	20:19			21:28	20	19:16 (41)	22:32		
3	09:27			08:41		15:29 (12)	07:29		15:44 (17)	07:01		19:08 (41)	05:38		18:59 (41)	04:37		
	15:55			17:01	23	15:52 (12)	18:09	35	16:19 (17)	20:21	9	19:17 (41)	21:30	15	19:14 (41)	22:33		
4	09:26			08:39		15:29 (12)	07:27		15:45 (17)	06:58		19:03 (41)	05:36		19:04 (41)	04:36		
	15:57			17:03	24	15:53 (12)	18:11	33	16:18 (17)	20:23	18	19:21 (41)	21:32	5	19:09 (41)	22:35		
5	09:25			08:36		15:29 (12)	07:24		15:46 (17)	06:55		18:59 (41)	05:33			04:35		
	15:58			17:06	23	15:52 (12)	18:14	32	16:18 (17)	20:25	24	19:23 (41)	21:35			22:36		
6	09:25			08:34		15:28 (12)	07:21		15:48 (17)	06:52		18:57 (41)	05:31			04:33		
	16:00			17:08	24	15:52 (12)	18:16	28	16:16 (17)	20:28	28	19:25 (41)	21:37			22:37		
7	09:24			08:32		15:29 (12)	07:18		15:49 (17)	06:49		18:55 (41)	05:29			04:32		
	16:01			17:10	24	15:53 (12)	18:19	25	16:14 (17)	20:30	31	19:26 (41)	21:39			22:39		
8	09:23			08:29		15:29 (12)	07:15		15:51 (17)	06:46		18:53 (41)	05:26			04:32		
	16:03			17:13	23	15:52 (12)	18:21	21	16:12 (17)	20:32	35	19:42 (30)	21:42			22:40		
9	09:22			08:27		15:31 (12)	07:13		15:54 (17)	06:43		18:52 (41)	05:24			04:31		
	16:05			17:15	21	15:52 (12)	18:23	15	16:09 (17)	20:35	54	19:59 (30)	21:44			22:41		
10	09:21			08:25		15:31 (12)	07:10			06:41		18:51 (41)	05:21			04:30		
	16:07			17:18	20	15:51 (12)	18:26			20:37	57	19:59 (30)	21:46			22:42		
11	09:20			08:22		15:32 (12)	07:07			06:38		18:49 (41)	05:19			04:29		
	16:09			17:20	18	15:50 (12)	18:28			20:39	60	19:59 (30)	21:48			22:43		
12	09:19			08:20		15:34 (12)	07:04			06:35		18:48 (41)	05:17			04:29		
	16:11			17:23	15	15:49 (12)	18:30			20:42	62	19:58 (30)	21:50			22:44		
13	09:18			08:17		15:36 (12)	07:01			06:32		18:48 (41)	05:15			04:28		
	16:12			17:25	22	16:09 (17)	18:33			20:44	64	19:59 (30)	21:53			22:45		
14	09:17			08:15		15:54 (17)	06:58			06:29		18:47 (41)	05:12			04:28		
	16:14			17:28	18	16:12 (17)	18:35			20:46	63	19:58 (30)	21:55			22:46		
15	09:15			08:12		15:52 (17)	06:55			06:27		18:46 (41)	05:10			04:27		
	16:17			17:30	22	16:14 (17)	18:37			20:48	63	19:57 (30)	21:57			22:47		
16	09:14			08:10		15:51 (17)	06:53		17:30 (36)	06:24		18:47 (41)	05:08			04:27		
	16:19			17:33	26	16:17 (17)	18:40	8	17:38 (36)	20:51	62	19:57 (30)	21:59			22:47		
17	09:13			08:07		15:49 (17)	06:50		17:27 (36)	06:21		18:46 (41)	05:06			04:27		
	16:21			17:35	29	16:18 (17)	18:42	13	17:40 (36)	20:53	60	19:55 (30)	22:01			22:48		
18	09:11			08:04		15:47 (17)	06:47		17:25 (36)	06:18		18:45 (41)	05:04			04:26		
	16:23			17:38	32	16:19 (17)	18:44	17	17:42 (36)	20:55	58	19:53 (30)	22:04			22:49		
19	09:10			08:02		15:46 (17)	06:44		17:23 (36)	06:15		18:46 (41)	05:02			04:26		
	16:25			17:40	33	16:19 (17)	18:46	19	17:42 (36)	20:58	53	19:52 (30)	22:06			22:49		
20	09:08			07:59		15:46 (17)	06:41		17:22 (36)	06:13		18:45 (41)	05:00			04:26		
	16:27			17:43	35	16:21 (17)	18:49	21	17:43 (36)	21:00	44	19:29 (41)	22:08			22:49		
21	09:06			07:57		15:45 (17)	06:38		17:21 (36)	06:10		18:45 (41)	04:58			04:26		
	16:30			17:45	36	16:21 (17)	18:51	22	17:43 (36)	21:02	43	19:28 (41)	22:10			22:50		
22	09:05			07:54		15:44 (17)	06:35		17:21 (36)	06:07		18:46 (41)	04:56			04:27		
	16:32			17:47	37	16:21 (17)	18:53	22	17:43 (36)	21:05	43	19:29 (41)	22:12			22:50		
23	09:03			07:51		15:44 (17)	06:32		17:20 (36)	06:05		18:46 (41)	04:54			04:27		
	16:34			17:50	38	16:22 (17)	18:56	22	17:42 (36)	21:07	41	19:27 (41)	22:14			22:50		
24	09:01			07:49		15:43 (17)	06:29		17:20 (36)	06:02		18:47 (41)	04:52			04:27		
	16:36			17:52	39	16:22 (17)	18:58	22	17:42 (36)	21:09	40	19:27 (41)	22:16			22:50		
25	08:59			07:46		15:44 (17)	06:27		17:20 (36)	05:59		18:47 (41)	04:50			04:28		
	16:39			17:55	38	16:22 (17)	19:00	21	17:41 (36)	21:12	39	19:26 (41)	22:18			22:50		
26	08:57			07:43		15:43 (17)	06:24		17:20 (36)	05:57		18:48 (41)	04:49			04:28		
	16:41			17:57	39	16:22 (17)	19:03	20	17:40 (36)	21:14	37	19:25 (41)	22:20			22:50		
27	08:55		15:34 (12)	07:40		15:43 (17)	06:21		17:22 (36)	05:54		18:48 (41)	04:47			04:29		
	16:44	10	15:44 (12)	18:00	39	16:22 (17)	19:05	17	17:39 (36)	21:16	36	19:24 (41)	22:21			22:50		
28	08:54		15:33 (12)	07:38		15:43 (17)	06:18		17:24 (36)	05:51		18:50 (41)	04:45			04:29		
	16:46	13	15:46 (12)	18:02	38	16:21 (17)	19:07	13	17:37 (36)	21:19	33	19:23 (41)	22:23			22:49		
29	08:51		15:31 (12)				07:15		18:26 (36)	05:49		18:50 (41)	04:44			04:30		
	16:48	16	15:47 (12)				20:09	8	18:34 (36)	21:21	31	19:21 (41)	22:25			22:49		
30	08:49		15:31 (12)				07:12			05:46		18:52 (41)	04:42			04:31		
	16:51	18	15:49 (12)				20:12			21:23	28	19:20 (41)	22:27			22:49		
31	08:47		15:29 (12)				07:09						04:41					
	16:53	20	15:49 (12)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (41)	07:39			07:51		15:00 (12)	08:59
	22:48	22:00			20:39	60	19:58 (30)	19:13			16:48	21	15:21 (12)	15:51
2	04:33	05:26			06:35		18:49 (41)	07:41			07:53		15:00 (12)	09:01
	22:47	21:58			20:36	57	19:57 (30)	19:10			16:46	22	15:22 (12)	15:50
3	04:34	05:28			06:37		18:49 (41)	07:43			07:56		14:59 (12)	09:03
	22:47	21:56			20:34	54	19:56 (30)	19:07			16:44	23	15:22 (12)	15:49
4	04:35	05:30			06:39		18:51 (41)	07:46		16:33 (17)	07:58		14:59 (12)	09:05
	22:46	21:53			20:31	35	19:40 (30)	19:04	11	16:44 (17)	16:41	23	15:22 (12)	15:48
5	04:36	05:33			06:42		18:52 (41)	07:48		16:29 (17)	08:01		14:59 (12)	09:07
	22:45	21:51			20:28	31	19:23 (41)	19:01	18	16:47 (17)	16:39	24	15:23 (12)	15:47
6	04:37	05:35			06:44		18:53 (41)	07:50		16:26 (17)	08:03		14:58 (12)	09:08
	22:44	21:49			20:25	28	19:21 (41)	18:58	24	16:50 (17)	16:36	24	15:22 (12)	15:46
7	04:38	05:37			06:46		18:54 (41)	07:52		16:24 (17)	08:05		14:59 (12)	09:10
	22:43	21:46			20:22	25	19:19 (41)	18:55	27	16:51 (17)	16:34	23	15:22 (12)	15:45
8	04:40	05:39			06:48		18:57 (41)	07:55		16:21 (17)	08:08		14:59 (12)	09:11
	22:42	21:44			20:19	18	19:15 (41)	18:53	30	16:51 (17)	16:32	23	15:22 (12)	15:44
9	04:41	05:41		19:10 (41)	06:50		19:00 (41)	07:57		16:21 (17)	08:10		14:59 (12)	09:13
	22:41	21:41	10	19:20 (41)	20:16	11	19:11 (41)	18:50	32	16:53 (17)	16:30	23	15:22 (12)	15:44
10	04:42	05:44		19:07 (41)	06:53			07:59		16:19 (17)	08:13		15:00 (12)	09:14
	22:40	21:39	17	19:24 (41)	20:13			18:47	34	16:53 (17)	16:27	21	15:21 (12)	15:43
11	04:44	05:46		19:04 (41)	06:55			08:02		16:18 (17)	08:15		15:01 (12)	09:16
	22:39	21:36	22	19:26 (41)	20:11			18:44	36	16:54 (17)	16:25	20	15:21 (12)	15:43
12	04:45	05:48		19:02 (41)	06:57			08:04		16:17 (17)	08:17		15:02 (12)	09:17
	22:37	21:34	26	19:28 (41)	20:08			18:41	37	16:54 (17)	16:23	19	15:21 (12)	15:42
13	04:47	05:50		19:00 (41)	06:59			08:06		16:16 (17)	08:20		15:03 (12)	09:18
	22:36	21:31	29	19:29 (41)	20:05			18:39	38	16:54 (17)	16:21	16	15:19 (12)	15:42
14	04:49	05:53		18:58 (41)	07:01		18:17 (36)	08:08		16:16 (17)	08:22		15:05 (12)	09:20
	22:35	21:28	32	19:30 (41)	20:02	7	18:24 (36)	18:36	38	16:54 (17)	16:19	13	15:18 (12)	15:42
15	04:50	05:55		18:57 (41)	07:04		18:13 (36)	08:11		16:15 (17)	08:24		15:07 (12)	09:21
	22:33	21:26	34	19:31 (41)	19:59	13	18:26 (36)	18:33	39	16:54 (17)	16:17	10	15:17 (12)	15:42
16	04:52	05:57		18:56 (41)	07:06		18:11 (36)	08:13		16:15 (17)	08:27			09:22
	22:32	21:23	36	19:32 (41)	19:56	16	18:27 (36)	18:30	39	16:54 (17)	16:15			15:42
17	04:54	05:59		18:54 (41)	07:08		18:09 (36)	08:15		16:15 (17)	08:29			09:23
	22:30	21:21	38	19:32 (41)	19:53	19	18:28 (36)	18:28	38	16:53 (17)	16:13			15:42
18	04:56	06:01		18:53 (41)	07:10		18:08 (36)	08:18		16:15 (17)	08:31			09:24
	22:28	21:18	40	19:33 (41)	19:50	20	18:28 (36)	18:25	39	16:54 (17)	16:11			15:42
19	04:57	06:04		18:52 (41)	07:12		18:08 (36)	08:20		16:15 (17)	08:34			09:24
	22:27	21:15	41	19:33 (41)	19:47	21	18:29 (36)	18:22	38	16:53 (17)	16:09			15:42
20	04:59	06:06		18:51 (41)	07:15		18:07 (36)	08:22		16:16 (17)	08:36			09:25
	22:25	21:13	42	19:33 (41)	19:44	22	18:29 (36)	18:19	36	16:52 (17)	16:07			15:42
21	05:01	06:08		18:50 (41)	07:17		18:06 (36)	08:25		16:16 (17)	08:38			09:26
	22:23	21:10	43	19:33 (41)	19:42	22	18:28 (36)	18:17	35	16:51 (17)	16:06			15:43
22	05:03	06:10		18:50 (41)	07:19		18:06 (36)	08:27		16:17 (17)	08:40			09:26
	22:21	21:07	43	19:33 (41)	19:39	22	18:28 (36)	18:14	34	16:51 (17)	16:04			15:43
23	05:05	06:13		18:49 (41)	07:21		18:06 (36)	08:29		16:17 (17)	08:43			09:27
	22:19	21:04	44	19:33 (41)	19:36	21	18:27 (36)	18:11	32	16:49 (17)	16:02			15:44
24	05:07	06:15		18:49 (41)	07:23		18:07 (36)	08:32		16:18 (17)	08:45			09:27
	22:17	21:02	54	19:55 (30)	19:33	19	18:26 (36)	18:09	31	16:49 (17)	16:01			15:44
25	05:09	06:17		18:49 (41)	07:26		18:07 (36)	07:34		15:18 (17)	08:47			09:28
	22:15	20:59	58	19:57 (30)	19:30	18	18:25 (36)	17:06	29	15:47 (17)	15:59			15:45
26	05:11	06:19		18:49 (41)	07:28		18:08 (36)	07:37		15:20 (17)	08:49			09:28
	22:13	20:56	60	19:58 (30)	19:27	15	18:23 (36)	17:04	25	15:45 (17)	15:57			15:46
27	05:13	06:22		18:48 (41)	07:30		18:09 (36)	07:39		15:22 (17)	08:51			09:28
	22:11	20:53	63	19:59 (30)	19:24	11	18:20 (36)	17:01	22	15:44 (17)	15:56			15:47
28	05:15	06:24		18:48 (41)	07:32			07:41		15:08 (12)	08:53			09:28
	22:09	20:51	63	19:59 (30)	19:21			16:58	22	15:41 (17)	15:55			15:48
29	05:17	06:26		18:48 (41)	07:34			07:44		15:05 (12)	08:55			09:28
	22:07	20:48	63	19:59 (30)	19:18			16:56	21	15:37 (17)	15:53			15:49
30	05:20	06:28		18:48 (41)	07:37			07:46		15:03 (12)	08:57			09:28
	22:05	20:45	63	19:59 (30)	19:16			16:53	16	15:19 (12)	15:52			15:50
31	05:22	06:30		18:48 (41)				07:49		15:01 (12)				09:28
	22:03	20:42	62	19:58 (30)				16:51	18	15:19 (12)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (27)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (27)
	15:53	39	13:36 (28)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (28)
2	09:28		12:01 (27)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (27)
	15:54	41	13:36 (28)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (28)
3	09:27		12:01 (27)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (27)
	15:55	41	13:36 (28)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (28)
4	09:27		12:01 (27)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (27)
	15:57	41	13:36 (28)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (28)
5	09:26		12:01 (27)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (27)
	15:58	43	13:37 (28)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (28)
6	09:25		12:02 (27)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (27)
	16:00	41	13:37 (28)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (28)
7	09:25		12:02 (27)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (27)
	16:02	41	13:37 (28)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (28)
8	09:24		12:02 (27)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (27)
	16:03	42	13:38 (28)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (28)
9	09:23		12:03 (27)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (27)
	16:05	41	13:38 (28)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (28)
10	09:22		12:03 (27)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (27)
	16:07	40	13:37 (28)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (28)
11	09:21		12:03 (27)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (27)
	16:09	41	13:38 (28)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (28)
12	09:20		12:03 (27)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (27)
	16:11	39	13:37 (28)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (28)
13	09:19		12:04 (27)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (27)
	16:13	37	13:37 (28)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (28)
14	09:17		12:04 (27)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (27)
	16:15	35	13:36 (28)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (28)
15	09:16		12:04 (27)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (27)	09:21		11:54 (27)
	16:17	32	13:35 (28)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (27)	15:42	38	13:27 (28)
16	09:15		12:04 (27)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (27)	09:22		11:55 (27)
	16:19	24	12:28 (27)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (27)	15:42	37	13:28 (28)
17	09:13		12:06 (27)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (27)	09:23		11:55 (27)
	16:21	24	12:30 (27)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (27)	15:42	37	13:28 (28)
18	09:12		12:06 (27)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (27)	09:24		11:56 (27)
	16:23	24	12:30 (27)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (27)	15:42	36	13:29 (28)
19	09:10		12:06 (27)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (27)	09:25		11:57 (27)
	16:25	24	12:30 (27)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (27)	15:42	36	13:29 (28)
20	09:09		12:07 (27)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (27)	09:26		11:58 (27)
	16:28	23	12:30 (27)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (27)	15:43	36	13:30 (28)
21	09:07		12:08 (27)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (27)	09:26		11:59 (27)
	16:30	21	12:29 (27)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (27)	15:43	35	13:31 (28)
22	09:05		12:09 (27)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (27)	09:27		11:58 (27)
	16:32	20	12:29 (27)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (27)	15:43	36	13:31 (28)
23	09:03		12:09 (27)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (27)	09:27		11:59 (27)
	16:34	19	12:28 (27)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (27)	15:44	36	13:31 (28)
24	09:02		12:10 (27)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (27)	09:28		12:00 (27)
	16:37	17	12:27 (27)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (27)	15:44	36	13:32 (28)
25	09:00		12:12 (27)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (27)	09:28		12:00 (27)
	16:39	15	12:27 (27)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (27)	15:45	37	13:33 (28)
26	08:58		12:14 (27)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (27)	09:28		12:00 (27)
	16:41	11	12:25 (27)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (27)	15:46	37	13:33 (28)
27	08:56		12:17 (27)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (27)	09:28		12:00 (27)
	16:44	4	12:21 (27)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (28)	15:47	38	13:33 (28)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (27)	09:29		12:01 (27)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (28)	15:48	37	13:34 (28)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (27)	09:28		12:00 (27)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (28)	15:49	38	13:34 (28)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (27)	09:28		12:01 (27)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (28)	15:50	39	13:35 (28)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (27)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (28)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		11:14 (27)	08:46		10:11 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (27)
	15:53	31	12:43 (28)	16:56	18	10:29 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (27)
2	09:28		11:14 (27)	08:44		10:11 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (27)
	15:54	30	12:43 (28)	16:58	17	10:28 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (27)
3	09:27		11:13 (27)	08:41		10:13 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (27)
	15:55	31	12:43 (28)	17:01	14	10:27 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (27)
4	09:27		11:13 (27)	08:39		10:14 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (27)
	15:57	30	12:43 (28)	17:03	11	10:25 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (27)
5	09:26		11:14 (27)	08:37		10:17 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (27)
	15:58	28	12:42 (28)	17:06	7	10:24 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (28)
6	09:25		11:14 (27)	08:35			07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (32)	09:09		11:00 (27)
	16:00	28	12:42 (28)	17:08			18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	7 09:54 (32)	15:46	28	12:28 (28)
7	09:25		11:14 (27)	08:32			07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (32)	09:10		11:01 (27)
	16:02	26	12:41 (28)	17:11			18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	11 09:56 (32)	15:45	29	12:30 (28)
8	09:24		11:14 (27)	08:30			07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (32)	09:12		11:02 (27)
	16:03	21	11:35 (27)	17:13			18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	14 09:57 (32)	15:45	30	12:31 (28)
9	09:23		11:15 (27)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (32)	09:14		11:03 (27)
	16:05	21	11:36 (27)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	17 09:59 (32)	15:44	30	12:32 (28)
10	09:22		11:15 (27)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (32)	09:15		11:03 (27)
	16:07	21	11:36 (27)	17:18			18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	18 10:00 (32)	15:44	30	12:32 (28)
11	09:21		11:15 (27)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (32)	09:16		11:04 (27)
	16:09	22	11:37 (27)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	19 10:00 (32)	15:43	30	12:33 (28)
12	09:20		11:15 (27)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (32)	09:18		11:04 (27)
	16:11	22	11:37 (27)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	19 10:00 (32)	15:43	31	12:34 (28)
13	09:19		11:16 (27)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (32)	09:19		11:05 (27)
	16:13	22	11:38 (27)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	20 10:01 (32)	15:42	31	12:35 (28)
14	09:17		11:16 (27)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (32)	09:20		11:06 (27)
	16:15	22	11:38 (27)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	19 10:01 (32)	15:42	30	12:35 (28)
15	09:16		11:16 (27)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (32)	09:21		11:06 (27)
	16:17	22	11:38 (27)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	20 10:01 (32)	15:42	31	12:36 (28)
16	09:15		11:16 (27)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (32)	09:22		11:08 (27)
	16:19	22	11:38 (27)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	19 10:01 (32)	15:42	30	12:37 (28)
17	09:13		11:18 (27)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (32)	09:23		11:09 (27)
	16:21	21	11:39 (27)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	26 11:08 (27)	15:42	30	12:38 (28)
18	09:12		11:18 (27)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (32)	09:24		11:08 (27)
	16:23	21	11:39 (27)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	29 11:10 (27)	15:42	30	12:37 (28)
19	09:10		10:13 (32)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (32)	09:25		11:09 (27)
	16:25	27	11:39 (27)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	31 11:12 (27)	15:42	29	12:38 (28)
20	09:09		10:12 (32)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (32)	09:26		11:10 (27)
	16:28	30	11:39 (27)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	32 11:13 (27)	15:43	30	12:39 (28)
21	09:07		10:11 (32)	07:57			06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (32)	09:26		11:11 (27)
	16:30	32	11:39 (27)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	32 11:14 (27)	15:43	29	12:40 (28)
22	09:05		10:10 (32)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (32)	09:27		11:11 (27)
	16:32	32	11:38 (27)	17:48			18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04	29 11:15 (27)	15:43	29	12:40 (28)
23	09:03		10:09 (32)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (32)	09:27		11:11 (27)
	16:34	31	11:37 (27)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	27 11:15 (27)	15:44	30	12:40 (28)
24	09:02		10:09 (32)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (27)	09:28		11:12 (27)
	16:37	29	11:36 (27)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	21 11:16 (27)	15:45	30	12:41 (28)
25	09:00		10:09 (32)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (27)	09:28		11:12 (27)
	16:39	26	11:34 (27)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	21 11:16 (27)	15:45	29	12:41 (28)
26	08:58		10:09 (32)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (27)	09:28		11:13 (27)
	16:41	19	10:28 (32)	17:57			19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58	22 11:17 (27)	15:46	30	12:42 (28)
27	08:56		10:09 (32)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (27)	09:28		11:13 (27)
	16:44	20	10:29 (32)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	22 11:17 (27)	15:47	30	12:42 (28)
28	08:54		10:09 (32)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (27)	09:29		11:13 (27)
	16:46	19	10:28 (32)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	22 11:18 (27)	15:48	31	12:43 (28)
29	08:52		10:09 (32)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (27)	09:29		11:13 (27)
	16:49	20	10:29 (32)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 11:18 (27)	15:49	30	12:42 (28)
30	08:50		10:09 (32)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (27)	09:28		11:13 (27)
	16:51	19	10:28 (32)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	22 11:18 (27)	15:50	31	12:43 (28)
31	08:48		10:10 (32)				07:10		04:41		05:22	06:31		07:49			09:28		11:14 (27)
	16:54	19	10:29 (32)				20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (28)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236		199		
Total, worst case		764			67											541		888	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May	June	July	August	September	October	November	December
1	09:28	12:55 (16)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51	09:00 12:38 (16)
	15:52 16	13:11 (16)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48	15:51 20 12:58 (16)
2	09:27	12:55 (16)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:01 12:39 (16)
	15:54 16	13:11 (16)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46	15:50 20 12:59 (16)
3	09:27	12:55 (16)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56	09:03 12:40 (16)
	15:55 17	13:12 (16)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49 20 13:00 (16)
4	09:26	12:55 (16)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58	09:05 12:40 (16)
	15:57 17	13:12 (16)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41	15:48 20 13:00 (16)
5	09:26	12:55 (16)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01	09:07 12:41 (16)
	15:58 18	13:13 (16)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39	15:47 19 13:00 (16)
6	09:25	12:55 (16)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03	09:09 12:41 (16)
	16:00 19	13:14 (16)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36	15:46 19 13:00 (16)
7	09:24	12:55 (16)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06	09:10 12:42 (16)
	16:01 20	13:15 (16)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34	15:45 18 13:00 (16)
8	09:24	12:56 (16)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08	09:12 12:43 (16)
	16:03 19	13:15 (16)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32	15:44 18 13:01 (16)
9	09:23	12:55 (16)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10	09:13 12:43 (16)
	16:05 20	13:15 (16)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44 17 13:00 (16)
10	09:22	12:56 (16)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	09:15 12:44 (16)
	16:07 20	13:16 (16)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27	15:43 17 13:01 (16)
11	09:21	12:57 (16)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:16 12:45 (16)
	16:09 20	13:17 (16)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25	15:43 16 13:01 (16)
12	09:19	12:57 (16)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	09:17 12:45 (16)
	16:11 20	13:17 (16)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	15:42 16 13:01 (16)
13	09:18	12:57 (16)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:19 12:46 (16)
	16:12 20	13:17 (16)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	15:42 16 13:02 (16)
14	09:17	12:58 (16)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22	09:20 12:47 (16)
	16:14 20	13:18 (16)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:42 14 13:01 (16)
15	09:16	12:58 (16)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	09:21 12:47 (16)
	16:17 20	13:18 (16)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17	15:42 14 13:01 (16)
16	09:14	12:58 (16)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:22 12:48 (16)
	16:19 20	13:18 (16)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15	15:42 13 13:01 (16)
17	09:13	12:59 (16)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	09:23 12:48 (16)
	16:21 19	13:18 (16)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	15:42 14 13:02 (16)
18	09:11	12:59 (16)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	09:24 12:49 (16)
	16:23 19	13:18 (16)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11	15:42 13 13:02 (16)
19	09:10	13:01 (16)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34 12:41 (16)	09:25 12:50 (16)
	16:25 18	13:19 (16)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 9 12:50 (16)	15:42 13 13:03 (16)
20	09:08	13:02 (16)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36 12:39 (16)	09:25 12:51 (16)
	16:27 16	13:18 (16)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 12 12:51 (16)	15:42 12 13:03 (16)
21	09:07	13:02 (16)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38 12:38 (16)	09:26 12:51 (16)
	16:30 15	13:17 (16)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 15 12:53 (16)	15:43 12 13:03 (16)
22	09:05	13:04 (16)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41 12:38 (16)	09:27 12:52 (16)
	16:32 12	13:16 (16)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 16 12:54 (16)	15:43 12 13:04 (16)
23	09:03	13:06 (16)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43 12:37 (16)	09:27 12:52 (16)
	16:34 9	13:15 (16)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 18 12:55 (16)	15:44 12 13:04 (16)
24	09:01		07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45 12:38 (16)	09:28 12:52 (16)
	16:37		17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18 12:56 (16)	15:44 12 13:04 (16)
25	09:00		07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47 12:37 (16)	09:28 12:53 (16)
	16:39		17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 19 12:56 (16)	15:45 13 13:06 (16)
26	08:58		07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49 12:37 (16)	09:28 12:53 (16)
	16:41		17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 20 12:57 (16)	15:46 13 13:06 (16)
27	08:56		07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52 12:37 (16)	09:28 12:54 (16)
	16:44		18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 20 12:57 (16)	15:47 13 13:07 (16)
28	08:54		07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54 12:37 (16)	09:28 12:53 (16)
	16:46		18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55 20 12:57 (16)	15:48 14 13:07 (16)
29	08:52			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56 12:38 (16)	09:28 12:53 (16)
	16:48			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 20 12:58 (16)	15:49 15 13:08 (16)
30	08:50			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58 12:38 (16)	09:28 12:54 (16)
	16:51			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 20 12:58 (16)	15:50 15 13:09 (16)
31	08:48			07:09		04:41		05:22	06:31		07:49		09:28 12:54 (16)
	16:53			20:14		22:29		22:03	20:42		16:51		15:51 15 13:09 (16)
Potential sun hours	221		260	365	432	521	547	546	478	386	319	236	199
Total, worst case		410										207	475

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (30)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (16)	08:59
	15:52		16:56 19	14:13 (30)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (16)	15:51
2	09:27		08:43	13:56 (30)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (16)	09:01
	15:54		16:58 16	14:12 (30)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (16)	15:50
3	09:27		08:41	13:58 (30)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (16)	09:03
	15:55		17:01 12	14:10 (30)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (16)	15:49
4	09:26		08:39	14:02 (30)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (16)	09:05
	15:57		17:03 5	14:07 (30)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (16)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (16)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (16)	15:47
6	09:25		08:34	15:25 (16)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (16)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (16)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (30)	09:10
	16:01		17:11 11	15:33 (16)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (30)	15:45
8	09:23		08:30	15:20 (16)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (30)	09:12
	16:03		17:13 15	15:35 (16)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (30)	15:44
9	09:23		08:27	15:19 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (30)	09:13
	16:05		17:15 18	15:37 (16)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (30)	15:44
10	09:22		08:25	15:18 (16)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (30)	09:15
	16:07		17:18 19	15:37 (16)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (30)	15:43
11	09:20		08:22	15:17 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (30)	09:16
	16:09		17:20 21	15:38 (16)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (30)	15:43
12	09:19		08:20	15:17 (16)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (30)	09:17
	16:10		17:23 22	15:39 (16)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (30)	15:42
13	09:18	13:53 (30)	08:17	15:17 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (30)	09:19
	16:12 5	13:58 (30)	17:25 22	15:39 (16)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (30)	15:42
14	09:17	13:51 (30)	08:15	15:16 (16)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (30)	09:20
	16:14 9	14:00 (30)	17:28 23	15:39 (16)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (30)	15:42
15	09:16	13:50 (30)	08:12	15:17 (16)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (41)	09:21
	16:17 11	14:01 (30)	17:30 22	15:39 (16)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (30)	15:42
16	09:14	13:50 (30)	08:10	15:17 (16)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (41)	09:22
	16:19 17	14:07 (30)	17:33 22	15:39 (16)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (30)	15:42
17	09:13	13:49 (30)	08:07	15:17 (16)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (41)	09:23
	16:21 21	14:10 (30)	17:35 21	15:38 (16)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (30)	15:42
18	09:11	11:38 (41)	08:05	15:18 (16)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (41)	09:24
	16:23 27	14:11 (30)	17:38 19	15:37 (16)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (30)	15:42
19	09:10	11:35 (41)	08:02	15:20 (16)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (41)	09:25
	16:25 32	14:12 (30)	17:40 17	15:37 (16)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (30)	15:42
20	09:08	11:32 (41)	07:59	15:21 (16)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (41)	09:25
	16:27 36	14:12 (30)	17:43 14	15:35 (16)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (30)	15:42
21	09:07	11:29 (41)	07:57	15:24 (16)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (16)	08:38	11:05 (41)	09:26
	16:30 42	14:13 (30)	17:45 8	15:32 (16)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (16)	16:06 42	13:49 (30)	15:43
22	09:05	11:27 (41)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (16)	08:41	11:08 (41)	09:27
	16:32 45	14:14 (30)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (16)	16:04 36	13:48 (30)	15:43
23	09:03	11:28 (41)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (16)	08:43	11:12 (41)	09:27
	16:34 44	14:14 (30)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (16)	16:02 32	13:49 (30)	15:44
24	09:01	11:29 (41)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (16)	08:45	11:16 (41)	09:27
	16:36 42	14:15 (30)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (16)	16:01 28	13:49 (30)	15:44
25	08:59	11:31 (41)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (16)	08:47	13:27 (30)	09:28
	16:39 40	14:15 (30)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (16)	15:59 21	13:48 (30)	15:45
26	08:58	11:32 (41)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (16)	08:49	13:29 (30)	09:28
	16:41 37	14:15 (30)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (16)	15:57 17	13:46 (30)	15:46
27	08:56	11:34 (41)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (16)	08:51	13:29 (30)	09:28
	16:44 33	14:15 (30)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (16)	15:56 12	13:41 (30)	15:47
28	08:54	13:51 (30)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (16)	08:53	13:30 (30)	09:28
	16:46 24	14:15 (30)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (16)	15:55 9	13:39 (30)	15:47
29	08:52	13:51 (30)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (16)	08:55	13:35 (30)	09:28
	16:48 23	14:14 (30)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (16)	15:53 5	13:40 (30)	15:49
30	08:50	13:52 (30)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (16)	08:57		09:28
	16:51 22	14:14 (30)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (16)	15:52		15:50
31	08:48	13:54 (30)			07:09		04:41		05:22	06:31		07:49	14:47 (16)			09:28
	16:53 20	14:14 (30)			20:14		22:29		22:03	20:42		16:51 20	15:07 (16)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June	
1	09:28		12:11 (36)		08:45		10:15 (17)		07:35		13:26 (30)	
	15:52	47	14:26 (18)		16:56	119	15:37 (39)		18:04	35	17:05 (13)	
2	09:27		12:11 (36)		08:43		12:16 (36)		07:32		15:45 (11)	
	15:54	53	14:28 (18)		16:58	114	15:38 (39)		18:07	27	17:09 (13)	
3	09:27		12:10 (36)		08:41		12:17 (36)		07:30		16:34 (16)	
	15:55	58	14:29 (18)		17:01	113	15:38 (39)		18:09	33	17:12 (13)	
4	09:26		12:10 (36)		08:39		09:39 (41)		07:27		16:31 (16)	
	15:57	61	14:29 (18)		17:03	109	15:39 (39)		18:12	43	17:15 (13)	
5	09:26		12:10 (36)		08:36		09:39 (41)		07:24		16:29 (16)	
	15:58	64	14:30 (18)		17:06	105	15:39 (39)		18:14	46	17:15 (13)	
6	09:25		12:09 (36)		08:34		09:40 (41)		07:21		16:26 (16)	
	16:00	70	14:31 (18)		17:08	95	15:39 (39)		18:16	49	17:15 (13)	
7	09:24		10:10 (17)		08:32		09:40 (41)		07:18		16:25 (16)	
	16:01	78	14:32 (18)		17:11	96	15:39 (39)		18:19	50	17:15 (13)	
8	09:23		10:10 (17)		08:30		09:38 (41)		07:15		16:23 (16)	
	16:03	84	14:33 (18)		17:13	96	15:38 (39)		18:21	52	17:15 (13)	
9	09:22		10:10 (17)		08:27		09:36 (41)		07:13		16:22 (16)	
	16:05	86	14:33 (18)		17:16	98	15:38 (39)		18:23	53	17:15 (13)	
10	09:21		10:11 (17)		08:25		09:33 (41)		07:10		16:20 (16)	
	16:07	91	14:34 (18)		17:18	107	15:57 (11)		18:26	54	17:14 (13)	
11	09:20		10:10 (17)		08:22		09:29 (41)		07:07		16:19 (16)	
	16:09	97	14:34 (18)		17:20	114	16:00 (11)		18:28	54	17:13 (13)	
12	09:19		10:09 (17)		08:20		09:27 (41)		07:04		16:18 (16)	
	16:11	102	14:35 (18)		17:23	118	16:03 (11)		18:30	54	17:12 (13)	
13	09:18		10:09 (17)		08:17		09:24 (41)		07:01		16:18 (16)	
	16:13	105	14:35 (18)		17:25	118	16:04 (11)		18:33	52	17:10 (13)	
14	09:17		10:10 (17)		08:15		09:21 (41)		06:58		16:17 (16)	
	16:15	107	14:36 (18)		17:28	114	16:05 (11)		18:35	51	17:08 (13)	
15	09:16		10:10 (17)		08:12		09:18 (41)		06:56		16:17 (16)	
	16:17	112	14:37 (18)		17:30	120	16:07 (11)		18:37	47	17:04 (13)	
16	09:14		10:02 (17)		08:10		09:13 (41)		06:53		16:17 (16)	
	16:19	119	14:37 (18)		17:33	125	16:08 (11)		18:40	46	17:03 (16)	
17	09:13		10:02 (17)		08:07		09:13 (41)		06:50		16:17 (16)	
	16:21	126	14:37 (18)		17:35	123	16:08 (11)		18:42	46	17:03 (16)	
18	09:11		10:02 (17)		08:05		09:13 (41)		06:47		16:16 (16)	
	16:23	127	14:37 (18)		17:38	121	16:08 (11)		18:44	46	17:02 (16)	
19	09:10		10:02 (17)		08:02		09:15 (41)		06:44		16:16 (16)	
	16:25	129	14:37 (18)		17:40	118	16:09 (11)		18:47	56	18:01 (21)	
20	09:08		10:02 (17)		07:59		09:16 (41)		06:41		16:16 (16)	
	16:27	130	14:37 (18)		17:43	114	16:09 (11)		18:49	60	18:03 (21)	
21	09:07		10:03 (17)		07:57		09:17 (41)		06:38		16:16 (16)	
	16:30	131	14:37 (18)		17:45	110	16:09 (11)		18:51	64	18:05 (21)	
22	09:05		10:03 (17)		07:54		09:18 (41)		06:35		16:17 (16)	
	16:32	129	14:36 (18)		17:48	104	16:08 (11)		18:54	63	18:05 (21)	
23	09:03		10:04 (17)		07:51		09:20 (41)		06:32		16:17 (16)	
	16:34	131	14:36 (18)		17:50	95	16:08 (11)		18:56	64	18:06 (21)	
24	09:01		10:04 (17)		07:49		13:09 (30)		06:30		16:18 (16)	
	16:37	128	14:35 (18)		17:52	77	16:08 (11)		18:58	64	18:06 (21)	
25	08:59		10:05 (17)		07:46		13:11 (30)		06:27		16:18 (16)	
	16:39	125	14:34 (18)		17:55	71	16:07 (11)		19:00	62	18:06 (21)	
26	08:58		10:05 (17)		07:43		13:13 (30)		06:24		16:20 (16)	
	16:41	124	15:28 (39)		17:57	66	16:06 (11)		19:03	61	18:07 (21)	
27	08:56		10:06 (17)		07:41		13:16 (30)		06:21		16:22 (16)	
	16:44	127	15:30 (39)		18:00	58	16:05 (11)		19:05	57	18:07 (21)	
28	08:54		10:07 (17)		07:38		13:19 (30)		06:18		16:23 (16)	
	16:46	130	15:33 (39)		18:02	49	16:04 (11)		19:07	54	18:06 (21)	
29	08:52		10:08 (17)						07:15		17:26 (16)	
	16:48	131	15:35 (39)						20:10	47	19:05 (21)	
30	08:50		10:09 (17)						07:12		17:29 (16)	
	16:51	129	15:36 (39)						20:12	38	19:04 (21)	
31	08:47		10:12 (17)						07:09		18:41 (21)	
	16:53	126	15:37 (39)						20:14	22	19:03 (21)	
Potential sun hours	221		260		365		432		521		547	
Total, worst case	3257		2867		1550		46					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September		October		November		December		
1	04:32	05:24	06:33		07:39		16:57 (16)	07:51	09:03 (41)	08:59	09:52 (17)
	22:48	22:01	20:39		19:13	53	17:50 (13)	16:49 107	15:26 (11)	15:51 96	14:16 (18)
2	04:33	05:26	06:35		07:41		16:58 (16)	07:53	09:06 (41)	09:01	09:53 (17)
	22:48	21:58	20:37		19:10	54	17:52 (13)	16:46 98	15:08 (39)	15:50 91	14:16 (18)
3	04:34	05:28	06:37		07:44		16:58 (16)	07:56	09:08 (41)	09:03	09:54 (17)
	22:47	21:56	20:34		19:07	54	17:52 (13)	16:44 96	15:08 (39)	15:49 88	14:17 (18)
4	04:35	05:30	06:39		07:46		16:58 (16)	07:58	09:10 (41)	09:05	09:54 (17)
	22:46	21:54	20:31		19:04	54	17:52 (13)	16:41 94	15:08 (39)	15:48 83	14:17 (18)
5	04:36	05:33	06:42		07:48		17:00 (16)	08:01	09:10 (41)	09:07	09:55 (17)
	22:45	21:51	20:28		19:01	52	17:52 (13)	16:39 95	15:09 (39)	15:47 77	14:17 (18)
6	04:37	05:35	06:44		07:50		17:00 (16)	08:03	09:10 (41)	09:08	09:57 (17)
	22:45	21:49	20:25		18:58	52	17:52 (13)	16:37 105	15:09 (39)	15:46 71	14:17 (18)
7	04:38	05:37	06:46		07:53		17:01 (16)	08:06	09:08 (41)	09:10	09:57 (17)
	22:44	21:46	20:22		18:56	50	17:51 (13)	16:34 111	15:09 (39)	15:45 64	14:17 (18)
8	04:40	05:39	06:48		07:55		17:03 (16)	08:08	11:48 (36)	09:12	11:57 (36)
	22:43	21:44	20:19		18:53	48	17:51 (13)	16:32 112	15:09 (39)	15:44 62	14:17 (18)
9	04:41	05:41	06:51	18:40 (21)	07:57		17:04 (16)	08:10	11:47 (36)	09:13	11:59 (36)
	22:41	21:41	20:16 10	18:50 (21)	18:50	46	17:50 (13)	16:30 113	15:09 (39)	15:44 57	14:17 (18)
10	04:42	05:44	06:53	18:37 (21)	07:59		17:06 (16)	08:13	09:45 (17)	09:15	12:00 (36)
	22:40	21:39	20:14 15	18:52 (21)	18:47	40	17:48 (13)	16:27 121	15:08 (39)	15:43 53	14:17 (18)
11	04:44	05:46	06:55	18:35 (21)	08:02		16:22 (11)	08:15	09:42 (17)	09:16	12:01 (36)
	22:39	21:36	20:11 19	18:54 (21)	18:44	36	17:45 (13)	16:25 127	15:08 (39)	15:43 47	14:16 (18)
12	04:45	05:48	06:57	18:34 (21)	08:04		16:18 (11)	08:17	09:41 (17)	09:17	12:03 (36)
	22:38	21:34	20:08 21	18:55 (21)	18:42	25	17:41 (13)	16:23 130	15:08 (39)	15:42 44	14:17 (18)
13	04:47	05:50	06:59	17:21 (16)	08:06		13:56 (30)	08:20	09:39 (17)	09:19	12:04 (36)
	22:36	21:31	20:05 37	18:55 (21)	18:39	42	17:38 (13)	16:21 131	15:06 (39)	15:42 39	14:17 (18)
14	04:49	05:53	07:02	17:17 (16)	08:09		13:50 (30)	08:22	09:39 (17)	09:20	12:07 (36)
	22:35	21:29	20:02 45	18:55 (21)	18:36	53	16:37 (11)	16:19 131	15:05 (39)	15:42 34	14:17 (18)
15	04:50	05:55	07:04	17:13 (16)	08:11		13:46 (30)	08:25	09:39 (17)	09:21	13:06 (30)
	22:33	21:26	19:59 52	18:55 (21)	18:33	62	16:37 (11)	16:17 128	15:03 (39)	15:42 26	14:16 (18)
16	04:52	05:57	07:06	17:11 (16)	08:13		13:44 (30)	08:27	09:39 (17)	09:22	13:08 (30)
	22:32	21:23	19:56 56	18:55 (21)	18:30	69	16:39 (11)	16:15 124	15:02 (39)	15:42 22	14:15 (18)
17	04:54	05:59	07:08	17:08 (16)	08:16		13:41 (30)	08:29	09:38 (17)	09:23	13:10 (30)
	22:30	21:21	19:53 59	18:54 (21)	18:28	75	16:39 (11)	16:13 125	14:07 (18)	15:42 18	14:15 (18)
18	04:56	06:02	07:10	17:07 (16)	08:18		09:55 (41)	08:32	09:38 (17)	09:24	13:12 (30)
	22:29	21:18	19:50 63	18:55 (21)	18:25	86	16:39 (11)	16:11 129	14:09 (18)	15:42 16	14:15 (18)
19	04:58	06:04	07:12	17:06 (16)	08:20		09:51 (41)	08:34	09:39 (17)	09:25	13:16 (7)
	22:27	21:15	19:47 63	18:54 (21)	18:22	98	16:39 (11)	16:09 131	14:11 (18)	15:42 11	14:15 (18)
20	04:59	06:06	07:15	17:04 (16)	08:23		09:49 (41)	08:36	09:38 (17)	09:25	13:16 (7)
	22:25	21:13	19:45 65	18:53 (21)	18:20	106	16:40 (11)	16:07 129	14:11 (18)	15:42 9	14:14 (18)
21	05:01	06:08	07:17	17:03 (16)	08:25		09:46 (41)	08:38	09:39 (17)	09:26	13:17 (7)
	22:23	21:10	19:42 64	18:51 (21)	18:17	113	16:39 (11)	16:06 131	14:13 (18)	15:43 9	14:15 (18)
22	05:03	06:11	07:19	17:01 (16)	08:27		09:45 (41)	08:41	09:38 (17)	09:26	13:18 (7)
	22:21	21:07	19:39 64	18:50 (21)	18:14	116	16:39 (11)	16:04 131	14:13 (18)	15:43 9	14:16 (18)
23	05:05	06:13	07:21	17:00 (16)	08:30		09:44 (41)	08:43	09:39 (17)	09:27	13:18 (7)
	22:19	21:05	19:36 62	18:48 (21)	18:12	119	16:38 (11)	16:02 128	14:14 (18)	15:44 9	14:16 (18)
24	05:07	06:15	07:24	17:00 (16)	08:32		09:43 (41)	08:45	09:39 (17)	09:27	13:18 (7)
	22:18	21:02	19:33 58	18:46 (21)	18:09	122	16:38 (11)	16:01 127	14:14 (18)	15:44 11	14:17 (18)
25	05:09	06:17	07:26	16:59 (16)	07:34		08:43 (41)	08:47	09:40 (17)	09:28	13:15 (30)
	22:16	20:59	19:30 46	17:45 (16)	17:06	123	15:38 (11)	15:59 124	14:15 (18)	15:45 14	14:17 (18)
26	05:11	06:19	07:28	16:58 (16)	07:37		08:44 (41)	08:49	09:40 (17)	09:28	13:14 (30)
	22:14	20:56	19:27 47	17:45 (16)	17:04	122	15:37 (11)	15:58 119	14:15 (18)	15:46 17	14:18 (18)
27	05:13	06:22	07:30	16:58 (16)	07:39		08:48 (41)	08:51	09:49 (17)	09:28	13:13 (30)
	22:11	20:53	19:24 46	17:44 (16)	17:01	118	15:36 (11)	15:56 112	14:16 (18)	15:47 20	14:19 (18)
28	05:15	06:24	07:32	16:58 (16)	07:41		08:51 (41)	08:53	09:49 (17)	09:28	13:12 (30)
	22:09	20:51	19:21 46	17:44 (16)	16:59	115	15:35 (11)	15:55 109	14:16 (18)	15:48 24	14:21 (18)
29	05:17	06:26	07:35	16:58 (16)	07:44		08:54 (41)	08:55	09:50 (17)	09:28	12:14 (36)
	22:07	20:48	19:19 50	17:48 (13)	16:56	119	15:34 (11)	15:53 106	14:16 (18)	15:49 31	14:23 (18)
30	05:20	06:28	07:37	16:57 (16)	07:46		08:57 (41)	08:57	09:50 (17)	09:28	12:13 (36)
	22:05	20:45	19:16 52	17:49 (13)	16:53	117	15:32 (11)	15:52 103	14:16 (18)	15:50 37	14:25 (18)
31	05:22	06:31			07:49		08:59 (41)			09:28	12:12 (36)
	22:03	20:42			16:51	115	15:29 (11)			15:51 41	14:25 (18)
Potential sun hours	546	478	386		319		236		199		
Total, worst case			1040		2454		3527		1230		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (5)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (5)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (5)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (5)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (5)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (5)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (5)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (5)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (5)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (5)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (5)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (5)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case							34		1					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44		04:40		20:27 (5)	04:32	20:33 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25		22:30	8	20:35 (5)	22:48	15 20:48 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41		04:38		20:27 (5)	04:33	20:33 (5)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28		22:31	11	20:38 (5)	22:47	15 20:48 (5)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39		04:37		20:27 (5)	04:34	20:33 (5)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30		22:33	12	20:39 (5)	22:47	15 20:48 (5)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36		04:36		20:27 (5)	04:35	20:33 (5)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32		22:34	12	20:39 (5)	22:46	14 20:47 (5)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34		04:35		20:27 (5)	04:36	20:33 (5)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35		22:36	13	20:40 (5)	22:45	14 20:47 (5)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31		04:34		20:27 (5)	04:37	20:34 (5)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37		22:37	13	20:40 (5)	22:44	13 20:47 (5)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29		04:33		20:28 (5)	04:39	20:34 (5)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39		22:38	14	20:42 (5)	22:43	12 20:46 (5)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26		04:32		20:28 (5)	04:40	20:34 (5)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41		22:40	14	20:42 (5)	22:42	12 20:46 (5)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24		04:31		20:28 (5)	04:41	20:35 (5)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44		22:41	14	20:42 (5)	22:41	11 20:46 (5)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22		04:30		20:29 (5)	04:43	20:35 (5)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46		22:42	14	20:43 (5)	22:40	11 20:46 (5)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19		04:29		20:28 (5)	04:44	20:35 (5)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48		22:43	16	20:44 (5)	22:39	9 20:44 (5)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17		04:29		20:29 (5)	04:46	20:35 (5)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50		22:44	16	20:45 (5)	22:37	4 20:39 (5)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15		04:28		20:29 (5)	04:47	20:35 (5)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53		22:45	16	20:45 (5)	22:36	3 20:38 (5)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12		04:28		20:29 (5)	04:49	20:35 (5)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55		22:46	17	20:46 (5)	22:34	2 20:37 (5)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10		04:27		20:30 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57		22:47	17	20:47 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08		04:27		20:30 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59		22:47	17	20:47 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06		04:27		20:30 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01		22:48	18	20:48 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04		04:27		20:31 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03		22:48	17	20:48 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02		04:27		20:31 (5)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05		22:49	18	20:49 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00		04:27		20:31 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07		22:49	18	20:49 (5)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58		04:27		20:31 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10		22:49	18	20:49 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56		04:27		20:31 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12		22:50	18	20:49 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54		04:27		20:31 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14		22:50	18	20:49 (5)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52		04:27		20:32 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15		22:50	17	20:49 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51		04:28		20:32 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17		22:50	17	20:49 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49		04:28		20:32 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19		22:50	18	20:50 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47		04:29		20:32 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21		22:49	17	20:49 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46		04:30		20:32 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23		22:49	17	20:49 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44		04:30		20:33 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25		22:49	17	20:50 (5)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42		20:27 (5)	04:31	20:32 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2	20:29 (5)	22:48	17 20:49 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41		20:27 (5)			05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3	20:30 (5)			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521			547		545		478	386	319	236	200
Total, worst case						5			469		150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (86)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13	09:01 (89)	16:49	15:52
2	09:27	08:43		07:33	08:13 (89)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (86)	07:54	09:01
	15:54	16:59		18:07	6 08:19 (89)	20:19	21:28	22:32	22:48	21:58	20:37		19:10	25 09:01 (89)	16:47	15:50
3	09:27	08:41		07:30	08:10 (89)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (86)	07:56	09:03
	15:56	17:01		18:10	12 08:22 (89)	20:21	21:30	22:33	22:47	21:56	20:34		19:07	26 09:01 (89)	16:44	15:49
4	09:26	08:39		07:27	08:07 (89)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (86)	07:59	09:05
	15:57	17:04		18:12	16 08:23 (89)	20:24	21:33	22:35	22:46	21:54	20:31		19:05	28 09:02 (89)	16:42	15:48
5	09:26	08:37		07:24	08:00 (86)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (86)	08:01	09:07
	15:59	17:06		18:14	24 08:24 (89)	20:26	21:35	22:36	22:45	21:51	20:28		19:02	28 09:02 (89)	16:39	15:47
6	09:25	08:34		07:21	07:58 (86)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (86)	08:03	09:08
	16:00	17:09		18:17	26 08:24 (89)	20:28	21:37	22:38	22:45	21:49	20:25		18:59	28 09:01 (89)	16:37	15:47
7	09:24	08:32		07:19	07:57 (86)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (86)	08:06	09:10
	16:02	17:11		18:19	28 08:25 (89)	20:30	21:40	22:39	22:44	21:47	20:23		18:56	27 09:01 (89)	16:35	15:46
8	09:23	08:30		07:16	07:56 (86)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (86)	08:08	09:12
	16:04	17:14		18:21	28 08:24 (89)	20:33	21:42	22:40	22:43	21:44	20:20		18:53	25 09:00 (89)	16:32	15:45
9	09:23	08:27		07:13	07:56 (86)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (86)	08:11	09:13
	16:06	17:16		18:24	28 08:24 (89)	20:35	21:44	22:41	22:41	21:42	20:17		18:50	22 08:58 (89)	16:30	15:44
10	09:22	08:25		07:10	07:56 (86)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (89)	08:13	09:15
	16:07	17:18		18:26	27 08:23 (89)	20:37	21:46	22:43	22:40	21:39	20:14		18:48	14 08:57 (89)	16:28	15:44
11	09:21	08:23		07:07	07:58 (86)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (89)	08:15	09:16
	16:09	17:21		18:28	26 08:24 (89)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	10 08:54 (89)	16:26	15:43
12	09:19	08:20		07:04	07:59 (86)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31	23 08:22 (89)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (85)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (88)	08:07		08:20	09:19
	16:13	17:26		18:33	20 08:21 (89)	20:44	21:53	22:45	22:36	21:31	20:05	8 08:21 (88)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (85)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (88)	08:09		08:22	09:20
	16:15	17:28		18:35	20 08:18 (89)	20:47	21:55	22:46	22:35	21:29	20:02	13 08:23 (88)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (85)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (88)	08:11		08:25	09:21
	16:17	17:31		18:38	14 08:14 (89)	20:49	21:57	22:47	22:33	21:26	19:59	16 08:24 (88)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (85)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (88)	08:13	09:01 (87)	08:27	09:22
	16:19	17:33		18:40	12 07:44 (85)	20:51	22:00	22:48	22:32	21:24	19:57	17 08:25 (88)	18:31	9 09:10 (87)	16:15	15:42
17	09:13	08:07		06:50	07:32 (85)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (88)	08:16	09:00 (87)	08:29	09:23
	16:21	17:36		18:42	12 07:44 (85)	20:53	22:02	22:48	22:30	21:21	19:54	18 08:25 (88)	18:28	12 09:12 (87)	16:13	15:42
18	09:12	08:05	08:36 (87)	06:47	07:32 (85)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (88)	08:18	08:59 (87)	08:32	09:24
	16:24	17:38	3 08:39 (87)	18:45	11 07:43 (85)	20:56	22:04	22:49	22:29	21:18	19:51	19 08:25 (88)	18:25	13 09:12 (87)	16:12	15:42
19	09:10	08:02	08:33 (87)	06:44	07:26 (88)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (88)	08:20	08:59 (87)	08:34	09:25
	16:26	17:41	7 08:40 (87)	18:47	16 07:42 (85)	20:58	22:06	22:49	22:27	21:16	19:48	19 08:24 (88)	18:23	14 09:13 (87)	16:10	15:43
20	09:08	08:00	08:30 (87)	06:42	07:23 (88)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (88)	08:23	08:58 (87)	08:36	09:25
	16:28	17:43	11 08:41 (87)	18:49	17 07:40 (85)	21:00	22:08	22:50	22:25	21:13	19:45	19 08:24 (88)	18:20	14 09:12 (87)	16:08	15:43
21	09:07	07:57	08:27 (87)	06:39	07:21 (88)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (88)	08:25	08:58 (87)	08:39	09:26
	16:30	17:46	14 08:41 (87)	18:52	15 07:36 (88)	21:03	22:10	22:50	22:23	21:10	19:42	17 08:22 (88)	18:17	14 09:12 (87)	16:06	15:43
22	09:05	07:54	08:27 (87)	06:36	07:20 (88)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (88)	08:27	09:01 (87)	08:41	09:27
	16:32	17:48	14 08:41 (87)	18:54	18 07:38 (88)	21:05	22:12	22:50	22:22	21:08	19:39	16 08:22 (88)	18:15	10 09:11 (87)	16:04	15:44
23	09:03	07:52	08:28 (87)	06:33	07:19 (88)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (88)	08:30	09:04 (87)	08:43	09:27
	16:35	17:50	13 08:41 (87)	18:56	19 07:38 (88)	21:07	22:14	22:50	22:20	21:05	19:36	17 08:24 (85)	18:12	6 09:10 (87)	16:03	15:44
24	09:01	07:49	08:28 (87)	06:30	07:19 (88)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (88)	08:32	09:06 (87)	08:45	09:27
	16:37	17:53	13 08:41 (87)	18:58	19 07:38 (88)	21:10	22:16	22:50	22:18	21:02	19:33	16 08:25 (85)	18:09	2 09:08 (87)	16:01	15:45
25	09:00	07:46	08:29 (87)	06:27	07:18 (88)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (85)	07:35		08:47	09:28
	16:39	17:55	10 08:39 (87)	19:01	19 07:37 (88)	21:12	22:18	22:50	22:16	20:59	19:30	11 08:26 (85)	17:07		16:00	15:46
26	08:58	07:44	08:30 (87)	06:24	07:18 (88)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (85)	07:37		08:49	09:28
	16:42	17:58	7 08:37 (87)	19:03	19 07:37 (88)	21:14	22:20	22:50	22:14	20:57	19:28	12 08:26 (85)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (88)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (85)	07:39		08:52	09:28
	16:44	18:00		19:05	18 07:36 (88)	21:17	22:22	22:50	22:12	20:54	19:25	12 08:26 (85)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (88)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (85)	07:42		08:54	09:28
	16:47	18:02		19:08	16 07:34 (88)	21:19	22:23	22:50	22:09	20:51	19:22	12 08:26 (85)	16:59		15:55	15:48
29	08:52			07:16	08:19 (88)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (85)	07:44		08:56	09:28
	16:49			20:10	14 08:33 (88)	21:21	22:25	22:49	22:07	20:48	19:19	19 08:57 (89)	16:56		15:54	15:49
30	08:50			07:13	08:21 (88)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (85)	07:47		08:58	09:28
	16:51			20:12	9 08:30 (88)	21:24	22:27	22:49	22:05	20:45	19:16	21 08:59 (89)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April		May		June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (42)	04:40	06:17 (40)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (42)	22:30	23 06:40 (40)
2	09:27	08:43		07:33	07:04		05:42		07:32 (42)	04:39	06:16 (40)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (42)	22:32	24 06:40 (40)
3	09:27	08:41		07:30	07:01		05:39		07:32 (42)	04:37	06:16 (40)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (42)	22:34	25 06:41 (40)
4	09:26	08:39		07:27	06:58		05:36		07:34 (42)	04:36	06:16 (40)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (42)	22:35	26 06:42 (40)
5	09:26	08:37		07:24	06:55		05:34		07:36 (42)	04:35	06:16 (40)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (42)	22:36	27 06:43 (40)
6	09:25	08:34		07:21	06:53		05:32		07:38 (42)	04:34	06:16 (40)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (42)	22:38	27 06:43 (40)
7	09:24	08:32		07:19	06:50		05:29		07:40 (42)	04:33	06:16 (40)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (42)	22:39	27 06:43 (40)
8	09:24	08:30	09:03 (89)	07:16	06:47		05:27			04:32	06:15 (40)
	16:04	17:14	2 09:05 (89)	18:21	20:33		21:42			22:40	29 06:44 (40)
9	09:23	08:27	09:00 (89)	07:13	06:44		05:24			04:31	06:16 (40)
	16:06	17:16	7 09:07 (89)	18:24	20:35		21:44			22:42	29 06:45 (40)
10	09:22	08:25	08:58 (89)	07:10	06:41	07:48 (42)	05:22			04:31	06:15 (40)
	16:07	17:18	10 09:08 (89)	18:26	20:37	10 07:58 (42)	21:46			22:43	30 06:45 (40)
11	09:21	08:23	08:56 (89)	07:07	06:38	07:45 (42)	05:20			04:30	06:16 (40)
	16:09	17:21	13 09:09 (89)	18:28	20:40	17 08:02 (42)	21:49			22:44	29 06:45 (40)
12	09:20	08:20	08:55 (89)	07:04	06:36	07:41 (42)	05:17			04:29	06:15 (40)
	16:11	17:23	14 09:09 (89)	18:31	20:42	22 08:03 (42)	21:51			22:45	30 06:45 (40)
13	09:18	08:18	08:55 (89)	07:02	06:33	07:37 (42)	05:15			04:29	06:16 (40)
	16:13	17:26	14 09:09 (89)	18:33	20:44	27 08:04 (42)	21:53			22:46	30 06:46 (40)
14	09:17	08:15	08:56 (89)	06:59	06:30	07:35 (42)	05:13			04:28	06:16 (40)
	16:15	17:28	13 09:09 (89)	18:35	20:47	30 08:05 (42)	21:55			22:46	30 06:46 (40)
15	09:16	08:13	08:56 (89)	06:56	06:27	07:34 (42)	05:11			04:28	06:15 (40)
	16:17	17:31	13 09:09 (89)	18:38	20:49	33 08:07 (42)	21:57			22:47	31 06:46 (40)
16	09:14	08:10	08:56 (89)	06:53	06:24	07:33 (42)	05:09			04:28	06:16 (40)
	16:19	17:33	11 09:07 (89)	18:40	20:51	34 08:07 (42)	22:00			22:48	30 06:46 (40)
17	09:13	08:07	08:58 (89)	06:50	06:22	07:32 (42)	05:06			04:27	06:16 (40)
	16:21	17:36	7 09:05 (89)	18:42	20:54	35 08:07 (42)	22:02			22:48	31 06:47 (40)
18	09:12	08:05		06:47	06:19	07:31 (42)	05:04			04:27	06:16 (40)
	16:24	17:38		18:45	20:56	37 08:08 (42)	22:04			22:49	31 06:47 (40)
19	09:10	08:02		06:44	06:16	07:30 (42)	05:02			04:27	06:16 (40)
	16:26	17:41		18:47	20:58	38 08:08 (42)	22:06			22:49	31 06:47 (40)
20	09:08	08:00		06:42	06:13	07:30 (42)	05:00			04:27	06:16 (40)
	16:28	17:43		18:49	21:00	39 08:09 (42)	22:08			22:50	31 06:47 (40)
21	09:07	07:57		06:39	06:11	07:30 (42)	04:58			04:27	06:16 (40)
	16:30	17:46		18:52	21:03	38 08:08 (42)	22:10			22:50	31 06:47 (40)
22	09:05	07:54		06:36	06:08	07:29 (42)	04:56			04:27	06:17 (40)
	16:32	17:48		18:54	21:05	39 08:08 (42)	22:12			22:50	31 06:48 (40)
23	09:03	07:52		06:33	06:05	07:29 (42)	04:55			04:28	06:17 (40)
	16:35	17:50		18:56	21:07	39 08:08 (42)	22:14			22:50	31 06:48 (40)
24	09:02	07:49		06:30	06:02	07:29 (42)	04:53			04:28	06:17 (40)
	16:37	17:53		18:58	21:10	38 08:07 (42)	22:16			22:50	31 06:48 (40)
25	09:00	07:46		06:27	06:00	07:29 (42)	04:51			04:28	06:18 (40)
	16:39	17:55		19:01	21:12	38 08:07 (42)	22:18			22:50	31 06:49 (40)
26	08:58	07:44		06:24	05:57	07:29 (42)	04:49		06:24 (40)	04:29	06:18 (40)
	16:42	17:58		19:03	21:14	37 08:06 (42)	22:20	8	06:32 (40)	22:50	31 06:49 (40)
27	08:56	07:41		06:21	05:54	07:29 (42)	04:48		06:21 (40)	04:29	06:19 (40)
	16:44	18:00		19:05	21:17	37 08:06 (42)	22:22	13	06:34 (40)	22:50	30 06:49 (40)
28	08:54	07:38		06:18	05:52	07:29 (42)	04:46		06:20 (40)	04:30	06:18 (40)
	16:47	18:02		19:08	21:19	36 08:05 (42)	22:24	16	06:36 (40)	22:50	31 06:49 (40)
29	08:52			07:16	05:49	07:30 (42)	04:44		06:19 (40)	04:31	06:19 (40)
	16:49			20:10	21:21	34 08:04 (42)	22:25	18	06:37 (40)	22:49	30 06:49 (40)
30	08:50			07:13	05:47	07:30 (42)	04:43		06:19 (40)	04:31	06:19 (40)
	16:51			20:12	21:24	33 08:03 (42)	22:27	20	06:39 (40)	22:49	30 06:49 (40)
31	08:48			07:10			04:41		06:17 (40)		
	16:54			20:14			22:29	22	06:39 (40)		
Potential sun hours	221	260		365	432		521			547	
Total, worst case			104			691		254			878

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December
1	04:32		06:20 (40)	05:24			06:33		07:44 (42)	07:39			07:51		08:28 (89)	09:00
	22:48	30	06:50 (40)	22:01			20:40	17	08:01 (42)	19:13			16:49	9	08:37 (89)	15:51
2	04:33		06:20 (40)	05:27			06:35		07:47 (42)	07:42			07:54		08:30 (89)	09:01
	22:48	30	06:50 (40)	21:58			20:37	10	07:57 (42)	19:10			16:47	6	08:36 (89)	15:50
3	04:34		06:20 (40)	05:29			06:38			07:44			07:56		08:33 (89)	09:03
	22:47	29	06:49 (40)	21:56			20:34			19:07			16:44	1	08:34 (89)	15:49
4	04:35		06:20 (40)	05:31			06:40			07:46			07:59			09:05
	22:46	29	06:49 (40)	21:54			20:31			19:05			16:42			15:48
5	04:36		06:21 (40)	05:33			06:42			07:48			08:01			09:07
	22:46	28	06:49 (40)	21:51			20:28			19:02			16:39			15:47
6	04:38		06:21 (40)	05:35		07:49 (42)	06:44			07:51			08:03			09:09
	22:45	28	06:49 (40)	21:49	13	08:02 (42)	20:25			18:59			16:37			15:47
7	04:39		06:23 (40)	05:38		07:46 (42)	06:47			07:53			08:06			09:10
	22:44	27	06:50 (40)	21:47	18	08:04 (42)	20:23			18:56			16:35			15:46
8	04:40		06:23 (40)	05:40		07:44 (42)	06:49			07:55			08:08			09:12
	22:43	26	06:49 (40)	21:44	22	08:06 (42)	20:20			18:53			16:32			15:45
9	04:42		06:23 (40)	05:42		07:43 (42)	06:51			07:57			08:11			09:13
	22:42	26	06:49 (40)	21:42	25	08:08 (42)	20:17			18:50			16:30			15:44
10	04:43		06:24 (40)	05:44		07:41 (42)	06:53			08:00			08:13			09:15
	22:40	24	06:48 (40)	21:39	28	08:09 (42)	20:14			18:48			16:28			15:44
11	04:45		06:25 (40)	05:46		07:40 (42)	06:55			08:02			08:15			09:16
	22:39	23	06:48 (40)	21:37	30	08:10 (42)	20:11			18:45			16:26			15:43
12	04:46		06:25 (40)	05:49		07:39 (42)	06:58			08:04			08:18			09:17
	22:38	23	06:48 (40)	21:34	32	08:11 (42)	20:08			18:42			16:24			15:43
13	04:48		06:26 (40)	05:51		07:38 (42)	07:00			08:07			08:20			09:19
	22:36	21	06:47 (40)	21:32	33	08:11 (42)	20:05			18:39			16:22			15:43
14	04:49		06:28 (40)	05:53		07:37 (42)	07:02			08:09			08:22			09:20
	22:35	18	06:46 (40)	21:29	35	08:12 (42)	20:02			18:36			16:19			15:43
15	04:51		06:28 (40)	05:55		07:36 (42)	07:04			08:11			08:25			09:21
	22:34	17	06:45 (40)	21:26	36	08:12 (42)	19:59			18:34			16:17			15:42
16	04:53		06:30 (40)	05:58		07:36 (42)	07:06			08:14			08:27			09:22
	22:32	14	06:44 (40)	21:24	37	08:13 (42)	19:57			18:31			16:15			15:42
17	04:54		06:31 (40)	06:00		07:35 (42)	07:09			08:16			08:29			09:23
	22:30	11	06:42 (40)	21:21	38	08:13 (42)	19:54			18:28			16:13			15:42
18	04:56		06:35 (40)	06:02		07:36 (42)	07:11			08:18			08:32			09:24
	22:29	5	06:40 (40)	21:18	38	08:14 (42)	19:51			18:25			16:12			15:42
19	04:58			06:04		07:35 (42)	07:13			08:21			08:34			09:25
	22:27			21:16	39	08:14 (42)	19:48			18:23			16:10			15:43
20	05:00			06:07		07:35 (42)	07:15			08:23			08:36			09:25
	22:25			21:13	38	08:13 (42)	19:45			18:20			16:08			15:43
21	05:02			06:09		07:34 (42)	07:17			08:25			08:39			09:26
	22:23			21:10	39	08:13 (42)	19:42			18:17			16:06			15:43
22	05:04			06:11		07:34 (42)	07:20			08:28			08:41			09:27
	22:22			21:08	39	08:13 (42)	19:39			18:15			16:04			15:44
23	05:06			06:13		07:34 (42)	07:22			08:30			08:43			09:27
	22:20			21:05	38	08:12 (42)	19:36			18:12			16:03			15:44
24	05:08			06:15		07:34 (42)	07:24			08:32		09:30 (89)	08:45			09:28
	22:18			21:02	37	08:11 (42)	19:33			18:09	3	09:33 (89)	16:01			15:45
25	05:10			06:18		07:34 (42)	07:26			07:35		08:28 (89)	08:47			09:28
	22:16			20:59	37	08:11 (42)	19:30			17:07	8	08:36 (89)	16:00			15:46
26	05:12			06:20		07:34 (42)	07:28			07:37		08:27 (89)	08:50			09:28
	22:14			20:57	36	08:10 (42)	19:28			17:04	11	08:38 (89)	15:58			15:46
27	05:14			06:22		07:35 (42)	07:31			07:39		08:25 (89)	08:52			09:28
	22:12			20:54	34	08:09 (42)	19:25			17:02	13	08:38 (89)	15:57			15:47
28	05:16			06:24		07:35 (42)	07:33			07:42		08:25 (89)	08:54			09:28
	22:10			20:51	32	08:07 (42)	19:22			16:59	14	08:39 (89)	15:55			15:48
29	05:18			06:27		07:36 (42)	07:35			07:44		08:24 (89)	08:56			09:28
	22:07			20:48	30	08:06 (42)	19:19			16:56	14	08:38 (89)	15:54			15:49
30	05:20			06:29		07:38 (42)	07:37			07:47		08:25 (89)	08:58			09:28
	22:05			20:45	27	08:05 (42)	19:16			16:54	13	08:38 (89)	15:53			15:50
31	05:22			06:31		07:41 (42)				07:49		08:26 (89)				09:28
	22:03			20:43	22	08:03 (42)				16:51	12	08:38 (89)				15:51
Potential sun hours	545			478			386			319			236			200
Total, worst case		409			833			27			88			16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:16 (89)	07:07	05:44			04:40		06:01 (42)
	15:53	16:56		18:05	15	08:31 (89)	20:17	21:26			22:30	34	06:35 (42)
2	09:27	08:43		07:33		08:17 (89)	07:04	05:42			04:39		06:01 (42)
	15:54	16:59		18:07	13	08:30 (89)	20:19	21:28			22:32	35	06:36 (42)
3	09:27	08:41		07:30		08:18 (89)	07:01	05:39			04:38		06:01 (42)
	15:56	17:01		18:10	10	08:28 (89)	20:21	21:30			22:33	35	06:36 (42)
4	09:26	08:39		07:27		08:20 (89)	06:58	05:37			04:36		06:00 (42)
	15:57	17:04		18:12	5	08:25 (89)	20:24	21:33			22:35	36	06:36 (42)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:01 (42)
	15:59	17:06		18:14			20:26	21:35			22:36	36	06:37 (42)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:01 (42)
	16:00	17:09		18:17			20:28	21:37			22:38	36	06:37 (42)
7	09:24	08:32		07:19			06:50	05:29			04:33		06:01 (42)
	16:02	17:11		18:19			20:31	21:40			22:39	36	06:37 (42)
8	09:24	08:30		07:16		07:46 (88)	06:47	05:27			04:32		06:01 (42)
	16:04	17:14		18:21	7	07:53 (88)	20:33	21:42			22:40	36	06:37 (42)
9	09:23	08:27		07:13		07:44 (88)	06:44	05:24			04:31		06:02 (42)
	16:06	17:16		18:24	10	07:54 (88)	20:35	21:44			22:41	36	06:38 (42)
10	09:22	08:25		07:10		07:43 (88)	06:41	05:22			04:31		06:01 (42)
	16:07	17:19		18:26	13	07:56 (88)	20:37	21:46			22:43	37	06:38 (42)
11	09:21	08:23		07:07		07:42 (88)	06:38	05:20			04:30		06:02 (42)
	16:09	17:21		18:28	14	07:56 (88)	20:40	21:49			22:44	37	06:39 (42)
12	09:20	08:20		07:04		07:42 (88)	06:36	05:17			04:29		06:02 (42)
	16:11	17:23		18:31	14	07:56 (88)	20:42	21:51			22:45	36	06:38 (42)
13	09:18	08:18		07:02		07:41 (88)	06:33	05:15			04:29		06:02 (42)
	16:13	17:26		18:33	15	07:56 (88)	20:44	21:53			22:46	37	06:39 (42)
14	09:17	08:15		06:59		07:42 (88)	06:30	05:13			04:28		06:03 (42)
	16:15	17:28		18:35	13	07:55 (88)	20:47	21:55			22:46	36	06:39 (42)
15	09:16	08:13		06:56		07:42 (88)	06:27	05:11			04:28		06:02 (42)
	16:17	17:31		18:38	11	07:53 (88)	20:49	21:57			22:47	37	06:39 (42)
16	09:14	08:10		06:53		07:44 (88)	06:24	05:09			04:28		06:02 (42)
	16:19	17:33		18:40	7	07:51 (88)	20:51	22:00			22:48	37	06:39 (42)
17	09:13	08:07		06:50			06:22	05:06		06:12 (42)	04:27		06:03 (42)
	16:21	17:36		18:42			20:54	22:02	10	06:22 (42)	22:48	37	06:40 (42)
18	09:12	08:05		06:47			06:19	05:04		06:11 (42)	04:27		06:03 (42)
	16:24	17:38		18:45			20:56	22:04	14	06:25 (42)	22:49	37	06:40 (42)
19	09:10	08:02		06:44			06:16	05:02		06:09 (42)	04:27		06:03 (42)
	16:26	17:41		18:47			20:58	22:06	18	06:27 (42)	22:49	37	06:40 (42)
20	09:08	08:00		06:42			06:13	05:00		06:08 (42)	04:27		06:03 (42)
	16:28	17:43		18:49			21:00	22:08	20	06:28 (42)	22:50	37	06:40 (42)
21	09:07	07:57		06:39			06:11	04:58		06:06 (42)	04:27		06:03 (42)
	16:30	17:46		18:52			21:03	22:10	23	06:29 (42)	22:50	37	06:40 (42)
22	09:05	07:54		06:36			06:08	04:56		06:05 (42)	04:27		06:04 (42)
	16:32	17:48		18:54			21:05	22:12	25	06:30 (42)	22:50	37	06:41 (42)
23	09:03	07:52		06:33			06:05	04:55		06:03 (42)	04:28		06:04 (42)
	16:35	17:50	8	08:29 (89)	18:56			21:07	22:14	28	06:31 (42)	22:50	37	06:41 (42)
24	09:02	07:49		08:18 (89)	06:30			06:02	04:53		06:03 (42)	04:28		06:04 (42)
	16:37	17:53	12	08:30 (89)	18:58			21:10	22:16	29	06:32 (42)	22:50	37	06:41 (42)
25	09:00	07:46		08:17 (89)	06:27			06:00	04:51		06:02 (42)	04:28		06:05 (42)
	16:39	17:55	14	08:31 (89)	19:01			21:12	22:18	30	06:32 (42)	22:50	37	06:42 (42)
26	08:58	07:44		08:16 (89)	06:24			05:57	04:49		06:02 (42)	04:29		06:05 (42)
	16:42	17:58	15	08:31 (89)	19:03			21:14	22:20	31	06:33 (42)	22:50	36	06:41 (42)
27	08:56	07:41		08:15 (89)	06:21			05:54	04:48		06:01 (42)	04:29		06:05 (42)
	16:44	18:00	16	08:31 (89)	19:05			21:17	22:22	32	06:33 (42)	22:50	37	06:42 (42)
28	08:54	07:38		08:15 (89)	06:18			05:52	04:46		06:01 (42)	04:30		06:05 (42)
	16:47	18:02	15	08:30 (89)	19:08			21:19	22:24	33	06:34 (42)	22:50	37	06:42 (42)
29	08:52				07:16			05:49	04:44		06:01 (42)	04:31		06:05 (42)
	16:49				20:10			21:21	22:25	34	06:35 (42)	22:49	37	06:42 (42)
30	08:50				07:13			05:47	04:43		06:01 (42)	04:32		06:06 (42)
	16:51				20:12			21:24	22:27	34	06:35 (42)	22:49	37	06:43 (42)
31	08:48				07:10				04:41		06:01 (42)			
	16:54				20:14				22:29	34	06:35 (42)			
Potential sun hours	221	260			365			432	521			547		
Total, worst case			80			147				395			1094	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August		September			October			November	December
1	04:32		06:06 (42)	05:24		06:33			07:39		08:21 (88)	07:51	09:00
	22:48	37	06:43 (42)	22:01		20:40			19:13	14	08:35 (88)	16:49	15:52
2	04:33		06:07 (42)	05:27		06:35			07:42		08:20 (88)	07:54	09:01
	22:48	36	06:43 (42)	21:58		20:37			19:10	15	08:35 (88)	16:47	15:50
3	04:34		06:06 (42)	05:29		06:38			07:44		08:20 (88)	07:56	09:03
	22:47	37	06:43 (42)	21:56		20:34			19:07	13	08:33 (88)	16:44	15:49
4	04:35		06:06 (42)	05:31		06:40			07:46		08:21 (88)	07:59	09:05
	22:46	37	06:43 (42)	21:54		20:31			19:05	12	08:33 (88)	16:42	15:48
5	04:37		06:06 (42)	05:33		06:42			07:48		08:22 (88)	08:01	09:07
	22:46	37	06:43 (42)	21:51		20:28			19:02	9	08:31 (88)	16:39	15:47
6	04:38		06:08 (42)	05:35		06:44			07:51			08:03	09:09
	22:45	36	06:44 (42)	21:49		20:25			18:59			16:37	15:47
7	04:39		06:08 (42)	05:38		06:47			07:53			08:06	09:10
	22:44	36	06:44 (42)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:08 (42)	05:40		06:49			07:55			08:08	09:12
	22:43	36	06:44 (42)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:08 (42)	05:42		06:51			07:57			08:11	09:13
	22:42	36	06:44 (42)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:08 (42)	05:44		06:53			08:00		08:54 (89)	08:13	09:15
	22:40	35	06:43 (42)	21:39		20:14			18:48	7	09:01 (89)	16:28	15:44
11	04:45		06:09 (42)	05:46		06:55			08:02		08:51 (89)	08:15	09:16
	22:39	35	06:44 (42)	21:37		20:11			18:45	11	09:02 (89)	16:26	15:43
12	04:46		06:09 (42)	05:49		06:58			08:04		08:49 (89)	08:18	09:17
	22:38	35	06:44 (42)	21:34		20:08			18:42	14	09:03 (89)	16:24	15:43
13	04:48		06:09 (42)	05:51		07:00			08:07		08:49 (89)	08:20	09:19
	22:36	34	06:43 (42)	21:31		20:05			18:39	15	09:04 (89)	16:22	15:43
14	04:49		06:10 (42)	05:53		07:02			08:09		08:48 (89)	08:22	09:20
	22:35	33	06:43 (42)	21:29		20:02			18:36	15	09:03 (89)	16:19	15:43
15	04:51		06:10 (42)	05:55		07:04			08:11		08:48 (89)	08:25	09:21
	22:34	33	06:43 (42)	21:26		19:59			18:34	16	09:04 (89)	16:17	15:42
16	04:53		06:11 (42)	05:58		07:06			08:14		08:48 (89)	08:27	09:22
	22:32	32	06:43 (42)	21:24		19:57			18:31	15	09:03 (89)	16:15	15:42
17	04:54		06:11 (42)	06:00		07:09			08:16		08:49 (89)	08:29	09:23
	22:30	31	06:42 (42)	21:21		19:54			18:28	13	09:02 (89)	16:14	15:42
18	04:56		06:12 (42)	06:02		07:11			08:18		08:50 (89)	08:32	09:24
	22:29	30	06:42 (42)	21:18		19:51			18:25	11	09:01 (89)	16:12	15:42
19	04:58		06:13 (42)	06:04		07:13			08:20		08:53 (89)	08:34	09:25
	22:27	29	06:42 (42)	21:16		19:48			18:23	6	08:59 (89)	16:10	15:43
20	05:00		06:13 (42)	06:07		07:15			08:23			08:36	09:25
	22:25	28	06:41 (42)	21:13		19:45			18:20			16:08	15:43
21	05:02		06:14 (42)	06:09		07:17			08:25			08:39	09:26
	22:23	27	06:41 (42)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:16 (42)	06:11		07:20			08:28			08:41	09:27
	22:22	24	06:40 (42)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:17 (42)	06:13		07:22			08:30			08:43	09:27
	22:20	21	06:38 (42)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:18 (42)	06:15		07:24			08:32			08:45	09:28
	22:18	19	06:37 (42)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:20 (42)	06:18		07:26			07:35			08:47	09:28
	22:16	16	06:36 (42)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:22 (42)	06:20		07:28			07:37			08:49	09:28
	22:14	12	06:34 (42)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:25 (42)	06:22		07:31		08:27 (88)	07:39			08:52	09:28
	22:12	6	06:31 (42)	20:54		19:25	5	08:32 (88)	17:02			15:57	15:47
28	05:16			06:24		07:33		08:24 (88)	07:42			08:54	09:28
	22:10			20:51		19:22	10	08:34 (88)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:22 (88)	07:44			08:56	09:28
	22:07			20:48		19:19	12	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:21 (88)	07:47			08:58	09:28
	22:05			20:45		19:16	14	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		808					41			186			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:18 (89)	07:07	05:44			04:40		06:18 (42)
	15:53	16:56		18:05	13	08:31 (89)	20:17	21:26			22:30	28	06:46 (42)
2	09:27	08:43		07:33		08:19 (89)	07:04	05:42			04:39		06:18 (42)
	15:54	16:59		18:07	10	08:29 (89)	20:19	21:28			22:32	28	06:46 (42)
3	09:27	08:41		07:30		08:21 (89)	07:01	05:39			04:38		06:17 (42)
	15:56	17:01		18:10	5	08:26 (89)	20:21	21:31			22:33	29	06:46 (42)
4	09:26	08:39		07:27			06:58	05:37			04:36		06:16 (42)
	15:57	17:04		18:12			20:24	21:33			22:35	30	06:46 (42)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:16 (42)
	15:59	17:06		18:14			20:26	21:35			22:36	31	06:47 (42)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:15 (42)
	16:00	17:09		18:17			20:28	21:37			22:38	32	06:47 (42)
7	09:24	08:32		07:19		07:48 (88)	06:50	05:29			04:33		06:14 (42)
	16:02	17:11		18:19	6	07:54 (88)	20:31	21:40			22:39	32	06:46 (42)
8	09:24	08:30		07:16		07:46 (88)	06:47	05:27			04:32		06:13 (42)
	16:04	17:14		18:21	10	07:56 (88)	20:33	21:42			22:40	33	06:46 (42)
9	09:23	08:27		07:13		07:44 (88)	06:44	05:24			04:31		06:14 (42)
	16:06	17:16		18:24	13	07:57 (88)	20:35	21:44			22:41	33	06:47 (42)
10	09:22	08:25		07:10		07:44 (88)	06:41	05:22			04:31		06:13 (42)
	16:07	17:19		18:26	14	07:58 (88)	20:37	21:46			22:43	33	06:46 (42)
11	09:21	08:23		07:07		07:44 (88)	06:38	05:20			04:30		06:14 (42)
	16:09	17:21		18:28	14	07:58 (88)	20:40	21:49			22:44	33	06:47 (42)
12	09:20	08:20		07:04		07:44 (88)	06:36	05:17			04:29		06:14 (42)
	16:11	17:23		18:31	13	07:57 (88)	20:42	21:51			22:45	32	06:46 (42)
13	09:18	08:18		07:02		07:44 (88)	06:33	05:15			04:29		06:14 (42)
	16:13	17:26		18:33	12	07:56 (88)	20:44	21:53			22:46	33	06:47 (42)
14	09:17	08:15		06:59		07:45 (88)	06:30	05:13			04:28		06:15 (42)
	16:15	17:28		18:35	10	07:55 (88)	20:47	21:55			22:46	32	06:47 (42)
15	09:16	08:13		06:56		07:46 (88)	06:27	05:11			04:28		06:15 (42)
	16:17	17:31		18:38	6	07:52 (88)	20:49	21:57			22:47	32	06:47 (42)
16	09:14	08:10		06:53			06:24	05:09		06:39 (42)	04:28		06:15 (42)
	16:19	17:33		18:40			20:51	22:00	2	06:41 (42)	22:48	32	06:47 (42)
17	09:13	08:07		06:50			06:22	05:06		06:37 (42)	04:27		06:15 (42)
	16:21	17:36		18:42			20:54	22:02	4	06:41 (42)	22:48	32	06:47 (42)
18	09:12	08:05		06:47			06:19	05:04		06:36 (42)	04:27		06:16 (42)
	16:24	17:38		18:45			20:56	22:04	7	06:43 (42)	22:49	31	06:47 (42)
19	09:10	08:02		06:44			06:16	05:02		06:35 (42)	04:27		06:16 (42)
	16:26	17:41		18:47			20:58	22:06	8	06:43 (42)	22:49	31	06:47 (42)
20	09:08	08:00		06:42			06:13	05:00		06:33 (42)	04:27		06:16 (42)
	16:28	17:43		18:49			21:00	22:08	10	06:43 (42)	22:50	31	06:47 (42)
21	09:07	07:57		06:39			06:11	04:58		06:31 (42)	04:27		06:16 (42)
	16:30	17:46		18:52			21:03	22:10	12	06:43 (42)	22:50	31	06:47 (42)
22	09:05	07:54		06:36			06:08	04:56		06:30 (42)	04:27		06:17 (42)
	16:32	17:48	5	08:28 (89)	18:54			21:05	22:12	14	06:44 (42)	22:50	31	06:48 (42)
23	09:03	07:52		08:21 (89)	06:33			06:05	04:55		06:29 (42)	04:28		06:17 (42)
	16:35	17:50	10	08:31 (89)	18:56			21:07	22:14	15	06:44 (42)	22:50	31	06:48 (42)
24	09:02	07:49		08:18 (89)	06:30			06:02	04:53		06:28 (42)	04:28		06:17 (42)
	16:37	17:53	13	08:31 (89)	18:58			21:10	22:16	17	06:45 (42)	22:50	31	06:48 (42)
25	09:00	07:46		08:17 (89)	06:27			06:00	04:51		06:26 (42)	04:28		06:18 (42)
	16:39	17:55	15	08:32 (89)	19:01			21:12	22:18	19	06:45 (42)	22:50	31	06:49 (42)
26	08:58	07:44		08:17 (89)	06:24			05:57	04:49		06:25 (42)	04:29		06:17 (42)
	16:42	17:58	15	08:32 (89)	19:03			21:14	22:20	20	06:45 (42)	22:50	32	06:49 (42)
27	08:56	07:41		08:17 (89)	06:21			05:54	04:48		06:23 (42)	04:29		06:18 (42)
	16:44	18:00	14	08:31 (89)	19:05			21:17	22:22	22	06:45 (42)	22:50	32	06:50 (42)
28	08:54	07:38		08:17 (89)	06:18			05:52	04:46		06:23 (42)	04:30		06:17 (42)
	16:47	18:02	14	08:31 (89)	19:08			21:19	22:24	22	06:45 (42)	22:50	32	06:49 (42)
29	08:52				07:16			05:49	04:44		06:22 (42)	04:31		06:18 (42)
	16:49				20:10			21:21	22:25	24	06:46 (42)	22:49	32	06:50 (42)
30	08:50				07:13			05:47	04:43		06:21 (42)	04:32		06:18 (42)
	16:51				20:12			21:24	22:27	25	06:46 (42)	22:49	33	06:51 (42)
31	08:48				07:10				04:41		06:19 (42)			
	16:54				20:14				22:29	26	06:45 (42)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			86			126			247			944	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August		September			October			November	December
1	04:32		06:18 (42)	05:24		06:33			07:39		08:23 (88)	07:51	09:00
	22:48	33	06:51 (42)	22:01		20:40			19:13	13	08:36 (88)	16:49	15:52
2	04:33		06:19 (42)	05:27		06:35			07:42		08:22 (88)	07:54	09:01
	22:48	33	06:52 (42)	21:58		20:37			19:10	14	08:36 (88)	16:47	15:50
3	04:34		06:18 (42)	05:29		06:38			07:44		08:21 (88)	07:56	09:03
	22:47	33	06:51 (42)	21:56		20:34			19:07	14	08:35 (88)	16:44	15:49
4	04:35		06:18 (42)	05:31		06:40			07:46		08:22 (88)	07:59	09:05
	22:46	33	06:51 (42)	21:54		20:31			19:05	13	08:35 (88)	16:42	15:48
5	04:37		06:19 (42)	05:33		06:42			07:48		08:22 (88)	08:01	09:07
	22:46	33	06:52 (42)	21:51		20:28			19:02	12	08:34 (88)	16:39	15:47
6	04:38		06:21 (42)	05:35		06:44			07:51		08:23 (88)	08:03	09:09
	22:45	32	06:53 (42)	21:49		20:25			18:59	9	08:32 (88)	16:37	15:47
7	04:39		06:22 (42)	05:38		06:47			07:53			08:06	09:10
	22:44	31	06:53 (42)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:23 (42)	05:40		06:49			07:55			08:08	09:12
	22:43	30	06:53 (42)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:24 (42)	05:42		06:51			07:57			08:11	09:13
	22:42	29	06:53 (42)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:25 (42)	05:44		06:53			08:00			08:13	09:15
	22:40	28	06:53 (42)	21:39		20:14			18:48			16:28	15:44
11	04:45		06:26 (42)	05:46		06:55			08:02		08:54 (89)	08:15	09:16
	22:39	28	06:54 (42)	21:37		20:11			18:45	7	09:01 (89)	16:26	15:43
12	04:46		06:27 (42)	05:49		06:58			08:04		08:51 (89)	08:18	09:17
	22:38	27	06:54 (42)	21:34		20:08			18:42	12	09:03 (89)	16:24	15:43
13	04:48		06:28 (42)	05:51		07:00			08:07		08:51 (89)	08:20	09:19
	22:36	26	06:54 (42)	21:32		20:05			18:39	13	09:04 (89)	16:22	15:43
14	04:49		06:30 (42)	05:53		07:02			08:09		08:49 (89)	08:22	09:20
	22:35	24	06:54 (42)	21:29		20:02			18:36	15	09:04 (89)	16:19	15:43
15	04:51		06:31 (42)	05:55		07:04			08:11		08:49 (89)	08:25	09:21
	22:34	23	06:54 (42)	21:26		19:59			18:34	15	09:04 (89)	16:17	15:42
16	04:53		06:33 (42)	05:58		07:06			08:14		08:49 (89)	08:27	09:22
	22:32	22	06:55 (42)	21:24		19:57			18:31	15	09:04 (89)	16:15	15:42
17	04:54		06:33 (42)	06:00		07:09			08:16		08:50 (89)	08:29	09:23
	22:30	21	06:54 (42)	21:21		19:54			18:28	14	09:04 (89)	16:14	15:42
18	04:56		06:35 (42)	06:02		07:11			08:18		08:50 (89)	08:32	09:24
	22:29	20	06:55 (42)	21:18		19:51			18:25	12	09:02 (89)	16:12	15:42
19	04:58		06:37 (42)	06:04		07:13			08:21		08:53 (89)	08:34	09:25
	22:27	18	06:55 (42)	21:16		19:48			18:23	8	09:01 (89)	16:10	15:43
20	05:00		06:38 (42)	06:07		07:15			08:23		08:55 (89)	08:36	09:25
	22:25	16	06:54 (42)	21:13		19:45			18:20	3	08:58 (89)	16:08	15:43
21	05:02		06:39 (42)	06:09		07:17			08:25			08:39	09:26
	22:23	15	06:54 (42)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:41 (42)	06:11		07:20			08:28			08:41	09:27
	22:22	13	06:54 (42)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:42 (42)	06:13		07:22			08:30			08:43	09:27
	22:20	11	06:53 (42)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:44 (42)	06:15		07:24			08:32			08:45	09:28
	22:18	9	06:53 (42)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:45 (42)	06:18		07:26			07:35			08:47	09:28
	22:16	8	06:53 (42)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:47 (42)	06:20		07:28			07:37			08:49	09:28
	22:14	6	06:53 (42)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:49 (42)	06:22		07:31			07:39			08:52	09:28
	22:12	3	06:52 (42)	20:54		19:25			17:02			15:57	15:47
28	05:16		06:51 (42)	06:24		07:33		08:29 (88)	07:42			08:54	09:28
	22:10	1	06:52 (42)	20:51		19:22	3	08:32 (88)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:25 (88)	07:44			08:56	09:28
	22:07			20:48		19:19	9	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:23 (88)	07:47			08:58	09:28
	22:05			20:45		19:16	12	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		606					24			189			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:11 (88)	07:07	05:44		07:08 (42)	04:40		06:45 (42)
	15:53	16:56		18:05	6	08:17 (88)	20:17	21:26	1	07:09 (42)	22:30	32	07:17 (42)
2	09:27	08:43		07:33		08:08 (88)	07:04	05:42		07:06 (42)	04:39		06:46 (42)
	15:54	16:59		18:07	11	08:19 (88)	20:19	21:28	6	07:12 (42)	22:32	31	07:17 (42)
3	09:27	08:41		07:30		08:06 (88)	07:01	05:39		07:04 (42)	04:38		06:46 (42)
	15:56	17:01		18:10	13	08:19 (88)	20:21	21:31	9	07:13 (42)	22:33	31	07:17 (42)
4	09:26	08:39		07:27		08:05 (88)	06:58	05:37		07:02 (42)	04:36		06:47 (42)
	15:57	17:04		18:12	14	08:19 (88)	20:24	21:33	13	07:15 (42)	22:35	29	07:16 (42)
5	09:26	08:37		07:24		08:05 (88)	06:55	05:34		07:00 (42)	04:35		06:48 (42)
	15:59	17:06		18:14	14	08:19 (88)	20:26	21:35	16	07:16 (42)	22:36	29	07:17 (42)
6	09:25	08:34		07:21		08:05 (88)	06:53	05:32		06:58 (42)	04:34		06:49 (42)
	16:00	17:09		18:17	13	08:18 (88)	20:28	21:37	19	07:17 (42)	22:38	27	07:16 (42)
7	09:24	08:32		07:19		08:05 (88)	06:50	05:29		06:55 (42)	04:33		06:49 (42)
	16:02	17:11		18:19	12	08:17 (88)	20:31	21:40	22	07:17 (42)	22:39	27	07:16 (42)
8	09:24	08:30		07:16		08:06 (88)	06:47	05:27		06:54 (42)	04:32		06:49 (42)
	16:04	17:14		18:21	10	08:16 (88)	20:33	21:42	24	07:18 (42)	22:40	26	07:15 (42)
9	09:23	08:27		07:13		08:08 (88)	06:44	05:24		06:52 (42)	04:31		06:50 (42)
	16:06	17:16		18:24	5	08:13 (88)	20:35	21:44	27	07:19 (42)	22:42	26	07:16 (42)
10	09:22	08:25		07:10			06:41	05:22		06:50 (42)	04:31		06:51 (42)
	16:07	17:18		18:26			20:37	21:46	29	07:19 (42)	22:43	24	07:15 (42)
11	09:21	08:23		07:07			06:38	05:20		06:48 (42)	04:30		06:52 (42)
	16:09	17:21		18:28			20:40	21:49	32	07:20 (42)	22:44	23	07:15 (42)
12	09:20	08:20		07:04			06:36	05:17		06:46 (42)	04:29		06:52 (42)
	16:11	17:23		18:31			20:42	21:51	34	07:20 (42)	22:45	22	07:14 (42)
13	09:18	08:18		07:02			06:33	05:15		06:45 (42)	04:29		06:53 (42)
	16:13	17:26		18:33			20:44	21:53	35	07:20 (42)	22:46	21	07:14 (42)
14	09:17	08:15		06:59			06:30	05:13		06:43 (42)	04:28		06:53 (42)
	16:15	17:28		18:35			20:47	21:55	37	07:20 (42)	22:46	22	07:15 (42)
15	09:16	08:13	08:44 (89)	06:56			06:27	05:11		06:41 (42)	04:28		06:53 (42)
	16:17	17:31	6 08:50 (89)	18:38			20:49	21:57	39	07:20 (42)	22:47	21	07:14 (42)
16	09:14	08:10	08:42 (89)	06:53			06:24	05:09		06:41 (42)	04:28		06:54 (42)
	16:19	17:33	10 08:52 (89)	18:40			20:51	22:00	39	07:20 (42)	22:48	20	07:14 (42)
17	09:13	08:07	08:40 (89)	06:50			06:22	05:06		06:40 (42)	04:27		06:54 (42)
	16:21	17:36	13 08:53 (89)	18:42			20:54	22:02	40	07:20 (42)	22:48	20	07:14 (42)
18	09:12	08:05	08:40 (89)	06:47			06:19	05:04		06:41 (42)	04:27		06:55 (42)
	16:24	17:38	14 08:54 (89)	18:45			20:56	22:04	40	07:21 (42)	22:49	19	07:14 (42)
19	09:10	08:02	08:39 (89)	06:44			06:16	05:02		06:41 (42)	04:27		06:55 (42)
	16:26	17:41	15 08:54 (89)	18:47			20:58	22:06	40	07:21 (42)	22:49	19	07:14 (42)
20	09:08	08:00	08:39 (89)	06:42			06:13	05:00		06:41 (42)	04:27		06:55 (42)
	16:28	17:43	15 08:54 (89)	18:49			21:00	22:08	39	07:20 (42)	22:50	19	07:14 (42)
21	09:07	07:57	08:39 (89)	06:39			06:11	04:58		06:41 (42)	04:27		06:55 (42)
	16:30	17:46	14 08:53 (89)	18:52			21:03	22:10	39	07:20 (42)	22:50	19	07:14 (42)
22	09:05	07:54	08:39 (89)	06:36			06:08	04:56		06:41 (42)	04:27		06:56 (42)
	16:32	17:48	13 08:52 (89)	18:54			21:05	22:12	39	07:20 (42)	22:50	19	07:15 (42)
23	09:03	07:52	08:41 (89)	06:33			06:05	04:55		06:41 (42)	04:28		06:56 (42)
	16:35	17:50	11 08:52 (89)	18:56			21:07	22:14	39	07:20 (42)	22:50	19	07:15 (42)
24	09:02	07:49	08:42 (89)	06:30			06:02	04:53		06:42 (42)	04:28		06:56 (42)
	16:37	17:53	8 08:50 (89)	18:58			21:10	22:16	38	07:20 (42)	22:50	19	07:15 (42)
25	09:00	07:46		06:27			06:00	04:51		06:42 (42)	04:28		06:57 (42)
	16:39	17:55		19:01			21:12	22:18	37	07:19 (42)	22:50	19	07:16 (42)
26	08:58	07:44		06:24			05:57	04:49		06:43 (42)	04:29		06:56 (42)
	16:42	17:58		19:03			21:14	22:20	37	07:20 (42)	22:50	20	07:16 (42)
27	08:56	07:41		06:21			05:54	04:48		06:43 (42)	04:29		06:56 (42)
	16:44	18:00		19:05			21:17	22:22	36	07:19 (42)	22:50	21	07:17 (42)
28	08:54	07:38		06:18			05:52	04:46		06:43 (42)	04:30		06:56 (42)
	16:47	18:02		19:08			21:19	22:24	36	07:19 (42)	22:50	21	07:17 (42)
29	08:52			07:16			05:49	04:44		06:44 (42)	04:31		06:56 (42)
	16:49			20:10			21:21	22:25	35	07:19 (42)	22:49	21	07:17 (42)
30	08:50			07:13			05:47	04:43		06:45 (42)	04:32		06:56 (42)
	16:51			20:12			21:24	22:27	34	07:19 (42)	22:49	22	07:18 (42)
31	08:48			07:10				04:41		06:44 (42)			
	16:54			20:14				22:29	34	07:18 (42)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			119		98				945			688	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September	October		November	December
1	04:32		06:56 (42)	05:24	06:57 (42)	06:33	07:39	07:51	09:00
	22:48	23	07:19 (42)	22:01	33 07:30 (42)	20:40	19:13	16:49	15:52
2	04:33		06:56 (42)	05:27	06:59 (42)	06:35	07:42	07:54	09:01
	22:48	24	07:20 (42)	21:58	31 07:30 (42)	20:37	19:10	16:47	15:50
3	04:34		06:55 (42)	05:29	07:01 (42)	06:38	07:44	07:56	09:03
	22:47	25	07:20 (42)	21:56	28 07:29 (42)	20:34	19:07	16:44	15:49
4	04:35		06:55 (42)	05:31	07:03 (42)	06:40	07:46	07:59	09:05
	22:46	25	07:20 (42)	21:54	26 07:29 (42)	20:31	19:05	16:42	15:48
5	04:37		06:54 (42)	05:33	07:05 (42)	06:42	07:48	08:44 (88)	08:01 09:07
	22:46	27	07:21 (42)	21:51	23 07:28 (42)	20:28	19:02	8 08:52 (88)	16:39 15:47
6	04:38		06:55 (42)	05:35	07:06 (42)	06:44	07:51	08:42 (88)	08:03 09:09
	22:45	28	07:23 (42)	21:49	21 07:27 (42)	20:25	18:59	11 08:53 (88)	16:37 15:47
7	04:39		06:55 (42)	05:38	07:08 (42)	06:47	07:53	08:41 (88)	08:06 09:10
	22:44	28	07:23 (42)	21:47	18 07:26 (42)	20:23	18:56	13 08:54 (88)	16:35 15:46
8	04:40		06:54 (42)	05:40	07:10 (42)	06:49	07:55	08:40 (88)	08:08 09:12
	22:43	30	07:24 (42)	21:44	15 07:25 (42)	20:20	18:53	14 08:54 (88)	16:32 15:45
9	04:42		06:54 (42)	05:42	07:12 (42)	06:51	07:57	08:39 (88)	08:11 09:13
	22:42	30	07:24 (42)	21:42	12 07:24 (42)	20:17	18:50	15 08:54 (88)	16:30 15:44
10	04:43		06:53 (42)	05:44	07:13 (42)	06:53	08:00	08:40 (88)	08:13 09:15
	22:40	31	07:24 (42)	21:39	9 07:22 (42)	20:14	18:48	14 08:54 (88)	16:28 15:44
11	04:45		06:54 (42)	05:46	07:15 (42)	06:55	08:02	08:40 (88)	08:15 09:16
	22:39	32	07:26 (42)	21:37	5 07:20 (42)	20:11	18:45	13 08:53 (88)	16:26 15:43
12	04:46		06:53 (42)	05:49		06:58	08:04	08:42 (88)	08:18 09:17
	22:38	33	07:26 (42)	21:34		20:08	18:42	9 08:51 (88)	16:24 15:43
13	04:48		06:53 (42)	05:51		07:00	08:07	08:45 (88)	08:20 09:19
	22:36	33	07:26 (42)	21:32		20:05	18:39	4 08:49 (88)	16:22 15:43
14	04:49		06:53 (42)	05:53		07:02	08:09		08:22 09:20
	22:35	34	07:27 (42)	21:29		20:02	18:36		16:19 15:43
15	04:51		06:52 (42)	05:55		07:04	08:11		08:25 09:21
	22:34	35	07:27 (42)	21:26		19:59	18:34		16:17 15:42
16	04:53		06:52 (42)	05:58		07:06	08:14		08:27 09:22
	22:32	36	07:28 (42)	21:24		19:57	18:31		16:15 15:42
17	04:54		06:52 (42)	06:00		07:09	08:16	09:17 (89)	08:29 09:23
	22:30	36	07:28 (42)	21:21		19:54	18:28	2 09:19 (89)	16:13 15:42
18	04:56		06:52 (42)	06:02		07:11	08:18	09:13 (89)	08:32 09:24
	22:29	37	07:29 (42)	21:18		19:51	18:25	9 09:22 (89)	16:12 15:42
19	04:58		06:52 (42)	06:04		07:13	08:21	09:12 (89)	08:34 09:25
	22:27	38	07:30 (42)	21:16		19:48	18:23	12 09:24 (89)	16:10 15:43
20	05:00		06:51 (42)	06:07		07:15	08:23	09:10 (89)	08:36 09:25
	22:25	38	07:29 (42)	21:13		19:45	18:20	14 09:24 (89)	16:08 15:43
21	05:02		06:51 (42)	06:09		07:17	08:25	09:10 (89)	08:39 09:26
	22:23	39	07:30 (42)	21:10		19:42	18:17	15 09:25 (89)	16:06 15:43
22	05:04		06:52 (42)	06:11		07:19	08:28	09:09 (89)	08:41 09:27
	22:22	39	07:31 (42)	21:08		19:39	18:15	15 09:24 (89)	16:04 15:44
23	05:06		06:51 (42)	06:13		07:22	08:30	09:09 (89)	08:43 09:27
	22:20	39	07:30 (42)	21:05		19:36	18:12	15 09:24 (89)	16:03 15:44
24	05:08		06:51 (42)	06:15		07:24	08:32	09:09 (89)	08:45 09:28
	22:18	40	07:31 (42)	21:02		19:33	18:09	14 09:23 (89)	16:01 15:45
25	05:10		06:51 (42)	06:18		07:26	07:35	08:10 (89)	08:47 09:28
	22:16	40	07:31 (42)	20:59		19:30	17:07	13 08:23 (89)	16:00 15:46
26	05:12		06:51 (42)	06:20		07:28	07:37	08:13 (89)	08:49 09:28
	22:14	40	07:31 (42)	20:57		19:28	17:04	9 08:22 (89)	15:58 15:46
27	05:14		06:52 (42)	06:22		07:31	07:39	08:14 (89)	08:52 09:28
	22:12	39	07:31 (42)	20:54		19:25	17:02	5 08:19 (89)	15:57 15:47
28	05:16		06:52 (42)	06:24		07:33	07:42		08:54 09:28
	22:10	39	07:31 (42)	20:51		19:22	16:59		15:55 15:48
29	05:18		06:52 (42)	06:27		07:35	07:44		08:56 09:28
	22:07	38	07:30 (42)	20:48		19:19	16:56		15:54 15:49
30	05:20		06:54 (42)	06:29		07:37	07:47		08:58 09:28
	22:05	36	07:30 (42)	20:45		19:16	16:54		15:53 15:50
31	05:22		06:55 (42)	06:31			07:49		09:28
	22:03	35	07:30 (42)	20:43			16:51		15:51
Potential sun hours	545			478		386	319		236 200
Total, worst case		1047			221			224	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:24 (2)	08:46		10:12 (1)	07:35	08:22 (26)	07:07	05:44	04:40
	15:53	50	12:55 (4)	16:56	65	13:08 (4)	18:05	42	09:51 (3)	20:17	21:26	22:31
2	09:28		11:22 (2)	08:44		10:12 (1)	07:33	08:21 (26)	07:04	05:41	04:39
	15:54	54	12:56 (4)	16:59	63	13:07 (4)	18:07	37	09:47 (3)	20:19	21:28	22:32
3	09:27		11:20 (2)	08:41		10:13 (1)	07:30	08:21 (26)	07:01	05:39	04:37
	15:56	57	12:56 (4)	17:01	61	13:07 (4)	18:10	24	08:45 (26)	20:21	21:31	22:34
4	09:27		11:20 (2)	08:39		10:13 (1)	07:27	08:20 (26)	06:58	05:36	04:36
	15:57	58	12:57 (4)	17:04	57	13:05 (4)	18:12	25	08:45 (26)	20:24	21:33	22:35
5	09:26		11:20 (2)	08:37		10:14 (1)	07:24	08:20 (26)	06:55	05:34	04:35
	15:59	60	12:58 (4)	17:06	54	13:05 (4)	18:14	24	08:44 (26)	20:26	21:35	22:37
6	09:25		11:20 (2)	08:35		10:15 (1)	07:22	08:20 (26)	06:53	05:31	04:34
	16:00	61	12:58 (4)	17:09	49	13:03 (4)	18:17	24	08:44 (26)	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32		09:40 (3)	07:19	08:20 (26)	06:50	05:29	04:33
	16:02	62	12:59 (4)	17:11	47	13:01 (4)	18:19	23	08:43 (26)	20:31	21:40	22:39
8	09:24		11:21 (2)	08:30		09:36 (3)	07:16	08:21 (26)	06:47	05:27	04:32
	16:04	63	13:00 (4)	17:13	49	12:59 (4)	18:21	20	08:41 (26)	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28		09:21 (6)	07:13	08:22 (26)	06:44	05:24	04:31
	16:05	65	13:01 (4)	17:16	44	12:56 (4)	18:24	19	08:41 (26)	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25		09:18 (6)	07:10	08:24 (26)	06:41	05:22	04:30
	16:07	65	13:01 (4)	17:18	32	09:54 (3)	18:26	15	08:39 (26)	20:38	21:47	22:43
11	09:21		11:21 (2)	08:23		09:16 (6)	07:07	08:26 (26)	06:38	05:20	04:30
	16:09	68	13:03 (4)	17:21	39	09:56 (3)	18:28	10	08:36 (26)	20:40	21:49	22:44
12	09:20		11:21 (2)	08:20		09:14 (6)	07:05			06:36	05:17	04:29
	16:11	68	13:03 (4)	17:23	42	09:56 (3)	18:31			20:42	21:51	22:45
13	09:19		11:22 (2)	08:18		09:13 (6)	07:02			06:33	05:15	04:29
	16:13	68	13:04 (4)	17:26	44	09:57 (3)	18:33			20:44	21:53	22:46
14	09:17		11:22 (2)	08:15		09:13 (6)	06:59	07:37 (28)	06:30	05:13	04:28
	16:15	68	13:04 (4)	17:28	46	09:59 (3)	18:35	4	07:41 (28)	20:47	21:55	22:47
15	09:16		11:22 (2)	08:13		09:13 (6)	06:56	07:33 (28)	06:27	05:11	04:28
	16:17	70	13:05 (4)	17:31	46	09:59 (3)	18:38	11	07:44 (28)	20:49	21:58	22:47
16	09:15		11:22 (2)	08:10		09:12 (6)	06:53	07:31 (28)	06:24	05:08	04:27
	16:19	71	13:05 (4)	17:33	47	09:59 (3)	18:40	15	07:46 (28)	20:51	22:00	22:48
17	09:13		11:23 (2)	08:08		09:13 (6)	06:50	07:30 (28)	06:22	05:06	04:27
	16:21	71	13:06 (4)	17:36	47	10:00 (3)	18:42	16	07:46 (28)	20:54	22:02	22:49
18	09:12		11:23 (2)	08:05		09:13 (6)	06:47	07:29 (28)	06:19	05:04	04:27
	16:23	72	13:07 (4)	17:38	47	10:00 (3)	18:45	18	07:47 (28)	20:56	22:04	22:49
19	09:10		11:24 (2)	08:02		09:14 (6)	06:44	07:28 (28)	06:16	05:02	04:27
	16:26	70	13:07 (4)	17:41	46	10:00 (3)	18:47	19	07:47 (28)	20:58	22:06	22:50
20	09:09		11:24 (2)	08:00		09:14 (6)	06:42	07:27 (28)	06:13	05:00	04:27
	16:28	71	13:08 (4)	17:43	46	10:00 (3)	18:49	19	07:46 (28)	21:01	22:08	22:50
21	09:07		11:25 (2)	07:57		09:15 (6)	06:39	07:28 (28)	06:11	04:58	04:27
	16:30	70	13:08 (4)	17:46	44	09:59 (3)	18:52	19	07:47 (28)	21:03	22:10	22:50
22	09:05		11:25 (2)	07:54		09:19 (6)	06:36	07:28 (28)	06:08	04:56	04:27
	16:32	70	13:08 (4)	17:48	40	10:00 (3)	18:54	18	07:46 (28)	21:05	22:12	22:50
23	09:04		11:25 (2)	07:52		09:26 (3)	06:33	07:28 (28)	06:05	04:54	04:27
	16:35	69	13:08 (4)	17:50	33	09:59 (3)	18:56	17	07:45 (28)	21:08	22:14	22:51
24	09:02		11:26 (2)	07:49		08:32 (26)	06:30	07:29 (28)	06:02	04:53	04:28
	16:37	68	13:08 (4)	17:53	35	09:58 (3)	18:59	14	07:43 (28)	21:10	22:16	22:51
25	09:00		10:27 (1)	07:46		08:28 (26)	06:27	07:31 (28)	06:00	04:51	04:28
	16:39	72	13:09 (4)	17:55	42	09:57 (3)	19:01	10	07:41 (28)	21:12	22:18	22:51
26	08:58		10:23 (1)	07:44		08:25 (26)	06:24			05:57	04:49	04:29
	16:42	74	13:09 (4)	17:58	45	09:56 (3)	19:03			21:14	22:20	22:50
27	08:56		10:20 (1)	07:41		08:23 (26)	06:21			05:54	04:47	04:29
	16:44	75	13:09 (4)	18:00	45	09:54 (3)	19:05			21:17	22:22	22:50
28	08:54		10:15 (1)	07:38		08:23 (26)	06:18			05:52	04:46	04:30
	16:46	76	13:08 (4)	18:02	44	09:53 (3)	19:08			21:19	22:24	22:50
29	08:52		10:11 (1)				07:16			05:49	04:44	04:31
	16:49	73	13:09 (4)				20:10			21:21	22:26	22:50
30	08:50		10:11 (1)				07:13			05:47	04:43	04:31
	16:51	67	13:08 (4)				20:12			21:24	22:27	22:49
31	08:48		10:11 (1)				07:10				04:41	
	16:54	67	13:08 (4)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		2073			1299			443				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:40			07:52		08:47 (6)	09:00		11:03 (2)
	22:49	22:01	20:40			19:13			16:49	36	12:20 (4)	15:51	67	12:45 (4)
2	04:33	05:26	06:35			07:42		09:06 (26)	07:54		09:03 (3)	09:02		11:04 (2)
	22:48	21:59	20:37			19:10	6	09:12 (26)	16:46	43	12:26 (4)	15:50	66	12:45 (4)
3	04:34	05:29	06:38			07:44		09:02 (26)	07:56		09:06 (3)	09:04		11:04 (2)
	22:47	21:56	20:34			19:07	13	09:15 (26)	16:44	50	12:29 (4)	15:49	64	12:44 (4)
4	04:35	05:31	06:40			07:46		09:00 (26)	07:59		09:46 (1)	09:05		11:05 (2)
	22:47	21:54	20:31			19:05	17	09:17 (26)	16:42	44	12:32 (4)	15:48	63	12:44 (4)
5	04:36	05:33	06:42			07:48		08:58 (26)	08:01		09:44 (1)	09:07		11:05 (2)
	22:46	21:52	20:28			19:02	20	09:18 (26)	16:39	51	12:33 (4)	15:47	62	12:44 (4)
6	04:38	05:35	06:44			07:51		08:57 (26)	08:04		09:44 (1)	09:09		11:06 (2)
	22:45	21:49	20:26			18:59	22	09:19 (26)	16:37	55	12:35 (4)	15:46	61	12:45 (4)
7	04:39	05:37	06:47			07:53		08:57 (26)	08:06		09:44 (1)	09:10		11:07 (2)
	22:44	21:47	20:23			18:56	23	09:20 (26)	16:35	58	12:36 (4)	15:46	60	12:45 (4)
8	04:40	05:40	06:49			07:55		08:55 (26)	08:08		09:43 (1)	09:12		11:08 (2)
	22:43	21:44	20:20			18:53	24	09:19 (26)	16:32	60	12:36 (4)	15:45	58	12:45 (4)
9	04:41	05:42	06:51			07:58		08:55 (26)	08:11		09:43 (1)	09:14		11:09 (2)
	22:42	21:42	20:17			18:50	24	09:19 (26)	16:30	64	12:38 (4)	15:44	57	12:45 (4)
10	04:43	05:44	06:53			08:00		08:55 (26)	08:13		09:43 (1)	09:15		11:11 (2)
	22:41	21:39	20:14			18:48	24	09:19 (26)	16:28	65	12:39 (4)	15:44	54	12:45 (4)
11	04:44	05:46	06:55			08:02		08:54 (26)	08:16		09:42 (1)	09:16		11:14 (2)
	22:39	21:37	20:11			18:45	32	10:18 (3)	16:26	67	12:39 (4)	15:43	51	12:45 (4)
12	04:46	05:49	06:58			08:04		08:55 (26)	08:18		09:43 (1)	09:18		11:15 (2)
	22:38	21:34	20:08			18:42	39	10:23 (3)	16:24	67	12:40 (4)	15:43	48	12:45 (4)
13	04:48	05:51	07:00			08:07		08:55 (26)	08:20		09:43 (1)	09:19		11:18 (2)
	22:37	21:32	20:05			18:39	43	10:25 (3)	16:21	73	12:41 (4)	15:43	46	12:46 (4)
14	04:49	05:53	07:02			08:09		08:55 (26)	08:23		09:48 (1)	09:20		11:20 (2)
	22:35	21:29	20:02			18:36	46	10:26 (3)	16:19	75	12:41 (4)	15:42	44	12:46 (4)
15	04:51	05:55	07:04			08:11		08:57 (26)	08:25		09:52 (1)	09:21		11:21 (2)
	22:34	21:26	20:00			18:34	46	10:28 (3)	16:17	75	12:41 (4)	15:42	42	12:46 (4)
16	04:53	05:58	07:06			08:14		08:58 (26)	08:27		09:56 (1)	09:22		11:22 (2)
	22:32	21:24	19:57			18:31	44	10:28 (3)	16:15	74	12:42 (4)	15:42	41	12:46 (4)
17	04:54	06:00	07:09			08:16		09:01 (26)	08:30		10:01 (1)	09:23		11:24 (2)
	22:31	21:21	19:54			18:28	41	10:29 (3)	16:13	71	12:42 (4)	15:42	38	12:46 (4)
18	04:56	06:02	07:11		08:19 (28)	08:18		09:57 (3)	08:32		11:00 (2)	09:24		11:25 (2)
	22:29	21:19	19:51	9	08:28 (28)	18:25	32	10:29 (3)	16:11	68	12:42 (4)	15:42	37	12:47 (4)
19	04:58	06:04	07:13		08:16 (28)	08:21		09:57 (3)	08:34		11:00 (2)	09:25		11:27 (2)
	22:27	21:16	19:48	13	08:29 (28)	18:23	33	10:30 (3)	16:10	69	12:43 (4)	15:43	36	12:47 (4)
20	05:00	06:06	07:15		08:14 (28)	08:23		09:48 (6)	08:37		11:00 (2)	09:26		11:28 (2)
	22:25	21:13	19:45	16	08:30 (28)	18:20	42	10:30 (3)	16:08	70	12:43 (4)	15:43	35	12:48 (4)
21	05:02	06:09	07:17		08:14 (28)	08:25		09:46 (6)	08:39		11:00 (2)	09:26		11:28 (2)
	22:24	21:10	19:42	17	08:31 (28)	18:17	45	10:31 (3)	16:06	70	12:43 (4)	15:43	35	12:48 (4)
22	05:04	06:11	07:20		08:13 (28)	08:28		09:44 (6)	08:41		11:00 (2)	09:27		11:29 (2)
	22:22	21:08	19:39	18	08:31 (28)	18:15	46	10:30 (3)	16:04	71	12:44 (4)	15:44	35	12:49 (4)
23	05:06	06:13	07:22		08:12 (28)	08:30		09:44 (6)	08:43		11:00 (2)	09:27		11:29 (2)
	22:20	21:05	19:36	19	08:31 (28)	18:12	46	10:30 (3)	16:03	70	12:43 (4)	15:44	35	12:49 (4)
24	05:08	06:15	07:24		08:12 (28)	08:32		09:42 (6)	08:45		11:00 (2)	09:28		11:30 (2)
	22:18	21:02	19:33	19	08:31 (28)	18:09	47	10:29 (3)	16:01	72	12:44 (4)	15:45	35	12:50 (4)
25	05:10	06:18	07:26		08:11 (28)	07:35		08:42 (6)	08:48		11:00 (2)	09:28		11:29 (2)
	22:16	20:59	19:31	19	08:30 (28)	17:07	47	09:29 (3)	15:59	71	12:43 (4)	15:45	36	12:50 (4)
26	05:12	06:20	07:28		08:12 (28)	07:37		08:43 (6)	08:50		11:01 (2)	09:28		11:29 (2)
	22:14	20:57	19:28	17	08:29 (28)	17:04	46	09:29 (3)	15:58	71	12:44 (4)	15:46	37	12:51 (4)
27	05:14	06:22	07:31		08:13 (28)	07:40		08:42 (6)	08:52		11:01 (2)	09:28		11:29 (2)
	22:12	20:54	19:25	15	08:28 (28)	17:02	46	09:28 (3)	15:57	71	12:44 (4)	15:47	39	12:52 (4)
28	05:16	06:24	07:33		08:14 (28)	07:42		08:43 (6)	08:54		11:02 (2)	09:29		11:28 (2)
	22:10	20:51	19:22	12	08:26 (28)	16:59	45	09:28 (3)	15:55	68	12:44 (4)	15:48	40	12:52 (4)
29	05:18	06:27	07:35		08:15 (28)	07:44		08:44 (6)	08:56		11:02 (2)	09:29		11:27 (2)
	22:08	20:48	19:19	8	08:23 (28)	16:56	43	09:27 (3)	15:54	68	12:44 (4)	15:49	42	12:52 (4)
30	05:20	06:29	07:37			07:47		08:44 (6)	08:58		11:02 (2)	09:28		11:26 (2)
	22:05	20:45	19:16			16:54	42	09:26 (3)	15:53	68	12:44 (4)	15:50	44	12:53 (4)
31	05:22	06:31				07:49		08:45 (6)				09:28		11:25 (2)
	22:03	20:43				16:51	38	09:25 (3)				15:51	48	12:54 (4)
Potential sun hours	545	478	386			319			236			200		
Total, worst case				182			1062			1935			1456	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:34 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	5	07:39 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:30 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	12	07:42 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:28 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	15	07:43 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:26 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:44 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50		07:25 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	19	07:44 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:24 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:16 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:44 (4)	20:56	22:04	22:49	22:29	21:19	19:51	8 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:24 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:13 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	20	07:44 (4)	20:58	22:06	22:50	22:27	21:16	19:48	13 08:26 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:25 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:11 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:45 (4)	21:01	22:08	22:50	22:26	21:13	19:45	16 08:27 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:25 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:11 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19	07:44 (4)	21:03	22:10	22:50	22:24	21:11	19:42	17 08:28 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:25 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18	07:43 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:29 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:25 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:08 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:42 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:28 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:26 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	14	07:40 (4)	21:10	22:16	22:51	22:18	21:02	19:34	20 08:28 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:28 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:07 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	9	07:37 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:27 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:29	08:08 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	19 08:27 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:08 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	18 08:26 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:08 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	17 08:25 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:09 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	14 08:23 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	8 08:21 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365			432	521	547	545	478	386		319	236	200
Total, worst case				206							210				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:25 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	10 07:35 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:18	15:42
16	09:15	08:10	06:53	07:23 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	13 07:36 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50	07:21 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:13 (4)	08:16	08:30	09:23
	16:21	17:36	18:43	16 07:37 (4)	20:54	22:02	22:49	22:31	21:21	19:54	4	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47	07:20 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:09 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	18 07:38 (4)	20:56	22:04	22:49	22:29	21:19	19:51	11	08:20 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:19 (4)	06:16	05:02	04:27	04:58	06:04	07:13		08:07 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	19 07:38 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14	08:21 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:19 (4)	06:13	05:00	04:27	05:00	06:07	07:15		08:05 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20 07:39 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17	08:22 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:05 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19 07:38 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18	08:23 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:19 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:04 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18 07:37 (4)	21:05	22:12	22:51	22:22	21:08	19:39	19	08:23 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:19 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:03 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17 07:36 (4)	21:08	22:14	22:51	22:20	21:05	19:36	19	08:22 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:20 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:03 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15 07:35 (4)	21:10	22:16	22:51	22:18	21:02	19:34	19	08:22 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:21 (4)	06:00	04:51	04:28	05:10	06:18	07:26		08:02 (4)	07:35	08:48	09:28
	16:40	17:55	19:01	12 07:33 (4)	21:12	22:18	22:51	22:16	21:00	19:31	19	08:21 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24	07:23 (4)	05:57	04:49	04:29	05:12	06:20	07:29		08:04 (4)	07:37	08:50	09:28
	16:42	17:58	19:03	7 07:30 (4)	21:15	22:20	22:51	22:14	20:57	19:28	16	08:20 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31		08:04 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25	15	08:19 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:25	07:33		08:05 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	11	08:16 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35		08:08 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	4	08:12 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:06	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				184							186			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:17 (2)	08:46		10:11 (1)	07:35	08:24 (26)	07:07	05:44	04:40
	15:53	54	12:46 (4)	16:56	61	12:57 (4)	18:05	32	09:46 (3)	20:17	21:26	22:31
2	09:28		11:17 (2)	08:44		10:11 (1)	07:33		08:23 (26)	07:04	05:41	04:39
	15:54	54	12:46 (4)	16:59	58	12:56 (4)	18:07	24	08:47 (26)	20:19	21:28	22:32
3	09:27		11:17 (2)	08:41		10:12 (1)	07:30		08:23 (26)	07:01	05:39	04:37
	15:56	56	12:47 (4)	17:01	55	12:55 (4)	18:10	24	08:47 (26)	20:21	21:31	22:34
4	09:27		11:17 (2)	08:39		10:12 (1)	07:27		08:23 (26)	06:58	05:36	04:36
	15:57	57	12:48 (4)	17:04	52	12:54 (4)	18:12	23	08:46 (26)	20:24	21:33	22:35
5	09:26		11:17 (2)	08:37		10:14 (1)	07:24		08:23 (26)	06:55	05:34	04:35
	15:59	58	12:48 (4)	17:06	46	12:53 (4)	18:14	22	08:45 (26)	20:26	21:35	22:37
6	09:25		11:17 (2)	08:35		10:14 (1)	07:22		08:23 (26)	06:53	05:31	04:34
	16:00	59	12:49 (4)	17:09	41	12:50 (4)	18:17	22	08:45 (26)	20:28	21:38	22:38
7	09:25		11:17 (2)	08:32		09:37 (3)	07:19		08:24 (26)	06:50	05:29	04:33
	16:02	61	12:50 (4)	17:11	43	12:47 (4)	18:19	19	08:43 (26)	20:31	21:40	22:39
8	09:24		11:17 (2)	08:30		09:35 (3)	07:16		08:24 (26)	06:47	05:27	04:32
	16:04	63	12:51 (4)	17:13	36	12:44 (4)	18:21	18	08:42 (26)	20:33	21:42	22:41
9	09:23		11:18 (2)	08:28		09:32 (3)	07:13		08:27 (26)	06:44	05:24	04:31
	16:05	63	12:52 (4)	17:16	21	09:53 (3)	18:24	13	08:40 (26)	20:35	21:44	22:42
10	09:22		11:17 (2)	08:25		09:31 (3)	07:10		08:30 (26)	06:41	05:22	04:30
	16:07	65	12:52 (4)	17:18	24	09:55 (3)	18:26	7	08:37 (26)	20:38	21:47	22:43
11	09:21		11:18 (2)	08:23		09:30 (3)	07:07			06:38	05:20	04:30
	16:09	65	12:53 (4)	17:21	26	09:56 (3)	18:28			20:40	21:49	22:44
12	09:20		11:18 (2)	08:20		09:29 (3)	07:05			06:36	05:17	04:29
	16:11	66	12:53 (4)	17:23	28	09:57 (3)	18:31			20:42	21:51	22:45
13	09:19		11:18 (2)	08:18		09:28 (3)	07:02		07:40 (28)	06:33	05:15	04:29
	16:13	67	12:54 (4)	17:26	29	09:57 (3)	18:33	5	07:45 (28)	20:44	21:53	22:46
14	09:17		11:18 (2)	08:15		09:28 (3)	06:59		07:36 (28)	06:30	05:13	04:28
	16:15	68	12:55 (4)	17:28	31	09:59 (3)	18:35	11	07:47 (28)	20:47	21:55	22:47
15	09:16		11:18 (2)	08:13		09:27 (3)	06:56		07:34 (28)	06:27	05:11	04:28
	16:17	69	12:55 (4)	17:31	32	09:59 (3)	18:38	15	07:49 (28)	20:49	21:58	22:47
16	09:15		11:19 (2)	08:10		09:26 (3)	06:53		07:33 (28)	06:24	05:08	04:27
	16:19	68	12:55 (4)	17:33	33	09:59 (3)	18:40	16	07:49 (28)	20:51	22:00	22:48
17	09:13		11:20 (2)	08:08		09:27 (3)	06:50		07:32 (28)	06:22	05:06	04:27
	16:21	69	12:57 (4)	17:36	33	10:00 (3)	18:42	18	07:50 (28)	20:54	22:02	22:49
18	09:12		11:20 (2)	08:05		09:26 (3)	06:47		07:31 (28)	06:19	05:04	04:27
	16:23	69	12:57 (4)	17:38	34	10:00 (3)	18:45	19	07:50 (28)	20:56	22:04	22:49
19	09:10		11:20 (2)	08:02		09:26 (3)	06:44		07:31 (28)	06:16	05:02	04:27
	16:26	69	12:57 (4)	17:41	33	09:59 (3)	18:47	18	07:49 (28)	20:58	22:06	22:50
20	09:09		11:21 (2)	08:00		09:26 (3)	06:42		07:30 (28)	06:13	05:00	04:27
	16:28	69	12:58 (4)	17:43	33	09:59 (3)	18:49	19	07:49 (28)	21:01	22:08	22:50
21	09:07		11:22 (2)	07:57		09:26 (3)	06:39		07:32 (28)	06:11	04:58	04:27
	16:30	67	12:58 (4)	17:46	32	09:58 (3)	18:52	17	07:49 (28)	21:03	22:10	22:50
22	09:05		11:22 (2)	07:54		09:27 (3)	06:36		07:32 (28)	06:08	04:56	04:27
	16:32	67	12:58 (4)	17:48	32	09:59 (3)	18:54	15	07:47 (28)	21:05	22:12	22:50
23	09:04		11:22 (2)	07:52		09:27 (3)	06:33		07:33 (28)	06:05	04:54	04:27
	16:35	66	12:58 (4)	17:50	31	09:58 (3)	18:56	13	07:46 (28)	21:08	22:14	22:51
24	09:02		10:25 (1)	07:49		08:30 (26)	06:30		07:35 (28)	06:02	04:53	04:28
	16:37	70	12:58 (4)	17:53	41	09:57 (3)	18:59	8	07:43 (28)	21:10	22:16	22:51
25	09:00		10:21 (1)	07:46		08:28 (26)	06:27			06:00	04:51	04:28
	16:39	72	12:58 (4)	17:55	42	09:55 (3)	19:01			21:12	22:18	22:51
26	08:58		10:18 (1)	07:44		08:26 (26)	06:24			05:57	04:49	04:29
	16:42	74	12:59 (4)	17:58	44	09:54 (3)	19:03			21:14	22:20	22:50
27	08:56		10:14 (1)	07:41		08:25 (26)	06:21			05:54	04:47	04:29
	16:44	76	12:59 (4)	18:00	41	09:52 (3)	19:05			21:17	22:22	22:50
28	08:54		10:10 (1)	07:38		08:25 (26)	06:18			05:52	04:46	04:30
	16:46	74	12:58 (4)	18:02	38	09:50 (3)	19:08			21:19	22:24	22:50
29	08:52		10:10 (1)				07:16			05:49	04:44	04:31
	16:49	65	12:58 (4)				20:10			21:21	22:26	22:50
30	08:50		10:10 (1)				07:13			05:47	04:43	04:31
	16:51	63	12:57 (4)				20:12			21:24	22:27	22:49
31	08:48		10:11 (1)				07:10				04:41	
	16:54	61	12:57 (4)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		2024			1050			378				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:40			07:52		09:00 (3)	09:00		11:00 (2)
	22:49	22:01	20:40			19:13			16:49	23	09:23 (3)	15:51	65	12:35 (4)
2	04:33	05:26	06:35			07:42			07:54		09:02 (3)	09:02		11:00 (2)
	22:48	21:59	20:37			19:10			16:46	23	09:54 (1)	15:50	65	12:35 (4)
3	04:34	05:29	06:38			07:44			07:56		09:05 (3)	09:04		11:01 (2)
	22:47	21:56	20:34			19:07			16:44	38	12:14 (4)	15:49	63	12:35 (4)
4	04:35	05:31	06:40			07:46		09:05 (26)	07:59		09:08 (3)	09:05		11:01 (2)
	22:47	21:54	20:31			19:05	11	09:16 (26)	16:42	44	12:19 (4)	15:48	63	12:35 (4)
5	04:36	05:33	06:42			07:48		09:02 (26)	08:01		09:44 (1)	09:07		11:02 (2)
	22:46	21:52	20:28			19:02	16	09:18 (26)	16:39	42	12:20 (4)	15:47	61	12:35 (4)
6	04:38	05:35	06:44			07:51		09:00 (26)	08:04		09:43 (1)	09:09		11:03 (2)
	22:45	21:49	20:26			18:59	19	09:19 (26)	16:37	48	12:23 (4)	15:46	59	12:35 (4)
7	04:39	05:37	06:47			07:53		09:00 (26)	08:06		09:43 (1)	09:10		11:04 (2)
	22:44	21:47	20:23			18:56	20	09:20 (26)	16:35	51	12:24 (4)	15:46	58	12:35 (4)
8	04:40	05:40	06:49			07:55		08:58 (26)	08:08		09:42 (1)	09:12		11:05 (2)
	22:43	21:44	20:20			18:53	23	09:21 (26)	16:32	55	12:25 (4)	15:45	58	12:36 (4)
9	04:41	05:42	06:51			07:58		08:57 (26)	08:11		09:42 (1)	09:14		11:06 (2)
	22:42	21:42	20:17			18:50	23	09:20 (26)	16:30	59	12:27 (4)	15:44	56	12:36 (4)
10	04:43	05:44	06:53			08:00		08:57 (26)	08:13		09:42 (1)	09:15		11:06 (2)
	22:41	21:39	20:14			18:48	24	09:21 (26)	16:28	60	12:28 (4)	15:44	55	12:36 (4)
11	04:44	05:46	06:55			08:02		08:57 (26)	08:16		09:41 (1)	09:16		11:07 (2)
	22:39	21:37	20:11			18:45	23	09:20 (26)	16:26	62	12:28 (4)	15:43	54	12:36 (4)
12	04:46	05:49	06:58			08:04		08:57 (26)	08:18		09:42 (1)	09:18		11:07 (2)
	22:38	21:34	20:08			18:42	24	09:21 (26)	16:24	63	12:29 (4)	15:43	52	12:36 (4)
13	04:48	05:51	07:00			08:07		08:57 (26)	08:20		09:42 (1)	09:19		11:10 (2)
	22:37	21:32	20:05			18:39	35	10:20 (3)	16:21	65	12:30 (4)	15:43	50	12:37 (4)
14	04:49	05:53	07:02			08:09		08:57 (26)	08:23		09:43 (1)	09:20		11:11 (2)
	22:35	21:29	20:02			18:36	39	10:23 (3)	16:19	74	12:31 (4)	15:42	49	12:37 (4)
15	04:51	05:55	07:04			08:11		08:58 (26)	08:25		09:46 (1)	09:21		11:13 (2)
	22:34	21:26	20:00			18:34	42	10:25 (3)	16:17	76	12:31 (4)	15:42	46	12:37 (4)
16	04:53	05:58	07:06			08:14		08:58 (26)	08:27		09:51 (1)	09:22		11:14 (2)
	22:32	21:24	19:57			18:31	43	10:26 (3)	16:15	74	12:32 (4)	15:42	45	12:37 (4)
17	04:54	06:00	07:09			08:16		09:00 (26)	08:30		09:55 (1)	09:23		11:15 (2)
	22:31	21:21	19:54			18:28	43	10:28 (3)	16:13	72	12:32 (4)	15:42	43	12:37 (4)
18	04:56	06:02	07:11			08:18		09:02 (26)	08:32		09:59 (1)	09:24		11:17 (2)
	22:29	21:19	19:51			18:25	39	10:28 (3)	16:11	70	12:32 (4)	15:42	40	12:37 (4)
19	04:58	06:04	07:13		08:22 (28)	08:21		09:58 (3)	08:34		10:57 (2)	09:25		11:18 (2)
	22:27	21:16	19:48	7	08:29 (28)	18:23	31	10:29 (3)	16:10	66	12:33 (4)	15:43	41	12:38 (4)
20	05:00	06:06	07:15		08:19 (28)	08:23		09:57 (3)	08:37		10:57 (2)	09:26		11:19 (2)
	22:25	21:13	19:45	12	08:31 (28)	18:20	32	10:29 (3)	16:08	67	12:33 (4)	15:43	40	12:39 (4)
21	05:02	06:09	07:17		08:18 (28)	08:25		09:57 (3)	08:39		10:57 (2)	09:26		11:19 (2)
	22:24	21:10	19:42	15	08:33 (28)	18:17	33	10:30 (3)	16:06	67	12:33 (4)	15:43	39	12:38 (4)
22	05:04	06:11	07:20		08:16 (28)	08:28		09:56 (3)	08:41		10:57 (2)	09:27		11:20 (2)
	22:22	21:08	19:39	17	08:33 (28)	18:15	33	10:29 (3)	16:04	68	12:34 (4)	15:44	39	12:39 (4)
23	05:06	06:13	07:22		08:15 (28)	08:30		09:56 (3)	08:43		10:57 (2)	09:27		11:20 (2)
	22:20	21:05	19:36	18	08:33 (28)	18:12	34	10:30 (3)	16:03	68	12:33 (4)	15:44	40	12:40 (4)
24	05:08	06:15	07:24		08:14 (28)	08:32		09:56 (3)	08:45		10:57 (2)	09:28		11:21 (2)
	22:18	21:02	19:33	19	08:33 (28)	18:09	33	10:29 (3)	16:01	69	12:34 (4)	15:45	41	12:41 (4)
25	05:10	06:18	07:26		08:14 (28)	07:35		08:56 (3)	08:48		10:57 (2)	09:28		11:21 (2)
	22:16	20:59	19:31	18	08:32 (28)	17:07	33	09:29 (3)	15:59	69	12:34 (4)	15:45	41	12:41 (4)
26	05:12	06:20	07:28		08:14 (28)	07:37		08:57 (3)	08:50		10:58 (2)	09:28		11:21 (2)
	22:14	20:57	19:28	19	08:33 (28)	17:04	32	09:29 (3)	15:58	68	12:34 (4)	15:46	42	12:42 (4)
27	05:14	06:22	07:31		08:14 (28)	07:40		08:56 (3)	08:52		10:57 (2)	09:28		11:20 (2)
	22:12	20:54	19:25	18	08:32 (28)	17:02	32	09:28 (3)	15:57	69	12:34 (4)	15:47	43	12:42 (4)
28	05:16	06:24	07:33		08:15 (28)	07:42		08:57 (3)	08:54		10:58 (2)	09:29		11:20 (2)
	22:10	20:51	19:22	15	08:30 (28)	16:59	31	09:28 (3)	15:55	68	12:35 (4)	15:48	44	12:43 (4)
29	05:18	06:27	07:35		08:15 (28)	07:44		08:58 (3)	08:56		10:59 (2)	09:29		11:18 (2)
	22:08	20:48	19:19	13	08:28 (28)	16:56	29	09:27 (3)	15:54	67	12:35 (4)	15:49	47	12:43 (4)
30	05:20	06:29	07:37		08:18 (28)	07:47		08:58 (3)	08:58		10:59 (2)	09:28		11:18 (2)
	22:05	20:45	19:16	8	08:26 (28)	16:54	28	09:26 (3)	15:53	65	12:34 (4)	15:50	49	12:44 (4)
31	05:22	06:31				07:49		09:00 (3)				09:28		11:16 (2)
	22:03	20:43				16:51	25	09:25 (3)				15:51	52	12:44 (4)
Potential sun hours	545	478	386			319			236			200		
Total, worst case				179			830			1810			1540	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:05 (4)	08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03	10	08:15 (4)	18:37	16:20	15:43
15	09:16	08:13	06:56		06:27	05:11	04:28	04:51	05:55	07:04		08:02 (4)	08:11	08:25	09:21
	16:17	17:31	18:38		20:49	21:58	22:47	22:34	21:27	20:00	14	08:16 (4)	18:34	16:18	15:42
16	09:15	08:10	06:53		06:24	05:09	04:28	04:53	05:58	07:06		08:00 (4)	08:14	08:27	09:22
	16:19	17:33	18:40		20:51	22:00	22:48	22:32	21:24	19:57	17	08:17 (4)	18:31	16:16	15:42
17	09:13	08:08	06:50		06:22	05:06	04:27	04:54	06:00	07:09		07:59 (4)	08:16	08:30	09:23
	16:21	17:36	18:43		20:54	22:02	22:49	22:31	21:21	19:54	18	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11		07:58 (4)	08:18	08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	19	08:17 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13		07:57 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	3 07:28 (4)	20:58	22:06	22:50	22:27	21:16	19:48	20	08:17 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:22 (4)	06:13	05:00	04:27	05:00	06:07	07:15		07:57 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	8 07:30 (4)	21:01	22:08	22:50	22:26	21:13	19:45	19	08:16 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:00 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	11 07:30 (4)	21:03	22:10	22:50	22:24	21:11	19:42	16	08:16 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:15 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:02 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	16 07:31 (4)	21:05	22:12	22:51	22:22	21:08	19:39	13	08:15 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:11 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:05 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	20 07:31 (4)	21:08	22:14	22:51	22:20	21:05	19:36	9	08:14 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:11 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	19 07:30 (4)	21:10	22:16	22:51	22:18	21:02	19:34	4	08:12 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:10 (4)	06:00	04:51	04:28	05:10	06:18	07:26			07:35	08:48	09:28
	16:40	17:55	19:01	20 07:30 (4)	21:12	22:18	22:51	22:16	21:00	19:31			17:07	16:00	15:46
26	08:58	07:44	06:24	07:10 (4)	05:57	04:49	04:29	05:12	06:20	07:29			07:37	08:50	09:28
	16:42	17:58	19:03	19 07:29 (4)	21:15	22:20	22:51	22:14	20:57	19:28			17:04	15:58	15:46
27	08:56	07:41	06:21	07:11 (4)	05:55	04:48	04:29	05:14	06:22	07:31			07:40	08:52	09:29
	16:44	18:00	19:06	17 07:28 (4)	21:17	22:22	22:50	22:12	20:54	19:25			17:02	15:57	15:47
28	08:54	07:38	06:19	07:12 (4)	05:52	04:46	04:30	05:16	06:25	07:33			07:42	08:54	09:29
	16:47	18:03	19:08	14 07:26 (4)	21:19	22:24	22:50	22:10	20:51	19:22			16:59	15:55	15:48
29	08:52		07:16	08:13 (4)	05:49	04:44	04:31	05:18	06:27	07:35			07:44	08:56	09:29
	16:49		20:10	11 08:24 (4)	21:22	22:26	22:50	22:08	20:48	19:19			16:57	15:54	15:49
30	08:50		07:13	08:18 (4)	05:47	04:43	04:32	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12	2 08:20 (4)	21:24	22:27	22:49	22:05	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:52
Potential sun hours	221	260	365		432	521	547	545	478	386			319	236	200
Total, worst case				160							159				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:35 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	8	07:43 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:32 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13	07:45 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:30 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16	07:46 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	19	07:47 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:15	15:42
17	09:13	08:08	06:50		07:27 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20	07:47 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	21	07:47 (4)	20:56	22:04	22:49	22:29	21:19	19:51	9 08:27 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:26 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21	07:47 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:29 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:27 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	21	07:48 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:30 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:13 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	21	07:47 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18 08:31 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:27 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19	07:46 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:31 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:44 (4)	21:08	22:14	22:51	22:20	21:05	19:36	21 08:31 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:10 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15	07:43 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21 08:31 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	10	07:40 (4)	21:12	22:18	22:51	22:16	21:00	19:31	21 08:30 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28	08:10 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	20 08:30 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:10 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	19 08:29 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:10 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18 08:28 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:11 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	15 08:26 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	11 08:24 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				221							224			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:36 (4)	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	24	09:00 (4)	16:49	15:51
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:35 (4)	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	25	09:00 (4)	16:47	15:50
3	09:27	08:41	07:30	08:05 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:34 (4)	07:56	09:04
	15:56	17:01	18:10	12 08:17 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	25	08:59 (4)	16:44	15:49
4	09:27	08:39	07:27	08:02 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:34 (4)	07:59	09:05
	15:57	17:04	18:12	17 08:19 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	26	09:00 (4)	16:42	15:48
5	09:26	08:37	07:24	08:01 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:34 (4)	08:01	09:07
	15:59	17:06	18:14	19 08:20 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	25	08:59 (4)	16:39	15:47
6	09:25	08:35	07:22	07:59 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:34 (4)	08:04	09:09
	16:00	17:09	18:17	22 08:21 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	24	08:58 (4)	16:37	15:47
7	09:25	08:32	07:19	07:58 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:35 (4)	08:06	09:10
	16:02	17:11	18:19	23 08:21 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	22	08:57 (4)	16:35	15:46
8	09:24	08:30	07:16	07:58 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:35 (4)	08:08	09:12
	16:04	17:14	18:22	24 08:22 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	21	08:56 (4)	16:32	15:45
9	09:23	08:28	07:13	07:57 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:36 (4)	08:11	09:14
	16:06	17:16	18:24	25 08:22 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	08:54 (4)	16:30	15:44
10	09:22	08:25	07:10	07:57 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:38 (4)	08:13	09:15
	16:07	17:19	18:26	25 08:22 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	08:53 (4)	16:28	15:44
11	09:21	08:23	07:07	07:57 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:41 (4)	08:16	09:16
	16:09	17:21	18:29	25 08:22 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	8	08:49 (4)	16:26	15:43
12	09:20	08:20	07:05	07:57 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:24	18:31	24 08:21 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18	07:02	07:57 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07			08:20	09:19
	16:13	17:26	18:33	23 08:20 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39			16:22	15:43
14	09:17	08:15	06:59	07:57 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09			08:23	09:20
	16:15	17:28	18:36	22 08:19 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36			16:19	15:42
15	09:16	08:13	06:56	07:58 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11			08:25	09:21
	16:17	17:31	18:38	20 08:18 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34			16:17	15:42
16	09:15	08:10	06:53	07:59 (4)	06:24	05:09	04:27	04:53	05:58	07:06		08:14			08:27	09:22
	16:19	17:33	18:40	17 08:16 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31			16:15	15:42
17	09:13	08:08	06:50	08:00 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16			08:30	09:23
	16:21	17:36	18:43	14 08:14 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28			16:14	15:42
18	09:12	08:05	06:47	08:04 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:18			08:32	09:24
	16:24	17:38	18:45	5 08:09 (4)	20:56	22:04	22:49	22:29	21:19	19:51		18:25			16:12	15:42
19	09:10	08:02	06:45		06:16	05:02	04:27	04:58	06:04	07:13		08:21			08:34	09:25
	16:26	17:41	18:47		20:58	22:06	22:50	22:27	21:16	19:48		18:23			16:10	15:43
20	09:09	08:00	06:42		06:13	05:00	04:27	05:00	06:07	07:15		08:23			08:37	09:26
	16:28	17:43	18:49		21:01	22:08	22:50	22:26	21:13	19:45		18:20			16:08	15:43
21	09:07	07:57	06:39		06:11	04:58	04:27	05:02	06:09	07:17		08:25			08:39	09:26
	16:30	17:46	18:52		21:03	22:10	22:50	22:24	21:11	19:42		18:17			16:06	15:43
22	09:05	07:55	06:36		06:08	04:56	04:27	05:04	06:11	07:20		08:28			08:41	09:27
	16:32	17:48	18:54		21:05	22:12	22:51	22:22	21:08	19:39		18:15			16:04	15:44
23	09:04	07:52	06:33		06:05	04:55	04:28	05:06	06:13	07:22		08:30			08:43	09:27
	16:35	17:50	18:56		21:08	22:14	22:51	22:20	21:05	19:36		18:12			16:03	15:44
24	09:02	07:49	06:30		06:03	04:53	04:28	05:08	06:16	07:24		08:32			08:45	09:28
	16:37	17:53	18:59		21:10	22:16	22:51	22:18	21:02	19:34		18:09			16:01	15:45
25	09:00	07:47	06:27		06:00	04:51	04:28	05:10	06:18	07:26		07:35			08:48	09:28
	16:39	17:55	19:01		21:12	22:18	22:51	22:16	21:00	19:31		17:07			16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:44 (4)	07:37			08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28	11 08:55 (4)	17:04			15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:41 (4)	07:40			08:52	09:29
	16:44	18:00	19:05		21:17	22:22	22:50	22:12	20:54	19:25	16 08:57 (4)	17:02			15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:24	07:33	08:39 (4)	07:42			08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	19 08:58 (4)	16:59			15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:37 (4)	07:44			08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	22 08:59 (4)	16:57			15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:37 (4)	07:47			08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16	23 09:00 (4)	16:54			15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49				09:28
	16:54		20:15			22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200	
Total, worst case				317							91		233			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:36		09:02 (2)	07:07	04:40	04:32	05:24	06:33		07:40		08:45 (4)	07:52	09:00
	15:53	16:56		18:05	4	09:06 (2)	20:17	21:26	22:31	22:49	22:01	20:40		19:13	28	09:13 (4)	16:49	15:51
2	09:28	08:44		07:33			07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:44 (4)	07:54	09:02
	15:54	16:59		18:07			20:19	21:28	22:32	22:48	21:59	20:37		19:10	29	09:13 (4)	16:47	15:50
3	09:27	08:41		07:30		08:17 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:43 (4)	07:56	09:04
	15:56	17:01		18:10	10	08:27 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	29	09:12 (4)	16:44	15:49
4	09:27	08:39		07:27		08:13 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:44 (4)	07:59	09:05
	15:57	17:04		18:12	17	08:30 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	28	09:12 (4)	16:42	15:48
5	09:26	08:37		07:24		08:11 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:44 (4)	08:01	09:07
	15:59	17:06		18:14	20	08:31 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	27	09:11 (4)	16:39	15:47
6	09:25	08:35		07:22		08:09 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:44 (4)	08:04	09:09
	16:00	17:09		18:17	24	08:33 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	26	09:10 (4)	16:37	15:47
7	09:25	08:32		07:19		08:08 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:45 (4)	08:06	09:10
	16:02	17:11		18:19	25	08:33 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	24	09:09 (4)	16:35	15:46
8	09:24	08:30		07:16		08:07 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:46 (4)	08:08	09:12
	16:04	17:14		18:22	27	08:34 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	22	09:08 (4)	16:32	15:45
9	09:23	08:28		07:13		08:07 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:47 (4)	08:11	09:14
	16:06	17:16		18:24	28	08:35 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	09:05 (4)	16:30	15:44
10	09:22	08:25		07:10		08:06 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:49 (4)	08:13	09:15
	16:07	17:19		18:26	29	08:35 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	09:04 (4)	16:28	15:44
11	09:21	08:23		07:07		08:06 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:53 (4)	08:16	09:16
	16:09	17:21		18:29	29	08:35 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	6	08:59 (4)	16:26	15:43
12	09:20	08:20		07:05		08:05 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:23		18:31	29	08:34 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18		07:02		08:05 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07		09:33 (2)	08:20	09:19
	16:13	17:26		18:33	29	08:34 (4)	20:44	21:53	22:46	22:37	21:32	20:05		18:39	7	09:40 (2)	16:22	15:43
14	09:17	08:15		06:59		08:05 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09		09:30 (2)	08:23	09:20
	16:15	17:28		18:36	28	08:33 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36	12	09:42 (2)	16:19	15:42
15	09:16	08:13		06:56		07:33 (3)	06:27	05:11	04:28	04:51	05:55	07:04		08:11		09:29 (2)	08:25	09:21
	16:17	17:31		18:38	32	08:32 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	15	09:44 (2)	16:17	15:42
16	09:15	08:10		06:53		07:30 (3)	06:24	05:09	04:27	04:53	05:58	07:06		08:14		09:27 (2)	08:27	09:22
	16:19	17:33		18:40	36	08:31 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	17	09:44 (2)	16:15	15:42
17	09:13	08:08	09:01 (2)	06:50		07:28 (3)	06:22	05:06	04:27	04:54	06:00	07:09	08:18 (3)	08:16		09:27 (2)	08:30	09:23
	16:21	17:36	9 09:10 (2)	18:43	38	08:30 (4)	20:54	22:02	22:49	22:31	21:21	19:54	5 08:23 (3)	18:28	18	09:45 (2)	16:14	15:42
18	09:12	08:05	08:58 (2)	06:47		07:27 (3)	06:19	05:04	04:27	04:56	06:02	07:11	08:14 (3)	08:18		09:26 (2)	08:32	09:24
	16:24	17:38	14 09:12 (2)	18:45	36	08:28 (4)	20:56	22:04	22:49	22:29	21:19	19:51	11 08:25 (3)	18:25	19	09:45 (2)	16:12	15:42
19	09:10	08:02	08:57 (2)	06:45		07:25 (3)	06:16	05:02	04:27	04:58	06:04	07:13	08:12 (3)	08:21		09:26 (2)	08:34	09:25
	16:26	17:41	16 09:13 (2)	18:47	34	08:25 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:26 (3)	18:23	19	09:45 (2)	16:10	15:43
20	09:09	08:00	08:56 (2)	06:42		07:25 (3)	06:13	05:00	04:27	05:00	06:07	07:15	08:10 (3)	08:23		09:25 (2)	08:37	09:26
	16:28	17:43	17 09:13 (2)	18:49	30	08:23 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:27 (3)	18:20	19	09:44 (2)	16:08	15:43
21	09:07	07:57	08:55 (2)	06:39		07:25 (3)	06:11	04:58	04:27	05:02	06:09	07:17	08:10 (3)	08:25		09:26 (2)	08:39	09:26
	16:30	17:46	18 09:13 (2)	18:52	18	07:43 (3)	21:03	22:10	22:50	22:24	21:10	19:42	18 08:28 (3)	18:17	18	09:44 (2)	16:06	15:43
22	09:05	07:55	08:55 (2)	06:36		07:24 (3)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (3)	08:28		09:26 (2)	08:41	09:27
	16:32	17:48	19 09:14 (2)	18:54	18	07:42 (3)	21:05	22:12	22:51	22:22	21:08	19:39	19 08:28 (3)	18:15	17	09:43 (2)	16:04	15:44
23	09:04	07:52	08:55 (2)	06:33		07:25 (3)	06:05	04:55	04:28	05:06	06:13	07:22	08:09 (3)	08:30		09:27 (2)	08:43	09:27
	16:35	17:50	19 09:14 (2)	18:56	16	07:41 (3)	21:08	22:14	22:51	22:20	21:05	19:36	27 09:06 (4)	18:12	15	09:42 (2)	16:03	15:44
24	09:02	07:49	08:55 (2)	06:30		07:25 (3)	06:02	04:53	04:28	05:08	06:16	07:24	08:08 (3)	08:32		09:29 (2)	08:45	09:28
	16:37	17:53	19 09:14 (2)	18:59	15	07:40 (3)	21:10	22:16	22:51	22:18	21:02	19:33	35 09:09 (4)	18:09	12	09:41 (2)	16:01	15:45
25	09:00	07:46	08:55 (2)	06:27		07:26 (3)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (3)	07:35		08:31 (2)	08:48	09:28
	16:39	17:55	18 09:13 (2)	19:01	12	07:38 (3)	21:12	22:18	22:51	22:16	21:00	19:31	35 09:10 (4)	17:07	7	08:38 (2)	16:00	15:46
26	08:58	07:44	08:55 (2)	06:24		07:28 (3)	05:57	04:49	04:29	05:12	06:20	07:28	08:11 (3)	07:37			08:50	09:28
	16:42	17:58	17 09:12 (2)	19:03	7	07:35 (3)	21:15	22:20	22:51	22:14	20:57	19:28	36 09:12 (4)	17:04			15:58	15:46
27	08:56	07:41	08:56 (2)	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:11 (3)	07:40			08:52	09:29
	16:44	18:00	15 09:11 (2)	19:05			21:17	22:22	22:50	22:12	20:54	19:25	37 09:13 (4)	17:02			15:57	15:47
28	08:54	07:38	08:58 (2)	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:13 (3)	07:42			08:54	09:29
	16:47	18:03	11 09:09 (2)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	34 09:13 (4)	16:59			15:55	15:48
29	08:52			07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:45 (4)	07:44			08:56	09:29
	16:49			20:10			21:21	22:26	22:50	22:08	20:48	19:19	28 09:13 (4)	16:57			15:54	15:49
30	08:50			07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:45 (4)	07:47			08:58	09:28
	16:51			20:12			21:24	22:27	22:49	22:05	20:46	19:16	29 09:14 (4)	16:54			15:53	15:50
31	08:48			07:10				04:41		05:22	06:31			07:49				09:28
	16:54			20:15				22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200	
Total, worst case			192		591							345		447			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:18 (2)	08:46	10:00 (3)	07:35	07:07	05:44	04:40
	15:53	49	12:27 (4)	16:56	25	10:25 (3)	18:05	20:17	21:26	22:31
2	09:28		11:18 (2)	08:44	09:59 (3)	07:33	07:04	05:41	04:39
	15:54	50	12:28 (4)	16:59	25	10:24 (3)	18:07	20:19	21:28	22:32
3	09:27		11:18 (2)	08:41	10:00 (3)	07:30	07:01	05:39	04:37
	15:56	51	12:28 (4)	17:01	25	10:25 (3)	18:10	20:21	21:31	22:34
4	09:27		11:18 (2)	08:39	09:59 (3)	07:27	06:58	05:36	04:36
	15:57	51	12:28 (4)	17:04	26	10:25 (3)	18:12	20:24	21:33	22:35
5	09:26		11:19 (2)	08:37	10:00 (3)	07:24	06:55	05:34	04:35
	15:59	51	12:29 (4)	17:06	26	10:26 (3)	18:14	20:26	21:35	22:37
6	09:25		11:19 (2)	08:35	10:00 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:29 (4)	17:09	25	10:25 (3)	18:17	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32	10:00 (3)	07:19	06:50	05:29	04:33
	16:02	51	12:30 (4)	17:11	25	10:25 (3)	18:19	20:31	21:40	22:39
8	09:24		11:20 (2)	08:30	10:01 (3)	07:16	06:47	05:27	04:32
	16:04	51	12:30 (4)	17:13	24	10:25 (3)	18:21	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28	10:01 (3)	07:13	06:44	05:24	04:31
	16:05	51	12:31 (4)	17:16	23	10:24 (3)	18:24	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25	10:03 (3)	07:10	06:41	05:22	04:30
	16:07	51	12:31 (4)	17:18	21	10:24 (3)	18:26	20:38	21:47	22:43
11	09:21		11:22 (2)	08:23	09:07 (26)	07:07	06:38	05:20	04:30
	16:09	50	12:31 (4)	17:21	25	10:22 (3)	18:28	20:40	21:49	22:44
12	09:20		11:22 (2)	08:20	09:04 (26)	07:05	06:36	05:17	04:29
	16:11	49	12:31 (4)	17:23	27	10:20 (3)	18:31	20:42	21:51	22:45
13	09:19		11:23 (2)	08:18	09:03 (26)	07:02	06:33	05:15	04:28
	16:13	49	12:32 (4)	17:26	26	10:18 (3)	18:33	20:44	21:53	22:46
14	09:17		11:24 (2)	08:15	09:02 (26)	06:59	06:30	05:13	04:28
	16:15	47	12:32 (4)	17:28	17	09:19 (26)	18:35	20:47	21:56	22:47
15	09:16		11:24 (2)	08:13	09:01 (26)	06:56	06:27	05:11	04:28
	16:17	47	12:32 (4)	17:31	19	09:20 (26)	18:38	20:49	21:58	22:47
16	09:15		11:25 (2)	08:10	09:00 (26)	06:53	06:24	05:08	04:27
	16:19	44	12:31 (4)	17:33	20	09:20 (26)	18:40	20:51	22:00	22:48
17	09:13		11:27 (2)	08:08	09:01 (26)	06:50	06:22	05:06	04:27
	16:21	42	12:32 (4)	17:36	20	09:21 (26)	18:42	20:54	22:02	22:49
18	09:12		11:28 (2)	08:05	09:00 (26)	06:47	06:19	05:04	04:27
	16:23	39	12:32 (4)	17:38	21	09:21 (26)	18:45	20:56	22:04	22:49
19	09:10		11:29 (2)	08:02	09:00 (26)	06:44	06:16	05:02	04:27
	16:26	35	12:31 (4)	17:41	20	09:20 (26)	18:47	20:58	22:06	22:50
20	09:09		11:31 (2)	08:00	09:00 (26)	06:42	06:13	05:00	04:27
	16:28	30	12:31 (4)	17:43	19	09:19 (26)	18:49	21:01	22:08	22:50
21	09:07		12:09 (4)	07:57	09:01 (26)	06:39	06:11	04:58	04:27
	16:30	21	12:30 (4)	17:46	17	09:18 (26)	18:52	21:03	22:10	22:50
22	09:05		12:11 (4)	07:55	09:02 (26)	06:36	06:08	04:56	04:27
	16:32	19	12:30 (4)	17:48	16	09:18 (26)	18:54	21:05	22:12	22:51
23	09:04		12:12 (4)	07:52	09:04 (26)	06:33	06:05	04:54	04:27
	16:35	17	12:29 (4)	17:50	12	09:16 (26)	18:56	21:08	22:14	22:51
24	09:02		10:08 (3)	07:49	09:06 (26)	06:30	06:02	04:53	04:28
	16:37	16	12:26 (4)	17:53	7	09:13 (26)	18:59	21:10	22:16	22:51
25	09:00		10:05 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	14	12:22 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:03 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	15	10:18 (3)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:03 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	17	10:20 (3)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:01 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	20	10:21 (3)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:01 (3)			07:16	05:49	04:44	04:31
	16:49	21	10:22 (3)			20:10	21:21	22:26	22:50
30	08:50		10:01 (3)			07:13	05:47	04:43	04:31
	16:51	22	10:23 (3)			20:12	21:24	22:27	22:49
31	08:48		10:00 (3)			07:10		04:41	
	16:54	24	10:24 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1145			511				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:40			07:52		09:32 (3)	09:00		11:04 (2)
	22:49		22:01		20:40		19:13			16:49	21	09:53 (3)	15:51	51	12:14 (4)
2	04:33		05:26		06:35		07:42			07:54		09:31 (3)	09:02		11:04 (2)
	22:48		21:59		20:37		19:10			16:46	22	09:53 (3)	15:50	51	12:14 (4)
3	04:34		05:29		06:38		07:44			07:56		09:31 (3)	09:04		11:04 (2)
	22:47		21:56		20:34		19:07			16:44	23	09:54 (3)	15:49	51	12:14 (4)
4	04:35		05:31		06:40		07:46			07:59		09:30 (3)	09:05		11:04 (2)
	22:47		21:54		20:31		19:05			16:42	25	09:55 (3)	15:48	51	12:14 (4)
5	04:36		05:33		06:42		07:49			08:01		09:29 (3)	09:07		11:05 (2)
	22:46		21:52		20:28		19:02			16:39	26	09:55 (3)	15:47	51	12:15 (4)
6	04:38		05:35		06:44		07:51			08:04		09:30 (3)	09:09		11:05 (2)
	22:45		21:49		20:26		18:59			16:37	25	09:55 (3)	15:46	51	12:15 (4)
7	04:39		05:37		06:47		07:53			08:06		09:30 (3)	09:10		11:06 (2)
	22:44		21:47		20:23		18:56			16:35	26	09:56 (3)	15:46	51	12:16 (4)
8	04:40		05:40		06:49		07:55			08:08		09:29 (3)	09:12		11:06 (2)
	22:43		21:44		20:20		18:53			16:32	26	09:55 (3)	15:45	51	12:16 (4)
9	04:41		05:42		06:51		07:58			08:11		09:30 (3)	09:14		11:07 (2)
	22:42		21:42		20:17		18:50			16:30	25	09:55 (3)	15:44	51	12:17 (4)
10	04:43		05:44		06:53		08:00			08:13		09:31 (3)	09:15		11:07 (2)
	22:41		21:39		20:14		18:48			16:28	24	09:55 (3)	15:44	51	12:17 (4)
11	04:44		05:46		06:55		08:02			08:16		09:31 (3)	09:16		11:08 (2)
	22:39		21:37		20:11		18:45			16:26	23	09:54 (3)	15:43	49	12:17 (4)
12	04:46		05:49		06:58		08:04			08:18		09:32 (3)	09:18		11:08 (2)
	22:38		21:34		20:08		18:42			16:24	22	09:54 (3)	15:43	49	12:17 (4)
13	04:48		05:51		07:00		08:07			08:20		09:33 (3)	09:19		11:09 (2)
	22:37		21:32		20:05		18:39			16:21	21	09:54 (3)	15:43	49	12:18 (4)
14	04:49		05:53		07:02		08:09			08:23		09:34 (3)	09:20		11:09 (2)
	22:35		21:29		20:02		18:36			16:19	20	09:54 (3)	15:42	49	12:18 (4)
15	04:51		05:55		07:04		08:11			08:25		09:35 (3)	09:21		11:10 (2)
	22:34		21:26		20:00		18:34			16:17	17	09:52 (3)	15:42	49	12:19 (4)
16	04:53		05:58		07:06		08:14			08:27		09:36 (3)	09:22		11:11 (2)
	22:32		21:24		19:57		18:31			16:15	15	09:51 (3)	15:42	48	12:20 (4)
17	04:54		06:00		07:09		08:16			08:30		09:39 (3)	09:23		11:12 (2)
	22:31		21:21		19:54		18:28			16:13	15	11:56 (4)	15:42	48	12:20 (4)
18	04:56		06:02		07:11		08:18		09:36 (26)	08:32		09:42 (3)	09:24		11:11 (2)
	22:29		21:19		19:51		18:25	10	09:46 (26)	16:11	16	12:00 (4)	15:42	48	12:20 (4)
19	04:58		06:04		07:13		08:21		09:34 (26)	08:34		11:46 (4)	09:25		11:12 (2)
	22:27		21:16		19:48		18:23	14	09:48 (26)	16:10	17	12:03 (4)	15:42	47	12:20 (4)
20	05:00		06:06		07:15		08:23		09:32 (26)	08:37		11:46 (4)	09:26		11:13 (2)
	22:26		21:13		19:45		18:20	17	09:49 (26)	16:08	19	12:05 (4)	15:43	48	12:21 (4)
21	05:02		06:09		07:17		08:25		09:32 (26)	08:39		11:44 (4)	09:26		11:14 (2)
	22:24		21:10		19:42		18:17	18	09:50 (26)	16:06	21	12:05 (4)	15:43	47	12:22 (4)
22	05:04		06:11		07:20		08:28		09:30 (26)	08:41		11:07 (2)	09:27		11:14 (2)
	22:22		21:08		19:39		18:15	20	09:50 (26)	16:04	30	12:07 (4)	15:44	47	12:22 (4)
23	05:06		06:13		07:22		08:30		09:30 (26)	08:43		11:05 (2)	09:27		11:14 (2)
	22:20		21:05		19:36		18:12	20	09:50 (26)	16:03	36	12:08 (4)	15:44	48	12:22 (4)
24	05:08		06:15		07:24		08:32		09:31 (26)	08:45		11:05 (2)	09:28		11:15 (2)
	22:18		21:02		19:33		18:09	20	09:51 (26)	16:01	39	12:09 (4)	15:45	48	12:23 (4)
25	05:10		06:18		07:26		07:35		08:30 (26)	08:48		11:04 (2)	09:28		11:15 (2)
	22:16		20:59		19:31		17:07	20	08:50 (26)	15:59	42	12:09 (4)	15:45	48	12:24 (4)
26	05:12		06:20		07:28		07:37		08:31 (26)	08:50		11:04 (2)	09:28		11:16 (2)
	22:14		20:57		19:28		17:04	19	08:50 (26)	15:58	43	12:10 (4)	15:46	48	12:24 (4)
27	05:14		06:22		07:31		07:40		08:30 (26)	08:52		11:03 (2)	09:29		11:16 (2)
	22:12		20:54		19:25		17:02	19	08:49 (26)	15:57	47	12:11 (4)	15:47	48	12:25 (4)
28	05:16		06:24		07:33		07:42		08:31 (26)	08:54		11:04 (2)	09:29		11:17 (2)
	22:10		20:51		19:22		16:59	17	08:48 (26)	15:55	47	12:12 (4)	15:48	48	12:25 (4)
29	05:18		06:27		07:35		07:44		08:33 (26)	08:56		11:03 (2)	09:29		11:16 (2)
	22:08		20:48		19:19		16:56	26	09:48 (3)	15:54	49	12:12 (4)	15:49	49	12:25 (4)
30	05:20		06:29		07:37		07:47		08:34 (26)	08:58		11:03 (2)	09:28		11:17 (2)
	22:05		20:45		19:16		16:54	27	09:50 (3)	15:53	50	12:12 (4)	15:50	49	12:26 (4)
31	05:22		06:31				07:49		08:37 (26)				09:28		11:18 (2)
	22:03		20:43				16:51	25	09:52 (3)				15:51	49	12:27 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								272			832			1523	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:00 (1)	08:46		09:41 (26)	07:35	08:28 (28)	07:07	05:44	04:40
	15:53	67	13:34 (4)	16:56	27	11:17 (3)	18:05	19	08:47 (28)	20:17	21:26	22:31
2	09:28		11:00 (1)	08:44		09:37 (26)	07:33		08:27 (28)	07:04	05:41	04:39
	15:54	68	13:34 (4)	16:59	32	11:16 (3)	18:07	20	08:47 (28)	20:19	21:28	22:32
3	09:27		11:00 (1)	08:41		09:35 (26)	07:30		08:27 (28)	07:01	05:39	04:37
	15:56	69	13:34 (4)	17:01	35	11:15 (3)	18:10	20	08:47 (28)	20:21	21:31	22:34
4	09:27		11:00 (1)	08:39		09:34 (26)	07:27		08:27 (28)	06:58	05:36	04:36
	15:57	69	13:35 (4)	17:04	33	11:13 (3)	18:12	19	08:46 (28)	20:24	21:33	22:35
5	09:26		11:00 (1)	08:37		09:33 (26)	07:24		08:28 (28)	06:55	05:34	04:35
	15:59	69	13:35 (4)	17:06	33	11:12 (3)	18:14	17	08:45 (28)	20:26	21:35	22:37
6	09:25		11:00 (1)	08:35		09:32 (26)	07:22		08:28 (28)	06:53	05:31	04:34
	16:00	69	13:35 (4)	17:08	23	11:06 (3)	18:17	16	08:44 (28)	20:28	21:38	22:38
7	09:25		10:54 (3)	08:32		09:31 (26)	07:19		08:29 (28)	06:50	05:29	04:33
	16:02	75	13:36 (4)	17:11	22	09:53 (26)	18:19	13	08:42 (28)	20:31	21:40	22:39
8	09:24		10:53 (3)	08:30		09:32 (26)	07:16		08:31 (28)	06:47	05:27	04:32
	16:04	77	13:37 (4)	17:13	22	09:54 (26)	18:21	8	08:39 (28)	20:33	21:42	22:41
9	09:23		10:52 (3)	08:28		09:31 (26)	07:13			06:44	05:24	04:31
	16:05	76	13:37 (4)	17:16	23	09:54 (26)	18:24			20:35	21:44	22:42
10	09:22		10:51 (3)	08:25		09:32 (26)	07:10			06:41	05:22	04:30
	16:07	78	13:37 (4)	17:18	23	09:55 (26)	18:26			20:38	21:47	22:43
11	09:21		10:50 (3)	08:23		09:31 (26)	07:07			06:38	05:20	04:30
	16:09	78	13:38 (4)	17:21	24	09:55 (26)	18:28			20:40	21:49	22:44
12	09:20		10:49 (3)	08:20		09:31 (26)	07:05			06:36	05:17	04:29
	16:11	76	13:37 (4)	17:23	23	09:54 (26)	18:31			20:42	21:51	22:45
13	09:19		10:50 (3)	08:18		09:31 (26)	07:02			06:33	05:15	04:28
	16:13	74	13:38 (4)	17:26	23	09:54 (26)	18:33			20:44	21:53	22:46
14	09:17		10:49 (3)	08:15		09:33 (26)	06:59			06:30	05:13	04:28
	16:15	73	13:38 (4)	17:28	21	09:54 (26)	18:35			20:47	21:55	22:47
15	09:16		10:48 (3)	08:13		09:33 (26)	06:56			06:27	05:11	04:28
	16:17	69	13:38 (4)	17:31	20	09:53 (26)	18:38			20:49	21:58	22:47
16	09:15		10:48 (3)	08:10		09:34 (26)	06:53			06:24	05:08	04:27
	16:19	62	13:37 (4)	17:33	17	09:51 (26)	18:40			20:51	22:00	22:48
17	09:13		10:49 (3)	08:08		09:36 (26)	06:50			06:22	05:06	04:27
	16:21	61	13:38 (4)	17:36	14	09:50 (26)	18:42			20:54	22:02	22:49
18	09:12		10:48 (3)	08:05		09:39 (26)	06:47			06:19	05:04	04:27
	16:23	61	13:38 (4)	17:38	8	09:47 (26)	18:45			20:56	22:04	22:49
19	09:10		10:48 (3)	08:02			06:44			06:16	05:02	04:27
	16:26	58	13:37 (4)	17:41			18:47			20:58	22:06	22:50
20	09:09		10:48 (3)	08:00			06:42			06:13	05:00	04:27
	16:28	57	13:37 (4)	17:43			18:49			21:01	22:08	22:50
21	09:07		10:48 (3)	07:57			06:39			06:10	04:58	04:27
	16:30	53	13:36 (4)	17:45			18:52			21:03	22:10	22:50
22	09:05		10:49 (3)	07:54			06:36			06:08	04:56	04:27
	16:32	49	13:35 (4)	17:48			18:54			21:05	22:12	22:51
23	09:04		10:49 (3)	07:52			06:33			06:05	04:54	04:27
	16:35	43	13:33 (4)	17:50			18:56			21:08	22:14	22:51
24	09:02		10:48 (3)	07:49		08:36 (28)	06:30			06:02	04:53	04:28
	16:37	29	11:17 (3)	17:53	5	08:41 (28)	18:59			21:10	22:16	22:51
25	09:00		10:49 (3)	07:46		08:32 (28)	06:27			06:00	04:51	04:28
	16:39	29	11:18 (3)	17:55	12	08:44 (28)	19:01			21:12	22:18	22:51
26	08:58		10:49 (3)	07:44		08:30 (28)	06:24			05:57	04:49	04:29
	16:42	29	11:18 (3)	17:58	15	08:45 (28)	19:03			21:14	22:20	22:51
27	08:56		10:50 (3)	07:41		08:29 (28)	06:21			05:54	04:47	04:29
	16:44	29	11:19 (3)	18:00	17	08:46 (28)	19:05			21:17	22:22	22:50
28	08:54		10:50 (3)	07:38		08:29 (28)	06:18			05:52	04:46	04:30
	16:46	28	11:18 (3)	18:02	18	08:47 (28)	19:08			21:19	22:24	22:50
29	08:52		10:51 (3)				07:16			05:49	04:44	04:30
	16:49	27	11:18 (3)				20:10			21:21	22:26	22:50
30	08:50		10:51 (3)				07:13			05:47	04:43	04:31
	16:51	26	11:17 (3)				20:12			21:24	22:27	22:49
31	08:48		10:52 (3)				07:10				04:41	
	16:54	25	11:17 (3)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		1753			490			132				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:52		09:00 (26)	09:00		10:33 (3)
	22:49		22:01		20:40		19:13			16:49	24	09:24 (26)	15:51	76	13:20 (4)
2	04:33		05:26		06:35		07:42			07:54		09:01 (26)	09:02		10:34 (3)
	22:48		21:59		20:37		19:10			16:46	23	09:24 (26)	15:50	78	13:20 (4)
3	04:34		05:29		06:38		07:44			07:56		09:01 (26)	09:04		10:35 (3)
	22:47		21:56		20:34		19:07			16:44	23	09:24 (26)	15:49	78	13:20 (4)
4	04:35		05:31		06:40		07:46			07:59		09:02 (26)	09:05		10:37 (3)
	22:47		21:54		20:31		19:05			16:42	22	09:24 (26)	15:48	77	13:21 (4)
5	04:36		05:33		06:42		07:48		09:11 (28)	08:01		09:02 (26)	09:07		10:39 (3)
	22:46		21:52		20:28		19:02	3	09:14 (28)	16:39	26	10:37 (3)	15:47	76	13:21 (4)
6	04:37		05:35		06:44		07:51		09:06 (28)	08:04		09:03 (26)	09:09		10:46 (1)
	22:45		21:49		20:26		18:59	11	09:17 (28)	16:37	32	10:42 (3)	15:46	70	13:22 (4)
7	04:39		05:37		06:47		07:53		09:05 (28)	08:06		09:05 (26)	09:10		10:47 (1)
	22:44		21:47		20:23		18:56	15	09:20 (28)	16:35	34	10:44 (3)	15:46	69	13:22 (4)
8	04:40		05:40		06:49		07:55		09:03 (28)	08:08		09:05 (26)	09:12		10:48 (1)
	22:43		21:44		20:20		18:53	17	09:20 (28)	16:32	35	10:45 (3)	15:45	69	13:23 (4)
9	04:41		05:42		06:51		07:58		09:02 (28)	08:11		09:08 (26)	09:14		10:49 (1)
	22:42		21:42		20:17		18:50	18	09:20 (28)	16:30	33	10:47 (3)	15:44	68	13:23 (4)
10	04:43		05:44		06:53		08:00		09:02 (28)	08:13		09:13 (26)	09:15		10:49 (1)
	22:41		21:39		20:14		18:48	19	09:21 (28)	16:28	25	10:48 (3)	15:44	69	13:23 (4)
11	04:44		05:46		06:55		08:02		09:01 (28)	08:16		10:22 (3)	09:16		10:50 (1)
	22:39		21:37		20:11		18:45	20	09:21 (28)	16:26	26	10:48 (3)	15:43	69	13:24 (4)
12	04:46		05:49		06:58		08:04		09:01 (28)	08:18		10:22 (3)	09:18		10:50 (1)
	22:38		21:34		20:08		18:42	20	09:21 (28)	16:24	27	10:49 (3)	15:43	67	13:24 (4)
13	04:47		05:51		07:00		08:07		09:01 (28)	08:20		10:22 (3)	09:19		10:51 (1)
	22:37		21:32		20:05		18:39	19	09:20 (28)	16:21	28	10:50 (3)	15:43	68	13:25 (4)
14	04:49		05:53		07:02		08:09		09:01 (28)	08:23		10:23 (3)	09:20		10:52 (1)
	22:35		21:29		20:02		18:36	18	09:19 (28)	16:19	28	10:51 (3)	15:42	67	13:25 (4)
15	04:51		05:55		07:04		08:11		09:02 (28)	08:25		10:22 (3)	09:21		10:52 (1)
	22:34		21:26		20:00		18:34	16	09:18 (28)	16:17	29	10:51 (3)	15:42	66	13:25 (4)
16	04:53		05:57		07:06		08:14		09:03 (28)	08:27		10:22 (3)	09:22		10:53 (1)
	22:32		21:24		19:57		18:31	13	09:16 (28)	16:15	29	10:51 (3)	15:42	64	13:25 (4)
17	04:54		06:00		07:09		08:16		09:05 (28)	08:30		10:23 (3)	09:23		10:54 (1)
	22:31		21:21		19:54		18:28	10	09:15 (28)	16:13	29	10:52 (3)	15:42	67	13:27 (4)
18	04:56		06:02		07:11		08:18			08:32		10:22 (3)	09:24		10:54 (1)
	22:29		21:19		19:51		18:25			16:11	29	10:51 (3)	15:42	64	13:26 (4)
19	04:58		06:04		07:13		08:21			08:34		10:23 (3)	09:25		10:55 (1)
	22:27		21:16		19:48		18:23			16:10	43	13:07 (4)	15:42	65	13:27 (4)
20	05:00		06:06		07:15		08:23			08:37		10:24 (3)	09:26		10:55 (1)
	22:25		21:13		19:45		18:20			16:08	49	13:10 (4)	15:43	66	13:28 (4)
21	05:02		06:09		07:17		08:25			08:39		10:23 (3)	09:26		10:56 (1)
	22:24		21:10		19:42		18:17			16:06	53	13:11 (4)	15:43	66	13:29 (4)
22	05:04		06:11		07:20		08:28			08:41		10:24 (3)	09:27		10:56 (1)
	22:22		21:08		19:39		18:15			16:04	57	13:13 (4)	15:44	65	13:28 (4)
23	05:06		06:13		07:22		08:30			08:43		10:24 (3)	09:27		10:56 (1)
	22:20		21:05		19:36		18:12			16:03	58	13:13 (4)	15:44	66	13:29 (4)
24	05:08		06:15		07:24		08:32		10:07 (26)	08:45		10:26 (3)	09:28		10:58 (1)
	22:18		21:02		19:33		18:09	10	10:17 (26)	16:01	60	13:15 (4)	15:45	64	13:30 (4)
25	05:10		06:18		07:26		07:35		09:05 (26)	08:48		10:26 (3)	09:28		10:58 (1)
	22:16		20:59		19:30		17:07	15	09:20 (26)	15:59	61	13:15 (4)	15:45	65	13:30 (4)
26	05:12		06:20		07:28		07:37		09:04 (26)	08:50		10:27 (3)	09:28		10:58 (1)
	22:14		20:57		19:28		17:04	18	09:22 (26)	15:58	62	13:16 (4)	15:46	66	13:31 (4)
27	05:14		06:22		07:31		07:40		09:02 (26)	08:52		10:28 (3)	09:28		10:58 (1)
	22:12		20:54		19:25		17:02	20	09:22 (26)	15:56	67	13:17 (4)	15:47	66	13:31 (4)
28	05:16		06:24		07:33		07:42		09:02 (26)	08:54		10:29 (3)	09:29		10:59 (1)
	22:10		20:51		19:22		16:59	21	09:23 (26)	15:55	72	13:18 (4)	15:48	67	13:32 (4)
29	05:18		06:27		07:35		07:44		09:02 (26)	08:56		10:30 (3)	09:29		10:58 (1)
	22:08		20:48		19:19		16:56	22	09:24 (26)	15:54	74	13:18 (4)	15:49	67	13:32 (4)
30	05:20		06:29		07:37		07:47		09:01 (26)	08:58		10:31 (3)	09:28		10:59 (1)
	22:05		20:45		19:16		16:54	23	09:24 (26)	15:53	75	13:18 (4)	15:50	66	13:32 (4)
31	05:22		06:31				07:49		09:01 (26)				09:28		11:00 (1)
	22:03		20:43				16:51	23	09:24 (26)				15:51	66	13:33 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								351			1233			2117	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:05 (1)	08:46		09:41 (26)	07:35	08:31 (28)	07:07	05:44	04:40
	15:53	69	13:41 (4)	16:56	36	11:24 (3)	18:05	20	08:51 (28)	20:17	21:26	22:31
2	09:28		11:05 (1)	08:44		09:40 (26)	07:33		08:31 (28)	07:04	05:41	04:39
	15:54	68	13:41 (4)	16:59	35	11:22 (3)	18:07	20	08:51 (28)	20:19	21:28	22:32
3	09:27		11:05 (1)	08:41		09:39 (26)	07:30		08:31 (28)	07:01	05:39	04:37
	15:56	69	13:41 (4)	17:01	35	11:21 (3)	18:10	19	08:50 (28)	20:21	21:31	22:34
4	09:27		11:00 (3)	08:39		09:38 (26)	07:27		08:31 (28)	06:58	05:36	04:36
	15:57	74	13:42 (4)	17:04	32	11:19 (3)	18:12	19	08:50 (28)	20:24	21:33	22:35
5	09:26		10:59 (3)	08:37		09:38 (26)	07:24		08:32 (28)	06:55	05:34	04:35
	15:59	76	13:42 (4)	17:06	22	10:00 (26)	18:14	16	08:48 (28)	20:26	21:35	22:37
6	09:25		10:58 (3)	08:35		09:37 (26)	07:22		08:33 (28)	06:53	05:31	04:34
	16:00	77	13:43 (4)	17:08	23	10:00 (26)	18:17	14	08:47 (28)	20:28	21:38	22:38
7	09:25		10:58 (3)	08:32		09:36 (26)	07:19		08:35 (28)	06:50	05:29	04:33
	16:02	76	13:43 (4)	17:11	24	10:00 (26)	18:19	9	08:44 (28)	20:31	21:40	22:39
8	09:24		10:57 (3)	08:30		09:37 (26)	07:16			06:47	05:27	04:32
	16:04	78	13:44 (4)	17:13	24	10:01 (26)	18:21			20:33	21:42	22:41
9	09:23		10:57 (3)	08:28		09:36 (26)	07:13			06:44	05:24	04:31
	16:05	77	13:44 (4)	17:16	24	10:00 (26)	18:24			20:35	21:44	22:42
10	09:22		10:56 (3)	08:25		09:37 (26)	07:10			06:41	05:22	04:30
	16:07	77	13:44 (4)	17:18	24	10:01 (26)	18:26			20:38	21:47	22:43
11	09:21		10:56 (3)	08:23		09:37 (26)	07:07			06:38	05:20	04:30
	16:09	76	13:45 (4)	17:21	23	10:00 (26)	18:28			20:40	21:49	22:44
12	09:20		10:56 (3)	08:20		09:37 (26)	07:05			06:36	05:17	04:29
	16:11	74	13:44 (4)	17:23	23	10:00 (26)	18:31			20:42	21:51	22:45
13	09:19		10:56 (3)	08:18		09:38 (26)	07:02			06:33	05:15	04:28
	16:13	73	13:45 (4)	17:26	21	09:59 (26)	18:33			20:44	21:53	22:46
14	09:17		10:56 (3)	08:15		09:39 (26)	06:59			06:30	05:13	04:28
	16:15	69	13:45 (4)	17:28	20	09:59 (26)	18:35			20:47	21:55	22:47
15	09:16		10:55 (3)	08:13		09:40 (26)	06:56			06:27	05:11	04:28
	16:17	61	13:45 (4)	17:31	17	09:57 (26)	18:38			20:49	21:58	22:47
16	09:15		10:55 (3)	08:10		09:42 (26)	06:53			06:24	05:08	04:27
	16:19	59	13:44 (4)	17:33	13	09:55 (26)	18:40			20:51	22:00	22:48
17	09:13		10:56 (3)	08:08		09:45 (26)	06:50			06:21	05:06	04:27
	16:21	59	13:45 (4)	17:36	8	09:53 (26)	18:42			20:54	22:02	22:49
18	09:12		10:56 (3)	08:05			06:47			06:19	05:04	04:27
	16:23	58	13:45 (4)	17:38			18:45			20:56	22:04	22:49
19	09:10		10:56 (3)	08:02			06:44			06:16	05:02	04:27
	16:26	55	13:44 (4)	17:41			18:47			20:58	22:06	22:50
20	09:09		10:56 (3)	08:00			06:42			06:13	05:00	04:27
	16:28	54	13:44 (4)	17:43			18:49			21:01	22:08	22:50
21	09:07		10:56 (3)	07:57			06:39			06:10	04:58	04:27
	16:30	50	13:43 (4)	17:45			18:52			21:03	22:10	22:50
22	09:05		10:56 (3)	07:54			06:36			06:08	04:56	04:27
	16:32	45	13:42 (4)	17:48			18:54			21:05	22:12	22:51
23	09:04		10:57 (3)	07:52		08:40 (28)	06:33			06:05	04:54	04:27
	16:35	40	13:40 (4)	17:50	5	08:45 (28)	18:56			21:08	22:14	22:51
24	09:02		10:56 (3)	07:49		08:36 (28)	06:30			06:02	04:53	04:28
	16:37	32	13:36 (4)	17:53	12	08:48 (28)	18:59			21:10	22:16	22:51
25	09:00		10:57 (3)	07:46		08:34 (28)	06:27			06:00	04:51	04:28
	16:39	29	11:26 (3)	17:55	15	08:49 (28)	19:01			21:12	22:18	22:51
26	08:58		10:57 (3)	07:44		08:33 (28)	06:24			05:57	04:49	04:29
	16:42	29	11:26 (3)	17:58	17	08:50 (28)	19:03			21:14	22:20	22:51
27	08:56		10:58 (3)	07:41		08:32 (28)	06:21			05:54	04:47	04:29
	16:44	28	11:26 (3)	18:00	18	08:50 (28)	19:05			21:17	22:22	22:50
28	08:54		10:58 (3)	07:38		08:32 (28)	06:18			05:52	04:46	04:30
	16:46	28	11:26 (3)	18:02	19	08:51 (28)	19:08			21:19	22:24	22:50
29	08:52		10:59 (3)				07:16			05:49	04:44	04:30
	16:49	27	11:26 (3)				20:10			21:21	22:26	22:50
30	08:50		10:59 (3)				07:13			05:47	04:43	04:31
	16:51	26	11:25 (3)				20:12			21:24	22:27	22:49
31	08:48		09:43 (26)				07:10				04:41	
	16:54	32	11:24 (3)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		1745			490			117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December		
1	04:32	05:24	06:33	07:39		07:51		09:06 (26)	09:00	10:39 (3)
	22:49	22:01	20:40	19:13		16:49	24	09:30 (26)	15:51	75 13:27 (4)
2	04:33	05:26	06:35	07:42		07:54		09:06 (26)	09:02	10:39 (3)
	22:48	21:59	20:37	19:10		16:46	24	09:30 (26)	15:50	77 13:27 (4)
3	04:34	05:29	06:38	07:44		07:56		09:06 (26)	09:04	10:40 (3)
	22:47	21:56	20:34	19:07		16:44	24	09:30 (26)	15:49	78 13:27 (4)
4	04:35	05:31	06:40	07:46		07:59		09:07 (26)	09:05	10:41 (3)
	22:47	21:54	20:31	19:05		16:42	23	09:30 (26)	15:48	79 13:28 (4)
5	04:36	05:33	06:42	07:48		08:01		09:07 (26)	09:07	10:43 (3)
	22:46	21:52	20:28	19:02		16:39	22	09:29 (26)	15:47	76 13:28 (4)
6	04:37	05:35	06:44	07:51	09:12 (28)	08:04		09:08 (26)	09:09	10:44 (3)
	22:45	21:49	20:26	18:59	7 09:19 (28)	16:37	21	09:29 (26)	15:46	77 13:29 (4)
7	04:39	05:37	06:47	07:53	09:10 (28)	08:06		09:09 (26)	09:10	10:46 (3)
	22:44	21:47	20:23	18:56	12 09:22 (28)	16:35	32	10:50 (3)	15:46	76 13:29 (4)
8	04:40	05:40	06:49	07:55	09:08 (28)	08:08		09:09 (26)	09:12	10:48 (3)
	22:43	21:44	20:20	18:53	15 09:23 (28)	16:32	34	10:51 (3)	15:45	74 13:30 (4)
9	04:41	05:42	06:51	07:58	09:06 (28)	08:11		09:10 (26)	09:14	10:51 (3)
	22:42	21:42	20:17	18:50	18 09:24 (28)	16:30	36	10:53 (3)	15:44	72 13:30 (4)
10	04:43	05:44	06:53	08:00	09:06 (28)	08:13		09:12 (26)	09:15	10:54 (1)
	22:41	21:39	20:14	18:48	19 09:25 (28)	16:28	35	10:55 (3)	15:44	68 13:30 (4)
11	04:44	05:46	06:55	08:02	09:05 (28)	08:16		09:14 (26)	09:16	10:55 (1)
	22:39	21:37	20:11	18:45	19 09:24 (28)	16:26	33	10:55 (3)	15:43	68 13:31 (4)
12	04:46	05:49	06:58	08:04	09:05 (28)	08:18		10:31 (3)	09:18	10:55 (1)
	22:38	21:34	20:08	18:42	20 09:25 (28)	16:24	26	10:57 (3)	15:43	68 13:31 (4)
13	04:47	05:51	07:00	08:07	09:04 (28)	08:20		10:31 (3)	09:19	10:56 (1)
	22:37	21:32	20:05	18:39	20 09:24 (28)	16:21	27	10:58 (3)	15:43	68 13:32 (4)
14	04:49	05:53	07:02	08:09	09:04 (28)	08:23		10:31 (3)	09:20	10:57 (1)
	22:35	21:29	20:02	18:36	19 09:23 (28)	16:19	28	10:59 (3)	15:42	67 13:32 (4)
15	04:51	05:55	07:04	08:11	09:05 (28)	08:25		10:30 (3)	09:21	10:57 (1)
	22:34	21:26	20:00	18:34	18 09:23 (28)	16:17	28	10:58 (3)	15:42	68 13:32 (4)
16	04:53	05:57	07:06	08:14	09:05 (28)	08:27		10:30 (3)	09:22	10:57 (1)
	22:32	21:24	19:57	18:31	16 09:21 (28)	16:15	29	10:59 (3)	15:42	68 13:32 (4)
17	04:54	06:00	07:09	08:16	09:07 (28)	08:30		10:31 (3)	09:23	10:59 (1)
	22:31	21:21	19:54	18:28	14 09:21 (28)	16:13	29	11:00 (3)	15:42	66 13:34 (4)
18	04:56	06:02	07:11	08:18	09:08 (28)	08:32		10:30 (3)	09:24	10:59 (1)
	22:29	21:19	19:51	18:25	10 09:18 (28)	16:11	32	13:10 (4)	15:42	66 13:33 (4)
19	04:58	06:04	07:13	08:21		08:34		10:31 (3)	09:25	10:59 (1)
	22:27	21:16	19:48	18:23		16:10	40	13:14 (4)	15:42	67 13:34 (4)
20	05:00	06:06	07:15	08:23		08:37		10:31 (3)	09:26	11:00 (1)
	22:25	21:13	19:45	18:20		16:08	45	13:17 (4)	15:43	66 13:35 (4)
21	05:02	06:09	07:17	08:25		08:39		10:31 (3)	09:26	11:01 (1)
	22:24	21:10	19:42	18:17		16:06	50	13:18 (4)	15:43	66 13:35 (4)
22	05:04	06:11	07:20	08:28		08:41		10:32 (3)	09:27	11:01 (1)
	22:22	21:08	19:39	18:15		16:04	54	13:20 (4)	15:44	66 13:35 (4)
23	05:06	06:13	07:22	08:30		08:43		10:32 (3)	09:27	11:01 (1)
	22:20	21:05	19:36	18:12		16:03	55	13:20 (4)	15:44	66 13:36 (4)
24	05:08	06:15	07:24	08:32		08:45		10:33 (3)	09:28	11:02 (1)
	22:18	21:02	19:33	18:09		16:01	58	13:22 (4)	15:45	66 13:37 (4)
25	05:10	06:18	07:26	07:35	09:13 (26)	08:48		10:33 (3)	09:28	11:03 (1)
	22:16	20:59	19:30	17:07	10 09:23 (26)	15:59	59	13:22 (4)	15:45	66 13:37 (4)
26	05:12	06:20	07:28	07:37	09:11 (26)	08:50		10:34 (3)	09:28	11:03 (1)
	22:14	20:57	19:28	17:04	15 09:26 (26)	15:58	60	13:24 (4)	15:46	67 13:38 (4)
27	05:14	06:22	07:31	07:40	09:09 (26)	08:52		10:34 (3)	09:28	11:03 (1)
	22:12	20:54	19:25	17:01	18 09:27 (26)	15:56	62	13:24 (4)	15:47	68 13:38 (4)
28	05:16	06:24	07:33	07:42	09:08 (26)	08:54		10:36 (3)	09:29	11:04 (1)
	22:10	20:51	19:22	16:59	20 09:28 (26)	15:55	69	13:25 (4)	15:48	66 13:39 (4)
29	05:18	06:27	07:35	07:44	09:08 (26)	08:56		10:36 (3)	09:29	11:03 (1)
	22:08	20:48	19:19	16:56	21 09:29 (26)	15:54	72	13:25 (4)	15:49	68 13:39 (4)
30	05:20	06:29	07:37	07:47	09:07 (26)	08:58		10:37 (3)	09:28	11:04 (1)
	22:05	20:45	19:16	16:54	22 09:29 (26)	15:53	74	13:26 (4)	15:50	68 13:39 (4)
31	05:22	06:31		07:49	09:07 (26)				09:28	11:05 (1)
	22:03	20:43		16:51	23 09:30 (26)				15:51	68 13:40 (4)
Potential sun hours	546	478	386	319		236			199	
Total, worst case					336		1205			2159

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:16 (4)	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	3	08:19 (4)	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42			07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10			16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44			07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08			16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46			07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05			16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49			08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02			16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51			08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59			16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53			08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56			16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55			08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53			16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58			08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51			16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00			08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48			16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02			08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45			16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05			08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18	07:02		07:33 (4)	06:33	05:15	04:29	04:48	05:51		07:00			08:20	09:19
	16:13	17:26	18:33	9	07:42 (4)	20:45	21:53	22:46	22:37	21:32		20:05			16:22	15:43
14	09:17	08:15	06:59		07:31 (4)	06:30	05:13	04:28	04:49	05:53		07:02			08:23	09:20
	16:15	17:28	18:36	13	07:44 (4)	20:47	21:56	22:47	22:35	21:29		20:03			16:20	15:43
15	09:16	08:13	06:56		07:29 (4)	06:27	05:11	04:28	04:51	05:55		07:04			08:25	09:21
	16:17	17:31	18:38	16	07:45 (4)	20:49	21:58	22:47	22:34	21:27		20:00			16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58		07:06			08:27	09:22
	16:19	17:33	18:40	18	07:46 (4)	20:51	22:00	22:48	22:32	21:24		19:57			16:15	15:42
17	09:13	08:08	06:50		07:26 (4)	06:22	05:06	04:27	04:54	06:00		07:09			08:30	09:23
	16:21	17:36	18:43	20	07:46 (4)	20:54	22:02	22:49	22:31	21:21		19:54			16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02		07:11		08:19 (4)	08:32	09:24
	16:24	17:38	18:45	20	07:46 (4)	20:56	22:04	22:49	22:29	21:19		19:51	5	08:24 (4)	16:12	15:42
19	09:10	08:03	06:45		07:25 (4)	06:16	05:02	04:27	04:58	06:04		07:13		08:15 (4)	08:34	09:25
	16:26	17:41	18:47	21	07:46 (4)	20:58	22:06	22:50	22:27	21:16		19:48	12	08:27 (4)	16:10	15:43
20	09:09	08:00	06:42		07:26 (4)	06:13	05:00	04:27	05:00	06:07		07:15		08:13 (4)	08:37	09:26
	16:28	17:43	18:49	20	07:46 (4)	21:01	22:08	22:50	22:26	21:13		19:45	15	08:28 (4)	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09		07:17		08:12 (4)	08:39	09:26
	16:30	17:46	18:52	20	07:46 (4)	21:03	22:10	22:50	22:24	21:11		19:42	18	08:30 (4)	16:06	15:43
22	09:05	07:55	06:36		07:26 (4)	06:08	04:56	04:27	05:04	06:11		07:20		08:11 (4)	08:41	09:27
	16:33	17:48	18:54	19	07:45 (4)	21:05	22:12	22:51	22:22	21:08		19:39	19	08:30 (4)	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13		07:22		08:10 (4)	08:43	09:27
	16:35	17:51	18:56	16	07:43 (4)	21:08	22:14	22:51	22:20	21:05		19:36	20	08:30 (4)	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16		07:24		08:09 (4)	08:46	09:28
	16:37	17:53	18:59	13	07:41 (4)	21:10	22:16	22:51	22:18	21:02		19:34	21	08:30 (4)	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18		07:26		08:09 (4)	08:48	09:28
	16:39	17:55	19:01	8	07:38 (4)	21:12	22:18	22:51	22:16	21:00		19:31	20	08:29 (4)	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20		07:28		08:09 (4)	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57		19:28	20	08:29 (4)	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22		07:31		08:09 (4)	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54		19:25	19	08:28 (4)	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24		07:33		08:09 (4)	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51		19:22	18	08:27 (4)	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27		07:35		08:10 (4)	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48		19:19	15	08:25 (4)	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29		07:37		08:12 (4)	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46		19:16	12	08:24 (4)	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31				07:49		09:28
	16:54		20:15				22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200	
Total, worst case				213							214		3			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:26 (2)	08:46	10:08 (3)	07:35	07:07	05:44	04:40
	15:53	51	12:42 (4)	16:56	26	10:34 (3)	18:05	20:17	21:26	22:31
2	09:28		11:26 (2)	08:44	10:07 (3)	07:33	07:04	05:41	04:39
	15:54	51	12:42 (4)	16:59	27	10:34 (3)	18:07	20:19	21:28	22:32
3	09:27		11:26 (2)	08:41	10:08 (3)	07:30	07:01	05:39	04:37
	15:56	52	12:42 (4)	17:01	26	10:34 (3)	18:10	20:21	21:31	22:34
4	09:27		11:27 (2)	08:39	10:07 (3)	07:27	06:58	05:36	04:36
	15:57	52	12:43 (4)	17:04	27	10:34 (3)	18:12	20:24	21:33	22:35
5	09:26		11:27 (2)	08:37	10:08 (3)	07:24	06:55	05:34	04:35
	15:59	52	12:43 (4)	17:06	26	10:34 (3)	18:14	20:26	21:35	22:37
6	09:25		11:28 (2)	08:35	10:08 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:43 (4)	17:09	26	10:34 (3)	18:17	20:28	21:38	22:38
7	09:25		11:28 (2)	08:32	10:08 (3)	07:19	06:50	05:29	04:33
	16:02	52	12:44 (4)	17:11	25	10:33 (3)	18:19	20:31	21:40	22:39
8	09:24		10:35 (1)	08:30	10:10 (3)	07:16	06:47	05:27	04:32
	16:04	58	12:45 (4)	17:13	23	10:33 (3)	18:21	20:33	21:42	22:41
9	09:23		10:34 (1)	08:28	10:10 (3)	07:13	06:44	05:24	04:31
	16:05	60	12:45 (4)	17:16	22	10:32 (3)	18:24	20:35	21:44	22:42
10	09:22		10:33 (1)	08:25	09:11 (26)	07:10	06:41	05:22	04:30
	16:07	62	12:45 (4)	17:18	27	10:31 (3)	18:26	20:38	21:47	22:43
11	09:21		10:33 (1)	08:23	09:09 (26)	07:07	06:38	05:20	04:30
	16:09	63	12:46 (4)	17:21	28	10:29 (3)	18:28	20:40	21:49	22:44
12	09:20		10:32 (1)	08:20	09:07 (26)	07:05	06:36	05:17	04:29
	16:11	64	12:46 (4)	17:23	27	10:27 (3)	18:31	20:42	21:51	22:45
13	09:19		10:33 (1)	08:18	09:06 (26)	07:02	06:33	05:15	04:28
	16:13	64	12:46 (4)	17:26	18	09:24 (26)	18:33	20:44	21:53	22:46
14	09:17		10:32 (1)	08:15	09:05 (26)	06:59	06:30	05:13	04:28
	16:15	64	12:46 (4)	17:28	20	09:25 (26)	18:35	20:47	21:56	22:47
15	09:16		10:32 (1)	08:13	09:05 (26)	06:56	06:27	05:11	04:28
	16:17	63	12:46 (4)	17:31	20	09:25 (26)	18:38	20:49	21:58	22:47
16	09:15		10:31 (1)	08:10	09:04 (26)	06:53	06:24	05:08	04:27
	16:19	63	12:46 (4)	17:33	21	09:25 (26)	18:40	20:51	22:00	22:48
17	09:13		10:32 (1)	08:08	09:05 (26)	06:50	06:22	05:06	04:27
	16:21	60	12:46 (4)	17:36	21	09:26 (26)	18:42	20:54	22:02	22:49
18	09:12		10:32 (1)	08:05	09:05 (26)	06:47	06:19	05:04	04:27
	16:23	58	12:46 (4)	17:38	20	09:25 (26)	18:45	20:56	22:04	22:49
19	09:10		10:32 (1)	08:02	09:05 (26)	06:44	06:16	05:02	04:27
	16:26	53	12:46 (4)	17:41	20	09:25 (26)	18:47	20:58	22:06	22:50
20	09:09		10:33 (1)	08:00	09:05 (26)	06:42	06:13	05:00	04:27
	16:28	42	12:45 (4)	17:43	19	09:24 (26)	18:49	21:01	22:08	22:50
21	09:07		10:33 (1)	07:57	09:05 (26)	06:39	06:11	04:58	04:27
	16:30	42	12:45 (4)	17:46	18	09:23 (26)	18:52	21:03	22:10	22:50
22	09:05		10:16 (3)	07:54	09:07 (26)	06:36	06:08	04:56	04:27
	16:32	44	12:44 (4)	17:48	15	09:22 (26)	18:54	21:05	22:12	22:51
23	09:04		10:13 (3)	07:52	09:09 (26)	06:33	06:05	04:54	04:27
	16:35	48	12:43 (4)	17:50	11	09:20 (26)	18:56	21:08	22:14	22:51
24	09:02		10:11 (3)	07:49	09:13 (26)	06:30	06:02	04:53	04:28
	16:37	45	12:40 (4)	17:53	3	09:16 (26)	18:59	21:10	22:16	22:51
25	09:00		10:10 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	40	12:37 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:09 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	36	10:52 (1)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:09 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	37	10:52 (1)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:08 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	35	10:50 (1)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:08 (3)			07:16	05:49	04:44	04:30
	16:49	33	10:49 (1)			20:10	21:21	22:26	22:50
30	08:50		10:08 (3)			07:13	05:47	04:43	04:31
	16:51	25	10:33 (3)			20:12	21:24	22:27	22:49
31	08:48		10:07 (3)			07:10		04:41	
	16:54	26	10:33 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1546			516				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:40			07:52		08:41 (26)	09:00		10:15 (1)
	22:49	22:01	20:40	19:13			16:49	27	10:01 (3)	15:51	63	12:28 (4)
2	04:33	05:26	06:35	07:42			07:54		09:40 (3)	09:02		10:16 (1)
	22:48	21:59	20:37	19:10			16:46	22	10:02 (3)	15:50	62	12:28 (4)
3	04:34	05:29	06:38	07:44			07:56		09:39 (3)	09:04		10:17 (1)
	22:47	21:56	20:34	19:07			16:44	24	10:03 (3)	15:49	60	12:28 (4)
4	04:35	05:31	06:40	07:46			07:59		09:39 (3)	09:05		10:19 (1)
	22:47	21:54	20:31	19:05			16:42	25	10:04 (3)	15:48	57	12:29 (4)
5	04:36	05:33	06:42	07:48			08:01		09:38 (3)	09:07		11:13 (2)
	22:46	21:52	20:28	19:02			16:39	26	10:04 (3)	15:47	52	12:29 (4)
6	04:37	05:35	06:44	07:51			08:04		09:38 (3)	09:09		11:14 (2)
	22:45	21:49	20:26	18:59			16:37	26	10:04 (3)	15:46	52	12:30 (4)
7	04:39	05:37	06:47	07:53			08:06		09:38 (3)	09:10		11:14 (2)
	22:44	21:47	20:23	18:56			16:35	27	10:05 (3)	15:46	52	12:30 (4)
8	04:40	05:40	06:49	07:55			08:08		09:37 (3)	09:12		11:15 (2)
	22:43	21:44	20:20	18:53			16:32	27	10:04 (3)	15:45	52	12:31 (4)
9	04:41	05:42	06:51	07:58			08:11		09:38 (3)	09:14		11:16 (2)
	22:42	21:42	20:17	18:50			16:30	26	10:04 (3)	15:44	51	12:31 (4)
10	04:43	05:44	06:53	08:00			08:13		09:38 (3)	09:15		11:15 (2)
	22:41	21:39	20:14	18:48			16:28	27	10:05 (3)	15:44	52	12:31 (4)
11	04:44	05:46	06:55	08:02			08:16		09:38 (3)	09:16		11:16 (2)
	22:39	21:37	20:11	18:45			16:26	26	10:04 (3)	15:43	51	12:32 (4)
12	04:46	05:49	06:58	08:04			08:18		09:39 (3)	09:18		11:16 (2)
	22:38	21:34	20:08	18:42			16:24	25	10:04 (3)	15:43	51	12:32 (4)
13	04:48	05:51	07:00	08:07			08:20		09:40 (3)	09:19		11:17 (2)
	22:37	21:32	20:05	18:39			16:21	33	10:21 (1)	15:43	51	12:33 (4)
14	04:49	05:53	07:02	08:09			08:23		09:41 (3)	09:20		11:18 (2)
	22:35	21:29	20:02	18:36			16:19	35	10:23 (1)	15:42	50	12:33 (4)
15	04:51	05:55	07:04	08:11			08:25		09:41 (3)	09:21		11:18 (2)
	22:34	21:26	20:00	18:34			16:17	37	10:24 (1)	15:42	50	12:33 (4)
16	04:53	05:58	07:06	08:14			08:27		09:42 (3)	09:22		11:19 (2)
	22:32	21:24	19:57	18:31			16:15	36	10:25 (1)	15:42	50	12:34 (4)
17	04:54	06:00	07:09	08:16			08:30		09:44 (3)	09:23		11:20 (2)
	22:31	21:21	19:54	18:28			16:13	40	12:11 (4)	15:42	50	12:35 (4)
18	04:56	06:02	07:11	08:18		09:42 (26)	08:32		09:45 (3)	09:24		11:19 (2)
	22:29	21:19	19:51	18:25	7	09:49 (26)	16:11	45	12:14 (4)	15:42	49	12:34 (4)
19	04:58	06:04	07:13	08:21		09:39 (26)	08:34		09:47 (3)	09:25		11:20 (2)
	22:27	21:16	19:48	18:23	13	09:52 (26)	16:10	48	12:17 (4)	15:42	50	12:35 (4)
20	05:00	06:06	07:15	08:23		09:37 (26)	08:37		09:51 (3)	09:26		11:21 (2)
	22:26	21:13	19:45	18:20	16	09:53 (26)	16:08	44	12:19 (4)	15:43	50	12:36 (4)
21	05:02	06:09	07:17	08:25		09:36 (26)	08:39		10:08 (1)	09:26		11:22 (2)
	22:24	21:10	19:42	18:17	18	09:54 (26)	16:06	42	12:20 (4)	15:43	49	12:36 (4)
22	05:04	06:11	07:20	08:28		09:35 (26)	08:41		10:09 (1)	09:27		11:22 (2)
	22:22	21:08	19:39	18:15	19	09:54 (26)	16:04	42	12:21 (4)	15:44	49	12:36 (4)
23	05:06	06:13	07:22	08:30		09:35 (26)	08:43		10:08 (1)	09:27		11:22 (2)
	22:20	21:05	19:36	18:12	20	09:55 (26)	16:03	54	12:22 (4)	15:44	49	12:36 (4)
24	05:08	06:15	07:24	08:32		09:34 (26)	08:45		10:09 (1)	09:28		11:23 (2)
	22:18	21:02	19:33	18:09	21	09:55 (26)	16:01	58	12:23 (4)	15:45	50	12:38 (4)
25	05:10	06:18	07:26	07:35		08:34 (26)	08:48		10:09 (1)	09:28		11:23 (2)
	22:16	20:59	19:31	17:07	21	08:55 (26)	15:59	61	12:24 (4)	15:45	49	12:38 (4)
26	05:12	06:20	07:28	07:37		08:34 (26)	08:50		10:10 (1)	09:28		11:24 (2)
	22:14	20:57	19:28	17:04	21	08:55 (26)	15:58	62	12:25 (4)	15:46	49	12:38 (4)
27	05:14	06:22	07:31	07:40		08:34 (26)	08:52		10:11 (1)	09:29		11:24 (2)
	22:12	20:54	19:25	17:02	20	08:54 (26)	15:57	63	12:25 (4)	15:47	50	12:39 (4)
28	05:16	06:24	07:33	07:42		08:35 (26)	08:54		10:12 (1)	09:29		11:25 (2)
	22:10	20:51	19:22	16:59	19	08:54 (26)	15:55	63	12:26 (4)	15:48	50	12:40 (4)
29	05:18	06:27	07:35	07:44		08:36 (26)	08:56		10:13 (1)	09:29		11:24 (2)
	22:08	20:48	19:19	16:56	21	09:53 (3)	15:54	64	12:26 (4)	15:49	50	12:39 (4)
30	05:20	06:29	07:37	07:47		08:36 (26)	08:58		10:13 (1)	09:28		11:25 (2)
	22:05	20:45	19:16	16:54	29	09:57 (3)	15:53	65	12:27 (4)	15:50	50	12:40 (4)
31	05:22	06:31		07:49		08:38 (26)				09:28		11:26 (2)
	22:03	20:43		16:51	29	09:59 (3)				15:51	51	12:41 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					274			1200			1601	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June	July	August	September			October			November	December
1	09:28	08:46			07:36		08:20 (4)	07:07	05:44	04:40	04:32	05:24	06:33			07:40		08:51 (4)	07:52	09:00
	15:53	16:56			18:05	13	08:33 (4)	20:17	21:26	22:31	22:49	22:01	20:40			19:13	25	09:16 (4)	16:49	15:51
2	09:28	08:44			07:33		08:18 (4)	07:04	05:42	04:39	04:33	05:27	06:36			07:42		08:49 (4)	07:54	09:02
	15:54	16:59			18:07	17	08:35 (4)	20:19	21:28	22:32	22:48	21:59	20:37			19:10	27	09:16 (4)	16:47	15:50
3	09:27	08:41			07:30		08:16 (4)	07:01	05:39	04:37	04:34	05:29	06:38			07:44		08:48 (4)	07:56	09:04
	15:56	17:01			18:10	20	08:36 (4)	20:22	21:31	22:34	22:47	21:56	20:34			19:08	28	09:16 (4)	16:44	15:49
4	09:27	08:39			07:27		08:14 (4)	06:58	05:37	04:36	04:35	05:31	06:40			07:46		08:49 (4)	07:59	09:05
	15:57	17:04			18:12	23	08:37 (4)	20:24	21:33	22:35	22:47	21:54	20:31			19:05	27	09:16 (4)	16:42	15:48
5	09:26	08:37			07:24		08:13 (4)	06:56	05:34	04:35	04:36	05:33	06:42			07:49		08:48 (4)	08:01	09:07
	15:59	17:06			18:14	25	08:38 (4)	20:26	21:35	22:37	22:46	21:52	20:28			19:02	28	09:16 (4)	16:39	15:47
6	09:25	08:35			07:22		08:12 (4)	06:53	05:32	04:34	04:38	05:35	06:44			07:51		08:47 (4)	08:04	09:09
	16:00	17:09			18:17	26	08:38 (4)	20:28	21:38	22:38	22:45	21:49	20:26			18:59	28	09:15 (4)	16:37	15:47
7	09:25	08:32			07:19		08:11 (4)	06:50	05:29	04:33	04:39	05:38	06:47			07:53		08:48 (4)	08:06	09:10
	16:02	17:11			18:19	27	08:38 (4)	20:31	21:40	22:39	22:44	21:47	20:23			18:56	27	09:15 (4)	16:35	15:46
8	09:24	08:30			07:16		08:11 (4)	06:47	05:27	04:32	04:40	05:40	06:49			07:55		08:48 (4)	08:08	09:12
	16:04	17:14			18:22	27	08:38 (4)	20:33	21:42	22:41	22:43	21:44	20:20			18:53	26	09:14 (4)	16:32	15:45
9	09:23	08:28			07:13		08:11 (4)	06:44	05:24	04:31	04:42	05:42	06:51			07:58		08:48 (4)	08:11	09:14
	16:06	17:16			18:24	28	08:39 (4)	20:35	21:44	22:42	22:42	21:42	20:17			18:50	24	09:12 (4)	16:30	15:44
10	09:22	08:25			07:10		08:11 (4)	06:41	05:22	04:31	04:43	05:44	06:53			08:00		08:50 (4)	08:13	09:15
	16:07	17:19			18:26	28	08:39 (4)	20:38	21:47	22:43	22:41	21:39	20:14			18:48	22	09:12 (4)	16:28	15:44
11	09:21	08:23			07:07		08:11 (4)	06:38	05:20	04:30	04:45	05:46	06:55			08:02		08:50 (4)	08:16	09:16
	16:09	17:21			18:29	27	08:38 (4)	20:40	21:49	22:44	22:39	21:37	20:11			18:45	20	09:10 (4)	16:26	15:43
12	09:20	08:20			07:05		08:11 (4)	06:36	05:17	04:29	04:46	05:49	06:58			08:04		08:53 (4)	08:18	09:18
	16:11	17:23			18:31	26	08:37 (4)	20:42	21:51	22:45	22:38	21:34	20:08			18:42	15	09:08 (4)	16:24	15:43
13	09:19	08:18			07:02		08:12 (4)	06:33	05:15	04:29	04:48	05:51	07:00			08:07		08:55 (4)	08:20	09:19
	16:13	17:26			18:33	24	08:36 (4)	20:45	21:53	22:46	22:37	21:32	20:05			18:39	10	09:05 (4)	16:22	15:43
14	09:17	08:15			06:59		08:12 (4)	06:30	05:13	04:28	04:49	05:53	07:02			08:09			08:23	09:20
	16:15	17:28			18:36	23	08:35 (4)	20:47	21:56	22:47	22:35	21:29	20:03			18:36			16:19	15:42
15	09:16	08:13			06:56		08:13 (4)	06:27	05:11	04:28	04:51	05:55	07:04			08:11			08:25	09:21
	16:17	17:31			18:38	20	08:33 (4)	20:49	21:58	22:47	22:34	21:27	20:00			18:34			16:17	15:42
16	09:15	08:10			06:53		08:15 (4)	06:24	05:09	04:27	04:53	05:58	07:06			08:14			08:27	09:22
	16:19	17:33			18:40	15	08:30 (4)	20:51	22:00	22:48	22:32	21:24	19:57			18:31			16:15	15:42
17	09:13	08:08			06:50		08:17 (4)	06:22	05:06	04:27	04:54	06:00	07:09			08:16			08:30	09:23
	16:21	17:36			18:43	10	08:27 (4)	20:54	22:02	22:49	22:31	21:21	19:54			18:28			16:14	15:42
18	09:12	08:05			06:47			06:19	05:04	04:27	04:56	06:02	07:11			08:18			08:32	09:24
	16:24	17:38			18:45			20:56	22:04	22:49	22:29	21:19	19:51			18:25			16:12	15:42
19	09:10	08:02			06:45			06:16	05:02	04:27	04:58	06:04	07:13			08:21			08:34	09:25
	16:26	17:41			18:47			20:58	22:06	22:50	22:27	21:16	19:48			18:23			16:10	15:43
20	09:09	08:00			06:42			06:13	05:00	04:27	05:00	06:07	07:15			08:23			08:37	09:26
	16:28	17:43			18:49			21:01	22:08	22:50	22:26	21:13	19:45			18:20			16:08	15:43
21	09:07	07:57			06:39			06:11	04:58	04:27	05:02	06:09	07:17			08:25			08:39	09:26
	16:30	17:46			18:52			21:03	22:10	22:50	22:24	21:10	19:42			18:17			16:06	15:43
22	09:05	07:55			06:36			06:08	04:56	04:27	05:04	06:11	07:20			08:28			08:41	09:27
	16:32	17:48			18:54			21:05	22:12	22:51	22:22	21:08	19:39			18:15			16:04	15:44
23	09:04	07:52			06:33			06:05	04:55	04:28	05:06	06:13	07:22			08:30			08:43	09:27
	16:35	17:50			18:56			21:08	22:14	22:51	22:20	21:05	19:36			18:12			16:03	15:44
24	09:02	07:49			06:30			06:02	04:53	04:28	05:08	06:16	07:24			08:32			08:45	09:28
	16:37	17:53			18:59			21:10	22:16	22:51	22:18	21:02	19:33			18:09			16:01	15:45
25	09:00	07:46			06:27			06:00	04:51	04:28	05:10	06:18	07:26			07:35			08:48	09:28
	16:39	17:55			19:01			21:12	22:18	22:51	22:16	21:00	19:31			17:07			16:00	15:46
26	08:58	07:44			06:24			05:57	04:49	04:29	05:12	06:20	07:28		09:02 (4)	07:37			08:50	09:28
	16:42	17:58			19:03			21:15	22:20	22:51	22:14	20:57	19:28	6	09:08 (4)	17:04			15:58	15:46
27	08:56	07:41			06:21			05:55	04:48	04:29	05:14	06:22	07:31		08:57 (4)	07:40			08:52	09:29
	16:44	18:00			19:05			21:17	22:22	22:50	22:12	20:54	19:25	14	09:11 (4)	17:02			15:57	15:47
28	08:54	07:38		08:26 (4)	06:19			05:52	04:46	04:30	05:16	06:24	07:33		08:55 (4)	07:42			08:54	09:29
	16:47	18:03	2	08:28 (4)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	18	09:13 (4)	16:59			15:55	15:48
29	08:52				07:16			05:49	04:44	04:31	05:18	06:27	07:35		08:53 (4)	07:44			08:56	09:29
	16:49				20:10			21:21	22:26	22:50	22:08	20:48	19:19	21	09:14 (4)	16:57			15:54	15:49
30	08:50				07:13			05:47	04:43	04:31	05:20	06:29	07:37		08:52 (4)	07:47			08:58	09:28
	16:51				20:12			21:24	22:27	22:49	22:05	20:46	19:16	24	09:16 (4)	16:54			15:53	15:50
31	08:48				07:10				04:41		05:22	06:31				07:49				09:28
	16:54				20:15				22:29		22:03	20:43				16:52				15:51
Potential sun hours	221	260			365			432	521	547	545	478	386			319			236	200
Total, worst case			2			379								83			307			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		12:21 (28)	08:46		10:00 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:36 (32)	09:00	10:51 (27)
	15:53	20	12:41 (28)	16:56	20	10:20 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6	09:42 (32)	15:51	28	12:23 (28)
2	09:28		12:22 (28)	08:44		09:59 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:34 (32)	09:02		10:51 (27)
	15:54	19	12:41 (28)	16:58	21	10:20 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11	09:45 (32)	15:50	30	12:24 (28)
3	09:27		12:22 (28)	08:41		10:00 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:33 (32)	09:04		10:52 (27)
	15:55	19	12:41 (28)	17:01	20	10:20 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14	09:47 (32)	15:49	29	12:25 (28)
4	09:27		11:12 (27)	08:39		10:00 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:31 (32)	09:05		10:53 (27)
	15:57	22	12:41 (28)	17:03	20	10:20 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	09:48 (32)	15:48	30	12:26 (28)
5	09:26		11:11 (27)	08:37		10:01 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:31 (32)	09:07		10:54 (27)
	15:58	26	12:42 (28)	17:06	19	10:20 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18	09:49 (32)	15:47	29	12:27 (28)
6	09:25		11:10 (27)	08:35		10:01 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:30 (32)	09:09		10:56 (27)
	16:00	28	12:42 (28)	17:08	18	10:19 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20	09:50 (32)	15:46	28	12:28 (28)
7	09:25		11:09 (27)	08:32		10:01 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:30 (32)	09:10		10:58 (27)
	16:02	29	12:42 (28)	17:11	17	10:18 (32)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20	09:50 (32)	15:45	26	12:29 (28)
8	09:24		11:09 (27)	08:30		10:03 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:30 (32)	09:12		11:00 (27)
	16:03	30	12:42 (28)	17:13	15	10:18 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20	09:50 (32)	15:45	23	12:30 (28)
9	09:23		11:09 (27)	08:27		10:04 (32)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:30 (32)	09:13		12:11 (28)
	16:05	30	12:42 (28)	17:16	12	10:16 (32)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20	09:50 (32)	15:44	19	12:30 (28)
10	09:22		11:08 (27)	08:25		10:07 (32)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:31 (32)	09:15		12:11 (28)
	16:07	30	12:41 (28)	17:18	5	10:12 (32)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20	09:51 (32)	15:44	19	12:30 (28)
11	09:21		11:09 (27)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:30 (32)	09:16		12:11 (28)
	16:09	28	12:41 (28)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20	09:50 (32)	15:43	20	12:31 (28)
12	09:20		11:08 (27)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:31 (32)	09:18		12:11 (28)
	16:11	27	12:40 (28)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27	10:58 (27)	15:43	20	12:31 (28)
13	09:19		11:08 (27)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:32 (32)	09:19		12:12 (28)
	16:13	25	12:39 (28)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31	11:01 (27)	15:42	21	12:33 (28)
14	09:17		11:08 (27)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:33 (32)	09:20		12:12 (28)
	16:15	20	11:28 (27)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32	11:03 (27)	15:42	21	12:33 (28)
15	09:16		11:08 (27)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:34 (32)	09:21		12:12 (28)
	16:17	21	11:29 (27)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31	11:03 (27)	15:42	21	12:33 (28)
16	09:15		11:08 (27)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:36 (32)	09:22		12:13 (28)
	16:19	21	11:29 (27)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31	11:05 (27)	15:42	20	12:33 (28)
17	09:13		11:09 (27)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:38 (32)	09:23		12:14 (28)
	16:21	22	11:31 (27)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28	11:06 (27)	15:42	21	12:35 (28)
18	09:12		11:09 (27)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:44 (27)	09:24		12:14 (28)
	16:23	22	11:31 (27)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22	11:06 (27)	15:42	21	12:35 (28)
19	09:10		11:09 (27)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		10:45 (27)	09:25		12:14 (28)
	16:25	22	11:31 (27)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22	11:07 (27)	15:42	21	12:35 (28)
20	09:09		11:09 (27)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:45 (27)	09:26		12:15 (28)
	16:28	23	11:32 (27)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22	11:07 (27)	15:43	21	12:36 (28)
21	09:07		11:09 (27)	07:57			06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39		10:45 (27)	09:26		12:16 (28)
	16:30	23	11:32 (27)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	11:07 (27)	15:43	21	12:37 (28)
22	09:05		11:10 (27)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		10:45 (27)	09:27		12:16 (28)
	16:32	22	11:32 (27)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	11:08 (27)	15:43	21	12:37 (28)
23	09:03		11:10 (27)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:45 (27)	09:27		12:16 (28)
	16:34	22	11:32 (27)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	11:08 (27)	15:44	21	12:37 (28)
24	09:02		11:10 (27)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:46 (27)	09:28		12:17 (28)
	16:37	22	11:32 (27)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22	11:08 (27)	15:45	21	12:38 (28)
25	09:00		10:04 (32)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:46 (27)	09:28		12:17 (28)
	16:39	28	11:32 (27)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22	11:08 (27)	15:45	21	12:38 (28)
26	08:58		10:03 (32)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:47 (27)	09:28		12:18 (28)
	16:42	31	11:32 (27)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21	11:08 (27)	15:46	21	12:39 (28)
27	08:56		10:02 (32)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:47 (27)	09:28		12:18 (28)
	16:44	31	11:31 (27)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21	11:08 (27)	15:47	21	12:39 (28)
28	08:54		10:00 (32)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:48 (27)	09:29		12:19 (28)
	16:46	32	11:30 (27)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21	11:09 (27)	15:48	21	12:40 (28)
29	08:52		10:00 (32)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:49 (27)	09:29		12:19 (28)
	16:49	31	11:29 (27)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	12:18 (28)	15:49	21	12:40 (28)
30	08:50		09:59 (32)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:49 (27)	09:28		12:20 (28)
	16:51	27	11:26 (27)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28	12:21 (28)	15:50	20	12:40 (28)
31	08:48		09:59 (32)				07:10		04:41		05:22	06:31		07:49				09:28		12:21 (28)
	16:54	20	10:19 (32)				20:14		22:29		22:03	20:43		16:51				15:51	20	12:41 (28)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		773			167											657			697	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April		May	June
1	09:27	08:45		07:35			07:06		05:44	04:40
	15:53	16:56		18:04			20:16		21:25	22:30
2	09:27	08:43		07:32			07:04		05:41	04:38
	15:54	16:58		18:07			20:19		21:28	22:31
3	09:26	08:41		07:29			07:01		05:39	04:37
	15:55	17:01		18:09			20:21		21:30	22:33
4	09:26	08:39		07:27			06:58	19:38 (67)	05:36	04:36
	15:57	17:03		18:12			20:23	2 19:40 (67)	21:32	22:34
5	09:25	08:36		07:24			06:55	19:34 (67)	05:34	04:35
	15:58	17:06		18:14			20:25	8 19:42 (67)	21:35	22:36
6	09:25	08:34		07:21			06:52	19:32 (67)	05:31	04:34
	16:00	17:08		18:16			20:28	11 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18			06:49	19:31 (67)	05:29	04:33
	16:02	17:11		18:19			20:30	12 19:43 (67)	21:39	22:39
8	09:23	08:29		07:15			06:46	19:31 (67)	05:26	04:32
	16:03	17:13		18:21			20:32	13 19:44 (67)	21:41	22:40
9	09:22	08:27		07:13			06:44	19:31 (67)	05:24	04:31
	16:05	17:16		18:23			20:35	12 19:43 (67)	21:44	22:41
10	09:21	08:24		07:10			06:41	19:31 (67)	05:22	04:30
	16:07	17:18		18:26			20:37	11 19:42 (67)	21:46	22:42
11	09:20	08:22		07:07			06:38	19:32 (67)	05:19	04:30
	16:09	17:21		18:28			20:39	8 19:40 (67)	21:48	22:43
12	09:19	08:20		07:04			06:35	19:34 (67)	05:17	04:29
	16:11	17:23		18:30			20:42	4 19:38 (67)	21:50	22:44
13	09:18	08:17		07:01			06:32		05:15	04:28
	16:13	17:25		18:33			20:44		21:53	22:45
14	09:17	08:15		06:58			06:29		05:13	04:28
	16:15	17:28		18:35			20:46		21:55	22:46
15	09:15	08:12		06:55			06:27	19:48 (66)	05:10	04:27
	16:17	17:30		18:37			20:48	9 19:57 (66)	21:57	22:47
16	09:14	08:10	16:48 (70)	06:53			06:24	19:47 (66)	05:08	04:27
	16:19	17:33	1 16:49 (70)	18:40			20:51	13 20:00 (66)	21:59	22:47
17	09:13	08:07	16:44 (70)	06:50			06:21	19:45 (66)	05:06	04:27
	16:21	17:35	8 16:52 (70)	18:42			20:53	15 20:00 (66)	22:01	22:48
18	09:11	08:04	16:42 (70)	06:47			06:18	19:44 (66)	05:04	04:27
	16:23	17:38	12 16:54 (70)	18:44			20:55	16 20:00 (66)	22:03	22:48
19	09:09	08:02	16:41 (70)	06:44			06:16	19:44 (66)	05:02	04:27
	16:25	17:40	13 16:54 (70)	18:47			20:58	17 20:01 (66)	22:05	22:49
20	09:08	07:59	16:42 (70)	06:41			06:13	19:43 (66)	05:00	04:27
	16:28	17:43	13 16:55 (70)	18:49			21:00	18 20:01 (66)	22:08	22:49
21	09:06	07:57	16:41 (70)	06:38		18:02 (69)	06:10	19:42 (66)	04:58	04:27
	16:30	17:45	14 16:55 (70)	18:51	2	18:04 (69)	21:02	18 20:00 (66)	22:10	22:49
22	09:05	07:54	16:41 (70)	06:35		17:58 (69)	06:07	19:43 (66)	04:56	04:27
	16:32	17:48	13 16:54 (70)	18:53	9	18:07 (69)	21:05	17 20:00 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32		17:56 (69)	06:05	19:43 (66)	04:54	04:27
	16:34	17:50	11 16:53 (70)	18:56	12	18:08 (69)	21:07	16 19:59 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30		17:55 (69)	06:02	19:44 (66)	04:52	04:28
	16:37	17:52	9 16:52 (70)	18:58	14	18:09 (69)	21:09	15 19:59 (66)	22:16	22:50
25	08:59	07:46	16:45 (70)	06:27		17:54 (69)	05:59	19:45 (66)	04:51	04:28
	16:39	17:55	4 16:49 (70)	19:00	15	18:09 (69)	21:12	12 19:57 (66)	22:17	22:50
26	08:57	07:43		06:24		17:53 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57		19:03	15	18:08 (69)	21:14	8 19:55 (66)	22:19	22:50
27	08:55	07:40		06:21		17:54 (69)	05:54		04:47	04:29
	16:44	18:00		19:05	15	18:09 (69)	21:16		22:21	22:49
28	08:53	07:38		06:18		17:55 (69)	05:51		04:46	04:30
	16:46	18:02		19:07	13	18:08 (69)	21:18		22:23	22:49
29	08:51			07:15		18:55 (69)	05:49		04:44	04:30
	16:49			20:09	11	19:06 (69)	21:21		22:25	22:49
30	08:49			07:12		18:57 (69)	05:46		04:43	04:31
	16:51			20:12	6	19:03 (69)	21:23		22:26	22:48
31	08:47			07:09					04:41	
	16:53			20:14					22:28	
Potential sun hours	222	260		365			432		521	547
Total, worst case			98		112			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:31 (67)	07:39			07:51	08:59
	22:48	22:00			20:39	8	19:39 (67)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:29 (67)	07:41			07:53	09:01
	22:47	21:58			20:36	11	19:40 (67)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:29 (67)	07:43			07:56	09:03
	22:47	21:56			20:34	12	19:41 (67)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:28 (67)	07:46			07:58	09:05
	22:46	21:53			20:31	13	19:41 (67)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:28 (67)	07:48			08:00	09:06
	22:45	21:51			20:28	12	19:40 (67)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:28 (67)	07:50			08:03	09:08
	22:44	21:48			20:25	11	19:39 (67)	18:58			16:37	15:46
7	04:39	05:37			06:46		19:29 (67)	07:52			08:05	09:10
	22:43	21:46			20:22	8	19:37 (67)	18:56			16:34	15:45
8	04:40	05:39			06:48		19:31 (67)	07:55			08:08	09:11
	22:42	21:44			20:19	3	19:34 (67)	18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55			08:02			08:15	09:16
	22:39	21:36			20:11			18:44			16:25	15:43
12	04:46	05:48			06:57			08:04			08:17	09:17
	22:37	21:34			20:08			18:42			16:23	15:43
13	04:47	05:50			06:59		18:49 (69)	08:06			08:20	09:18
	22:36	21:31			20:05	5	18:54 (69)	18:39			16:21	15:42
14	04:49	05:53			07:01		18:46 (69)	08:08			08:22	09:19
	22:34	21:28			20:02	10	18:56 (69)	18:36			16:19	15:42
15	04:51	05:55			07:04		18:44 (69)	08:11			08:24	09:20
	22:33	21:26			19:59	13	18:57 (69)	18:33			16:17	15:42
16	04:52	05:57		19:56 (66)	07:06		18:43 (69)	08:13			08:27	09:21
	22:31	21:23	4	20:00 (66)	19:56	14	18:57 (69)	18:30			16:15	15:42
17	04:54	05:59		19:53 (66)	07:08		18:42 (69)	08:15		17:16 (70)	08:29	09:22
	22:30	21:21	9	20:02 (66)	19:53	15	18:57 (69)	18:28	6	17:22 (70)	16:13	15:42
18	04:56	06:02		19:51 (66)	07:10		18:41 (69)	08:18		17:14 (70)	08:31	09:23
	22:28	21:18	13	20:04 (66)	19:50	15	18:56 (69)	18:25	10	17:24 (70)	16:11	15:42
19	04:58	06:04		19:49 (66)	07:12		18:42 (69)	08:20		17:13 (70)	08:34	09:24
	22:26	21:15	15	20:04 (66)	19:47	14	18:56 (69)	18:22	12	17:25 (70)	16:09	15:42
20	05:00	06:06		19:48 (66)	07:15		18:42 (69)	08:22		17:12 (70)	08:36	09:25
	22:25	21:12	17	20:05 (66)	19:44	13	18:55 (69)	18:20	14	17:26 (70)	16:08	15:43
21	05:01	06:08		19:48 (66)	07:17		18:43 (69)	08:25		17:12 (70)	08:38	09:26
	22:23	21:10	17	20:05 (66)	19:42	10	18:53 (69)	18:17	13	17:25 (70)	16:06	15:43
22	05:03	06:11		19:47 (66)	07:19		18:45 (69)	08:27		17:12 (70)	08:40	09:26
	22:21	21:07	18	20:05 (66)	19:39	5	18:50 (69)	18:14	13	17:25 (70)	16:04	15:43
23	05:05	06:13		19:48 (66)	07:21			08:29		17:12 (70)	08:43	09:27
	22:19	21:04	18	20:06 (66)	19:36			18:12	12	17:24 (70)	16:02	15:44
24	05:07	06:15		19:48 (66)	07:23			08:32		17:13 (70)	08:45	09:27
	22:17	21:02	17	20:05 (66)	19:33			18:09	10	17:23 (70)	16:01	15:45
25	05:09	06:17		19:48 (66)	07:26			07:34		16:14 (70)	08:47	09:27
	22:15	20:59	16	20:04 (66)	19:30			17:06	7	16:21 (70)	15:59	15:45
26	05:11	06:20		19:48 (66)	07:28			07:37			08:49	09:28
	22:13	20:56	15	20:03 (66)	19:27			17:04			15:58	15:46
27	05:13	06:22		19:49 (66)	07:30			07:39			08:51	09:28
	22:11	20:53	12	20:01 (66)	19:24			17:01			15:56	15:47
28	05:16	06:24		19:50 (66)	07:32			07:41			08:53	09:28
	22:09	20:50	9	19:59 (66)	19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28			07:37			07:46			08:57	09:28
	22:05	20:45			19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (67)				07:48				09:27
	22:02	20:42	5	19:38 (67)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			185			192			97			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April		May	June
1	09:27	08:45		07:35			07:06	19:00 (69)	05:44	04:40
	15:53	16:56		18:04			20:16	4 19:04 (69)	21:25	22:30
2	09:27	08:43		07:32			07:04		05:41	04:38
	15:54	16:58		18:07			20:19		21:28	22:31
3	09:26	08:41		07:29			07:01		05:39	04:37
	15:55	17:01		18:09			20:21		21:30	22:33
4	09:26	08:39		07:27			06:58		05:36	04:36
	15:57	17:03		18:12			20:23		21:32	22:34
5	09:25	08:36		07:24			06:55		05:34	04:35
	15:58	17:06		18:14			20:25		21:35	22:36
6	09:25	08:34		07:21			06:52	19:37 (67)	05:31	04:34
	16:00	17:08		18:16			20:28	6 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18			06:49	19:35 (67)	05:29	04:33
	16:02	17:11		18:19			20:30	10 19:45 (67)	21:39	22:39
8	09:23	08:29		07:15			06:46	19:34 (67)	05:26	04:32
	16:03	17:13		18:21			20:32	12 19:46 (67)	21:41	22:40
9	09:22	08:27		07:13			06:44	19:33 (67)	05:24	04:31
	16:05	17:16		18:23			20:35	13 19:46 (67)	21:44	22:41
10	09:21	08:24		07:10			06:41	19:33 (67)	05:22	04:30
	16:07	17:18		18:26			20:37	12 19:45 (67)	21:46	22:42
11	09:20	08:22		07:07			06:38	19:33 (67)	05:19	04:30
	16:09	17:21		18:28			20:39	11 19:44 (67)	21:48	22:43
12	09:19	08:20		07:04			06:35	19:33 (67)	05:17	04:29
	16:11	17:23		18:30			20:42	10 19:43 (67)	21:50	22:44
13	09:18	08:17		07:01			06:32	19:35 (67)	05:15	04:28
	16:13	17:25		18:33			20:44	7 19:42 (67)	21:53	22:45
14	09:17	08:15		06:58			06:29		05:13	04:28
	16:15	17:28		18:35			20:46		21:55	22:46
15	09:15	08:12		06:55			06:27		05:10	04:27
	16:17	17:30		18:37			20:48		21:57	22:47
16	09:14	08:10		06:53			06:24		05:08	04:27
	16:19	17:33		18:40			20:51		21:59	22:47
17	09:13	08:07		06:50			06:21	19:53 (66)	05:06	04:27
	16:21	17:35		18:42			20:53	8 20:01 (66)	22:01	22:48
18	09:11	08:04	16:45 (70)	06:47			06:18	19:50 (66)	05:04	04:27
	16:23	17:38	8 16:53 (70)	18:44			20:55	12 20:02 (66)	22:03	22:48
19	09:09	08:02	16:43 (70)	06:44			06:16	19:49 (66)	05:02	04:27
	16:25	17:40	12 16:55 (70)	18:47			20:58	15 20:04 (66)	22:05	22:49
20	09:08	07:59	16:43 (70)	06:41			06:13	19:48 (66)	05:00	04:27
	16:28	17:43	13 16:56 (70)	18:49			21:00	16 20:04 (66)	22:08	22:49
21	09:06	07:57	16:43 (70)	06:38			06:10	19:46 (66)	04:58	04:27
	16:30	17:45	13 16:56 (70)	18:51			21:02	18 20:04 (66)	22:10	22:49
22	09:05	07:54	16:42 (70)	06:35			06:07	19:47 (66)	04:56	04:27
	16:32	17:48	14 16:56 (70)	18:53			21:05	17 20:04 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32		18:01 (69)	06:05	19:46 (66)	04:54	04:27
	16:34	17:50	13 16:55 (70)	18:56	7	18:08 (69)	21:07	18 20:04 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30		17:59 (69)	06:02	19:46 (66)	04:52	04:28
	16:37	17:52	11 16:54 (70)	18:58	11	18:10 (69)	21:09	18 20:04 (66)	22:16	22:50
25	08:59	07:46	16:44 (70)	06:27		17:57 (69)	05:59	19:46 (66)	04:51	04:28
	16:39	17:55	9 16:53 (70)	19:00	14	18:11 (69)	21:12	17 20:03 (66)	22:17	22:50
26	08:57	07:43	16:47 (70)	06:24		17:56 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57	4 16:51 (70)	19:03	15	18:11 (69)	21:14	16 20:03 (66)	22:19	22:50
27	08:55	07:40		06:21		17:56 (69)	05:54	19:47 (66)	04:47	04:29
	16:44	18:00		19:05	16	18:12 (69)	21:16	14 20:01 (66)	22:21	22:49
28	08:53	07:38		06:18		17:56 (69)	05:51	19:49 (66)	04:46	04:30
	16:46	18:02		19:07	15	18:11 (69)	21:18	11 20:00 (66)	22:23	22:49
29	08:51			07:15		18:56 (69)	05:49	19:50 (66)	04:44	04:30
	16:49			20:09	14	19:10 (69)	21:21	7 19:57 (66)	22:25	22:49
30	08:49			07:12		18:56 (69)	05:46		04:43	04:31
	16:51			20:12	13	19:09 (69)	21:23		22:26	22:48
31	08:47			07:09		18:57 (69)			04:41	
	16:53			20:14	10	19:07 (69)			22:28	
Potential sun hours	222	260		365			432		521	547
Total, worst case			97		115			272		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:32 (67)	07:39			07:51	08:59
	22:48	22:00			20:39	11	19:43 (67)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:31 (67)	07:41			07:53	09:01
	22:47	21:58			20:36	12	19:43 (67)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:31 (67)	07:43			07:56	09:03
	22:47	21:56			20:34	13	19:44 (67)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:31 (67)	07:46			07:58	09:05
	22:46	21:53			20:31	12	19:43 (67)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:32 (67)	07:48			08:00	09:06
	22:45	21:51			20:28	10	19:42 (67)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:33 (67)	07:50			08:03	09:08
	22:44	21:48			20:25	7	19:40 (67)	18:58			16:37	15:46
7	04:39	05:37			06:46			07:52			08:05	09:10
	22:43	21:46			20:22			18:56			16:34	15:45
8	04:40	05:39			06:48			07:55			08:08	09:11
	22:42	21:44			20:19			18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55		18:54 (69)	08:02			08:15	09:16
	22:39	21:36			20:11	1	18:55 (69)	18:44			16:25	15:43
12	04:46	05:48			06:57		18:50 (69)	08:04			08:17	09:17
	22:37	21:34			20:08	9	18:59 (69)	18:42			16:23	15:43
13	04:47	05:50			06:59		18:48 (69)	08:06			08:20	09:18
	22:36	21:31			20:05	12	19:00 (69)	18:39			16:21	15:42
14	04:49	05:53		19:58 (66)	07:01		18:47 (69)	08:08			08:22	09:19
	22:34	21:28	8	20:06 (66)	20:02	14	19:01 (69)	18:36			16:19	15:42
15	04:51	05:55		19:56 (66)	07:04		18:46 (69)	08:11			08:24	09:20
	22:33	21:26	12	20:08 (66)	19:59	15	19:01 (69)	18:33			16:17	15:42
16	04:52	05:57		19:54 (66)	07:06		18:45 (69)	08:13		17:18 (70)	08:27	09:21
	22:31	21:23	15	20:09 (66)	19:56	15	19:00 (69)	18:30	7	17:25 (70)	16:15	15:42
17	04:54	05:59		19:53 (66)	07:08		18:45 (69)	08:15		17:15 (70)	08:29	09:22
	22:30	21:21	16	20:09 (66)	19:53	14	18:59 (69)	18:28	11	17:26 (70)	16:13	15:42
18	04:56	06:02		19:52 (66)	07:10		18:45 (69)	08:18		17:14 (70)	08:31	09:23
	22:28	21:18	18	20:10 (66)	19:50	13	18:58 (69)	18:25	13	17:27 (70)	16:11	15:42
19	04:58	06:04		19:52 (66)	07:12		18:46 (69)	08:20		17:13 (70)	08:34	09:24
	22:26	21:15	18	20:10 (66)	19:47	12	18:58 (69)	18:22	14	17:27 (70)	16:09	15:42
20	05:00	06:06		19:51 (66)	07:15		18:47 (69)	08:22		17:13 (70)	08:36	09:25
	22:25	21:12	18	20:09 (66)	19:44	8	18:55 (69)	18:20	14	17:27 (70)	16:08	15:43
21	05:01	06:08		19:51 (66)	07:17			08:25		17:13 (70)	08:38	09:26
	22:23	21:10	18	20:09 (66)	19:42			18:17	13	17:26 (70)	16:06	15:43
22	05:03	06:11		19:51 (66)	07:19			08:27		17:14 (70)	08:40	09:26
	22:21	21:07	17	20:08 (66)	19:39			18:14	12	17:26 (70)	16:04	15:43
23	05:05	06:13		19:52 (66)	07:21			08:29		17:14 (70)	08:43	09:27
	22:19	21:04	17	20:09 (66)	19:36			18:12	10	17:24 (70)	16:02	15:44
24	05:07	06:15		19:53 (66)	07:23			08:32		17:16 (70)	08:45	09:27
	22:17	21:02	14	20:07 (66)	19:33			18:09	7	17:23 (70)	16:01	15:45
25	05:09	06:17		19:54 (66)	07:26			07:34			08:47	09:27
	22:15	20:59	12	20:06 (66)	19:30			17:06			15:59	15:45
26	05:11	06:20		19:56 (66)	07:28			07:37			08:49	09:28
	22:13	20:56	7	20:03 (66)	19:27			17:04			15:58	15:46
27	05:13	06:22			07:30			07:39			08:51	09:28
	22:11	20:53			19:24			17:01			15:56	15:47
28	05:16	06:24			07:32			07:41			08:53	09:28
	22:09	20:50			19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28		19:35 (67)	07:37			07:46			08:57	09:28
	22:05	20:45	7	19:42 (67)	19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (67)				07:48				09:27
	22:02	20:42	10	19:43 (67)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			207			178			101			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 3.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

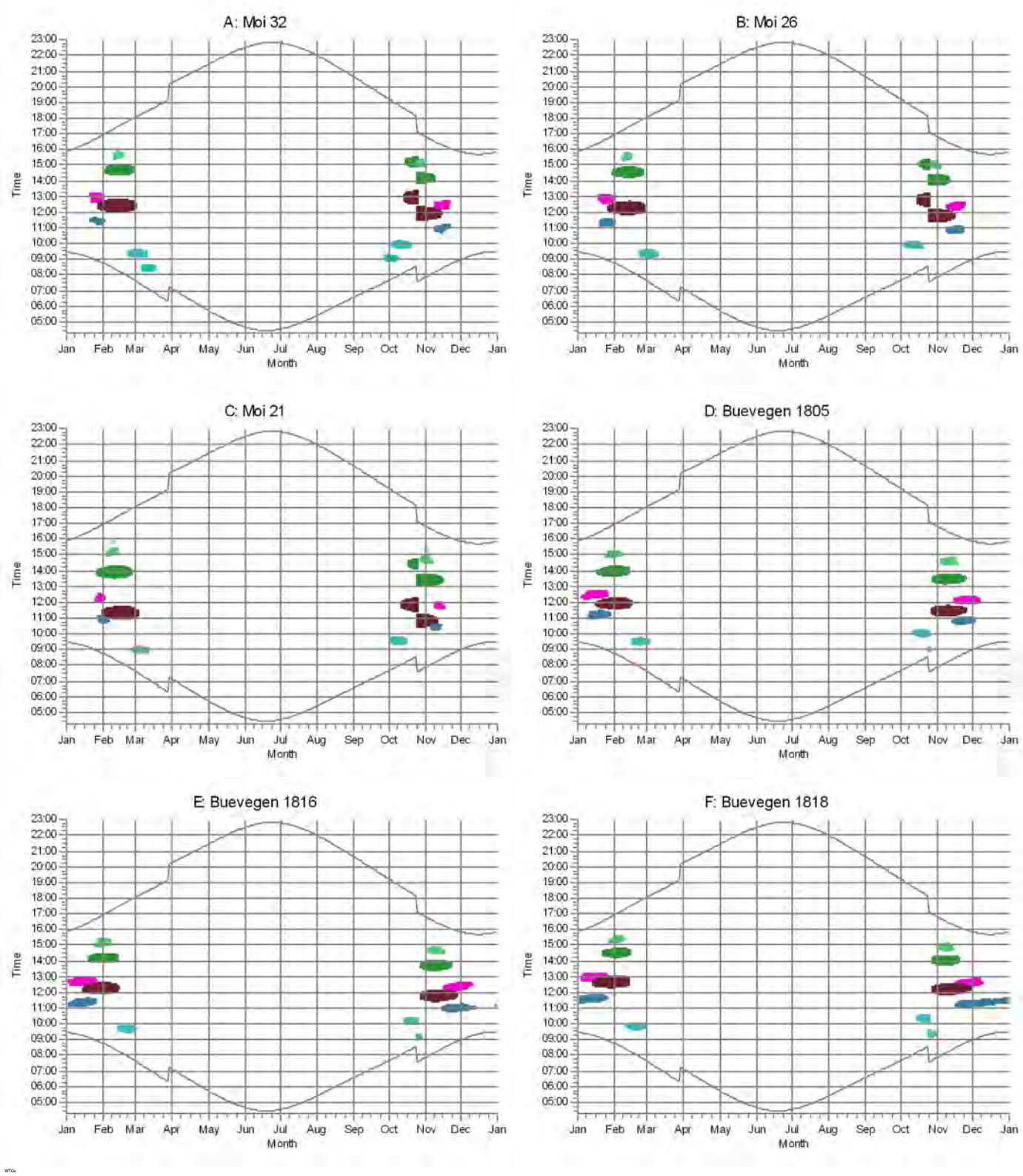
Med nærliggende – worst case

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

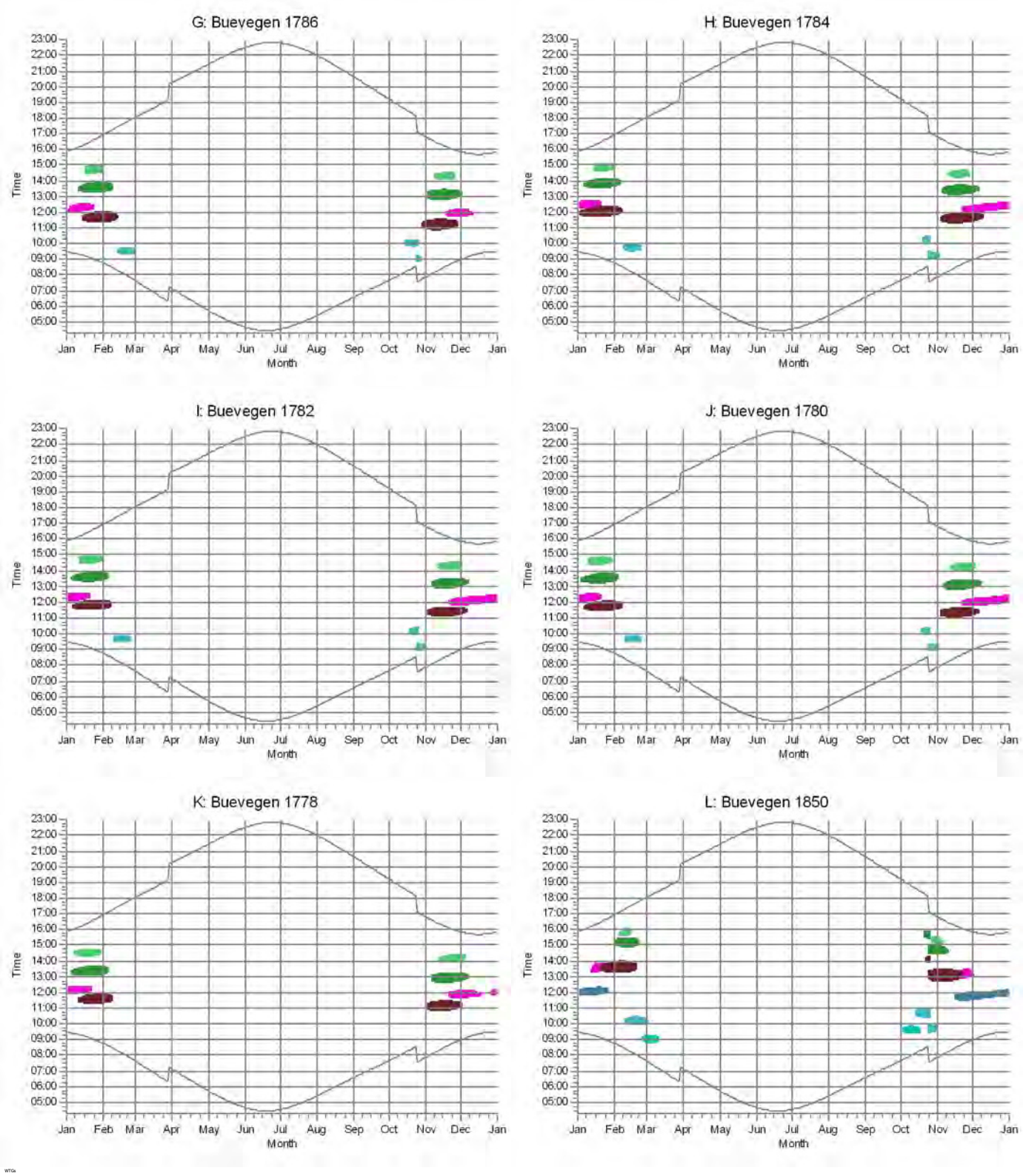


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

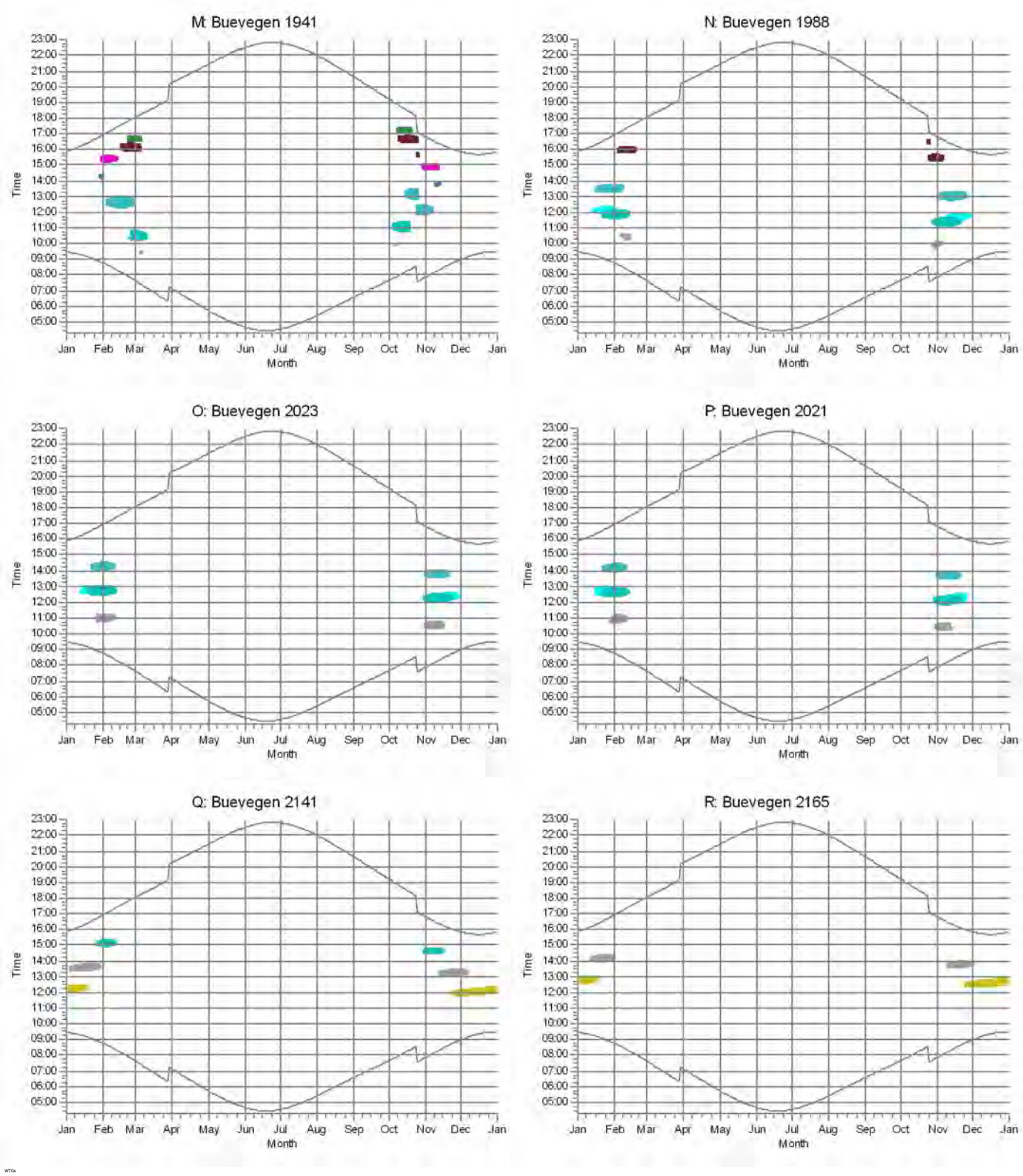


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

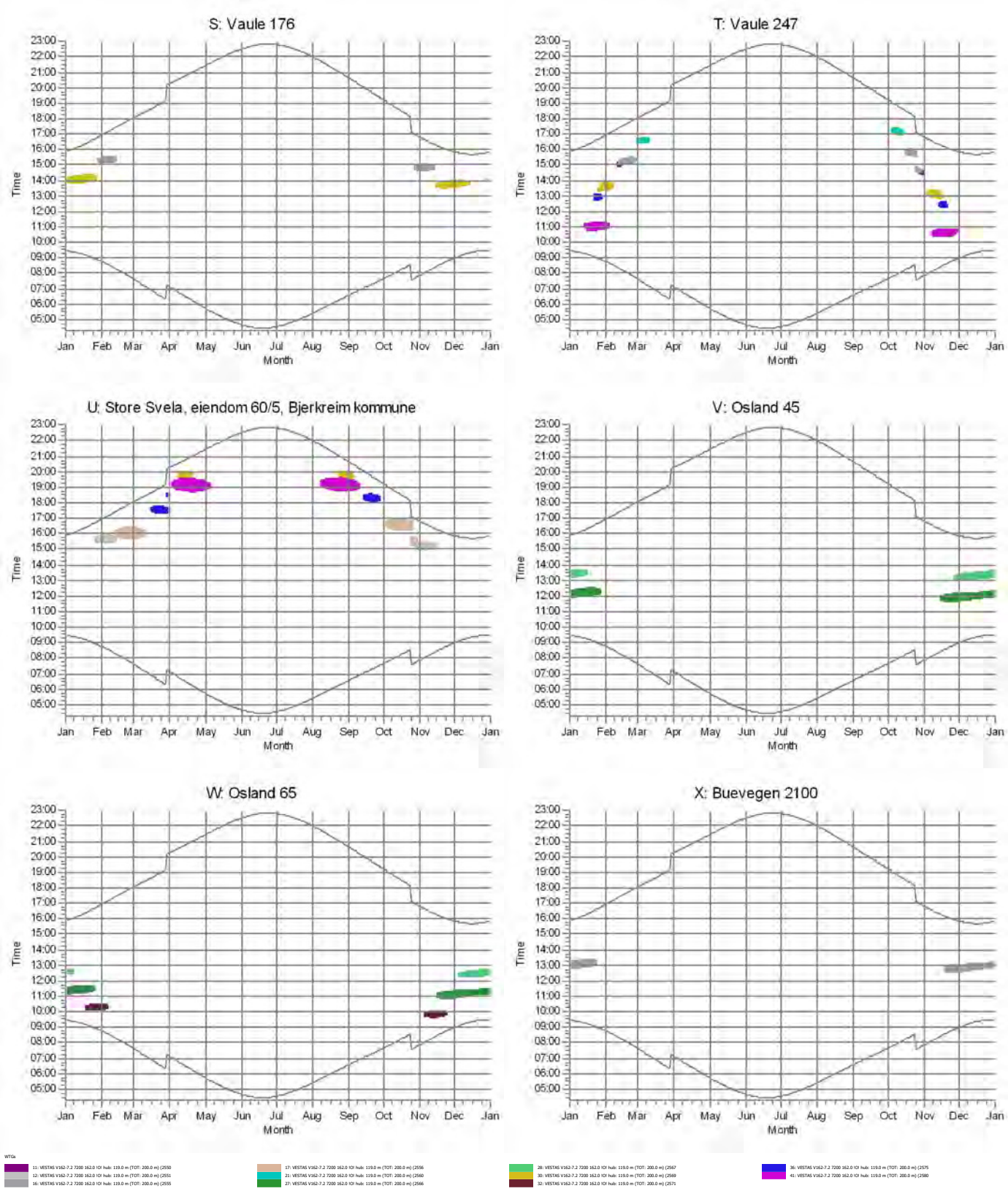


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

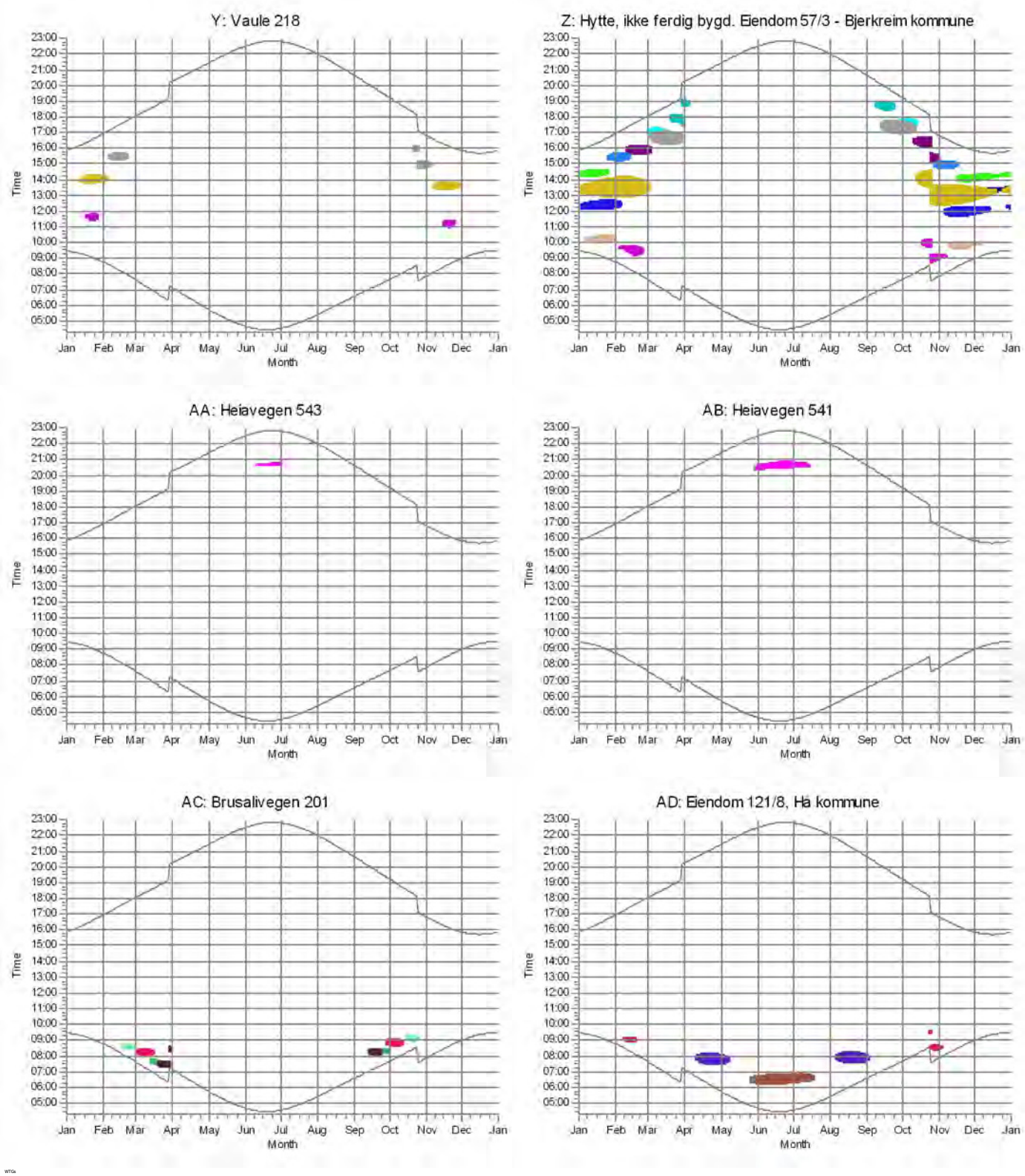


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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

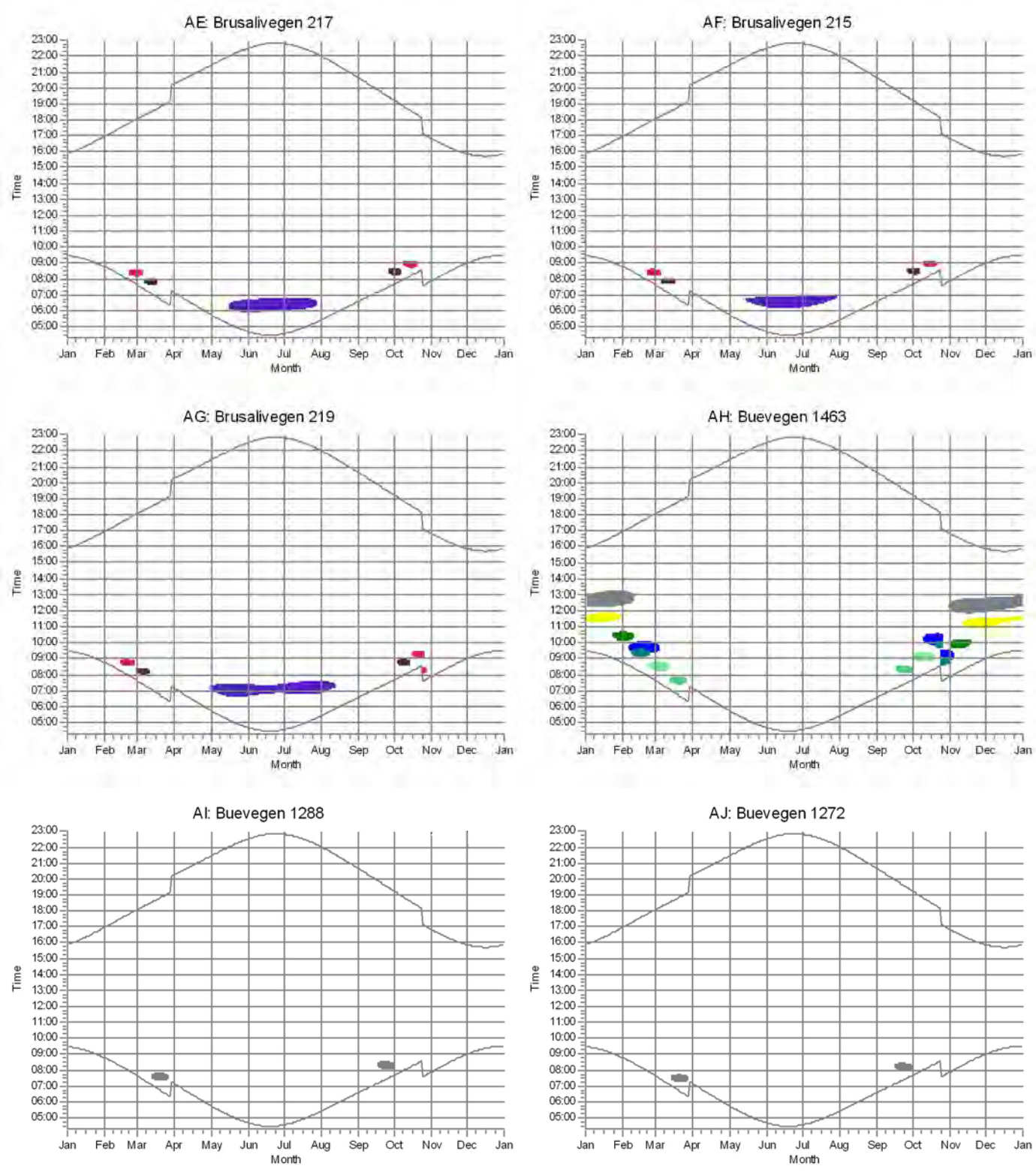


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

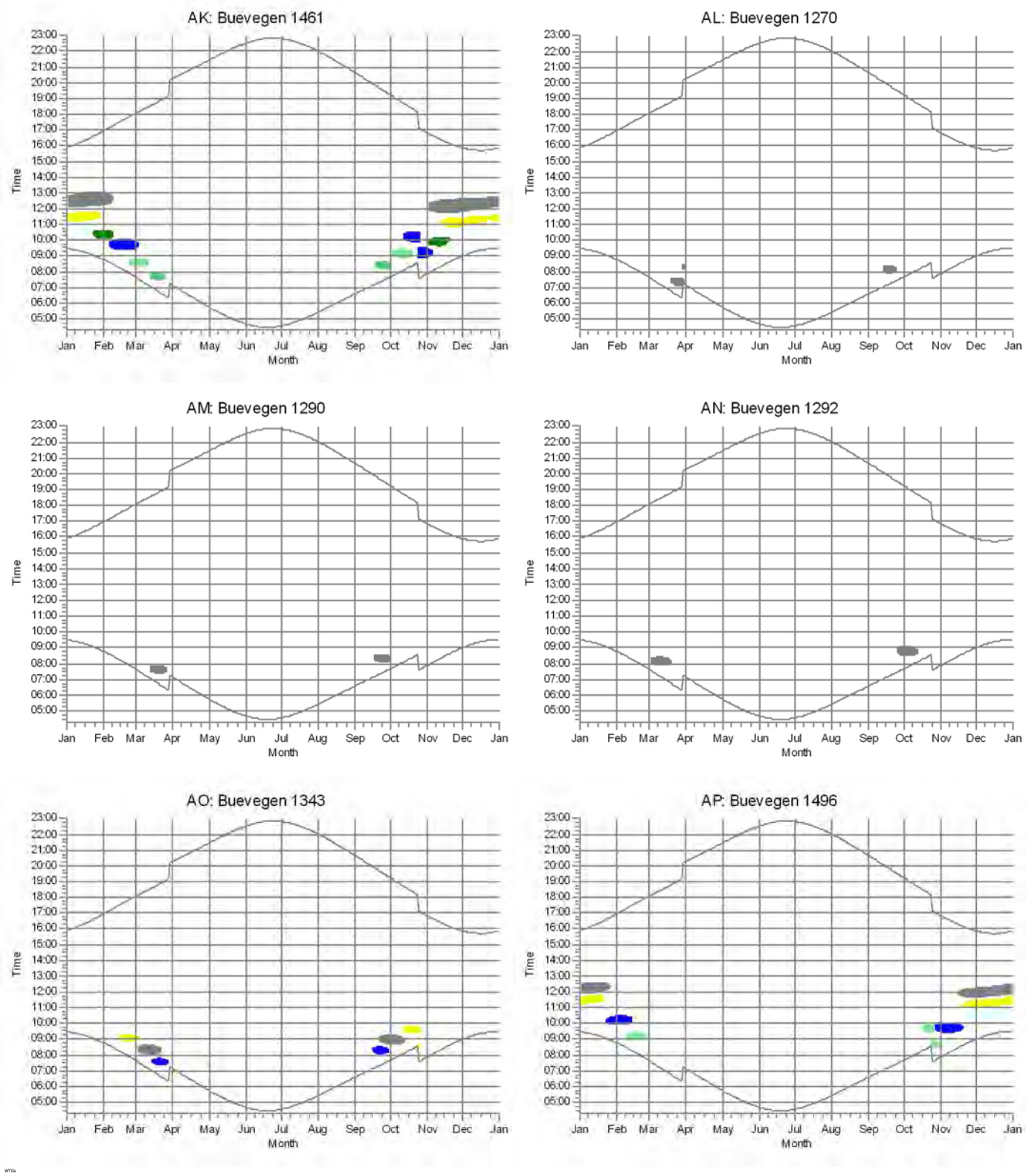


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere

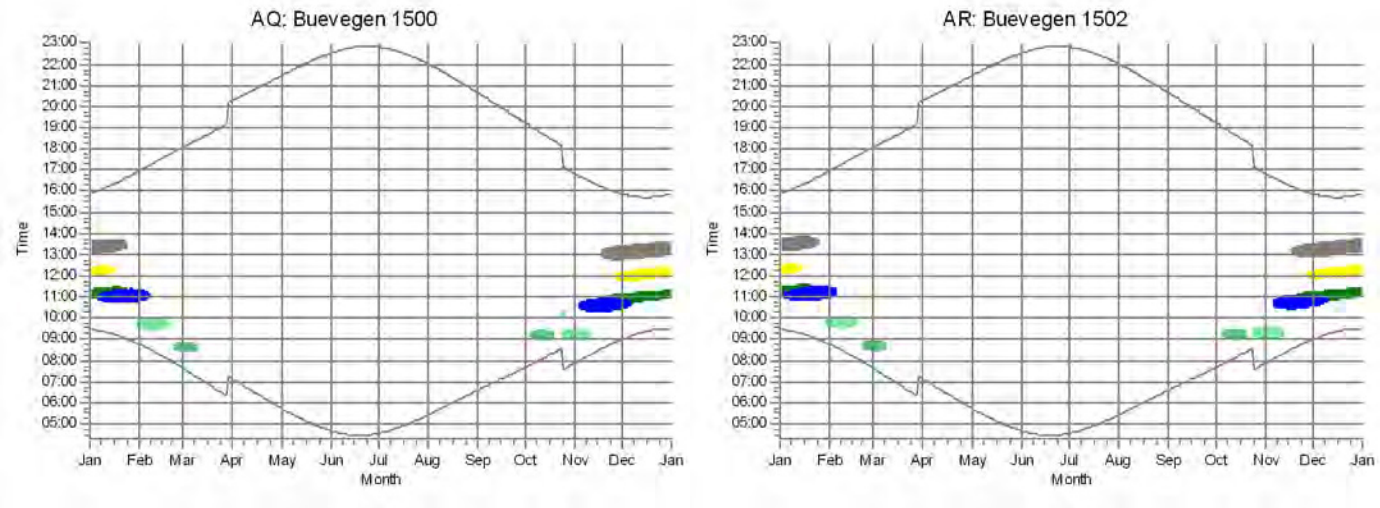


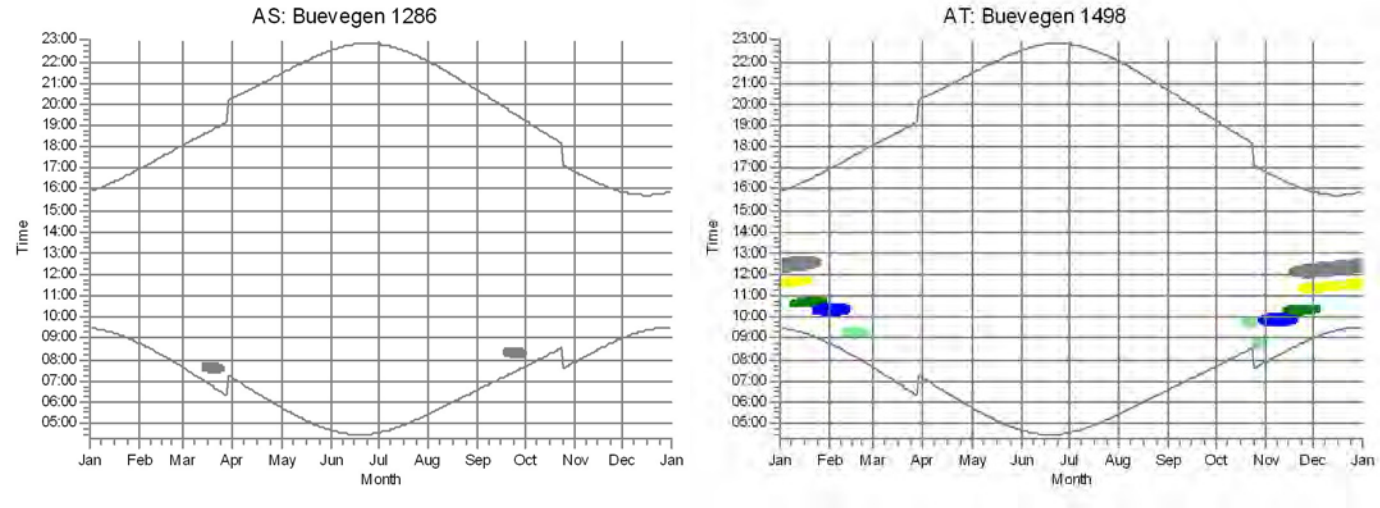
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Martine / martine.bjugg@multiconsult.no

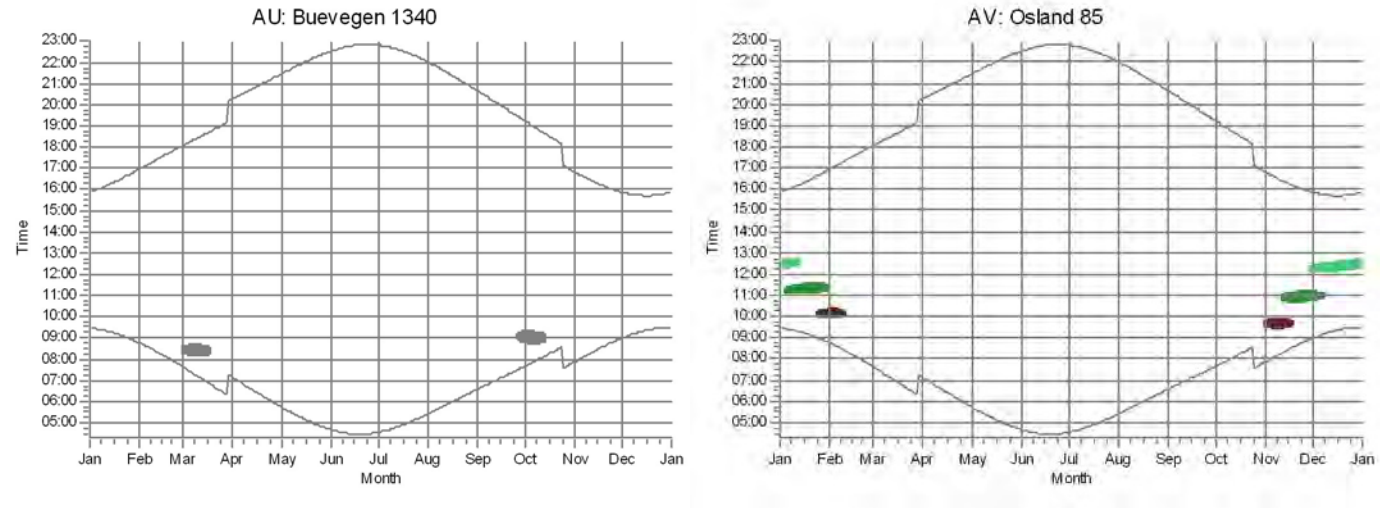
Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere





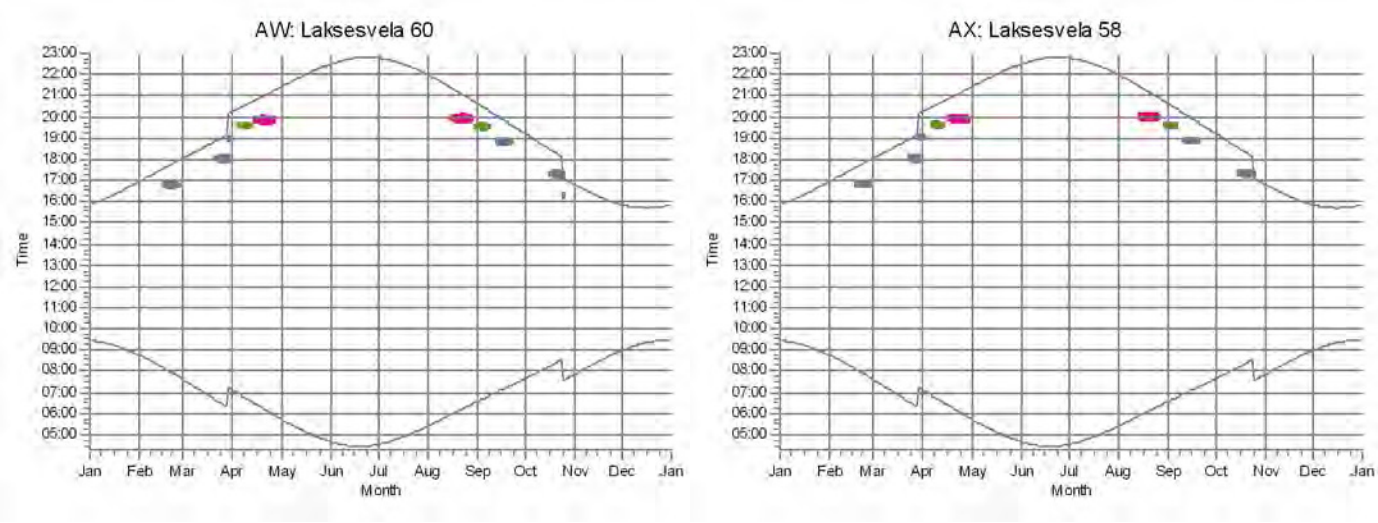


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Calculated:
19.11.2025 14:56/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - worst case - mottakere



Vedlegg 4.1

Tabell Moifjellet og Mellomstrand vindkraftverk

Med nærliggende – realistic case

Project:

Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (37)	07:35		09:10 (19)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (24)	18:05	24	09:34 (19)	20:17	21:26	22:30
2	09:27			08:43		11:24 (37)	07:33		09:10 (19)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (32)	18:07	25	09:35 (19)	20:19	21:28	22:32
3	09:27			08:41		12:08 (32)	07:30		09:10 (19)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (27)	18:09	24	09:34 (19)	20:21	21:30	22:34
4	09:26			08:39		12:07 (32)	07:27		09:10 (19)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (27)	18:12	24	09:34 (19)	20:24	21:33	22:35
5	09:26			08:37		12:06 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (27)	18:14	23	09:33 (19)	20:26	21:35	22:37
6	09:25			08:34		12:06 (32)	07:21		08:24 (21)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (27)	18:17	28	09:32 (19)	20:28	21:37	22:38
7	09:24			08:32		12:05 (32)	07:19		08:21 (21)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (27)	18:19	32	09:30 (19)	20:30	21:40	22:39
8	09:24			08:30		12:05 (32)	07:16		08:19 (21)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (27)	18:21	32	09:28 (19)	20:33	21:42	22:40
9	09:23			08:27		12:04 (32)	07:13		08:18 (21)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (27)	18:24	29	09:26 (19)	20:35	21:44	22:42
10	09:22			08:25		12:04 (32)	07:10		08:17 (21)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (28)	18:26	18	08:35 (21)	20:37	21:46	22:43
11	09:21			08:23		12:04 (32)	07:07		08:17 (21)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (28)	18:28	18	08:35 (21)	20:40	21:49	22:44
12	09:20			08:20		12:04 (32)	07:04		08:17 (21)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (28)	18:31	19	08:36 (21)	20:42	21:51	22:45
13	09:18			08:18		12:03 (32)	07:01		08:17 (21)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (28)	18:33	18	08:35 (21)	20:44	21:53	22:46
14	09:17			08:15		12:04 (32)	06:59		08:17 (21)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (28)	18:35	17	08:34 (21)	20:47	21:55	22:47
15	09:16			08:13		12:04 (32)	06:56		08:18 (21)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (28)	18:38	15	08:33 (21)	20:49	21:58	22:47
16	09:15			08:10		12:03 (32)	06:53		08:19 (21)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (28)	18:40	12	08:31 (21)	20:51	22:00	22:48
17	09:13			08:07		12:03 (32)	06:50		08:22 (21)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (28)	18:42	5	08:27 (21)	20:53	22:02	22:49
18	09:12			08:05		12:04 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (27)	18:49			21:00	22:08	22:50
21	09:07		11:29 (37)	07:57		12:05 (32)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (24)	17:45	71	14:56 (27)	18:51			21:03	22:10	22:50
22	09:05		11:28 (37)	07:54		12:06 (32)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (24)	17:48	66	14:55 (27)	18:54			21:05	22:12	22:50
23	09:03		11:29 (37)	07:52		09:20 (19)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (24)	17:50	69	14:54 (27)	18:56			21:07	22:14	22:50
24	09:02		11:28 (37)	07:49		09:16 (19)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (24)	17:53	69	14:52 (27)	18:58			21:10	22:16	22:51
25	09:00		11:27 (37)	07:46		09:14 (19)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (24)	17:55	64	14:49 (27)	19:01			21:12	22:18	22:50
26	08:58		11:22 (37)	07:44		09:13 (19)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (24)	17:57	54	14:45 (27)	19:03			21:14	22:20	22:50
27	08:56		11:14 (37)	07:41		09:12 (19)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (24)	18:00	41	12:35 (32)	19:05			21:17	22:22	22:50
28	08:54		11:14 (37)	07:38		09:11 (19)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (24)	18:02	33	12:29 (32)	19:07			21:19	22:24	22:50
29	08:52		11:15 (37)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (24)				20:10			21:21	22:25	22:50
30	08:50		11:15 (37)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (24)				20:12			21:24	22:27	22:49
31	08:48		11:17 (37)				07:10				04:41	
	16:54	57	13:05 (24)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (21)	07:51		11:33 (32)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (21)	16:49	78	14:57 (28)	15:51
2	04:33		05:26		06:35			07:42		08:56 (21)	07:54		11:34 (32)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (21)	16:46	74	14:26 (27)	15:50
3	04:34		05:28		06:37			07:44		08:55 (21)	07:56		11:35 (32)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (21)	16:44	71	14:25 (27)	15:49
4	04:35		05:31		06:40			07:46		08:55 (21)	07:59		11:35 (32)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (19)	16:41	69	14:24 (27)	15:48
5	04:36		05:33		06:42			07:48		08:56 (21)	08:01		11:36 (32)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (19)	16:39	64	14:23 (27)	15:47
6	04:37		05:35		06:44			07:51		08:57 (21)	08:03		11:37 (32)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (19)	16:37	61	14:22 (27)	15:46
7	04:39		05:37		06:46			07:53		08:58 (21)	08:06		11:37 (32)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (19)	16:34	53	14:17 (27)	15:45
8	04:40		05:39		06:49			07:55		09:03 (21)	08:08		11:39 (32)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (19)	16:32	42	14:11 (27)	15:45
9	04:41		05:42		06:51			07:57		09:45 (19)	08:11		10:53 (37)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (19)	16:30	37	12:12 (32)	15:44
10	04:43		05:44		06:53			08:00		09:45 (19)	08:13		10:50 (37)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (19)	16:28	52	12:34 (24)	15:44
11	04:44		05:46		06:55			08:02		09:44 (19)	08:15		10:48 (37)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (19)	16:25	57	12:36 (24)	15:43
12	04:46		05:48		06:57			08:04		09:43 (19)	08:18		10:47 (37)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (19)	16:23	58	12:37 (24)	15:43
13	04:47		05:51		07:00			08:07		09:44 (19)	08:20		10:47 (37)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (19)	16:21	57	12:39 (24)	15:42
14	04:49		05:53		07:02			08:09		09:44 (19)	08:22		10:46 (37)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (32)	16:19	52	12:39 (24)	15:42
15	04:51		05:55		07:04			08:11		09:45 (19)	08:25		10:47 (37)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (32)	16:17	43	12:40 (24)	15:42
16	04:52		05:57		07:06			08:13		09:45 (19)	08:27		10:55 (37)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (27)	16:15	37	12:41 (24)	15:42
17	04:54		06:00		07:08			08:16		09:47 (19)	08:29		11:00 (37)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (27)	16:13	33	12:41 (24)	15:42
18	04:56		06:02		07:11			08:18		09:48 (19)	08:32		11:02 (37)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (27)	16:11	33	12:42 (24)	15:42
19	04:58		06:04		07:13			08:20		09:52 (19)	08:34		11:04 (37)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (27)	16:09	21	12:43 (24)	15:42
20	05:00		06:06		07:15			08:23		12:37 (32)	08:36		11:03 (37)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (27)	16:08	22	12:42 (24)	15:43
21	05:01		06:08		07:17			08:25		12:36 (32)	08:39		11:04 (37)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (27)	16:06	8	12:43 (24)	15:43
22	05:03		06:11		07:19			08:27		12:35 (32)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (27)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (32)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (27)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (32)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (27)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (32)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (28)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (32)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (28)	15:58			15:46
27	05:13		06:22		07:30		09:02 (21)	07:39		11:33 (32)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (21)	17:01	97	15:16 (28)	15:56			15:47
28	05:16		06:24		07:33		09:00 (21)	07:42		11:33 (32)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (21)	16:59	101	15:18 (28)	15:55			15:48
29	05:18		06:26		07:35		08:58 (21)	07:44		11:33 (32)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (21)	16:56	102	15:18 (28)	15:54			15:49
30	05:20		06:29		07:37		08:56 (21)	07:47		11:33 (32)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (21)	16:54	99	15:15 (28)	15:52			15:50
31	05:22		06:31					07:49		11:34 (32)				09:28
	22:03		20:42					16:51	90	15:09 (28)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (37)	07:35		09:09 (19)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (27)	18:05	23	09:32 (19)	20:17	21:26	22:30
2	09:27			08:43		12:00 (32)	07:33		09:09 (19)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (27)	18:07	24	09:33 (19)	20:19	21:28	22:32
3	09:27			08:41		11:58 (32)	07:30		09:09 (19)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (27)	18:09	24	09:33 (19)	20:21	21:30	22:34
4	09:26			08:39		11:58 (32)	07:27		09:09 (19)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (27)	18:12	23	09:32 (19)	20:24	21:33	22:35
5	09:26			08:37		11:57 (32)	07:24		09:10 (19)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (27)	18:14	21	09:31 (19)	20:26	21:35	22:37
6	09:25			08:34		11:57 (32)	07:21		09:10 (19)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (27)	18:17	20	09:30 (19)	20:28	21:37	22:38
7	09:24			08:32		11:56 (32)	07:19		09:11 (19)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (27)	18:19	17	09:28 (19)	20:30	21:40	22:39
8	09:24			08:30		11:56 (32)	07:16		09:13 (19)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (28)	18:21	12	09:25 (19)	20:33	21:42	22:40
9	09:23			08:27		11:56 (32)	07:13		09:16 (19)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (28)	18:24	5	09:21 (19)	20:35	21:44	22:42
10	09:22			08:25		11:55 (32)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (28)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (32)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (28)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (32)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (28)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (28)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (27)	18:45			20:56	22:04	22:49
19	09:10		12:54 (24)	08:02		11:57 (32)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (24)	17:40	70	14:48 (27)	18:47			20:58	22:06	22:50
20	09:08		11:12 (37)	08:00		11:57 (32)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (24)	17:43	68	14:47 (27)	18:49			21:00	22:08	22:50
21	09:07		11:11 (37)	07:57		11:58 (32)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (24)	17:45	64	14:46 (27)	18:51			21:03	22:10	22:50
22	09:05		11:11 (37)	07:54		11:59 (32)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (24)	17:48	58	14:44 (27)	18:54			21:05	22:12	22:50
23	09:03		11:11 (37)	07:52		09:17 (19)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (24)	17:50	62	14:43 (27)	18:56			21:07	22:14	22:50
24	09:02		11:10 (37)	07:49		09:14 (19)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (24)	17:53	57	14:39 (27)	18:58			21:10	22:16	22:51
25	09:00		11:08 (37)	07:46		09:13 (19)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (24)	17:55	42	12:28 (32)	19:01			21:12	22:18	22:50
26	08:58		11:09 (37)	07:44		09:11 (19)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (24)	17:57	38	12:24 (32)	19:03			21:14	22:20	22:50
27	08:56		11:09 (37)	07:41		09:10 (19)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (24)	18:00	22	09:32 (19)	19:05			21:17	22:22	22:50
28	08:54		11:10 (37)	07:38		09:09 (19)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (24)	18:02	23	09:32 (19)	19:07			21:19	22:24	22:50
29	08:52		11:12 (37)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (24)				20:10			21:21	22:25	22:50
30	08:50		11:12 (37)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (24)				20:12			21:24	22:27	22:49
31	08:48		11:14 (37)				07:10				04:41	
	16:54	56	14:29 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (32)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (28)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (32)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (28)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (32)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (28)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (32)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (27)	15:48
5	04:36	05:33	06:42	07:48		09:51 (19)	08:01		11:27 (32)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (19)	16:39	70	14:17 (27)	15:47
6	04:37	05:35	06:44	07:51		09:48 (19)	08:03		11:28 (32)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (19)	16:37	65	14:16 (27)	15:46
7	04:39	05:37	06:46	07:53		09:46 (19)	08:06		11:28 (32)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (19)	16:34	62	14:14 (27)	15:45
8	04:40	05:39	06:49	07:55		09:45 (19)	08:08		11:29 (32)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (19)	16:32	57	14:13 (27)	15:45
9	04:41	05:42	06:51	07:57		09:44 (19)	08:11		11:30 (32)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (19)	16:30	53	14:12 (27)	15:44
10	04:43	05:44	06:53	08:00		09:44 (19)	08:13		10:47 (37)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (19)	16:28	58	14:10 (27)	15:44
11	04:44	05:46	06:55	08:02		09:43 (19)	08:15		10:45 (37)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (19)	16:25	55	13:59 (27)	15:43
12	04:46	05:48	06:57	08:04		09:42 (19)	08:18		10:44 (37)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (19)	16:23	57	12:31 (24)	15:43
13	04:47	05:51	07:00	08:07		09:43 (19)	08:20		10:43 (37)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (19)	16:21	59	12:32 (24)	15:42
14	04:49	05:53	07:02	08:09		09:42 (19)	08:22		10:42 (37)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (19)	16:19	58	12:33 (24)	15:42
15	04:51	05:55	07:04	08:11		09:43 (19)	08:25		10:42 (37)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (32)	16:17	53	12:34 (24)	15:42
16	04:52	05:57	07:06	08:13		09:44 (19)	08:27		10:42 (37)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (32)	16:15	45	12:35 (24)	15:42
17	04:54	06:00	07:08	08:16		09:45 (19)	08:29		10:41 (37)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (27)	16:13	47	12:35 (24)	15:42
18	04:56	06:02	07:11	08:18		09:46 (19)	08:32		10:44 (37)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (27)	16:11	46	12:36 (24)	15:42
19	04:58	06:04	07:13	08:20		09:49 (19)	08:34		10:46 (37)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (27)	16:09	45	12:37 (24)	15:42
20	05:00	06:06	07:15	08:23		12:30 (32)	08:36		10:46 (37)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (27)	16:08	45	12:37 (24)	15:43
21	05:01	06:08	07:17	08:25		12:29 (32)	08:39		10:46 (37)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (27)	16:06	36	12:37 (24)	15:43
22	05:03	06:11	07:19	08:27		12:27 (32)	08:41		10:48 (37)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (27)	16:04	30	12:38 (24)	15:43
23	05:05	06:13	07:22	08:30		12:27 (32)	08:43		12:30 (24)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (27)	16:02	5	12:35 (24)	15:44
24	05:07	06:15	07:24	08:32		12:26 (32)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (27)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (32)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (27)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (32)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (32)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (28)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (32)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (28)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (32)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (28)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (32)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (28)	15:52			15:50
31	05:22	06:31		07:49		11:25 (32)				09:28
	22:03	20:42		16:51	101	15:13 (28)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (37)	07:35		08:50 (19)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (27)	18:05	39	11:29 (32)	20:17	21:26	22:30
2	09:27			08:43		10:44 (37)	07:33		08:50 (19)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (27)	18:07	31	11:25 (32)	20:19	21:28	22:32
3	09:27			08:41		10:46 (37)	07:30		08:49 (19)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (27)	18:09	21	09:10 (19)	20:21	21:31	22:34
4	09:26			08:39		10:47 (37)	07:27		08:48 (19)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (28)	18:12	22	09:10 (19)	20:24	21:33	22:35
5	09:26			08:37		10:50 (37)	07:24		08:48 (19)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (28)	18:14	21	09:09 (19)	20:26	21:35	22:37
6	09:25			08:34		11:05 (32)	07:21		08:48 (19)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (28)	18:17	21	09:09 (19)	20:28	21:37	22:38
7	09:24			08:32		11:03 (32)	07:19		08:48 (19)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (28)	18:19	20	09:08 (19)	20:30	21:40	22:39
8	09:24			08:30		11:03 (32)	07:16		08:48 (19)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (28)	18:21	19	09:07 (19)	20:33	21:42	22:40
9	09:23			08:27		11:02 (32)	07:13		08:48 (19)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (26)	18:24	18	09:06 (19)	20:35	21:44	22:42
10	09:22			08:25		11:01 (32)	07:10		08:49 (19)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (26)	18:26	15	09:04 (19)	20:37	21:46	22:43
11	09:21			08:23		11:01 (32)	07:07		08:51 (19)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (28)	18:28	10	09:01 (19)	20:40	21:49	22:44
12	09:20			08:20		11:00 (32)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (28)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (32)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (28)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (32)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (27)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (32)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (27)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (32)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (27)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (32)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (27)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (32)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (27)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (32)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (27)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (32)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (27)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (32)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (27)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (32)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (27)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (32)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (27)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (32)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (27)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (32)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (32)	19:01			21:12	22:18	22:50
26	08:58		12:05 (24)	07:44		08:58 (19)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (24)	17:57	36	11:36 (32)	19:03			21:14	22:20	22:50
27	08:56		12:05 (24)	07:41		08:54 (19)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (27)	18:00	41	11:34 (32)	19:05			21:17	22:22	22:50
28	08:54		11:00 (37)	07:38		08:52 (19)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (27)	18:02	41	11:32 (32)	19:08			21:19	22:24	22:50
29	08:52		10:56 (37)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (27)				20:10			21:21	22:25	22:50
30	08:50		10:50 (37)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (27)				20:12			21:24	22:27	22:49
31	08:48		10:44 (37)				07:10				04:41	
	16:54	62	14:05 (27)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (32)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (26)	15:51
2	04:33		05:26		06:35		07:42		09:32 (19)	07:54		10:32 (32)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (19)	16:46	110	15:25 (26)	15:50
3	04:34		05:28		06:37		07:44		09:28 (19)	07:56		10:33 (32)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (19)	16:44	97	14:53 (28)	15:49
4	04:35		05:31		06:40		07:46		09:26 (19)	07:59		10:33 (32)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (19)	16:41	89	14:46 (28)	15:48
5	04:36		05:33		06:42		07:48		09:25 (19)	08:01		10:35 (32)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (19)	16:39	81	14:41 (28)	15:47
6	04:37		05:35		06:44		07:51		09:24 (19)	08:03		10:20 (37)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (19)	16:37	77	14:35 (28)	15:46
7	04:39		05:37		06:46		07:53		09:23 (19)	08:06		10:16 (37)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (19)	16:34	77	14:32 (28)	15:45
8	04:40		05:39		06:49		07:55		09:23 (19)	08:08		10:15 (37)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (19)	16:32	71	13:39 (27)	15:45
9	04:41		05:42		06:51		07:57		09:22 (19)	08:11		10:15 (37)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (19)	16:30	72	13:39 (27)	15:44
10	04:43		05:44		06:53		08:00		09:23 (19)	08:13		10:14 (37)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (19)	16:28	71	13:38 (27)	15:44
11	04:44		05:46		06:55		08:02		09:23 (19)	08:15		10:15 (37)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (19)	16:25	61	13:36 (27)	15:43
12	04:46		05:48		06:57		08:04		09:23 (19)	08:18		10:24 (37)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (32)	16:23	52	13:35 (27)	15:43
13	04:47		05:51		07:00		08:07		09:24 (19)	08:20		10:28 (37)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (32)	16:21	47	13:33 (27)	15:42
14	04:49		05:53		07:02		08:09		09:25 (19)	08:22		10:32 (37)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (32)	16:19	39	13:30 (27)	15:42
15	04:51		05:55		07:04		08:11		09:28 (19)	08:25		11:38 (24)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (32)	16:17	19	13:26 (27)	15:42
16	04:52		05:57		07:06		08:13		11:35 (32)	08:27		11:38 (24)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (32)	16:15	4	11:42 (24)	15:42
17	04:54		06:00		07:08		08:16		11:34 (32)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (32)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (32)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (27)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (32)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (27)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (32)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (27)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (32)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (27)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (32)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (27)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (32)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (27)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (32)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (27)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (32)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (27)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (32)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (27)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (32)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (27)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (32)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (28)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (32)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (28)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (32)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (28)	15:52			15:50
31	05:22		06:31				07:49		10:31 (32)				09:28
	22:03		20:42				16:51	99	14:52 (28)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46		11:39 (32)	07:35	09:25 (19)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (28)	18:05	9 09:34 (19)	20:17	21:26	22:31
2	09:27		08:43		11:39 (32)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (28)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (32)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (28)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (32)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (28)	18:12		20:24	21:33	22:35
5	09:26	12:20 (24)	08:37		11:39 (32)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (24)	17:06	80	15:09 (28)	18:14		20:26	21:35	22:37
6	09:25	12:19 (24)	08:34		11:40 (32)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (24)	17:08	74	15:08 (28)	18:17		20:28	21:37	22:38
7	09:24	12:17 (24)	08:32		11:40 (32)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (24)	17:11	62	14:11 (27)	18:19		20:30	21:40	22:39
8	09:24	12:17 (24)	08:30		11:41 (32)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (24)	17:13	61	14:11 (27)	18:21		20:33	21:42	22:40
9	09:23	12:18 (24)	08:27		11:42 (32)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (24)	17:16	57	14:10 (27)	18:24		20:35	21:44	22:42
10	09:22	11:06 (37)	08:25		11:42 (32)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (24)	17:18	54	14:09 (27)	18:26		20:37	21:46	22:43
11	09:21	11:02 (37)	08:23		11:44 (32)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (24)	17:21	48	14:08 (27)	18:28		20:40	21:49	22:44
12	09:20	11:01 (37)	08:20		11:45 (32)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (24)	17:23	42	14:06 (27)	18:31		20:42	21:51	22:45
13	09:18	11:02 (37)	08:18		11:46 (32)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (24)	17:26	32	14:02 (27)	18:33		20:44	21:53	22:46
14	09:17	11:02 (37)	08:15		11:49 (32)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (24)	17:28	18	12:07 (32)	18:35		20:47	21:55	22:47
15	09:16	11:02 (37)	08:13		11:52 (32)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (24)	17:31	12	12:04 (32)	18:38		20:49	21:58	22:47
16	09:15	11:02 (37)	08:10		09:29 (19)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (24)	17:33	5	09:34 (19)	18:40		20:51	22:00	22:48
17	09:13	11:02 (37)	08:07		09:25 (19)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (24)	17:36	12	09:37 (19)	18:42		20:53	22:02	22:49
18	09:12	11:03 (37)	08:05		09:24 (19)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (27)	17:38	16	09:40 (19)	18:45		20:56	22:04	22:49
19	09:10	11:03 (37)	08:02		09:23 (19)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (27)	17:40	17	09:40 (19)	18:47		20:58	22:06	22:50
20	09:08	11:04 (37)	08:00		09:22 (19)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (27)	17:43	19	09:41 (19)	18:49		21:00	22:08	22:50
21	09:07	11:04 (37)	07:57		09:21 (19)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (27)	17:45	20	09:41 (19)	18:51		21:03	22:10	22:50
22	09:05	11:05 (37)	07:54		09:20 (19)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (27)	17:48	21	09:41 (19)	18:54		21:05	22:12	22:50
23	09:03	11:05 (37)	07:52		09:21 (19)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (27)	17:50	21	09:42 (19)	18:56		21:07	22:14	22:51
24	09:02	11:06 (37)	07:49		09:21 (19)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (27)	17:53	20	09:41 (19)	18:58		21:10	22:16	22:51
25	09:00	11:07 (37)	07:46		09:21 (19)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (28)	17:55	20	09:41 (19)	19:01		21:12	22:18	22:51
26	08:58	11:09 (37)	07:44		09:21 (19)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (28)	17:57	19	09:40 (19)	19:03		21:14	22:20	22:50
27	08:56	11:10 (37)	07:41		09:22 (19)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (28)	18:00	16	09:38 (19)	19:05		21:17	22:22	22:50
28	08:54	11:13 (37)	07:38		09:23 (19)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (28)	18:02	14	09:37 (19)	19:08		21:19	22:24	22:50
29	08:52	11:40 (32)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (28)				20:10		21:21	22:25	22:50
30	08:50	11:39 (32)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (28)				20:12		21:24	22:27	22:49
31	08:48	11:39 (32)				07:10			04:41	
	16:54	88 15:13 (28)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				
Sun reduction		0,50		0,50		0,50				
Oper. time red.		0,80		0,80		0,80				
Wind dir. red.		0,62		0,63		0,73				
Total reduction		0,25		0,25		0,29				
Total, real		371		276		3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (32)	09:00		10:44 (37)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (27)	15:51	31	12:23 (24)
2	04:33	05:26	06:35	07:42			07:54		11:11 (32)	09:02		10:48 (37)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (27)	15:50	27	12:23 (24)
3	04:34	05:28	06:37	07:44			07:56		11:11 (32)	09:03		12:01 (24)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (27)	15:49	17	12:18 (24)
4	04:35	05:31	06:40	07:46			07:59		11:10 (32)	09:05		12:01 (24)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (27)	15:48	13	12:14 (24)
5	04:36	05:33	06:42	07:48			08:01		11:10 (32)	09:07		12:02 (24)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (28)	15:47	11	12:13 (24)
6	04:37	05:35	06:44	07:51			08:03		11:10 (32)	09:09		12:05 (24)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (28)	15:46	5	12:10 (24)
7	04:39	05:37	06:46	07:53			08:06		11:09 (32)	09:10		12:07 (24)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (28)	15:45	2	12:09 (24)
8	04:40	05:39	06:49	07:55			08:08		11:09 (32)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (28)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (28)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (28)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (32)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (28)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (19)	08:18		11:11 (32)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (19)	16:23	88	14:45 (28)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (19)	08:20		11:12 (32)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (19)	16:21	86	14:45 (28)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (19)	08:22		10:45 (37)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (19)	16:19	89	14:45 (28)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (19)	08:25		10:42 (37)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (19)	16:17	87	14:45 (28)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (19)	08:27		10:41 (37)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (19)	16:15	81	14:30 (28)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (19)	08:30		10:41 (37)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (19)	16:13	83	14:25 (28)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (19)	08:32		10:40 (37)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (19)	16:11	84	13:41 (27)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (19)	08:34		10:40 (37)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (19)	16:09	83	13:40 (27)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (19)	08:36		10:39 (37)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (19)	16:08	82	13:39 (27)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (19)	08:39		10:39 (37)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (19)	16:06	80	13:38 (27)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (19)	08:41		10:40 (37)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (19)	16:04	75	13:37 (27)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (19)	08:43		10:39 (37)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (19)	16:02	69	13:35 (27)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (19)	08:45		10:40 (37)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (19)	16:01	58	13:32 (27)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (19)	08:47		10:40 (37)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (19)	15:59	45	12:20 (24)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		10:41 (37)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (19)	15:58	43	12:21 (24)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (32)	08:52		10:41 (37)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (32)	15:56	43	12:21 (24)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (32)	08:54		10:42 (37)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (32)	15:55	42	12:22 (24)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (32)	08:56		10:42 (37)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (27)	15:54	42	12:22 (24)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (32)	08:58		10:42 (37)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (27)	15:52	40	12:22 (24)	15:50		
31	05:22	06:31		07:49		11:13 (32)				09:28		
	22:03	20:42		16:51	50	13:38 (27)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (37)	08:46		11:58 (32)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (37)	16:56	88	15:21 (28)	18:05	20:17	21:26	22:30
2	09:27		11:11 (37)	08:43		11:59 (32)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (37)	16:58	85	15:21 (28)	18:07	20:19	21:28	22:32
3	09:27		11:11 (37)	08:41		12:00 (32)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (24)	17:01	84	15:21 (28)	18:09	20:21	21:31	22:34
4	09:27		11:11 (37)	08:39		11:59 (32)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (24)	17:03	82	15:20 (28)	18:12	20:24	21:33	22:35
5	09:26		11:11 (37)	08:37		11:59 (32)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (24)	17:06	81	15:19 (28)	18:14	20:26	21:35	22:37
6	09:25		11:11 (37)	08:34		12:00 (32)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (24)	17:08	75	15:18 (28)	18:17	20:28	21:37	22:38
7	09:24		11:11 (37)	08:32		12:01 (32)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (24)	17:11	64	15:14 (28)	18:19	20:30	21:40	22:39
8	09:24		11:11 (37)	08:30		12:02 (32)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (24)	17:13	57	14:25 (27)	18:21	20:33	21:42	22:40
9	09:23		11:12 (37)	08:27		12:03 (32)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (24)	17:16	53	14:24 (27)	18:24	20:35	21:44	22:42
10	09:22		11:11 (37)	08:25		12:04 (32)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (24)	17:18	48	14:23 (27)	18:26	20:37	21:46	22:43
11	09:21		11:12 (37)	08:23		12:06 (32)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (24)	17:21	43	14:22 (27)	18:28	20:40	21:49	22:44
12	09:20		11:12 (37)	08:20		12:07 (32)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (24)	17:23	35	14:20 (27)	18:31	20:42	21:51	22:45
13	09:18		11:12 (37)	08:18		12:10 (32)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (24)	17:26	22	14:16 (27)	18:33	20:44	21:53	22:46
14	09:17		11:12 (37)	08:15		09:38 (19)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (24)	17:28	10	12:19 (32)	18:35	20:47	21:55	22:47
15	09:16		11:12 (37)	08:13		09:35 (19)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (24)	17:31	12	09:47 (19)	18:38	20:49	21:58	22:47
16	09:15		11:12 (37)	08:10		09:33 (19)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (24)	17:33	16	09:49 (19)	18:40	20:51	22:00	22:48
17	09:13		11:13 (37)	08:07		09:32 (19)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (24)	17:36	18	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:14 (37)	08:05		09:31 (19)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (24)	17:38	20	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:15 (37)	08:02		09:31 (19)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (24)	17:40	20	09:51 (19)	18:47	20:58	22:06	22:50
20	09:08		11:15 (37)	08:00		09:30 (19)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (27)	17:43	21	09:51 (19)	18:49	21:00	22:08	22:50
21	09:07		11:16 (37)	07:57		09:30 (19)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (27)	17:45	21	09:51 (19)	18:51	21:03	22:10	22:50
22	09:05		11:16 (37)	07:54		09:29 (19)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (27)	17:48	22	09:51 (19)	18:54	21:05	22:12	22:50
23	09:03		11:17 (37)	07:52		09:30 (19)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (27)	17:50	21	09:51 (19)	18:56	21:07	22:14	22:51
24	09:02		11:19 (37)	07:49		09:31 (19)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (27)	17:53	19	09:50 (19)	18:58	21:10	22:16	22:51
25	09:00		11:20 (37)	07:46		09:31 (19)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (27)	17:55	18	09:49 (19)	19:01	21:12	22:18	22:51
26	08:58		11:23 (37)	07:44		09:32 (19)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (28)	17:57	15	09:47 (19)	19:03	21:14	22:20	22:50
27	08:56		11:58 (32)	07:41		09:34 (19)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (28)	18:00	11	09:45 (19)	19:05	21:17	22:22	22:50
28	08:54		11:58 (32)	07:38		09:38 (19)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (28)	18:02	2	09:40 (19)	19:07	21:19	22:24	22:50
29	08:52		11:59 (32)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (28)				20:10	21:21	22:25	22:50
30	08:50		11:58 (32)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (28)				20:12	21:24	22:27	22:49
31	08:48		11:58 (32)				07:10		04:41	
	16:54	88	15:22 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (32)	09:00		10:54 (37)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (27)	15:51	43	12:35 (24)
2	04:33		05:26		06:35		07:42			07:54		11:32 (32)	09:02		10:54 (37)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (27)	15:50	42	12:35 (24)
3	04:34		05:28		06:37		07:44			07:56		11:32 (32)	09:03		10:55 (37)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (27)	15:49	40	12:35 (24)
4	04:35		05:31		06:40		07:46			07:59		11:30 (32)	09:05		10:56 (37)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (28)	15:48	39	12:35 (24)
5	04:36		05:33		06:42		07:48			08:01		11:30 (32)	09:07		10:56 (37)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (28)	15:47	39	12:36 (24)
6	04:37		05:35		06:44		07:51			08:03		11:30 (32)	09:09		10:57 (37)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (28)	15:46	30	12:36 (24)
7	04:39		05:37		06:46		07:53			08:06		11:29 (32)	09:10		10:58 (37)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (28)	15:45	29	12:36 (24)
8	04:40		05:39		06:49		07:55			08:08		11:29 (32)	09:12		10:59 (37)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (28)	15:45	15	12:33 (24)
9	04:41		05:42		06:51		07:57			08:11		11:29 (32)	09:13		11:00 (37)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (28)	15:44	12	12:34 (24)
10	04:43		05:44		06:53		08:00			08:13		11:30 (32)	09:15		11:00 (37)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (28)	15:43	4	12:31 (24)
11	04:44		05:46		06:55		08:02			08:15		11:29 (32)	09:16		11:02 (37)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (28)	15:43	2	11:04 (37)
12	04:46		05:48		06:57		08:04			08:18		11:30 (32)	09:18		11:02 (37)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (28)	15:43	2	11:04 (37)
13	04:47		05:51		07:00		08:07			08:20		11:30 (32)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (28)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (19)	08:22		11:30 (32)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (19)	16:19	74	14:42 (28)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (19)	08:25		11:31 (32)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (19)	16:17	68	14:38 (28)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (19)	08:27		10:56 (37)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (19)	16:15	69	14:36 (28)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (19)	08:30		10:54 (37)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (19)	16:13	73	13:55 (27)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (19)	08:32		10:52 (37)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (19)	16:11	78	13:54 (27)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (19)	08:34		10:52 (37)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (19)	16:09	81	13:54 (27)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (19)	08:36		10:51 (37)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (19)	16:08	80	13:52 (27)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (19)	08:39		10:51 (37)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (19)	16:06	78	13:51 (27)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (19)	08:41		10:51 (37)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (19)	16:04	75	13:50 (27)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (19)	08:43		10:51 (37)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (19)	16:02	64	12:31 (24)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (19)	08:45		10:51 (37)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (19)	16:01	63	12:32 (24)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (19)	08:47		10:51 (37)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (19)	15:59	60	12:32 (24)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (19)	08:50		10:52 (37)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (19)	15:58	56	12:33 (24)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (19)	08:52		10:51 (37)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (19)	15:56	53	12:33 (24)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (19)	08:54		10:52 (37)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (32)	15:55	44	12:34 (24)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (32)	08:56		10:53 (37)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (27)	15:54	43	12:34 (24)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (32)	08:58		10:53 (37)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (27)	15:52	43	12:34 (24)	15:50		
31	05:22		06:31				07:49		11:35 (32)				09:28		11:11 (37)
	22:03		20:42				16:51	44	13:52 (27)				15:51	1	11:12 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (37)	08:46		12:23 (32)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (37)	16:56	82	15:30 (28)	18:05	20:17	21:26	22:30
2	09:27		11:23 (37)	08:43		12:24 (32)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (37)	16:58	86	15:34 (28)	18:07	20:19	21:28	22:32
3	09:27		11:23 (37)	08:41		12:25 (32)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (37)	17:01	84	15:34 (28)	18:09	20:21	21:31	22:34
4	09:26		11:23 (37)	08:39		12:25 (32)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (24)	17:03	85	15:34 (28)	18:12	20:24	21:33	22:35
5	09:26		11:23 (37)	08:37		12:25 (32)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (24)	17:06	82	15:33 (28)	18:14	20:26	21:35	22:37
6	09:25		11:24 (37)	08:34		12:26 (32)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (24)	17:08	79	15:33 (28)	18:17	20:28	21:37	22:38
7	09:24		11:24 (37)	08:32		12:26 (32)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (24)	17:11	74	15:31 (28)	18:19	20:30	21:40	22:39
8	09:24		11:24 (37)	08:30		12:28 (32)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (24)	17:13	68	15:30 (28)	18:21	20:33	21:42	22:40
9	09:23		11:24 (37)	08:27		12:28 (32)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (24)	17:16	60	15:26 (28)	18:24	20:35	21:44	22:42
10	09:22		11:25 (37)	08:25		12:29 (32)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (24)	17:18	51	14:44 (27)	18:26	20:37	21:46	22:43
11	09:21		11:25 (37)	08:23		12:32 (32)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (24)	17:21	45	14:43 (27)	18:28	20:40	21:49	22:44
12	09:20		11:25 (37)	08:20		09:49 (19)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (24)	17:23	45	14:42 (27)	18:31	20:42	21:51	22:45
13	09:18		11:26 (37)	08:18		09:45 (19)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (24)	17:26	43	14:40 (27)	18:33	20:44	21:53	22:46
14	09:17		11:26 (37)	08:15		09:44 (19)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (24)	17:28	27	14:38 (27)	18:35	20:47	21:55	22:47
15	09:16		11:26 (37)	08:13		09:43 (19)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (24)	17:31	18	10:01 (19)	18:38	20:49	21:58	22:47
16	09:15		11:27 (37)	08:10		09:42 (19)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (24)	17:33	20	10:02 (19)	18:40	20:51	22:00	22:48
17	09:13		11:27 (37)	08:07		09:41 (19)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (24)	17:35	21	10:02 (19)	18:42	20:53	22:02	22:49
18	09:12		11:28 (37)	08:05		09:41 (19)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (24)	17:38	22	10:03 (19)	18:45	20:56	22:04	22:49
19	09:10		11:29 (37)	08:02		09:40 (19)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (24)	17:40	23	10:03 (19)	18:47	20:58	22:06	22:50
20	09:08		11:30 (37)	08:00		09:40 (19)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (24)	17:43	23	10:03 (19)	18:49	21:00	22:08	22:50
21	09:07		11:31 (37)	07:57		09:40 (19)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (24)	17:45	22	10:02 (19)	18:51	21:03	22:10	22:50
22	09:05		11:31 (37)	07:54		09:40 (19)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (24)	17:48	22	10:02 (19)	18:54	21:05	22:12	22:50
23	09:03		11:33 (37)	07:52		09:42 (19)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (27)	17:50	20	10:02 (19)	18:56	21:07	22:14	22:50
24	09:02		11:35 (37)	07:49		09:42 (19)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (27)	17:53	18	10:00 (19)	18:58	21:10	22:16	22:51
25	09:00		11:39 (37)	07:46		09:43 (19)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (27)	17:55	16	09:59 (19)	19:01	21:12	22:18	22:50
26	08:58		12:24 (32)	07:44		09:45 (19)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (27)	17:57	11	09:56 (19)	19:03	21:14	22:20	22:50
27	08:56		12:23 (32)	07:41		09:49 (19)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (27)	18:00	2	09:51 (19)	19:05	21:17	22:22	22:50
28	08:54		12:23 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (28)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (32)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (28)				20:10	21:21	22:25	22:50
30	08:50		12:23 (32)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (28)				20:12	21:24	22:27	22:49
31	08:48		12:24 (32)				07:10		04:41	
	16:53	77	15:26 (28)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,62			0,62					
Total reduction		0,25			0,25					
Total, real		386			284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (32)	09:00		11:07 (37)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (27)	15:51	43	12:51 (24)
2	04:33		05:26		06:35		07:42			07:54		11:58 (32)	09:02		11:08 (37)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (28)	15:50	42	12:51 (24)
3	04:34		05:28		06:37		07:44			07:56		11:57 (32)	09:03		11:08 (37)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (28)	15:49	42	12:51 (24)
4	04:35		05:31		06:40		07:46			07:59		11:56 (32)	09:05		11:09 (37)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (28)	15:48	41	12:52 (24)
5	04:36		05:33		06:42		07:48			08:01		11:55 (32)	09:07		11:09 (37)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (28)	15:47	35	12:52 (24)
6	04:37		05:35		06:44		07:51			08:03		11:55 (32)	09:09		11:10 (37)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (28)	15:46	31	12:52 (24)
7	04:38		05:37		06:46		07:53			08:06		11:54 (32)	09:10		11:11 (37)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (28)	15:45	24	12:40 (24)
8	04:40		05:39		06:49		07:55			08:08		11:54 (32)	09:12		11:11 (37)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (28)	15:45	24	12:41 (24)
9	04:41		05:42		06:51		07:57			08:11		11:55 (32)	09:13		11:12 (37)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (28)	15:44	20	12:37 (24)
10	04:43		05:44		06:53		08:00			08:13		11:55 (32)	09:15		11:12 (37)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (28)	15:43	17	11:29 (37)
11	04:44		05:46		06:55		08:02			08:15		11:54 (32)	09:16		11:14 (37)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (28)	15:43	16	11:30 (37)
12	04:46		05:48		06:57		08:04			08:18		11:55 (32)	09:18		11:14 (37)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (28)	15:43	15	11:29 (37)
13	04:47		05:51		07:00		08:07			08:20		11:56 (32)	09:19		11:15 (37)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (28)	15:42	15	11:30 (37)
14	04:49		05:53		07:02		08:09			08:22		11:55 (32)	09:20		11:16 (37)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (28)	15:42	14	11:30 (37)
15	04:51		05:55		07:04		08:11		10:19 (19)	08:25		11:56 (32)	09:21		11:16 (37)
	22:34		21:26		19:59		18:33	8	10:27 (19)	16:17	57	14:13 (27)	15:42	14	11:30 (37)
16	04:52		05:57		07:06		08:13		10:16 (19)	08:27		11:57 (32)	09:22		11:17 (37)
	22:32		21:24		19:56		18:31	13	10:29 (19)	16:15	54	14:12 (27)	15:42	12	11:29 (37)
17	04:54		06:00		07:08		08:16		10:15 (19)	08:29		11:12 (37)	09:23		11:17 (37)
	22:30		21:21		19:54		18:28	16	10:31 (19)	16:13	58	14:11 (27)	15:42	12	11:29 (37)
18	04:56		06:02		07:11		08:18		10:13 (19)	08:32		11:09 (37)	09:24		11:18 (37)
	22:29		21:18		19:51		18:25	19	10:32 (19)	16:11	67	14:10 (27)	15:42	11	11:29 (37)
19	04:58		06:04		07:13		08:20		10:12 (19)	08:34		11:08 (37)	09:25		11:19 (37)
	22:27		21:16		19:48		18:22	21	10:33 (19)	16:09	66	14:08 (27)	15:42	11	11:30 (37)
20	05:00		06:06		07:15		08:23		10:11 (19)	08:36		11:06 (37)	09:26		11:20 (37)
	22:25		21:13		19:45		18:20	22	10:33 (19)	16:08	60	12:44 (24)	15:43	10	11:30 (37)
21	05:01		06:08		07:17		08:25		10:11 (19)	08:39		11:06 (37)	09:26		11:20 (37)
	22:24		21:10		19:42		18:17	23	10:34 (19)	16:06	62	12:46 (24)	15:43	10	11:30 (37)
22	05:03		06:11		07:19		08:27		10:10 (19)	08:41		11:06 (37)	09:27		11:21 (37)
	22:22		21:08		19:39		18:14	23	10:33 (19)	16:04	63	12:47 (24)	15:43	10	11:31 (37)
23	05:05		06:13		07:22		08:30		10:11 (19)	08:43		11:05 (37)	09:27		11:21 (37)
	22:20		21:05		19:36		18:12	22	10:33 (19)	16:02	63	12:47 (24)	15:44	10	11:31 (37)
24	05:07		06:15		07:24		08:32		10:10 (19)	08:45		11:05 (37)	09:28		11:22 (37)
	22:18		21:02		19:33		18:09	22	10:32 (19)	16:01	64	12:48 (24)	15:44	10	11:32 (37)
25	05:09		06:17		07:26		07:35		09:11 (19)	08:47		11:05 (37)	09:28		11:22 (37)
	22:16		20:59		19:30		17:06	21	09:32 (19)	15:59	63	12:48 (24)	15:45	11	11:33 (37)
26	05:11		06:20		07:28		07:37		09:11 (19)	08:50		11:06 (37)	09:28		11:22 (37)
	22:14		20:56		19:27		17:04	20	09:31 (19)	15:58	59	12:49 (24)	15:46	12	11:34 (37)
27	05:13		06:22		07:30		07:39		09:12 (19)	08:52		11:05 (37)	09:28		11:23 (37)
	22:12		20:54		19:25		17:01	18	09:30 (19)	15:56	57	12:49 (24)	15:47	11	11:34 (37)
28	05:16		06:24		07:33		07:42		09:14 (19)	08:54		11:06 (37)	09:28		11:23 (37)
	22:10		20:51		19:22		16:59	28	14:08 (27)	15:55	53	12:50 (24)	15:48	13	11:36 (37)
29	05:18		06:26		07:35		07:44		09:15 (19)	08:56		11:06 (37)	09:28		11:22 (37)
	22:07		20:48		19:19		16:56	44	14:10 (27)	15:54	44	12:50 (24)	15:49	14	11:36 (37)
30	05:20		06:29		07:37		07:47		09:19 (19)	08:58		11:06 (37)	09:28		11:23 (37)
	22:05		20:45		19:16		16:54	44	14:11 (27)	15:52	43	12:50 (24)	15:50	15	11:38 (37)
31	05:22		06:31				07:49		12:01 (32)				09:28		11:23 (37)
	22:03		20:42				16:51	46	14:13 (27)				15:51	15	11:38 (37)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		08:46		11:27 (32)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (28)	18:05	20:17	21:26	22:31
2	09:27	12:04 (24)	08:43		11:27 (32)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (24)	16:58	60	13:50 (27)	18:07	20:19	21:28	22:32
3	09:27	12:04 (24)	08:41		11:28 (32)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (24)	17:01	58	13:50 (27)	18:09	20:21	21:31	22:34
4	09:27	12:04 (24)	08:39		11:28 (32)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (24)	17:03	54	13:48 (27)	18:12	20:24	21:33	22:35
5	09:26	12:04 (24)	08:37		11:28 (32)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (24)	17:06	52	13:47 (27)	18:14	20:26	21:35	22:37
6	09:25	12:05 (24)	08:34		11:29 (32)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (24)	17:08	49	13:47 (27)	18:17	20:28	21:37	22:38
7	09:24	12:05 (24)	08:32		11:29 (32)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (24)	17:11	43	13:44 (27)	18:19	20:30	21:40	22:39
8	09:24	12:05 (24)	08:30		11:31 (32)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (24)	17:13	35	13:42 (27)	18:21	20:33	21:42	22:40
9	09:23	12:06 (24)	08:27		11:32 (32)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (24)	17:16	22	11:54 (32)	18:24	20:35	21:44	22:42
10	09:22	12:06 (24)	08:25		11:34 (32)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (24)	17:18	18	11:52 (32)	18:26	20:37	21:46	22:43
11	09:21	12:07 (24)	08:23		11:37 (32)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (24)	17:21	14	11:51 (32)	18:28	20:40	21:49	22:44
12	09:20	12:07 (24)	08:20		11:41 (32)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (27)	17:23	4	11:45 (32)	18:31	20:42	21:51	22:45
13	09:18	12:08 (24)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (27)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (24)	08:15		09:30 (19)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (27)	17:28	5	09:35 (19)	18:35	20:47	21:55	22:47
15	09:16	11:34 (32)	08:13		09:27 (19)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (27)	17:31	11	09:38 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10		09:25 (19)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (27)	17:33	14	09:39 (19)	18:40	20:51	22:00	22:48
17	09:13	11:31 (32)	08:07		09:23 (19)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (27)	17:36	17	09:40 (19)	18:42	20:53	22:02	22:49
18	09:12	11:30 (32)	08:05		09:23 (19)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (28)	17:38	18	09:41 (19)	18:45	20:56	22:04	22:49
19	09:10	11:29 (32)	08:02		09:22 (19)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (28)	17:40	19	09:41 (19)	18:47	20:58	22:06	22:50
20	09:09	11:28 (32)	08:00		09:22 (19)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (28)	17:43	19	09:41 (19)	18:49	21:00	22:08	22:50
21	09:07	11:28 (32)	07:57		09:22 (19)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (28)	17:45	19	09:41 (19)	18:51	21:03	22:10	22:50
22	09:05	11:28 (32)	07:54		09:22 (19)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (28)	17:48	19	09:41 (19)	18:54	21:05	22:12	22:50
23	09:03	11:26 (32)	07:52		09:23 (19)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (28)	17:50	18	09:41 (19)	18:56	21:07	22:14	22:51
24	09:02	11:26 (32)	07:49		09:23 (19)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (28)	17:53	17	09:40 (19)	18:58	21:10	22:16	22:51
25	09:00	11:26 (32)	07:46		09:24 (19)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (28)	17:55	14	09:38 (19)	19:01	21:12	22:18	22:51
26	08:58	11:26 (32)	07:44		09:25 (19)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (28)	17:57	11	09:36 (19)	19:03	21:14	22:20	22:50
27	08:56	11:25 (32)	07:41		09:30 (19)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (28)	18:00	1	09:31 (19)	19:05	21:17	22:22	22:50
28	08:54	11:26 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (32)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (28)				20:10	21:21	22:25	22:50
30	08:50	11:26 (32)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (28)				20:12	21:24	22:27	22:49
31	08:48	11:26 (32)				07:10		04:41	
	16:54	76 14:52 (28)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,66					
Total reduction		0,24		0,26					
Total, real		382		180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (32)	09:00		11:49 (24)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (32)	15:51	22	12:11 (24)
2	04:33		05:26		06:35		07:42			07:54		11:01 (32)	09:02		11:49 (24)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (32)	15:50	22	12:11 (24)
3	04:34		05:28		06:37		07:44			07:56		11:01 (32)	09:03		11:49 (24)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (27)	15:49	22	12:11 (24)
4	04:35		05:31		06:40		07:46			07:59		10:59 (32)	09:05		11:50 (24)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (27)	15:48	21	12:11 (24)
5	04:36		05:33		06:42		07:48			08:01		10:59 (32)	09:07		11:50 (24)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (27)	15:47	21	12:11 (24)
6	04:37		05:35		06:44		07:51			08:03		10:58 (32)	09:09		11:51 (24)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (27)	15:46	16	12:07 (24)
7	04:39		05:37		06:46		07:53			08:06		10:57 (32)	09:10		11:51 (24)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (27)	15:45	17	12:08 (24)
8	04:40		05:39		06:49		07:55			08:08		10:57 (32)	09:12		11:52 (24)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (27)	15:45	8	12:00 (24)
9	04:41		05:42		06:51		07:57			08:11		10:57 (32)	09:13		11:53 (24)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (28)	15:44	4	11:57 (24)
10	04:43		05:44		06:53		08:00			08:13		10:58 (32)	09:15		11:53 (24)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (28)	15:43	1	11:54 (24)
11	04:44		05:46		06:55		08:02			08:15		10:57 (32)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (28)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (32)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (28)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (32)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (28)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (32)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (28)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (19)	08:25		10:58 (32)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (19)	16:17	83	14:27 (28)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (19)	08:27		10:59 (32)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (19)	16:15	83	14:28 (28)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (19)	08:30		11:00 (32)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (19)	16:13	83	14:29 (28)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (19)	08:32		11:00 (32)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (19)	16:11	81	14:29 (28)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (19)	08:34		11:01 (32)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (19)	16:09	87	14:29 (28)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (19)	08:36		11:02 (32)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (19)	16:08	88	14:29 (28)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (19)	08:39		11:03 (32)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (19)	16:06	88	14:29 (28)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (19)	08:41		11:04 (32)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (19)	16:04	88	14:30 (28)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (19)	08:43		11:05 (32)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (19)	16:02	84	14:29 (28)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (19)	08:45		11:07 (32)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (19)	16:01	72	14:30 (28)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (19)	08:47		11:08 (32)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (19)	15:59	58	13:20 (27)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (19)	08:50		11:11 (32)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (19)	15:58	53	13:20 (27)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (19)	08:52		11:13 (32)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (19)	15:56	47	13:19 (27)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (24)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (27)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (24)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (27)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (32)	08:58		11:48 (24)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (32)	15:52	30	13:15 (27)	15:50		
31	05:22		06:31				07:49		11:06 (32)				09:28		
	22:03		20:42				16:51	15	11:21 (32)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (24)	08:46	11:53 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (24)	16:56	49	14:04 (27)	18:05	20:17	21:26	22:31
2	09:27		12:18 (24)	08:43	11:54 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (24)	16:58	44	14:02 (27)	18:07	20:19	21:28	22:32
3	09:27		11:54 (32)	08:41	11:56 (32)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (24)	17:01	39	14:01 (27)	18:09	20:21	21:31	22:34
4	09:27		11:52 (32)	08:39	11:57 (32)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (24)	17:03	32	13:59 (27)	18:12	20:24	21:33	22:35
5	09:26		11:51 (32)	08:37	11:59 (32)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (24)	17:06	19	13:55 (27)	18:14	20:26	21:35	22:37
6	09:25		11:50 (32)	08:34	12:04 (32)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (24)	17:08	5	12:09 (32)	18:17	20:28	21:37	22:38
7	09:24		11:50 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (27)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (27)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (32)	08:27		09:42 (19)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (27)	17:16	7	09:49 (19)	18:24	20:35	21:44	22:42
10	09:22		11:49 (32)	08:25		09:40 (19)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (27)	17:18	12	09:52 (19)	18:26	20:37	21:46	22:43
11	09:21		11:49 (32)	08:23		09:39 (19)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (27)	17:21	15	09:54 (19)	18:28	20:40	21:49	22:44
12	09:20		11:48 (32)	08:20		09:37 (19)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (27)	17:23	17	09:54 (19)	18:31	20:42	21:51	22:45
13	09:18		11:49 (32)	08:18		09:36 (19)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (27)	17:26	19	09:55 (19)	18:33	20:44	21:53	22:46
14	09:17		11:48 (32)	08:15		09:37 (19)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (27)	17:28	19	09:56 (19)	18:35	20:47	21:55	22:47
15	09:16		11:48 (32)	08:13		09:36 (19)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (28)	17:31	20	09:56 (19)	18:38	20:49	21:58	22:47
16	09:15		11:47 (32)	08:10		09:36 (19)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (28)	17:33	20	09:56 (19)	18:40	20:51	22:00	22:48
17	09:13		11:48 (32)	08:07		09:36 (19)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (28)	17:36	19	09:55 (19)	18:42	20:53	22:02	22:49
18	09:12		11:48 (32)	08:05		09:37 (19)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (28)	17:38	19	09:56 (19)	18:45	20:56	22:04	22:49
19	09:10		11:48 (32)	08:02		09:37 (19)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (28)	17:40	18	09:55 (19)	18:47	20:58	22:06	22:50
20	09:08		11:48 (32)	08:00		09:38 (19)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (28)	17:43	15	09:53 (19)	18:49	21:00	22:08	22:50
21	09:07		11:48 (32)	07:57		09:39 (19)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (28)	17:45	13	09:52 (19)	18:51	21:03	22:10	22:50
22	09:05		11:48 (32)	07:54		09:41 (19)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (28)	17:48	8	09:49 (19)	18:54	21:05	22:12	22:50
23	09:03		11:48 (32)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (28)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (32)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (28)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (32)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (28)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (32)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (28)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (32)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (28)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (32)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (28)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (32)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (28)				20:10	21:21	22:25	22:50
30	08:50		11:51 (32)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (28)				20:12	21:24	22:27	22:49
31	08:48		11:52 (32)				07:10		04:41	
	16:54	55	14:55 (28)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (19)	09:00		11:31 (32)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (19)	15:51	60	13:37 (27)
2	04:33	05:26	06:35	07:42			07:54		09:12 (19)	09:02		11:32 (32)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (19)	15:50	56	13:36 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (27)
5	04:36	05:33	06:42	07:48			08:01		11:32 (32)	09:07		11:35 (32)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (32)	15:47	43	13:32 (27)
6	04:37	05:35	06:44	07:51			08:03		11:29 (32)	09:09		11:37 (32)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (27)	15:46	36	12:27 (24)
7	04:38	05:37	06:46	07:53			08:06		11:27 (32)	09:10		11:38 (32)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (27)	15:45	34	12:27 (24)
8	04:40	05:39	06:49	07:55			08:08		11:25 (32)	09:12		11:40 (32)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (27)	15:45	32	12:28 (24)
9	04:41	05:42	06:51	07:57			08:11		11:25 (32)	09:13		11:42 (32)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (27)	15:44	28	12:28 (24)
10	04:43	05:44	06:53	08:00			08:13		11:24 (32)	09:15		12:07 (24)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (27)	15:43	21	12:28 (24)
11	04:44	05:46	06:55	08:02			08:15		11:23 (32)	09:16		12:08 (24)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (28)	15:43	21	12:29 (24)
12	04:46	05:48	06:57	08:04			08:18		11:23 (32)	09:18		12:08 (24)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (28)	15:43	21	12:29 (24)
13	04:47	05:51	07:00	08:07			08:20		11:23 (32)	09:19		12:09 (24)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (28)	15:42	21	12:30 (24)
14	04:49	05:53	07:02	08:09			08:22		11:22 (32)	09:20		12:09 (24)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (28)	15:42	21	12:30 (24)
15	04:51	05:55	07:04	08:11			08:25		11:22 (32)	09:21		12:09 (24)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (28)	15:42	21	12:30 (24)
16	04:52	05:57	07:06	08:13			08:27		11:22 (32)	09:22		12:10 (24)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (28)	15:42	20	12:30 (24)
17	04:54	06:00	07:08	08:16			08:30		11:23 (32)	09:23		12:10 (24)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (28)	15:42	21	12:31 (24)
18	04:56	06:02	07:11	08:18			08:32		11:22 (32)	09:24		12:11 (24)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (28)	15:42	20	12:31 (24)
19	04:58	06:04	07:13	08:20			08:34		11:23 (32)	09:25		12:12 (24)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (28)	15:42	20	12:32 (24)
20	05:00	06:06	07:15	08:23		10:11 (19)	08:36		11:22 (32)	09:26		12:12 (24)
	22:25	21:13	19:45	18:20	10	10:21 (19)	16:08	82	14:37 (28)	15:43	20	12:32 (24)
21	05:01	06:08	07:17	08:25		10:10 (19)	08:39		11:23 (32)	09:26		12:12 (24)
	22:24	21:10	19:42	18:17	13	10:23 (19)	16:06	80	14:37 (28)	15:43	20	12:32 (24)
22	05:03	06:11	07:19	08:27		10:08 (19)	08:41		11:24 (32)	09:27		12:13 (24)
	22:22	21:08	19:39	18:14	16	10:24 (19)	16:04	79	14:38 (28)	15:43	20	12:33 (24)
23	05:05	06:13	07:22	08:30		10:07 (19)	08:43		11:24 (32)	09:27		12:13 (24)
	22:20	21:05	19:36	18:12	18	10:25 (19)	16:02	84	14:38 (28)	15:44	20	12:33 (24)
24	05:07	06:15	07:24	08:32		10:06 (19)	08:45		11:25 (32)	09:28		12:14 (24)
	22:18	21:02	19:33	18:09	19	10:25 (19)	16:01	88	14:38 (28)	15:44	21	12:35 (24)
25	05:09	06:17	07:26	07:35		09:06 (19)	08:47		11:25 (32)	09:28		12:15 (24)
	22:16	20:59	19:30	17:06	20	09:26 (19)	15:59	88	14:38 (28)	15:45	20	12:35 (24)
26	05:11	06:20	07:28	07:37		09:06 (19)	08:50		11:26 (32)	09:28		12:15 (24)
	22:14	20:57	19:27	17:04	20	09:26 (19)	15:58	81	14:37 (28)	15:46	20	12:35 (24)
27	05:13	06:22	07:30	07:39		09:06 (19)	08:52		11:27 (32)	09:28		12:16 (24)
	22:12	20:54	19:25	17:01	19	09:25 (19)	15:56	73	14:26 (28)	15:47	20	12:36 (24)
28	05:16	06:24	07:33	07:42		09:06 (19)	08:54		11:28 (32)	09:28		12:16 (24)
	22:10	20:51	19:22	16:59	19	09:25 (19)	15:55	65	13:38 (27)	15:48	21	12:37 (24)
29	05:18	06:26	07:35	07:44		09:06 (19)	08:56		11:29 (32)	09:28		12:16 (24)
	22:07	20:48	19:19	16:56	18	09:24 (19)	15:54	64	13:37 (27)	15:49	20	12:36 (24)
30	05:20	06:29	07:37	07:47		09:07 (19)	08:58		11:29 (32)	09:28		12:17 (24)
	22:05	20:45	19:16	16:54	17	09:24 (19)	15:52	62	13:37 (27)	15:50	20	12:37 (24)
31	05:22	06:31		07:49		09:08 (19)				09:28		12:16 (24)
	22:03	20:42		16:51	15	09:23 (19)				15:51	21	12:37 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:08 (24)	08:46	11:39 (32)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (24)	16:56 49	13:50 (27)	18:05	20:17	21:26	22:31
2	09:27		12:08 (24)	08:43	11:40 (32)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (24)	16:58 44	13:48 (27)	18:07	20:19	21:28	22:32
3	09:27		12:09 (24)	08:41	11:41 (32)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (24)	17:01 39	13:47 (27)	18:09	20:21	21:31	22:34
4	09:27		12:09 (24)	08:39	11:42 (32)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (24)	17:03 32	13:45 (27)	18:12	20:24	21:33	22:35
5	09:26		12:09 (24)	08:37	11:43 (32)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (24)	17:06 19	12:02 (32)	18:14	20:26	21:35	22:37
6	09:25		12:10 (24)	08:34	11:46 (32)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (27)	17:08 14	12:00 (32)	18:17	20:28	21:37	22:38
7	09:24		11:43 (32)	08:32	11:50 (32)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (27)	17:11 6	11:56 (32)	18:19	20:30	21:40	22:39
8	09:24		11:41 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	41	13:37 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23		11:40 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	47	13:39 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22		11:38 (32)	08:25	09:39 (19)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (27)	17:18 3	09:42 (19)	18:26	20:37	21:46	22:43
11	09:21		11:38 (32)	08:23	09:36 (19)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (27)	17:21 10	09:46 (19)	18:28	20:40	21:49	22:44
12	09:20		11:37 (32)	08:20	09:34 (19)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (28)	17:23 14	09:48 (19)	18:31	20:42	21:51	22:45
13	09:18		11:37 (32)	08:18	09:33 (19)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (28)	17:26 16	09:49 (19)	18:33	20:44	21:53	22:46
14	09:17		11:36 (32)	08:15	09:33 (19)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (28)	17:28 17	09:50 (19)	18:35	20:47	21:55	22:47
15	09:16		11:36 (32)	08:13	09:32 (19)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (28)	17:31 18	09:50 (19)	18:38	20:49	21:58	22:47
16	09:15		11:35 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (28)	17:33 19	09:50 (19)	18:40	20:51	22:00	22:48
17	09:13		11:36 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (28)	17:36 19	09:50 (19)	18:42	20:53	22:02	22:49
18	09:12		11:36 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (28)	17:38 19	09:51 (19)	18:45	20:56	22:04	22:49
19	09:10		11:36 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (28)	17:40 18	09:50 (19)	18:47	20:58	22:06	22:50
20	09:09		11:35 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (28)	17:43 17	09:49 (19)	18:49	21:00	22:08	22:50
21	09:07		11:35 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (28)	17:45 15	09:48 (19)	18:51	21:03	22:10	22:50
22	09:05		11:36 (32)	07:54	09:34 (19)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (28)	17:48 12	09:46 (19)	18:54	21:05	22:12	22:50
23	09:03		11:35 (32)	07:52	09:38 (19)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (28)	17:50 6	09:44 (19)	18:56	21:07	22:14	22:51
24	09:02		11:35 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	79	14:52 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:35 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	78	14:52 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:36 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	77	14:52 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:36 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	74	14:51 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:36 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	71	14:50 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:37 (32)			07:15	05:49	04:44	04:30
	16:49	66	14:49 (28)			20:10	21:21	22:25	22:50
30	08:50		11:37 (32)			07:13	05:46	04:42	04:31
	16:51	56	14:45 (28)			20:12	21:24	22:27	22:49
31	08:48		11:38 (32)			07:10		04:41	
	16:54	51	13:50 (27)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1881		406					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,68					
Total reduction		0,24		0,27					
Total, real		457		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (32)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (27)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (27)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (27)
4	04:35	05:31	06:40	07:46			07:59		11:18 (32)	09:05		11:25 (32)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (32)	15:48	42	13:22 (27)
5	04:36	05:33	06:42	07:48			08:01		11:15 (32)	09:07		11:28 (32)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (32)	15:47	34	13:21 (27)
6	04:37	05:35	06:44	07:51			08:03		11:14 (32)	09:09		11:56 (24)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (32)	15:46	26	13:19 (27)
7	04:38	05:37	06:46	07:53			08:06		11:12 (32)	09:10		11:56 (24)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (27)	15:45	21	12:17 (24)
8	04:40	05:39	06:49	07:55			08:08		11:11 (32)	09:12		11:57 (24)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (27)	15:45	21	12:18 (24)
9	04:41	05:42	06:51	07:57			08:11		11:10 (32)	09:13		11:58 (24)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (27)	15:44	20	12:18 (24)
10	04:43	05:44	06:53	08:00			08:13		11:10 (32)	09:15		11:58 (24)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (27)	15:43	20	12:18 (24)
11	04:44	05:46	06:55	08:02			08:15		11:09 (32)	09:16		11:58 (24)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (27)	15:43	21	12:19 (24)
12	04:46	05:48	06:57	08:04			08:18		11:09 (32)	09:18		11:58 (24)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (28)	15:43	21	12:19 (24)
13	04:47	05:51	07:00	08:07			08:20		11:09 (32)	09:19		12:00 (24)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (28)	15:42	20	12:20 (24)
14	04:49	05:53	07:02	08:09			08:23		11:08 (32)	09:20		12:00 (24)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (28)	15:42	20	12:20 (24)
15	04:51	05:55	07:04	08:11			08:25		11:08 (32)	09:21		12:00 (24)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (28)	15:42	20	12:20 (24)
16	04:52	05:57	07:06	08:13			08:27		11:09 (32)	09:22		12:01 (24)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (28)	15:42	19	12:20 (24)
17	04:54	06:00	07:08	08:16			08:30		11:09 (32)	09:23		12:01 (24)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (28)	15:42	20	12:21 (24)
18	04:56	06:02	07:11	08:18			08:32		11:09 (32)	09:24		12:02 (24)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (28)	15:42	19	12:21 (24)
19	04:58	06:04	07:13	08:20		10:07 (19)	08:34		11:10 (32)	09:25		12:02 (24)
	22:27	21:16	19:48	18:22	9	10:16 (19)	16:09	79	14:27 (28)	15:42	20	12:22 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:10 (32)	09:26		12:03 (24)
	22:25	21:13	19:45	18:20	13	10:18 (19)	16:08	79	14:27 (28)	15:43	19	12:22 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:10 (32)	09:26		12:03 (24)
	22:24	21:10	19:42	18:17	15	10:19 (19)	16:06	79	14:28 (28)	15:43	19	12:22 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:11 (32)	09:27		12:04 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	84	14:29 (28)	15:43	19	12:23 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:12 (32)	09:27		12:04 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:28 (28)	15:44	19	12:23 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:13 (32)	09:28		12:05 (24)
	22:18	21:02	19:33	18:09	19	10:20 (19)	16:01	88	14:29 (28)	15:44	19	12:24 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:13 (32)	09:28		12:06 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	88	14:29 (28)	15:45	19	12:25 (24)
26	05:11	06:20	07:28	07:37		09:02 (19)	08:50		11:14 (32)	09:28		12:06 (24)
	22:14	20:57	19:27	17:04	19	09:21 (19)	15:58	87	14:29 (28)	15:46	19	12:25 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:15 (32)	09:28		12:06 (24)
	22:12	20:54	19:25	17:01	19	09:20 (19)	15:56	86	14:29 (28)	15:47	20	12:26 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:16 (32)	09:28		12:07 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	82	14:29 (28)	15:48	20	12:27 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:17 (32)	09:28		12:07 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	72	14:29 (28)	15:49	19	12:26 (24)
30	05:20	06:29	07:37	07:47		09:04 (19)	08:58		11:18 (32)	09:28		12:07 (24)
	22:05	20:45	19:16	16:54	13	09:17 (19)	15:52	60	14:28 (28)	15:50	20	12:27 (24)
31	05:22	06:31		07:49		09:06 (19)				09:28		12:07 (24)
	22:03	20:42		16:51	9	09:15 (19)				15:51	20	12:27 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:05 (24)	08:46	11:36 (32)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (24)	16:56	45 13:44 (27)	18:05	20:17	21:26	22:31
2	09:27	12:06 (24)	08:43	11:37 (32)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (24)	16:58	40 13:42 (27)	18:07	20:19	21:28	22:32
3	09:27	12:06 (24)	08:41	11:38 (32)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (24)	17:01	34 13:40 (27)	18:09	20:21	21:31	22:34
4	09:27	12:06 (24)	08:39	11:39 (32)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (24)	17:03	20 11:59 (32)	18:12	20:24	21:33	22:35
5	09:26	12:06 (24)	08:37	11:41 (32)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (27)	17:06	16 11:57 (32)	18:14	20:26	21:35	22:37
6	09:25	12:07 (24)	08:34	11:44 (32)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (27)	17:08	11 11:55 (32)	18:17	20:28	21:37	22:38
7	09:24	11:39 (32)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (27)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (32)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (27)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (32)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (27)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (32)	08:25	09:37 (19)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (28)	17:18	6 09:43 (19)	18:26	20:37	21:46	22:43
11	09:21	11:34 (32)	08:23	09:35 (19)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (28)	17:21	11 09:46 (19)	18:28	20:40	21:49	22:44
12	09:20	11:33 (32)	08:20	09:33 (19)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (28)	17:23	15 09:48 (19)	18:31	20:42	21:51	22:45
13	09:18	11:34 (32)	08:18	09:32 (19)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (28)	17:26	16 09:48 (19)	18:33	20:44	21:53	22:46
14	09:17	11:33 (32)	08:15	09:32 (19)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (28)	17:28	18 09:50 (19)	18:35	20:47	21:55	22:47
15	09:16	11:32 (32)	08:13	09:31 (19)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (28)	17:31	19 09:50 (19)	18:38	20:49	21:58	22:47
16	09:15	11:32 (32)	08:10	09:31 (19)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (28)	17:33	19 09:50 (19)	18:40	20:51	22:00	22:48
17	09:13	11:32 (32)	08:07	09:31 (19)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (28)	17:36	19 09:50 (19)	18:42	20:53	22:02	22:49
18	09:12	11:32 (32)	08:05	09:32 (19)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (28)	17:38	18 09:50 (19)	18:45	20:56	22:04	22:49
19	09:10	11:32 (32)	08:02	09:32 (19)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (28)	17:40	17 09:49 (19)	18:47	20:58	22:06	22:50
20	09:09	11:32 (32)	08:00	09:32 (19)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (28)	17:43	16 09:48 (19)	18:49	21:00	22:08	22:50
21	09:07	11:32 (32)	07:57	09:33 (19)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (28)	17:45	14 09:47 (19)	18:51	21:03	22:10	22:50
22	09:05	11:32 (32)	07:54	09:35 (19)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (28)	17:48	10 09:45 (19)	18:54	21:05	22:12	22:50
23	09:03	11:31 (32)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (28)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (32)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (28)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (32)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (28)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (32)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (28)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (32)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (28)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (32)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (28)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (32)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (28)			20:10	21:21	22:25	22:50
30	08:50	11:34 (32)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (27)			20:12	21:24	22:27	22:49
31	08:48	11:35 (32)			07:10		04:41	
	16:54	48 13:44 (27)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,69				
Total reduction		0,24		0,27				
Total, real		467		100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (19)	09:00		11:16 (32)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (19)	15:51	74	14:26 (28)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (32)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (28)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (32)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (27)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (32)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (27)
5	04:36	05:33	06:42	07:48			08:01		11:13 (32)	09:07		11:23 (32)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (32)	15:47	39	13:18 (27)
6	04:37	05:35	06:44	07:51			08:03		11:11 (32)	09:09		11:53 (24)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (32)	15:46	32	13:17 (27)
7	04:38	05:37	06:46	07:53			08:06		11:10 (32)	09:10		11:54 (24)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (27)	15:45	28	13:16 (27)
8	04:40	05:39	06:49	07:55			08:08		11:08 (32)	09:12		11:54 (24)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (27)	15:45	22	13:13 (27)
9	04:41	05:42	06:51	07:57			08:11		11:07 (32)	09:13		11:55 (24)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (27)	15:44	20	12:15 (24)
10	04:43	05:44	06:53	08:00			08:13		11:07 (32)	09:15		11:55 (24)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (27)	15:43	20	12:15 (24)
11	04:44	05:46	06:55	08:02			08:15		11:06 (32)	09:16		11:56 (24)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (27)	15:43	20	12:16 (24)
12	04:46	05:48	06:57	08:04			08:18		11:06 (32)	09:18		11:56 (24)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (27)	15:43	20	12:16 (24)
13	04:47	05:51	07:00	08:07			08:20		11:06 (32)	09:19		11:57 (24)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (28)	15:42	20	12:17 (24)
14	04:49	05:53	07:02	08:09			08:23		11:05 (32)	09:20		11:57 (24)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (28)	15:42	20	12:17 (24)
15	04:51	05:55	07:04	08:11			08:25		11:05 (32)	09:21		11:57 (24)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (28)	15:42	20	12:17 (24)
16	04:52	05:57	07:06	08:13			08:27		11:06 (32)	09:22		11:58 (24)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (28)	15:42	19	12:17 (24)
17	04:54	06:00	07:08	08:16			08:30		11:06 (32)	09:23		11:58 (24)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (28)	15:42	19	12:17 (24)
18	04:56	06:02	07:11	08:18			08:32		11:06 (32)	09:24		11:59 (24)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (28)	15:42	19	12:18 (24)
19	04:58	06:04	07:13	08:20		10:09 (19)	08:34		11:06 (32)	09:25		11:59 (24)
	22:27	21:16	19:48	18:22	5	10:14 (19)	16:09	78	14:23 (28)	15:42	20	12:19 (24)
20	05:00	06:06	07:15	08:23		10:05 (19)	08:36		11:06 (32)	09:26		12:00 (24)
	22:25	21:13	19:45	18:20	11	10:16 (19)	16:08	79	14:23 (28)	15:43	19	12:19 (24)
21	05:01	06:08	07:17	08:25		10:04 (19)	08:39		11:07 (32)	09:26		12:00 (24)
	22:24	21:10	19:42	18:17	14	10:18 (19)	16:06	77	14:23 (28)	15:43	19	12:19 (24)
22	05:03	06:11	07:19	08:27		10:02 (19)	08:41		11:08 (32)	09:27		12:01 (24)
	22:22	21:08	19:39	18:14	17	10:19 (19)	16:04	77	14:24 (28)	15:43	19	12:20 (24)
23	05:05	06:13	07:22	08:30		10:02 (19)	08:43		11:08 (32)	09:27		12:01 (24)
	22:20	21:05	19:36	18:12	18	10:20 (19)	16:02	86	14:24 (28)	15:44	19	12:20 (24)
24	05:07	06:15	07:24	08:32		10:01 (19)	08:45		11:09 (32)	09:28		12:02 (24)
	22:18	21:02	19:33	18:09	18	10:19 (19)	16:01	87	14:25 (28)	15:44	19	12:21 (24)
25	05:09	06:17	07:26	07:35		09:01 (19)	08:47		11:10 (32)	09:28		12:03 (24)
	22:16	20:59	19:30	17:06	19	09:20 (19)	15:59	87	14:25 (28)	15:45	19	12:22 (24)
26	05:11	06:20	07:28	07:37		09:01 (19)	08:50		11:11 (32)	09:28		12:03 (24)
	22:14	20:57	19:27	17:04	19	09:20 (19)	15:58	87	14:25 (28)	15:46	19	12:22 (24)
27	05:13	06:22	07:30	07:39		09:01 (19)	08:52		11:11 (32)	09:28		12:03 (24)
	22:12	20:54	19:25	17:01	18	09:19 (19)	15:56	86	14:25 (28)	15:47	20	12:23 (24)
28	05:16	06:24	07:33	07:42		09:02 (19)	08:54		11:13 (32)	09:28		12:04 (24)
	22:10	20:51	19:22	16:59	17	09:19 (19)	15:55	85	14:26 (28)	15:48	20	12:24 (24)
29	05:18	06:26	07:35	07:44		09:02 (19)	08:56		11:14 (32)	09:28		12:04 (24)
	22:07	20:48	19:19	16:56	16	09:18 (19)	15:54	82	14:25 (28)	15:49	19	12:23 (24)
30	05:20	06:29	07:37	07:47		09:03 (19)	08:58		11:14 (32)	09:28		12:04 (24)
	22:05	20:45	19:16	16:54	14	09:17 (19)	15:52	80	14:25 (28)	15:50	20	12:24 (24)
31	05:22	06:31		07:49		09:05 (19)				09:28		12:04 (24)
	22:03	20:42		16:51	11	09:16 (19)				15:51	20	12:24 (24)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	11:58 (24)	08:46	11:24 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00	11:44 (24)
	15:53 16	12:14 (24)	16:56 49	13:35 (27)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51 57	14:20 (28)
2	09:28	11:58 (24)	08:43	11:24 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02	11:44 (24)
	15:54 18	12:16 (24)	16:58 47	13:34 (27)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50 50	14:19 (28)
3	09:27	11:58 (24)	08:41	11:25 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (32)	09:03	11:44 (24)
	15:55 20	12:18 (24)	17:01 42	13:33 (27)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44 12	11:14 (32)	15:49 40	14:19 (28)
4	09:27	11:58 (24)	08:39	11:26 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (32)	09:05	11:44 (24)
	15:57 21	12:19 (24)	17:03 35	13:30 (27)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41 17	11:16 (32)	15:48 34	14:19 (28)
5	09:26	11:59 (24)	08:37	11:26 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (32)	09:07	11:45 (24)
	15:58 20	12:19 (24)	17:06 23	11:49 (32)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39 20	11:18 (32)	15:47 31	13:06 (27)
6	09:25	11:59 (24)	08:34	11:28 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (32)	09:09	11:45 (24)
	16:00 26	13:18 (27)	17:08 20	11:48 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 23	11:20 (32)	15:46 27	13:05 (27)
7	09:25	12:00 (24)	08:32	11:30 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (32)	09:10	11:46 (24)
	16:02 30	13:21 (27)	17:11 16	11:46 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34 37	13:01 (27)	15:45 20	12:06 (24)
8	09:24	12:00 (24)	08:30	11:33 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (32)	09:12	11:47 (24)
	16:03 34	14:35 (28)	17:13 11	11:44 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 43	13:03 (27)	15:45 20	12:07 (24)
9	09:23	12:01 (24)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (32)	09:13	11:47 (24)
	16:05 41	14:36 (28)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 48	13:05 (27)	15:44 20	12:07 (24)
10	09:22	12:01 (24)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (32)	09:15	11:47 (24)
	16:07 50	14:36 (28)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28 51	13:06 (27)	15:43 19	12:07 (24)
11	09:21	12:02 (24)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (32)	09:16	11:48 (24)
	16:09 57	14:37 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25 52	13:06 (27)	15:43 16	12:04 (24)
12	09:20	11:28 (32)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (32)	09:18	11:48 (24)
	16:11 68	14:38 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 55	13:08 (27)	15:43 11	11:59 (24)
13	09:18	11:26 (32)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (32)	09:19	11:49 (24)
	16:13 75	14:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 62	14:08 (28)	15:42 11	12:00 (24)
14	09:17	11:25 (32)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (32)	09:20	11:50 (24)
	16:15 78	14:39 (28)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 69	14:10 (28)	15:42 7	12:00 (24)
15	09:16	11:24 (32)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (32)	09:21	11:50 (24)
	16:17 82	14:40 (28)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 71	14:12 (28)	15:42 3	11:53 (24)
16	09:15	11:23 (32)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (32)	09:22	11:50 (24)
	16:19 85	14:40 (28)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 75	14:14 (28)	15:42 3	11:53 (24)
17	09:13	11:23 (32)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (32)	09:23	11:51 (24)
	16:21 86	14:41 (28)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 77	14:15 (28)	15:42 1	11:52 (24)
18	09:12	11:23 (32)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (32)	09:24	
	16:23 87	14:42 (28)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 76	14:15 (28)	15:42	
19	09:10	11:22 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (32)	09:25	
	16:25 88	14:42 (28)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09 77	14:16 (28)	15:42	
20	09:09	11:22 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (32)	09:26	
	16:28 86	14:42 (28)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08 77	14:16 (28)	15:43	
21	09:07	11:22 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (32)	09:26	
	16:30 83	14:42 (28)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 83	14:17 (28)	15:43	
22	09:05	11:22 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (32)	09:27	
	16:32 77	14:42 (28)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04 86	14:18 (28)	15:43	
23	09:03	11:21 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (32)	09:27	
	16:34 77	14:41 (28)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 88	14:18 (28)	15:44	
24	09:02	11:21 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (32)	09:28	
	16:37 76	14:41 (28)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 87	14:19 (28)	15:44	
25	09:00	11:21 (32)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (32)	09:28	
	16:39 77	14:41 (28)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59 86	14:18 (28)	15:45	
26	08:58	11:22 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (32)	09:28	
	16:41 74	14:41 (28)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58 85	14:19 (28)	15:46	
27	08:56	11:21 (32)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (32)	09:28	11:56 (24)
	16:44 71	14:39 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 83	14:19 (28)	15:47 3	11:59 (24)
28	08:54	11:21 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (32)	09:28	11:57 (24)
	16:46 69	14:38 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 79	14:19 (28)	15:48 3	12:00 (24)
29	08:52	11:22 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (32)	09:28	11:56 (24)
	16:49 61	14:36 (28)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54 73	14:19 (28)	15:49 5	12:07 (24)
30	08:50	11:22 (32)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (32)	09:28	11:57 (24)
	16:51 55	13:36 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 69	14:19 (28)	15:50 11	12:08 (24)
31	08:48	11:23 (32)			07:10		04:41		05:22	06:31		07:49			09:28	11:57 (24)
	16:54 53	13:36 (27)			20:14		22:29		22:03	20:42		16:51			15:51 11	12:08 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case	1841		243										1761		403	
Sun reduction	0,50		0,50										0,50		0,50	
Oper. time red.	0,80		0,80										0,80		0,80	
Wind dir. red.	0,62		0,65										0,62		0,62	
Total reduction	0,25		0,26										0,25		0,25	
Total, real	452		63										435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (37)	08:46		13:17 (32)	07:35		08:53 (21)	07:07	05:44	04:40
	15:53	17	12:09 (37)	16:56	36	13:53 (32)	18:05	19	09:12 (21)	20:17	21:26	22:30
2	09:27		11:51 (37)	08:43		13:18 (32)	07:32		08:53 (21)	07:04	05:41	04:38
	15:54	19	12:10 (37)	16:58	43	15:13 (27)	18:07	20	09:13 (21)	20:19	21:28	22:32
3	09:27		11:51 (37)	08:41		13:17 (32)	07:30		08:52 (21)	07:01	05:39	04:37
	15:55	19	12:10 (37)	17:01	52	15:18 (27)	18:09	21	09:13 (21)	20:21	21:30	22:34
4	09:26		11:51 (37)	08:39		13:18 (32)	07:27		08:52 (21)	06:58	05:36	04:36
	15:57	20	12:11 (37)	17:03	54	15:20 (27)	18:12	20	09:12 (21)	20:24	21:33	22:35
5	09:26		11:52 (37)	08:37		13:17 (32)	07:24		08:52 (21)	06:55	05:34	04:35
	15:58	20	12:12 (37)	17:06	58	15:21 (27)	18:14	20	09:12 (21)	20:26	21:35	22:37
6	09:25		11:52 (37)	08:34		13:18 (32)	07:21		08:52 (21)	06:52	05:31	04:34
	16:00	20	12:12 (37)	17:08	62	15:43 (28)	18:16	19	09:11 (21)	20:28	21:37	22:38
7	09:24		11:52 (37)	08:32		13:17 (32)	07:19		08:53 (21)	06:49	05:29	04:33
	16:02	21	12:13 (37)	17:11	68	15:46 (28)	18:19	17	09:10 (21)	20:30	21:40	22:39
8	09:24		11:53 (37)	08:30		13:18 (32)	07:16		08:54 (21)	06:47	05:26	04:32
	16:03	21	12:14 (37)	17:13	72	15:51 (28)	18:21	14	09:08 (21)	20:33	21:42	22:40
9	09:23		11:52 (37)	08:27		13:18 (32)	07:13		08:55 (21)	06:44	05:24	04:31
	16:05	22	12:14 (37)	17:16	78	15:59 (28)	18:24	10	09:05 (21)	20:35	21:44	22:42
10	09:22		11:53 (37)	08:25		13:18 (32)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (37)	17:18	82	16:00 (28)	18:26			20:37	21:46	22:43
11	09:21		11:54 (37)	08:23		10:11 (19)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (37)	17:21	84	16:00 (28)	18:28			20:40	21:49	22:44
12	09:20		11:53 (37)	08:20		10:06 (19)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (37)	17:23	89	15:59 (28)	18:31			20:42	21:51	22:45
13	09:18		11:53 (37)	08:18		10:04 (19)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (24)	17:26	90	15:58 (28)	18:33			20:44	21:53	22:46
14	09:17		11:54 (37)	08:15		10:03 (19)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (24)	17:28	87	15:57 (28)	18:35			20:47	21:55	22:46
15	09:16		11:55 (37)	08:13		10:02 (19)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (24)	17:31	81	15:54 (28)	18:38			20:49	21:57	22:47
16	09:15		11:55 (37)	08:10		10:01 (19)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (24)	17:33	72	15:24 (27)	18:40			20:51	22:00	22:48
17	09:13		11:55 (37)	08:07		10:00 (19)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (24)	17:35	67	15:23 (27)	18:42			20:53	22:02	22:49
18	09:12		11:57 (37)	08:05		10:00 (19)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (24)	17:38	61	15:23 (27)	18:45			20:56	22:04	22:49
19	09:10		11:57 (37)	08:02		10:00 (19)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (24)	17:40	43	15:21 (27)	18:47			20:58	22:06	22:50
20	09:08		11:58 (37)	08:00		09:59 (19)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (24)	17:43	41	15:19 (27)	18:49			21:00	22:08	22:50
21	09:07		11:59 (37)	07:57		09:59 (19)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (24)	17:45	32	15:15 (27)	18:51			21:03	22:10	22:50
22	09:05		11:59 (37)	07:54		09:59 (19)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (24)	17:48	25	10:24 (19)	18:54			21:05	22:12	22:50
23	09:03		12:01 (37)	07:52		10:00 (19)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (24)	17:50	24	10:24 (19)	18:56			21:07	22:14	22:50
24	09:02		12:03 (37)	07:49		10:01 (19)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (24)	17:53	22	10:23 (19)	18:58			21:10	22:16	22:51
25	09:00		12:05 (37)	07:46		09:00 (21)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (32)	17:55	27	10:22 (19)	19:01			21:12	22:18	22:50
26	08:58		13:21 (32)	07:43		08:57 (21)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (32)	17:57	30	10:20 (19)	19:03			21:14	22:20	22:50
27	08:56		13:20 (32)	07:41		08:55 (21)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (32)	18:00	28	10:17 (19)	19:05			21:17	22:22	22:50
28	08:54		13:19 (32)	07:38		08:54 (21)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (32)	18:02	22	10:13 (19)	19:07			21:19	22:24	22:50
29	08:52		13:19 (32)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (32)				20:10			21:21	22:25	22:50
30	08:50		13:18 (32)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (32)				20:12			21:24	22:27	22:49
31	08:48		13:18 (32)				07:10				04:41	
	16:53	34	13:52 (32)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		12:48 (32)	09:00		11:36 (37)
	22:49	22:01	20:40	19:13			16:49	83	15:30 (28)	15:51	22	11:58 (37)
2	04:33	05:26	06:35	07:42			07:54		12:48 (32)	09:02		11:36 (37)
	22:48	21:58	20:37	19:10			16:46	76	15:28 (28)	15:50	22	11:58 (37)
3	04:34	05:28	06:37	07:44			07:56		12:48 (32)	09:03		11:36 (37)
	22:47	21:56	20:34	19:07			16:44	71	15:20 (28)	15:49	22	11:58 (37)
4	04:35	05:31	06:40	07:46		09:34 (21)	07:59		12:47 (32)	09:05		11:37 (37)
	22:47	21:54	20:31	19:04	7	09:41 (21)	16:41	66	15:15 (28)	15:48	21	11:58 (37)
5	04:36	05:33	06:42	07:48		09:32 (21)	08:01		12:47 (32)	09:07		11:37 (37)
	22:46	21:51	20:28	19:01	12	09:44 (21)	16:39	62	15:13 (28)	15:47	21	11:58 (37)
6	04:37	05:35	06:44	07:51		09:30 (21)	08:03		12:48 (32)	09:09		11:38 (37)
	22:45	21:49	20:25	18:59	15	09:45 (21)	16:37	57	14:51 (27)	15:46	21	11:59 (37)
7	04:38	05:37	06:46	07:53		09:28 (21)	08:06		12:47 (32)	09:10		11:39 (37)
	22:44	21:47	20:22	18:56	18	09:46 (21)	16:34	55	14:50 (27)	15:45	20	11:59 (37)
8	04:40	05:39	06:48	07:55		09:28 (21)	08:08		12:48 (32)	09:12		11:40 (37)
	22:43	21:44	20:20	18:53	19	09:47 (21)	16:32	50	14:48 (27)	15:45	19	11:59 (37)
9	04:41	05:42	06:51	07:57		09:27 (21)	08:11		12:48 (32)	09:13		11:41 (37)
	22:42	21:42	20:17	18:50	20	09:47 (21)	16:30	42	14:43 (27)	15:44	19	12:00 (37)
10	04:43	05:44	06:53	08:00		09:27 (21)	08:13		12:49 (32)	09:15		11:41 (37)
	22:40	21:39	20:14	18:47	20	09:47 (21)	16:28	35	13:24 (32)	15:43	18	11:59 (37)
11	04:44	05:46	06:55	08:02		09:26 (21)	08:15		12:49 (32)	09:16		11:42 (37)
	22:39	21:37	20:11	18:45	20	09:46 (21)	16:25	34	13:23 (32)	15:43	18	12:00 (37)
12	04:46	05:48	06:57	08:04		09:26 (21)	08:18		12:50 (32)	09:18		11:42 (37)
	22:38	21:34	20:08	18:42	19	09:45 (21)	16:23	33	13:23 (32)	15:43	17	11:59 (37)
13	04:47	05:51	07:00	08:06		09:27 (21)	08:20		12:51 (32)	09:19		11:43 (37)
	22:37	21:31	20:05	18:39	18	09:45 (21)	16:21	32	13:23 (32)	15:42	17	12:00 (37)
14	04:49	05:53	07:02	08:09		09:27 (21)	08:22		12:51 (32)	09:20		11:44 (37)
	22:35	21:29	20:02	18:36	26	10:48 (19)	16:19	31	13:22 (32)	15:42	16	12:00 (37)
15	04:51	05:55	07:04	08:11		09:29 (21)	08:25		12:53 (32)	09:21		11:44 (37)
	22:34	21:26	19:59	18:33	29	10:51 (19)	16:17	28	13:21 (32)	15:42	16	12:00 (37)
16	04:52	05:57	07:06	08:13		09:30 (21)	08:27		12:54 (32)	09:22		11:45 (37)
	22:32	21:24	19:56	18:31	28	10:52 (19)	16:15	27	13:21 (32)	15:42	15	12:00 (37)
17	04:54	05:59	07:08	08:16		10:33 (19)	08:29		11:38 (37)	09:23		11:45 (37)
	22:30	21:21	19:54	18:28	21	10:54 (19)	16:13	32	13:19 (32)	15:42	15	12:00 (37)
18	04:56	06:02	07:10	08:18		10:31 (19)	08:32		11:36 (37)	09:24		11:46 (37)
	22:29	21:18	19:51	18:25	23	10:54 (19)	16:11	35	13:20 (24)	15:42	15	12:01 (37)
19	04:58	06:04	07:13	08:20		10:31 (19)	08:34		11:36 (37)	09:25		11:47 (37)
	22:27	21:16	19:48	18:22	24	10:55 (19)	16:09	36	13:21 (24)	15:42	14	12:01 (37)
20	05:00	06:06	07:15	08:23		10:30 (19)	08:36		11:34 (37)	09:26		11:48 (37)
	22:25	21:13	19:45	18:20	25	10:55 (19)	16:08	40	13:21 (24)	15:42	14	12:02 (37)
21	05:01	06:08	07:17	08:25		10:30 (19)	08:39		11:34 (37)	09:26		11:48 (37)
	22:24	21:10	19:42	18:17	37	15:48 (27)	16:06	40	13:21 (24)	15:43	14	12:02 (37)
22	05:03	06:11	07:19	08:27		10:29 (19)	08:41		11:34 (37)	09:27		11:49 (37)
	22:22	21:08	19:39	18:14	42	15:50 (27)	16:04	43	13:22 (24)	15:43	14	12:03 (37)
23	05:05	06:13	07:22	08:30		10:30 (19)	08:43		11:33 (37)	09:27		11:49 (37)
	22:20	21:05	19:36	18:12	50	15:52 (27)	16:02	44	13:22 (24)	15:44	14	12:03 (37)
24	05:07	06:15	07:24	08:32		10:29 (19)	08:45		11:34 (37)	09:28		11:50 (37)
	22:18	21:02	19:33	18:09	63	15:52 (27)	16:01	44	13:23 (24)	15:44	14	12:04 (37)
25	05:09	06:17	07:26	07:35		09:30 (19)	08:47		11:33 (37)	09:28		11:50 (37)
	22:16	20:59	19:30	17:06	69	14:54 (27)	15:59	44	13:22 (24)	15:45	14	12:04 (37)
26	05:11	06:20	07:28	07:37		09:30 (19)	08:50		11:34 (37)	09:28		11:50 (37)
	22:14	20:56	19:27	17:04	74	14:54 (27)	15:58	44	13:23 (24)	15:46	15	12:05 (37)
27	05:13	06:22	07:30	07:39		09:31 (19)	08:52		11:34 (37)	09:28		11:50 (37)
	22:12	20:54	19:24	17:01	82	15:24 (28)	15:56	44	13:23 (24)	15:47	16	12:06 (37)
28	05:16	06:24	07:33	07:42		09:33 (19)	08:54		11:35 (37)	09:28		11:50 (37)
	22:10	20:51	19:22	16:59	89	15:27 (28)	15:55	37	13:17 (24)	15:48	16	12:06 (37)
29	05:18	06:26	07:35	07:44		09:34 (19)	08:56		11:35 (37)	09:28		11:50 (37)
	22:07	20:48	19:19	16:56	90	15:28 (28)	15:54	29	13:09 (24)	15:49	16	12:06 (37)
30	05:20	06:29	07:37	07:47		09:36 (19)	08:58		11:35 (37)	09:28		11:51 (37)
	22:05	20:45	19:16	16:54	90	15:29 (28)	15:52	23	13:03 (24)	15:50	17	12:08 (37)
31	05:22	06:31		07:49		12:49 (32)				09:28		11:51 (37)
	22:03	20:42		16:51	81	15:30 (28)				15:51	17	12:08 (37)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					1111			1317			529	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,64			0,59			0,64	
Total reduction					0,26			0,23			0,26	
Total, real					286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46	14:11 (37)	07:35	10:14 (21)	07:07	05:44	04:40
	15:53		16:56 18	15:31 (24)	18:05 73	16:49 (27)	20:17	21:26	22:30
2	09:27		08:43	15:15 (24)	07:32	10:15 (21)	07:04	05:41	04:38
	15:54		16:58 17	15:32 (24)	18:07 70	16:50 (27)	20:19	21:28	22:32
3	09:27		08:41	15:14 (24)	07:30	10:16 (21)	07:01	05:39	04:37
	15:55		17:01 19	15:33 (24)	18:09 63	16:48 (27)	20:21	21:30	22:34
4	09:26		08:39	12:33 (19)	07:27	10:16 (21)	06:58	05:36	04:36
	15:57		17:03 32	15:33 (24)	18:12 54	16:47 (27)	20:23	21:33	22:35
5	09:26		08:37	12:30 (19)	07:24	09:25 (16)	06:55	05:34	04:35
	15:58		17:06 37	15:33 (24)	18:14 37	16:44 (27)	20:26	21:35	22:36
6	09:25		08:34	12:29 (19)	07:21	09:21 (16)	06:52	05:31	04:34
	16:00		17:08 40	15:34 (24)	18:16 27	10:42 (21)	20:28	21:37	22:38
7	09:24		08:32	12:27 (19)	07:18	10:19 (21)	06:49	05:29	04:33
	16:02		17:11 43	15:33 (24)	18:19 20	10:39 (21)	20:30	21:40	22:39
8	09:24		08:30	12:26 (19)	07:16	10:21 (21)	06:47	05:26	04:32
	16:03		17:13 46	15:34 (24)	18:21 15	10:36 (21)	20:33	21:42	22:40
9	09:23		08:27	12:25 (19)	07:13	10:24 (21)	06:44	05:24	04:31
	16:05		17:16 46	15:33 (24)	18:24 8	10:32 (21)	20:35	21:44	22:42
10	09:22		08:25	12:24 (19)	07:10		06:41	05:22	04:30
	16:07		17:18 45	15:31 (24)	18:26		20:37	21:46	22:43
11	09:21		08:22	12:24 (19)	07:07		06:38	05:19	04:29
	16:09		17:21 43	15:30 (24)	18:28		20:40	21:49	22:44
12	09:20		08:20	12:23 (19)	07:04		06:35	05:17	04:29
	16:11		17:23 38	15:27 (24)	18:31		20:42	21:51	22:45
13	09:18		08:18	12:22 (19)	07:01		06:32	05:15	04:28
	16:13		17:26 35	12:57 (19)	18:33		20:44	21:53	22:46
14	09:17		08:15	12:23 (19)	06:59		06:30	05:12	04:28
	16:15		17:28 35	12:58 (19)	18:35		20:46	21:55	22:46
15	09:16		08:12	12:22 (19)	06:56		06:27	05:10	04:27
	16:17		17:30 35	12:57 (19)	18:38		20:49	21:57	22:47
16	09:14		08:10	12:22 (19)	06:53		06:24	05:08	04:27
	16:19		17:33 43	16:12 (32)	18:40		20:51	22:00	22:48
17	09:13		08:07	12:22 (19)	06:50		06:21	05:06	04:27
	16:21		17:35 49	16:15 (32)	18:42		20:53	22:02	22:48
18	09:12		08:05	12:23 (19)	06:47		06:18	05:04	04:27
	16:23		17:38 51	16:17 (32)	18:44		20:56	22:04	22:49
19	09:10		08:02	12:23 (19)	06:44		06:16	05:02	04:27
	16:25		17:40 54	16:18 (32)	18:47		20:58	22:06	22:49
20	09:08		08:00	12:23 (19)	06:41		06:13	05:00	04:27
	16:28		17:43 55	16:19 (32)	18:49		21:00	22:08	22:50
21	09:07		07:57	12:23 (19)	06:38		06:10	04:58	04:27
	16:30		17:45 56	16:20 (32)	18:51		21:03	22:10	22:50
22	09:05		07:54	12:24 (19)	06:36		06:07	04:56	04:27
	16:32		17:48 61	16:42 (27)	18:54		21:05	22:12	22:50
23	09:03		07:52	12:26 (19)	06:33		06:05	04:54	04:27
	16:34		17:50 66	16:48 (27)	18:56		21:07	22:14	22:50
24	09:01		07:49	10:20 (21)	06:30		06:02	04:52	04:27
	16:37		17:52 68	16:49 (27)	18:58		21:10	22:16	22:50
25	09:00		07:46	10:16 (21)	06:27		05:59	04:51	04:28
	16:39		17:55 89	16:50 (27)	19:01		21:12	22:18	22:50
26	08:58		07:43	10:15 (21)	06:24		05:57	04:49	04:28
	16:41		17:57 92	16:50 (27)	19:03		21:14	22:20	22:50
27	08:56		07:41	10:15 (21)	06:21		05:54	04:47	04:29
	16:44		18:00 77	16:50 (27)	19:05		21:17	22:22	22:50
28	08:54		07:38	10:15 (21)	06:18		05:51	04:45	04:29
	16:46		18:02 75	16:50 (27)	19:07		21:19	22:24	22:50
29	08:52				07:15		05:49	04:44	04:30
	16:49				20:10		21:21	22:25	22:49
30	08:50	14:16 (37)			07:12		05:46	04:42	04:31
	16:51 3	14:19 (37)			20:12		21:23	22:27	22:49
31	08:48	14:08 (37)			07:10			04:41	
	16:53 21	15:27 (24)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	24		1365		367				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,55		0,60		0,65				
Total reduction	0,22		0,24		0,26				
Total, real	5		328		96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (19)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (24)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (19)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (19)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (24)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (19)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (24)	15:48
5	04:36	05:33	06:42	07:48		10:59 (21)	08:01		11:58 (19)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (21)	16:39	41	15:03 (24)	15:47
6	04:37	05:35	06:44	07:50		10:56 (21)	08:03		12:01 (19)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (21)	16:37	36	15:04 (24)	15:46
7	04:38	05:37	06:46	07:53		09:54 (16)	08:06		12:03 (19)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (21)	16:34	31	15:03 (24)	15:45
8	04:40	05:39	06:48	07:55		09:58 (16)	08:08		14:45 (24)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (27)	16:32	18	15:03 (24)	15:45
9	04:41	05:42	06:51	07:57		10:01 (16)	08:10		14:46 (24)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (27)	16:30	17	15:03 (24)	15:44
10	04:43	05:44	06:53	08:00		10:49 (21)	08:13		13:42 (37)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (27)	16:28	20	15:03 (24)	15:43
11	04:44	05:46	06:55	08:02		10:49 (21)	08:15		13:39 (37)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (27)	16:25	20	14:58 (24)	15:43
12	04:46	05:48	06:57	08:04		10:48 (21)	08:18		13:48 (37)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (27)	16:23	3	13:51 (37)	15:43
13	04:47	05:50	06:59	08:06		10:48 (21)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (27)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (21)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (27)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (21)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (27)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (21)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (27)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (21)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (27)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (19)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (27)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (19)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (27)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (19)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (27)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (19)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (32)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (19)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (32)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (19)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (32)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (19)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (32)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (19)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (32)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (19)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (32)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (19)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (19)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (19)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (19)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (19)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (19)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (19)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (24)	15:52			15:50
31	05:22	06:31		07:49		11:53 (19)				09:28
	22:03	20:42		16:51	44	15:00 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	11:38 (21)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:44 (16)	09:00
	15:53	16:56 63	13:43 (19)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49 56	15:37 (32)	15:51
2	09:27	08:43	11:39 (21)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:56 (16)	09:01
	15:54	16:58 59	13:43 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46 51	15:37 (32)	15:50
3	09:27	08:41	11:38 (21)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	09:57 (16)	09:03
	15:55	17:01 51	13:42 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07	16:44 55	15:36 (32)	15:49
4	09:26	08:39	11:39 (21)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46	07:58	10:02 (16)	09:05
	15:57	17:03 51	15:59 (32)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41 56	15:35 (32)	15:48
5	09:26	08:37	11:39 (21)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:04 (16)	09:07
	15:58	17:06 56	16:02 (32)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39 58	15:34 (32)	15:47
6	09:25	08:34	10:34 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	11:10 (21)	09:09
	16:00	17:08 57	16:05 (32)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 55	15:33 (32)	15:46
7	09:24	08:32	10:32 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53	08:06	11:09 (21)	09:10
	16:02	17:11 55	16:05 (32)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56	16:34 49	13:12 (19)	15:45
8	09:24	08:30	10:27 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55	08:08	11:09 (21)	09:12
	16:03	17:13 53	16:07 (32)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32 50	13:13 (19)	15:45
9	09:23	08:27	10:26 (16)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:10	11:09 (21)	09:13
	16:05	17:16 49	16:07 (32)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 60	13:14 (19)	15:44
10	09:22	08:25	10:15 (16)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	11:10 (21)	09:15
	16:07	17:18 58	16:07 (32)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:28 61	13:14 (19)	15:43
11	09:21	08:22	10:16 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	11:10 (21)	09:16
	16:09	17:21 55	16:08 (32)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44	16:25 63	13:14 (19)	15:43
12	09:20	08:20	10:17 (16)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	11:10 (21)	09:17
	16:11	17:23 48	16:08 (32)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 66	13:15 (19)	15:43
13	09:18	08:17	10:18 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	11:11 (21)	09:19
	16:13	17:26 33	16:07 (32)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 65	13:15 (19)	15:42
14	09:17 12:02 (13)	08:15	10:21 (16)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09	08:22	11:11 (21)	09:20
	16:15 8 12:10 (13)	17:28 28	16:08 (32)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 66	13:15 (19)	15:42
15	09:16 12:02 (13)	08:12	15:50 (32)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	11:13 (21)	09:21
	16:17 9 12:11 (13)	17:30 17	16:07 (32)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17 64	13:15 (19)	15:42
16	09:14 12:02 (13)	08:10	15:51 (32)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	11:14 (21)	09:22
	16:19 11 12:13 (13)	17:33 14	16:05 (32)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 62	13:15 (19)	15:42
17	09:13 12:02 (13)	08:07	15:52 (32)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	11:15 (21)	09:23
	16:21 20 13:30 (19)	17:35 12	16:04 (32)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 61	13:14 (19)	15:42
18	09:12 11:58 (13)	08:05	15:56 (32)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:32	11:16 (21)	09:24
	16:23 30 13:34 (19)	17:38 6	16:02 (32)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 60	13:14 (19)	15:42
19	09:10 11:58 (13)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20	08:34	11:19 (21)	09:25
	16:25 33 13:35 (19)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22	16:09 55	13:14 (19)	15:42
20	09:08 11:58 (13)	08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	11:21 (21)	09:25
	16:27 36 13:37 (19)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 47	13:13 (19)	15:42
21	09:07 11:58 (13)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	11:33 (13)	09:26
	16:30 39 13:38 (19)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 39	13:13 (19)	15:43
22	09:05 11:46 (21)	07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41	11:34 (13)	09:27
	16:32 47 13:38 (19)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 36	13:13 (19)	15:43
23	09:03 11:44 (21)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	11:34 (13)	09:27
	16:34 55 13:39 (19)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 33	13:12 (19)	15:44
24	09:01 11:42 (21)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32 16:24 (32)	08:45	11:35 (13)	09:28
	16:37 60 13:40 (19)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09 8 16:32 (32)	16:01 30	13:11 (19)	15:44
25	09:00 11:42 (21)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34 15:22 (32)	08:47	11:41 (13)	09:28
	16:39 61 13:41 (19)	17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06 12 15:34 (32)	15:59 20	13:09 (19)	15:45
26	08:58 11:41 (21)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37 15:20 (32)	08:49	11:41 (13)	09:28
	16:41 62 13:42 (19)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 15 15:35 (32)	15:58 11	11:52 (13)	15:46
27	08:56 11:40 (21)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39 15:19 (32)	08:52	11:41 (13)	09:28
	16:44 64 13:42 (19)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01 17 15:36 (32)	15:56 10	11:51 (13)	15:47
28	08:54 11:40 (21)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42 09:50 (16)	08:54	11:42 (13)	09:28
	16:46 65 13:43 (19)	18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59 28 15:37 (32)	15:55 8	11:50 (13)	15:48
29	08:52 11:39 (21)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44 09:47 (16)	08:56		09:28
	16:49 65 13:43 (19)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56 37 15:37 (32)	15:53		15:49
30	08:50 11:39 (21)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46 09:46 (16)	08:58		09:28
	16:51 65 13:43 (19)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54 49 15:37 (32)	15:52		15:50
31	08:48 11:39 (21)			07:09		04:41		05:22	06:31		07:49 09:46 (16)			09:28
	16:53 63 13:43 (19)			20:14		22:29		22:03	20:42		16:51 55 15:38 (32)			15:51
Potential sun hours	221	260	365	432	521	547	546	478	386	319	236			199
Total, worst case	793	765								221	1347			
Sun reduction	0,50	0,50								0,50	0,50			
Oper. time red.	0,80	0,80								0,80	0,80			
Wind dir. red.	0,62	0,61								0,60	0,62			
Total reduction	0,25	0,24								0,24	0,25			
Total, real	197	187								53	334			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (16)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (16)	09:00
	15:53		16:56	74	14:26 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (19)	15:51
2	09:27		08:43		10:51 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (16)	09:01
	15:54		16:58	73	14:27 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (19)	15:50
3	09:27		08:41		10:50 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (16)	09:03
	15:55		17:01	74	14:27 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (19)	15:49
4	09:26		08:39		10:51 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (16)	09:05
	15:57		17:03	71	14:27 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (19)	15:48
5	09:26		08:37		10:51 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (16)	09:07
	15:58		17:06	68	14:26 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (19)	15:47
6	09:25		08:34		10:53 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (16)	09:09
	16:00		17:08	64	14:26 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (19)	15:46
7	09:24		08:32		10:53 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (16)	09:10
	16:02		17:11	59	14:25 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (19)	15:45
8	09:24		08:30		10:55 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (16)	09:12
	16:03		17:13	52	14:24 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (19)	15:45
9	09:23		08:27		10:56 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (16)	09:13
	16:05		17:16	43	14:22 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (19)	15:44
10	09:22		08:25		10:58 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (16)	09:15
	16:07		17:18	26	14:18 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (19)	15:43
11	09:21		08:22		12:44 (21)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (16)	09:16
	16:09		17:21	5	12:49 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (19)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (16)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (19)	15:42
13	09:18	12:39 (13)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (16)	09:19
	16:13	5 12:44 (13)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (19)	15:42
14	09:17	12:39 (13)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (16)	09:20
	16:15	7 12:46 (13)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (19)	15:42
15	09:16	12:39 (13)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (16)	09:21
	16:17	15 12:54 (13)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (19)	15:42
16	09:14	12:38 (13)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (16)	09:22
	16:19	17 12:55 (13)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (19)	15:42
17	09:13	12:38 (13)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (21)	09:23
	16:21	18 12:56 (13)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (19)	15:42
18	09:12	12:37 (13)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (21)	09:24
	16:23	19 12:56 (13)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (19)	15:42
19	09:10	12:38 (13)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (21)	09:25
	16:25	20 12:58 (13)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (19)	15:42
20	09:08	12:37 (21)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (21)	09:25
	16:27	22 12:59 (13)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (19)	15:42
21	09:07	12:35 (21)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (21)	09:26
	16:30	23 12:58 (13)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (13)	15:43
22	09:05	12:34 (21)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (21)	09:27
	16:32	33 14:16 (19)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (13)	15:43
23	09:03	12:33 (21)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (13)	09:27
	16:34	39 14:19 (19)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (13)	15:44
24	09:01	12:33 (21)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (13)	09:28
	16:37	42 14:21 (19)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (13)	15:44
25	09:00	12:32 (21)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (13)	09:28
	16:39	45 14:22 (19)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (13)	15:45
26	08:58	10:57 (16)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (13)	09:28
	16:41	50 14:24 (19)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (13)	15:46
27	08:56	10:51 (16)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (13)	09:28
	16:44	64 14:24 (19)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (13)	15:47
28	08:54	10:51 (16)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (13)	09:28
	16:46	69 14:25 (19)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (13)	15:48
29	08:52	10:51 (16)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (13)	09:28
	16:49	70 14:26 (19)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (13)	15:49
30	08:50	10:50 (16)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (19)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (16)				07:09		04:41		05:22	06:31		07:49	12:13 (21)			09:28
	16:53	74 14:27 (19)				20:14		22:29		22:03	20:42		16:51	7 12:20 (21)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236			199
Total, worst case	704		609										7	1322			
Sun reduction	0,50		0,50										0,50	0,50			
Oper. time red.	0,80		0,80										0,80	0,80			
Wind dir. red.	0,62		0,63										0,63	0,62			
Total reduction	0,25		0,25										0,25	0,25			
Total, real	174		153										2	328			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (16)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (16)	09:00
	15:53		16:56	73	14:22 (19)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (19)	15:51
2	09:27		08:43		10:46 (16)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (16)	09:01
	15:54		16:58	74	14:23 (19)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (19)	15:50
3	09:27		08:41		10:45 (16)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (16)	09:03
	15:55		17:01	74	14:22 (19)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (19)	15:49
4	09:26		08:39		10:46 (16)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (16)	09:05
	15:57		17:03	73	14:23 (19)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (19)	15:48
5	09:26		08:37		10:46 (16)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (16)	09:07
	15:58		17:06	71	14:22 (19)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (19)	15:47
6	09:25		08:34		10:47 (16)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (16)	09:09
	16:00		17:08	68	14:22 (19)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (19)	15:46
7	09:24		08:32		10:47 (16)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (16)	09:10
	16:02		17:11	65	14:21 (19)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (19)	15:45
8	09:24		08:30		10:48 (16)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (16)	09:12
	16:03		17:13	58	14:20 (19)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (19)	15:45
9	09:23		08:27		10:49 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (16)	09:13
	16:05		17:16	50	14:18 (19)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (19)	15:44
10	09:22		08:25		10:50 (16)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (16)	09:15
	16:07		17:18	40	14:16 (19)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (19)	15:43
11	09:21		08:22		10:53 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (16)	09:16
	16:09		17:21	22	12:47 (21)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (19)	15:43
12	09:20		08:20		12:38 (21)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (16)	09:17
	16:11		17:23	4	12:42 (21)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (19)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (16)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (19)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (21)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (19)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (21)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (19)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (21)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (19)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (21)	09:23
	16:21	5	12:50 (13)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (19)	15:42
18	09:12		12:33 (13)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (21)	09:24
	16:23	18	12:51 (13)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (19)	15:42
19	09:10		12:34 (13)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (21)	09:25
	16:25	19	12:53 (13)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (19)	15:42
20	09:08		12:34 (13)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (21)	09:25
	16:27	20	12:54 (13)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (19)	15:42
21	09:07		12:31 (21)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (21)	09:26
	16:30	22	12:53 (13)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (13)	15:43
22	09:05		12:29 (21)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (13)	09:27
	16:32	27	14:06 (19)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (13)	15:43
23	09:03		12:28 (21)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (13)	09:27
	16:34	38	14:14 (19)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (13)	15:44
24	09:01		12:27 (21)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (13)	09:28
	16:37	43	14:16 (19)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (13)	15:44
25	09:00		12:27 (21)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (13)	09:28
	16:39	45	14:17 (19)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (13)	15:45
26	08:58		12:26 (21)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (19)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (21)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (19)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (21)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (19)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (16)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (19)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (21)	08:58			09:28
	16:51	55	14:21 (19)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (21)	15:52			15:50
31	08:48		10:46 (16)			07:09		04:41		05:22	06:31		07:49	10:22 (16)				09:28
	16:53	69	14:22 (19)			20:14		22:29		22:03	20:42		16:51	25 12:17 (21)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (30)	08:45	14:59 (21)	07:35	07:07	05:44	04:39
	15:52	20 12:23 (30)	16:56	18 15:17 (21)	18:04	20:16	21:26	22:30
2	09:27	12:03 (30)	08:43	14:59 (21)	07:32	07:04	05:41	04:38
	15:54	20 12:23 (30)	16:58	19 15:18 (21)	18:07	20:19	21:28	22:32
3	09:27	12:03 (30)	08:41	14:58 (21)	07:30	07:01	05:38	04:37
	15:55	20 12:23 (30)	17:01	19 15:17 (21)	18:09	20:21	21:30	22:33
4	09:26	12:03 (30)	08:39	14:59 (21)	07:27	06:58	05:36	04:36
	15:57	21 12:24 (30)	17:03	19 15:18 (21)	18:12	20:23	21:33	22:35
5	09:26	12:04 (30)	08:37	14:59 (21)	07:24	06:55	05:33	04:34
	15:58	26 13:33 (16)	17:06	19 15:18 (21)	18:14	20:26	21:35	22:36
6	09:25	12:04 (30)	08:34	15:00 (21)	07:21	06:52	05:31	04:33
	16:00	29 13:35 (16)	17:08	18 15:18 (21)	18:16	20:28	21:37	22:38
7	09:24	12:05 (30)	08:32	15:00 (21)	07:18	06:49	05:29	04:32
	16:01	31 13:37 (16)	17:11	17 15:17 (21)	18:19	20:30	21:39	22:39
8	09:23	12:06 (30)	08:30	15:00 (21)	07:16	06:46	05:26	04:31
	16:03	33 13:39 (16)	17:13	16 15:16 (21)	18:21	20:33	21:42	22:40
9	09:23	12:06 (30)	08:27	15:02 (21)	07:13	06:44	05:24	04:31
	16:05	33 13:39 (16)	17:15	14 15:16 (21)	18:23	20:35	21:44	22:42
10	09:22	12:07 (30)	08:25	15:03 (21)	07:10	06:41	05:21	04:30
	16:07	35 13:41 (16)	17:18	11 15:14 (21)	18:26	20:37	21:46	22:43
11	09:21	12:07 (30)	08:22	15:07 (21)	07:07	06:38	05:19	04:29
	16:09	35 13:41 (16)	17:20	5 15:12 (21)	18:28	20:39	21:49	22:44
12	09:19	12:08 (30)	08:20		07:04	06:35	05:17	04:29
	16:11	35 13:42 (16)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (30)	08:17		07:01	06:32	05:15	04:28
	16:12	35 13:43 (16)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (30)	08:15		06:58	06:29	05:12	04:28
	16:14	35 13:44 (16)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (30)	08:12		06:56	06:27	05:10	04:27
	16:17	34 13:45 (16)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (30)	08:10		06:53	06:24	05:08	04:27
	16:19	32 13:45 (16)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (30)	08:07		06:50	06:21	05:06	04:27
	16:21	29 13:45 (16)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (30)	08:05		06:47	06:18	05:04	04:26
	16:23	26 13:46 (16)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (16)	08:02		06:44	06:16	05:02	04:26
	16:25	21 13:46 (16)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (16)	07:59		06:41	06:13	05:00	04:26
	16:27	22 13:47 (16)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (16)	07:57		06:38	06:10	04:58	04:26
	16:30	21 13:47 (16)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (16)	07:54		06:35	06:07	04:56	04:27
	16:32	21 13:47 (16)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (16)	07:51		06:33	06:05	04:54	04:27
	16:34	20 13:47 (16)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (16)	07:49		06:30	06:02	04:52	04:27
	16:37	19 13:47 (16)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (16)	07:46		06:27	05:59	04:50	04:28
	16:39	18 13:47 (16)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (16)	07:43		06:24	05:57	04:49	04:28
	16:41	17 13:47 (16)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (16)	07:41		06:21	05:54	04:47	04:29
	16:44	20 15:09 (21)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (16)	07:38		06:18	05:51	04:45	04:29
	16:46	23 15:12 (21)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (16)			07:15	05:49	04:44	04:30
	16:48	21 15:14 (21)			20:10	21:21	22:25	22:49
30	08:50	15:00 (21)			07:12	05:46	04:42	04:31
	16:51	15 15:15 (21)			20:12	21:23	22:27	22:49
31	08:48	15:00 (21)			07:09		04:41	
	16:53	16 15:16 (21)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (21)	08:59		11:49 (30)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (21)	15:51	35	13:23 (16)
2	04:33	05:26	06:35	07:41			07:54		14:31 (21)	09:01		11:50 (30)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (21)	15:50	35	13:24 (16)
3	04:34	05:28	06:37	07:44			07:56		14:31 (21)	09:03		11:50 (30)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (21)	15:49	33	13:23 (16)
4	04:35	05:30	06:39	07:46			07:58		14:29 (21)	09:05		11:50 (30)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (21)	15:48	33	13:23 (16)
5	04:36	05:33	06:42	07:48			08:01		14:29 (21)	09:07		11:50 (30)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (21)	15:47	31	13:22 (16)
6	04:37	05:35	06:44	07:50			08:03		14:29 (21)	09:08		11:50 (30)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (21)	15:46	30	13:22 (16)
7	04:38	05:37	06:46	07:53			08:06		14:29 (21)	09:10		11:51 (30)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (21)	15:45	27	13:21 (16)
8	04:40	05:39	06:48	07:55			08:08		14:29 (21)	09:12		11:51 (30)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (21)	15:44	21	12:12 (30)
9	04:41	05:41	06:51	07:57			08:10		14:30 (21)	09:13		11:51 (30)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (21)	15:44	21	12:12 (30)
10	04:42	05:44	06:53	07:59			08:13		14:29 (21)	09:15		11:52 (30)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (21)	15:43	20	12:12 (30)
11	04:44	05:46	06:55	08:02			08:15		14:30 (21)	09:16		11:53 (30)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (21)	15:43	20	12:13 (30)
12	04:45	05:48	06:57	08:04			08:18		14:32 (21)	09:17		11:53 (30)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (21)	15:42	20	12:13 (30)
13	04:47	05:50	06:59	08:06			08:20		13:07 (16)	09:19		11:54 (30)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (21)	15:42	20	12:14 (30)
14	04:49	05:53	07:02	08:09			08:22		13:04 (16)	09:20		11:54 (30)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (21)	15:42	20	12:14 (30)
15	04:50	05:55	07:04	08:11			08:25		13:03 (16)	09:21		11:54 (30)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (21)	15:42	20	12:14 (30)
16	04:52	05:57	07:06	08:13			08:27		13:03 (16)	09:22		11:55 (30)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (16)	15:42	20	12:15 (30)
17	04:54	05:59	07:08	08:16			08:29		13:02 (16)	09:23		11:55 (30)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (16)	15:42	20	12:15 (30)
18	04:56	06:02	07:10	08:18			08:32		13:02 (16)	09:24		11:56 (30)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (16)	15:42	19	12:15 (30)
19	04:57	06:04	07:13	08:20			08:34		13:02 (16)	09:25		11:56 (30)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (16)	15:42	20	12:16 (30)
20	04:59	06:06	07:15	08:23			08:36		13:01 (16)	09:25		11:57 (30)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (16)	15:42	20	12:17 (30)
21	05:01	06:08	07:17	08:25			08:38		13:02 (16)	09:26		11:57 (30)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (16)	15:43	20	12:17 (30)
22	05:03	06:10	07:19	08:27			08:41		13:02 (16)	09:27		11:58 (30)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (16)	15:43	20	12:18 (30)
23	05:05	06:13	07:21	08:30			08:43		13:02 (16)	09:27		11:58 (30)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (16)	15:44	20	12:18 (30)
24	05:07	06:15	07:24	08:32			08:45		11:55 (30)	09:27		11:58 (30)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (16)	15:44	20	12:18 (30)
25	05:09	06:17	07:26	07:34			08:47		11:52 (30)	09:28		11:59 (30)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (16)	15:45	20	12:19 (30)
26	05:11	06:19	07:28	07:37			08:49		11:51 (30)	09:28		12:00 (30)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (16)	15:46	20	12:20 (30)
27	05:13	06:22	07:30	07:39			08:51		11:50 (30)	09:28		12:00 (30)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (16)	15:47	20	12:20 (30)
28	05:15	06:24	07:32	07:42			08:54		11:49 (30)	09:28		12:00 (30)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (16)	15:48	20	12:20 (30)
29	05:17	06:26	07:35	07:44			08:56		11:50 (30)	09:28		12:01 (30)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (16)	15:49	20	12:21 (30)
30	05:20	06:28	07:37	07:46			08:58		11:49 (30)	09:28		12:01 (30)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (16)	15:50	21	12:22 (30)
31	05:22	06:31		07:49		14:35 (21)				09:28		12:01 (30)
	22:03	20:42		16:51	6	14:41 (21)				15:51	21	12:22 (30)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (30)	08:45	14:09 (16)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (30)
	15:52 20	12:55 (30)	16:56 5	14:14 (16)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (30)
2	09:27	12:36 (30)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (30)
	15:54 21	12:57 (30)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (30)
3	09:27	12:36 (30)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (30)
	15:55 21	12:57 (30)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (30)
4	09:26	12:37 (30)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (30)
	15:57 20	12:57 (30)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (30)
5	09:26	12:37 (30)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (30)
	15:58 20	12:57 (30)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (30)
6	09:25	12:38 (30)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (30)
	16:00 20	12:58 (30)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (30)
7	09:24	12:38 (30)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (30)
	16:01 20	12:58 (30)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (30)
8	09:23	12:39 (30)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (30)
	16:03 20	12:59 (30)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (30)
9	09:23	12:39 (30)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (30)
	16:05 19	12:58 (30)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (30)
10	09:22	12:40 (30)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (16)	09:15		12:25 (30)
	16:07 19	12:59 (30)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (16)	15:43	21	12:46 (30)
11	09:21	12:40 (30)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (16)	09:16		12:26 (30)
	16:09 19	12:59 (30)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (16)	15:43	21	12:47 (30)
12	09:19	12:42 (30)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (16)	09:17		12:26 (30)
	16:10 24	14:10 (16)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (16)	15:42	20	12:46 (30)
13	09:18	12:42 (30)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (16)	09:19		12:27 (30)
	16:12 27	14:11 (16)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (16)	15:42	20	12:47 (30)
14	09:17	12:44 (30)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (16)	09:20		12:27 (30)
	16:14 27	14:13 (16)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (16)	15:42	21	12:48 (30)
15	09:16	12:45 (30)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (16)	09:21		12:27 (30)
	16:17 27	14:14 (16)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (16)	15:42	21	12:48 (30)
16	09:14	12:46 (30)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (16)	09:22		12:28 (30)
	16:19 27	14:15 (16)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (16)	15:42	20	12:48 (30)
17	09:13	12:48 (30)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (16)	09:23		12:28 (30)
	16:21 25	14:16 (16)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (16)	15:42	20	12:48 (30)
18	09:11	13:59 (16)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (16)	09:24		12:29 (30)
	16:23 18	14:17 (16)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (16)	15:42	20	12:49 (30)
19	09:10	13:59 (16)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (16)	09:25		12:30 (30)
	16:25 19	14:18 (16)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (16)	15:42	20	12:50 (30)
20	09:08	13:59 (16)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (16)	09:25		12:30 (30)
	16:27 19	14:18 (16)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (16)	15:42	20	12:50 (30)
21	09:07	13:59 (16)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (16)	09:26		12:30 (30)
	16:30 20	14:19 (16)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (16)	15:43	20	12:50 (30)
22	09:05	13:59 (16)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (16)	09:27		12:31 (30)
	16:32 20	14:19 (16)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (16)	15:43	20	12:51 (30)
23	09:03	13:59 (16)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (16)	09:27		12:31 (30)
	16:34 21	14:20 (16)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (16)	15:44	20	12:51 (30)
24	09:01	14:00 (16)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (16)	09:27		12:31 (30)
	16:36 20	14:20 (16)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (16)	15:44	21	12:52 (30)
25	09:00	14:00 (16)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (30)	09:28		12:33 (30)
	16:39 21	14:21 (16)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (16)	15:45	20	12:53 (30)
26	08:58	14:01 (16)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (30)	09:28		12:33 (30)
	16:41 20	14:21 (16)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (16)	15:46	20	12:53 (30)
27	08:56	14:01 (16)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (30)	09:28		12:34 (30)
	16:44 19	14:20 (16)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (16)	15:47	20	12:54 (30)
28	08:54	14:02 (16)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (30)	09:28		12:33 (30)
	16:46 18	14:20 (16)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (16)	15:47	21	12:54 (30)
29	08:52	14:04 (16)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (30)	09:28		12:34 (30)
	16:48 16	14:20 (16)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (16)	15:49	20	12:54 (30)
30	08:50	14:04 (16)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (30)	09:28		12:35 (30)
	16:51 14	14:18 (16)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (16)	15:50	20	12:55 (30)
31	08:48	14:07 (16)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (30)
	16:53 10	14:17 (16)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (30)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (30)	08:45		15:12 (16)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (30)	16:56	14	15:26 (16)	18:04	20:16	21:26	22:30
2	09:27		13:54 (30)	08:43		15:12 (16)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (30)	16:58	16	15:28 (16)	18:07	20:19	21:28	22:32
3	09:27		13:54 (30)	08:41		15:11 (16)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (30)	17:01	17	15:28 (16)	18:09	20:21	21:30	22:33
4	09:26		13:54 (30)	08:39		15:11 (16)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (30)	17:03	18	15:29 (16)	18:12	20:23	21:33	22:35
5	09:26		13:53 (30)	08:37		15:11 (16)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (30)	17:06	18	15:29 (16)	18:14	20:26	21:35	22:36
6	09:25		13:53 (30)	08:34		15:11 (16)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (30)	17:08	19	15:30 (16)	18:16	20:28	21:37	22:38
7	09:24		13:54 (30)	08:32		15:11 (16)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (30)	17:10	19	15:30 (16)	18:19	20:30	21:39	22:39
8	09:23		13:54 (30)	08:30		15:11 (16)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (30)	17:13	18	15:29 (16)	18:21	20:32	21:42	22:40
9	09:23		13:53 (30)	08:27		15:12 (16)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (30)	17:15	18	15:30 (16)	18:23	20:35	21:44	22:41
10	09:22		13:53 (30)	08:25		15:12 (16)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (30)	17:18	17	15:29 (16)	18:26	20:37	21:46	22:43
11	09:20		13:53 (30)	08:22		15:13 (16)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (30)	17:20	14	15:27 (16)	18:28	20:39	21:48	22:44
12	09:19		13:54 (30)	08:20		15:16 (16)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (30)	17:23	11	15:27 (16)	18:30	20:42	21:51	22:45
13	09:18		13:53 (30)	08:17		15:18 (16)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (30)	17:25	5	15:23 (16)	18:33	20:44	21:53	22:45
14	09:17		13:54 (30)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (30)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (30)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (30)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (30)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (30)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (30)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (30)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (30)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (30)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (30)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (30)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (30)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (30)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (30)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (30)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (30)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (30)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (30)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (30)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (30)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (30)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (30)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (30)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (30)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (30)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (30)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (30)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (16)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (16)				20:12	21:23	22:27	22:49
31	08:48		15:14 (16)				07:09		04:41	
	16:53	11	15:25 (16)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		14:42 (16)	08:59		13:35 (30)
	22:48		22:01		20:39		19:13			16:48	16	14:58 (16)	15:51	19	13:54 (30)
2	04:33		05:26		06:35		07:41			07:53		14:41 (16)	09:01		13:37 (30)
	22:48		21:58		20:37		19:10			16:46	18	14:59 (16)	15:50	18	13:55 (30)
3	04:34		05:28		06:37		07:44			07:56		14:40 (16)	09:03		13:37 (30)
	22:47		21:56		20:34		19:07			16:44	19	14:59 (16)	15:49	18	13:55 (30)
4	04:35		05:30		06:39		07:46			07:58		14:40 (16)	09:05		13:38 (30)
	22:46		21:54		20:31		19:04			16:41	20	15:00 (16)	15:48	17	13:55 (30)
5	04:36		05:32		06:42		07:48			08:01		14:41 (16)	09:07		13:39 (30)
	22:45		21:51		20:28		19:01			16:39	19	15:00 (16)	15:47	16	13:55 (30)
6	04:37		05:35		06:44		07:50			08:03		14:41 (16)	09:08		13:40 (30)
	22:45		21:49		20:25		18:58			16:36	19	15:00 (16)	15:46	15	13:55 (30)
7	04:38		05:37		06:46		07:53			08:06		14:41 (16)	09:10		13:41 (30)
	22:44		21:46		20:22		18:56			16:34	18	14:59 (16)	15:45	14	13:55 (30)
8	04:40		05:39		06:48		07:55			08:08		14:42 (16)	09:12		13:42 (30)
	22:43		21:44		20:19		18:53			16:32	17	14:59 (16)	15:44	13	13:55 (30)
9	04:41		05:41		06:50		07:57			08:10		14:43 (16)	09:13		13:42 (30)
	22:41		21:41		20:16		18:50			16:30	16	14:59 (16)	15:44	12	13:54 (30)
10	04:42		05:44		06:53		07:59			08:13		14:43 (16)	09:15		13:43 (30)
	22:40		21:39		20:14		18:47			16:27	14	14:57 (16)	15:43	11	13:54 (30)
11	04:44		05:46		06:55		08:02			08:15		14:45 (16)	09:16		13:45 (30)
	22:39		21:36		20:11		18:44			16:25	11	14:56 (16)	15:43	9	13:54 (30)
12	04:45		05:48		06:57		08:04			08:18		14:47 (16)	09:17		13:46 (30)
	22:38		21:34		20:08		18:41			16:23	7	14:54 (16)	15:42	7	13:53 (30)
13	04:47		05:50		06:59		08:06			08:20			09:19		13:48 (30)
	22:36		21:31		20:05		18:39			16:21			15:42	5	13:53 (30)
14	04:49		05:53		07:01		08:09			08:22			09:20		13:49 (30)
	22:35		21:29		20:02		18:36			16:19			15:42	3	13:52 (30)
15	04:50		05:55		07:04		08:11			08:25		13:37 (30)	09:21		
	22:33		21:26		19:59		18:33			16:17	7	13:44 (30)	15:42		
16	04:52		05:57		07:06		08:13			08:27		13:36 (30)	09:22		
	22:32		21:23		19:56		18:30			16:15	11	13:47 (30)	15:42		
17	04:54		05:59		07:08		08:16			08:29		13:34 (30)	09:23		
	22:30		21:21		19:53		18:28			16:13	14	13:48 (30)	15:42		
18	04:56		06:01		07:10		08:18			08:32		13:33 (30)	09:24		
	22:29		21:18		19:50		18:25			16:11	17	13:50 (30)	15:42		
19	04:57		06:04		07:12		08:20			08:34		13:33 (30)	09:25		
	22:27		21:15		19:47		18:22			16:09	18	13:51 (30)	15:42		
20	04:59		06:06		07:15		08:23			08:36		13:32 (30)	09:25		
	22:25		21:13		19:45		18:19			16:07	19	13:51 (30)	15:42		
21	05:01		06:08		07:17		08:25			08:38		13:32 (30)	09:26		
	22:23		21:10		19:42		18:17			16:06	20	13:52 (30)	15:43		
22	05:03		06:10		07:19		08:27			08:41		13:32 (30)	09:27		
	22:21		21:07		19:39		18:14			16:04	20	13:52 (30)	15:43		
23	05:05		06:13		07:21		08:30			08:43		13:32 (30)	09:27		
	22:20		21:05		19:36		18:11			16:02	21	13:53 (30)	15:44		
24	05:07		06:15		07:23		08:32			08:45		13:33 (30)	09:27		
	22:18		21:02		19:33		18:09			16:00	21	13:54 (30)	15:44		
25	05:09		06:17		07:26		07:34			08:47		13:33 (30)	09:28		
	22:16		20:59		19:30		17:06			15:59	21	13:54 (30)	15:45		
26	05:11		06:19		07:28		07:37			08:49		13:33 (30)	09:28		
	22:14		20:56		19:27		17:04			15:57	21	13:54 (30)	15:46		
27	05:13		06:22		07:30		07:39			08:51		13:33 (30)	09:28		
	22:11		20:53		19:24		17:01			15:56	21	13:54 (30)	15:47		
28	05:15		06:24		07:32		07:41			08:53		13:33 (30)	09:28		
	22:09		20:51		19:21		16:58			15:55	21	13:54 (30)	15:47		
29	05:17		06:26		07:35		07:44		14:47 (16)	08:55		13:35 (30)	09:28		
	22:07		20:48		19:18		16:56	7	14:54 (16)	15:53	20	13:55 (30)	15:48		
30	05:19		06:28		07:37		07:46		14:45 (16)	08:57		13:35 (30)	09:28		13:56 (30)
	22:05		20:45		19:16		16:53	11	14:56 (16)	15:52	20	13:55 (30)	15:50	4	14:00 (30)
31	05:22		06:31				07:49		14:42 (16)				09:28		13:55 (30)
	22:03		20:42				16:51	15	14:57 (16)				15:51	6	14:01 (30)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								33			486			187	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,55			0,55			0,55	
Total reduction								0,22			0,22			0,22	
Total, real								7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:45		10:57 (41)	07:35		16:28 (21)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (30)	18:04	11	16:39 (21)	20:16	21:26	22:30
2	09:27			08:43		10:59 (41)	07:32		16:27 (21)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (30)	18:07	13	16:40 (21)	20:19	21:28	22:32
3	09:27			08:41		11:02 (41)	07:30		16:27 (21)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (30)	18:09	14	16:41 (21)	20:21	21:30	22:33
4	09:26			08:39		13:29 (30)	07:27		16:27 (21)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (30)	18:12	17	16:44 (21)	20:23	21:33	22:35
5	09:26			08:37		13:30 (30)	07:24		16:27 (21)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (30)	18:14	19	16:46 (21)	20:26	21:35	22:36
6	09:25			08:34		13:33 (30)	07:21		16:28 (21)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (30)	18:16	17	16:45 (21)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (21)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (21)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (21)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (21)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (21)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (21)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (11)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (11)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (11)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (11)	18:33			20:44	21:53	22:45
14	09:17		11:05 (41)	08:15		15:02 (11)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (41)	17:28	12	15:14 (16)	18:35			20:46	21:55	22:46
15	09:16		10:59 (41)	08:12		15:06 (16)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (41)	17:30	12	15:18 (16)	18:37			20:49	21:57	22:47
16	09:14		10:52 (41)	08:10		15:06 (16)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (41)	17:33	15	15:21 (16)	18:40			20:51	21:59	22:48
17	09:13		10:51 (41)	08:07		15:05 (16)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (41)	17:35	16	15:21 (16)	18:42			20:53	22:02	22:48
18	09:11		10:51 (41)	08:05		15:05 (16)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (41)	17:38	15	15:20 (16)	18:44			20:56	22:04	22:49
19	09:10		10:51 (41)	08:02		15:06 (16)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (41)	17:40	16	15:22 (16)	18:47			20:58	22:06	22:49
20	09:08		10:51 (41)	07:59		15:07 (16)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (41)	17:43	17	15:24 (16)	18:49			21:00	22:08	22:50
21	09:07		10:51 (41)	07:57		15:07 (16)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (41)	17:45	20	15:27 (16)	18:51			21:02	22:10	22:50
22	09:05		10:51 (41)	07:54		15:08 (16)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (36)	17:47	20	15:28 (16)	18:53			21:05	22:12	22:50
23	09:03		10:51 (41)	07:51		15:09 (16)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (36)	17:50	18	15:27 (16)	18:56			21:07	22:14	22:50
24	09:01		10:52 (41)	07:49		15:12 (16)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (36)	17:52	13	15:25 (16)	18:58			21:09	22:16	22:50
25	08:59		10:52 (41)	07:46		15:16 (16)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (36)	17:55	5	15:21 (16)	19:00			21:12	22:18	22:50
26	08:58		10:52 (41)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (30)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (41)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (30)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (41)	07:38		16:32 (21)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (30)	18:02	4	16:36 (21)	19:07			21:19	22:23	22:50
29	08:52		10:54 (41)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (30)				20:10			21:21	22:25	22:49
30	08:50		10:55 (41)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (30)				20:12			21:23	22:27	22:49
31	08:48		10:56 (41)				07:09				04:41	
	16:53	42	13:49 (30)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,67			0,57			0,57				
Total reduction		0,27			0,23			0,23				
Total, real		139			81			28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (30)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (30)	15:48
5	04:36	05:33	06:42	07:48		17:09 (21)	08:01		13:02 (30)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (21)	16:39	13	13:15 (30)	15:47
6	04:37	05:35	06:44	07:50		17:06 (21)	08:03		13:01 (30)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (21)	16:36	17	13:18 (30)	15:46
7	04:38	05:37	06:46	07:53		17:04 (21)	08:06		12:58 (30)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (21)	16:34	21	13:19 (30)	15:45
8	04:40	05:39	06:48	07:55		17:03 (21)	08:08		10:32 (41)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (21)	16:32	29	13:20 (30)	15:44
9	04:41	05:41	06:50	07:57		17:02 (21)	08:10		10:30 (41)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (21)	16:30	37	13:22 (30)	15:44
10	04:42	05:44	06:53	07:59		17:01 (21)	08:13		10:28 (41)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (21)	16:27	40	13:21 (30)	15:43
11	04:44	05:46	06:55	08:02		17:01 (21)	08:15		10:27 (41)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (21)	16:25	41	13:19 (30)	15:43
12	04:45	05:48	06:57	08:04		17:01 (21)	08:18		10:27 (41)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (21)	16:23	42	13:19 (30)	15:42
13	04:47	05:50	06:59	08:06		17:02 (21)	08:20		10:25 (41)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (21)	16:21	41	13:15 (30)	15:42
14	04:49	05:53	07:01	08:09		17:06 (21)	08:22		10:25 (41)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (21)	16:19	41	13:07 (30)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (41)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (30)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (41)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (30)	15:42
17	04:54	05:59	07:08	08:16		15:45 (16)	08:29		10:25 (41)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (16)	16:13	39	12:37 (36)	15:42
18	04:56	06:02	07:10	08:18		15:42 (16)	08:32		10:26 (41)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (16)	16:11	40	12:38 (36)	15:42
19	04:57	06:04	07:12	08:20		15:40 (16)	08:34		10:26 (41)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (16)	16:09	39	12:37 (36)	15:42
20	04:59	06:06	07:15	08:23		15:39 (16)	08:36		10:26 (41)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (16)	16:07	28	12:25 (36)	15:42
21	05:01	06:08	07:17	08:25		15:37 (16)	08:38		10:27 (41)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (16)	16:06	22	10:49 (41)	15:43
22	05:03	06:10	07:19	08:27		15:37 (16)	08:41		10:27 (41)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (16)	16:04	22	10:49 (41)	15:43
23	05:05	06:13	07:21	08:30		15:36 (16)	08:43		10:28 (41)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (16)	16:02	21	10:49 (41)	15:44
24	05:07	06:15	07:24	08:32		15:35 (16)	08:45		10:29 (41)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (16)	16:01	20	10:49 (41)	15:44
25	05:09	06:17	07:26	07:34		14:36 (16)	08:47		10:29 (41)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (16)	15:59	19	10:48 (41)	15:45
26	05:11	06:19	07:28	07:37		14:35 (16)	08:49		10:31 (41)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (16)	15:57	18	10:49 (41)	15:46
27	05:13	06:22	07:30	07:39		14:35 (16)	08:51		10:38 (41)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (16)	15:56	10	10:48 (41)	15:47
28	05:15	06:24	07:32	07:41		14:30 (11)	08:53		10:44 (41)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (16)	15:55	3	10:47 (41)	15:48
29	05:17	06:26	07:35	07:44		14:27 (11)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (11)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (11)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (11)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June
1	09:27			08:45		15:29 (12)	07:35		15:43 (17)	07:06			05:43		18:54 (41)	04:39
	15:52			16:56	22	15:51 (12)	18:04	38	16:21 (17)	20:16			21:25	25	19:19 (41)	22:30
2	09:27			08:43		15:29 (12)	07:32		15:44 (17)	07:04			05:41		18:56 (41)	04:38
	15:54			16:58	23	15:52 (12)	18:07	36	16:20 (17)	20:19			21:28	20	19:16 (41)	22:32
3	09:27			08:41		15:29 (12)	07:29		15:44 (17)	07:01		19:08 (41)	05:38		18:59 (41)	04:37
	15:55			17:01	23	15:52 (12)	18:09	35	16:19 (17)	20:21	9	19:17 (41)	21:30	15	19:14 (41)	22:33
4	09:26			08:39		15:29 (12)	07:27		15:45 (17)	06:58		19:03 (41)	05:36		19:04 (41)	04:36
	15:57			17:03	24	15:53 (12)	18:11	33	16:18 (17)	20:23	18	19:21 (41)	21:32	5	19:09 (41)	22:35
5	09:25			08:36		15:29 (12)	07:24		15:46 (17)	06:55		18:59 (41)	05:33			04:35
	15:58			17:06	23	15:52 (12)	18:14	32	16:18 (17)	20:25	24	19:23 (41)	21:35			22:36
6	09:25			08:34		15:28 (12)	07:21		15:48 (17)	06:52		18:57 (41)	05:31			04:33
	16:00			17:08	24	15:52 (12)	18:16	28	16:16 (17)	20:28	28	19:25 (41)	21:37			22:37
7	09:24			08:32		15:29 (12)	07:18		15:49 (17)	06:49		18:55 (41)	05:29			04:32
	16:01			17:10	24	15:53 (12)	18:19	25	16:14 (17)	20:30	31	19:26 (41)	21:39			22:39
8	09:23			08:29		15:29 (12)	07:15		15:51 (17)	06:46		18:53 (41)	05:26			04:32
	16:03			17:13	23	15:52 (12)	18:21	21	16:12 (17)	20:32	35	19:42 (30)	21:42			22:40
9	09:22			08:27		15:31 (12)	07:13		15:54 (17)	06:43		18:52 (41)	05:24			04:31
	16:05			17:15	21	15:52 (12)	18:23	15	16:09 (17)	20:35	54	19:59 (30)	21:44			22:41
10	09:21			08:25		15:31 (12)	07:10			06:41		18:51 (41)	05:21			04:30
	16:07			17:18	20	15:51 (12)	18:26			20:37	57	19:59 (30)	21:46			22:42
11	09:20			08:22		15:32 (12)	07:07			06:38		18:49 (41)	05:19			04:29
	16:09			17:20	18	15:50 (12)	18:28			20:39	60	19:59 (30)	21:48			22:43
12	09:19			08:20		15:34 (12)	07:04			06:35		18:48 (41)	05:17			04:29
	16:11			17:23	15	15:49 (12)	18:30			20:42	62	19:58 (30)	21:50			22:44
13	09:18			08:17		15:36 (12)	07:01			06:32		18:48 (41)	05:15			04:28
	16:12			17:25	22	16:09 (17)	18:33			20:44	64	19:59 (30)	21:53			22:45
14	09:17			08:15		15:54 (17)	06:58			06:29		18:47 (41)	05:12			04:28
	16:14			17:28	18	16:12 (17)	18:35			20:46	63	19:58 (30)	21:55			22:46
15	09:15			08:12		15:52 (17)	06:55			06:27		18:46 (41)	05:10			04:27
	16:17			17:30	22	16:14 (17)	18:37			20:48	63	19:57 (30)	21:57			22:47
16	09:14			08:10		15:51 (17)	06:53		17:30 (36)	06:24		18:47 (41)	05:08			04:27
	16:19			17:33	26	16:17 (17)	18:40	8	17:38 (36)	20:51	62	19:57 (30)	21:59			22:47
17	09:13			08:07		15:49 (17)	06:50		17:27 (36)	06:21		18:46 (41)	05:06			04:27
	16:21			17:35	29	16:18 (17)	18:42	13	17:40 (36)	20:53	60	19:55 (30)	22:01			22:48
18	09:11			08:04		15:47 (17)	06:47		17:25 (36)	06:18		18:45 (41)	05:04			04:26
	16:23			17:38	32	16:19 (17)	18:44	17	17:42 (36)	20:55	58	19:53 (30)	22:04			22:49
19	09:10			08:02		15:46 (17)	06:44		17:23 (36)	06:15		18:46 (41)	05:02			04:26
	16:25			17:40	33	16:19 (17)	18:46	19	17:42 (36)	20:58	53	19:52 (30)	22:06			22:49
20	09:08			07:59		15:46 (17)	06:41		17:22 (36)	06:13		18:45 (41)	05:00			04:26
	16:27			17:43	35	16:21 (17)	18:49	21	17:43 (36)	21:00	44	19:29 (41)	22:08			22:49
21	09:06			07:57		15:45 (17)	06:38		17:21 (36)	06:10		18:45 (41)	04:58			04:26
	16:30			17:45	36	16:21 (17)	18:51	22	17:43 (36)	21:02	43	19:28 (41)	22:10			22:50
22	09:05			07:54		15:44 (17)	06:35		17:21 (36)	06:07		18:46 (41)	04:56			04:27
	16:32			17:47	37	16:21 (17)	18:53	22	17:43 (36)	21:05	43	19:29 (41)	22:12			22:50
23	09:03			07:51		15:44 (17)	06:32		17:20 (36)	06:05		18:46 (41)	04:54			04:27
	16:34			17:50	38	16:22 (17)	18:56	22	17:42 (36)	21:07	41	19:27 (41)	22:14			22:50
24	09:01			07:49		15:43 (17)	06:29		17:20 (36)	06:02		18:47 (41)	04:52			04:27
	16:36			17:52	39	16:22 (17)	18:58	22	17:42 (36)	21:09	40	19:27 (41)	22:16			22:50
25	08:59			07:46		15:44 (17)	06:27		17:20 (36)	05:59		18:47 (41)	04:50			04:28
	16:39			17:55	38	16:22 (17)	19:00	21	17:41 (36)	21:12	39	19:26 (41)	22:18			22:50
26	08:57			07:43		15:43 (17)	06:24		17:20 (36)	05:57		18:48 (41)	04:49			04:28
	16:41			17:57	39	16:22 (17)	19:03	20	17:40 (36)	21:14	37	19:25 (41)	22:20			22:50
27	08:55		15:34 (12)	07:40		15:43 (17)	06:21		17:22 (36)	05:54		18:48 (41)	04:47			04:29
	16:44	10	15:44 (12)	18:00	39	16:22 (17)	19:05	17	17:39 (36)	21:16	36	19:24 (41)	22:21			22:50
28	08:54		15:33 (12)	07:38		15:43 (17)	06:18		17:24 (36)	05:51		18:50 (41)	04:45			04:29
	16:46	13	15:46 (12)	18:02	38	16:21 (17)	19:07	13	17:37 (36)	21:19	33	19:23 (41)	22:23			22:49
29	08:51		15:31 (12)				07:15		18:26 (36)	05:49		18:50 (41)	04:44			04:30
	16:48	16	15:47 (12)				20:09	8	18:34 (36)	21:21	31	19:21 (41)	22:25			22:49
30	08:49		15:31 (12)				07:12			05:46		18:52 (41)	04:42			04:31
	16:51	18	15:49 (12)				20:12			21:23	28	19:20 (41)	22:27			22:49
31	08:47		15:29 (12)				07:09						04:41			
	16:53	20	15:49 (12)				20:14						22:28			
Potential sun hours	221			260			365			432			521			547
Total, worst case		77			781			508			1216			65		
Sun reduction		0,50			0,50			0,50			0,50			0,50		
Oper. time red.		0,80			0,80			0,80			0,80			0,80		
Wind dir. red.		0,53			0,54			0,58			0,68			0,68		
Total reduction		0,21			0,22			0,23			0,27			0,27		
Total, real		16			169			118			331			18		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (41)	07:39			07:51		15:00 (12)	08:59
	22:48	22:00			20:39	60	19:58 (30)	19:13			16:48	21	15:21 (12)	15:51
2	04:33	05:26			06:35		18:49 (41)	07:41			07:53		15:00 (12)	09:01
	22:47	21:58			20:36	57	19:57 (30)	19:10			16:46	22	15:22 (12)	15:50
3	04:34	05:28			06:37		18:49 (41)	07:43			07:56		14:59 (12)	09:03
	22:47	21:56			20:34	54	19:56 (30)	19:07			16:44	23	15:22 (12)	15:49
4	04:35	05:30			06:39		18:51 (41)	07:46		16:33 (17)	07:58		14:59 (12)	09:05
	22:46	21:53			20:31	35	19:40 (30)	19:04	11	16:44 (17)	16:41	23	15:22 (12)	15:48
5	04:36	05:33			06:42		18:52 (41)	07:48		16:29 (17)	08:01		14:59 (12)	09:07
	22:45	21:51			20:28	31	19:23 (41)	19:01	18	16:47 (17)	16:39	24	15:23 (12)	15:47
6	04:37	05:35			06:44		18:53 (41)	07:50		16:26 (17)	08:03		14:58 (12)	09:08
	22:44	21:49			20:25	28	19:21 (41)	18:58	24	16:50 (17)	16:36	24	15:22 (12)	15:46
7	04:38	05:37			06:46		18:54 (41)	07:52		16:24 (17)	08:05		14:59 (12)	09:10
	22:43	21:46			20:22	25	19:19 (41)	18:55	27	16:51 (17)	16:34	23	15:22 (12)	15:45
8	04:40	05:39			06:48		18:57 (41)	07:55		16:21 (17)	08:08		14:59 (12)	09:11
	22:42	21:44			20:19	18	19:15 (41)	18:53	30	16:51 (17)	16:32	23	15:22 (12)	15:44
9	04:41	05:41		19:10 (41)	06:50		19:00 (41)	07:57		16:21 (17)	08:10		14:59 (12)	09:13
	22:41	21:41	10	19:20 (41)	20:16	11	19:11 (41)	18:50	32	16:53 (17)	16:30	23	15:22 (12)	15:44
10	04:42	05:44		19:07 (41)	06:53			07:59		16:19 (17)	08:13		15:00 (12)	09:14
	22:40	21:39	17	19:24 (41)	20:13			18:47	34	16:53 (17)	16:27	21	15:21 (12)	15:43
11	04:44	05:46		19:04 (41)	06:55			08:02		16:18 (17)	08:15		15:01 (12)	09:16
	22:39	21:36	22	19:26 (41)	20:11			18:44	36	16:54 (17)	16:25	20	15:21 (12)	15:43
12	04:45	05:48		19:02 (41)	06:57			08:04		16:17 (17)	08:17		15:02 (12)	09:17
	22:37	21:34	26	19:28 (41)	20:08			18:41	37	16:54 (17)	16:23	19	15:21 (12)	15:42
13	04:47	05:50		19:00 (41)	06:59			08:06		16:16 (17)	08:20		15:03 (12)	09:18
	22:36	21:31	29	19:29 (41)	20:05			18:39	38	16:54 (17)	16:21	16	15:19 (12)	15:42
14	04:49	05:53		18:58 (41)	07:01		18:17 (36)	08:08		16:16 (17)	08:22		15:05 (12)	09:20
	22:35	21:28	32	19:30 (41)	20:02	7	18:24 (36)	18:36	38	16:54 (17)	16:19	13	15:18 (12)	15:42
15	04:50	05:55		18:57 (41)	07:04		18:13 (36)	08:11		16:15 (17)	08:24		15:07 (12)	09:21
	22:33	21:26	34	19:31 (41)	19:59	13	18:26 (36)	18:33	39	16:54 (17)	16:17	10	15:17 (12)	15:42
16	04:52	05:57		18:56 (41)	07:06		18:11 (36)	08:13		16:15 (17)	08:27			09:22
	22:32	21:23	36	19:32 (41)	19:56	16	18:27 (36)	18:30	39	16:54 (17)	16:15			15:42
17	04:54	05:59		18:54 (41)	07:08		18:09 (36)	08:15		16:15 (17)	08:29			09:23
	22:30	21:21	38	19:32 (41)	19:53	19	18:28 (36)	18:28	38	16:53 (17)	16:13			15:42
18	04:56	06:01		18:53 (41)	07:10		18:08 (36)	08:18		16:15 (17)	08:31			09:24
	22:28	21:18	40	19:33 (41)	19:50	20	18:28 (36)	18:25	39	16:54 (17)	16:11			15:42
19	04:57	06:04		18:52 (41)	07:12		18:08 (36)	08:20		16:15 (17)	08:34			09:24
	22:27	21:15	41	19:33 (41)	19:47	21	18:29 (36)	18:22	38	16:53 (17)	16:09			15:42
20	04:59	06:06		18:51 (41)	07:15		18:07 (36)	08:22		16:16 (17)	08:36			09:25
	22:25	21:13	42	19:33 (41)	19:44	22	18:29 (36)	18:19	36	16:52 (17)	16:07			15:42
21	05:01	06:08		18:50 (41)	07:17		18:06 (36)	08:25		16:16 (17)	08:38			09:26
	22:23	21:10	43	19:33 (41)	19:42	22	18:28 (36)	18:17	35	16:51 (17)	16:06			15:43
22	05:03	06:10		18:50 (41)	07:19		18:06 (36)	08:27		16:17 (17)	08:40			09:26
	22:21	21:07	43	19:33 (41)	19:39	22	18:28 (36)	18:14	34	16:51 (17)	16:04			15:43
23	05:05	06:13		18:49 (41)	07:21		18:06 (36)	08:29		16:17 (17)	08:43			09:27
	22:19	21:04	44	19:33 (41)	19:36	21	18:27 (36)	18:11	32	16:49 (17)	16:02			15:44
24	05:07	06:15		18:49 (41)	07:23		18:07 (36)	08:32		16:18 (17)	08:45			09:27
	22:17	21:02	54	19:55 (30)	19:33	19	18:26 (36)	18:09	31	16:49 (17)	16:01			15:44
25	05:09	06:17		18:49 (41)	07:26		18:07 (36)	07:34		15:18 (17)	08:47			09:28
	22:15	20:59	58	19:57 (30)	19:30	18	18:25 (36)	17:06	29	15:47 (17)	15:59			15:45
26	05:11	06:19		18:49 (41)	07:28		18:08 (36)	07:37		15:20 (17)	08:49			09:28
	22:13	20:56	60	19:58 (30)	19:27	15	18:23 (36)	17:04	25	15:45 (17)	15:57			15:46
27	05:13	06:22		18:48 (41)	07:30		18:09 (36)	07:39		15:22 (17)	08:51			09:28
	22:11	20:53	63	19:59 (30)	19:24	11	18:20 (36)	17:01	22	15:44 (17)	15:56			15:47
28	05:15	06:24		18:48 (41)	07:32			07:41		15:08 (12)	08:53			09:28
	22:09	20:51	63	19:59 (30)	19:21			16:58	22	15:41 (17)	15:55			15:48
29	05:17	06:26		18:48 (41)	07:34			07:44		15:05 (12)	08:55			09:28
	22:07	20:48	63	19:59 (30)	19:18			16:56	21	15:37 (17)	15:53			15:49
30	05:20	06:28		18:48 (41)	07:37			07:46		15:03 (12)	08:57			09:28
	22:05	20:45	63	19:59 (30)	19:16			16:53	16	15:19 (12)	15:52			15:50
31	05:22	06:30		18:48 (41)				07:49		15:01 (12)				09:28
	22:03	20:42	62	19:58 (30)				16:51	18	15:19 (12)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (27)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (27)
	15:53	39	13:36 (28)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (28)
2	09:28		12:01 (27)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (27)
	15:54	41	13:36 (28)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (28)
3	09:27		12:01 (27)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (27)
	15:55	41	13:36 (28)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (28)
4	09:27		12:01 (27)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (27)
	15:57	41	13:36 (28)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (28)
5	09:26		12:01 (27)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (27)
	15:58	43	13:37 (28)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (28)
6	09:25		12:02 (27)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (27)
	16:00	41	13:37 (28)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (28)
7	09:25		12:02 (27)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (27)
	16:02	41	13:37 (28)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (28)
8	09:24		12:02 (27)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (27)
	16:03	42	13:38 (28)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (28)
9	09:23		12:03 (27)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (27)
	16:05	41	13:38 (28)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (28)
10	09:22		12:03 (27)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (27)
	16:07	40	13:37 (28)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (28)
11	09:21		12:03 (27)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (27)
	16:09	41	13:38 (28)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (28)
12	09:20		12:03 (27)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (27)
	16:11	39	13:37 (28)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (28)
13	09:19		12:04 (27)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (27)
	16:13	37	13:37 (28)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (28)
14	09:17		12:04 (27)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (27)
	16:15	35	13:36 (28)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (28)
15	09:16		12:04 (27)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (27)	09:21		11:54 (27)
	16:17	32	13:35 (28)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (27)	15:42	38	13:27 (28)
16	09:15		12:04 (27)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (27)	09:22		11:55 (27)
	16:19	24	12:28 (27)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (27)	15:42	37	13:28 (28)
17	09:13		12:06 (27)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (27)	09:23		11:55 (27)
	16:21	24	12:30 (27)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (27)	15:42	37	13:28 (28)
18	09:12		12:06 (27)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (27)	09:24		11:56 (27)
	16:23	24	12:30 (27)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (27)	15:42	36	13:29 (28)
19	09:10		12:06 (27)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (27)	09:25		11:57 (27)
	16:25	24	12:30 (27)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (27)	15:42	36	13:29 (28)
20	09:09		12:07 (27)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (27)	09:26		11:58 (27)
	16:28	23	12:30 (27)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (27)	15:43	36	13:30 (28)
21	09:07		12:08 (27)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (27)	09:26		11:59 (27)
	16:30	21	12:29 (27)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (27)	15:43	35	13:31 (28)
22	09:05		12:09 (27)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (27)	09:27		11:58 (27)
	16:32	20	12:29 (27)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (27)	15:43	36	13:31 (28)
23	09:03		12:09 (27)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (27)	09:27		11:59 (27)
	16:34	19	12:28 (27)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (27)	15:44	36	13:31 (28)
24	09:02		12:10 (27)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (27)	09:28		12:00 (27)
	16:37	17	12:27 (27)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (27)	15:44	36	13:32 (28)
25	09:00		12:12 (27)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (27)	09:28		12:00 (27)
	16:39	15	12:27 (27)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (27)	15:45	37	13:33 (28)
26	08:58		12:14 (27)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (27)	09:28		12:00 (27)
	16:41	11	12:25 (27)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (27)	15:46	37	13:33 (28)
27	08:56		12:17 (27)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (27)	09:28		12:00 (27)
	16:44	4	12:21 (27)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (28)	15:47	38	13:33 (28)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (27)	09:29		12:01 (27)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (28)	15:48	37	13:34 (28)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (27)	09:28		12:00 (27)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (28)	15:49	38	13:34 (28)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (27)	09:28		12:01 (27)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (28)	15:50	39	13:35 (28)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (27)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (28)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (27)	08:46	10:11 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (27)
	15:53 31	12:43 (28)	16:56 18	10:29 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (27)
2	09:28	11:14 (27)	08:44	10:11 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (27)
	15:54 30	12:43 (28)	16:58 17	10:28 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (27)
3	09:27	11:13 (27)	08:41	10:13 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (27)
	15:55 31	12:43 (28)	17:01 14	10:27 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (27)
4	09:27	11:13 (27)	08:39	10:14 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (27)
	15:57 30	12:43 (28)	17:03 11	10:25 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (27)
5	09:26	11:14 (27)	08:37	10:17 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (27)
	15:58 28	12:42 (28)	17:06 7	10:24 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (28)
6	09:25	11:14 (27)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (32)	09:09		11:00 (27)
	16:00 28	12:42 (28)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (32)	15:46	28	12:28 (28)
7	09:25	11:14 (27)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (32)	09:10		11:01 (27)
	16:02 26	12:41 (28)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (32)	15:45	29	12:30 (28)
8	09:24	11:14 (27)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (32)	09:12		11:02 (27)
	16:03 21	11:35 (27)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (32)	15:45	30	12:31 (28)
9	09:23	11:15 (27)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (32)	09:14		11:03 (27)
	16:05 21	11:36 (27)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (32)	15:44	30	12:32 (28)
10	09:22	11:15 (27)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (32)	09:15		11:03 (27)
	16:07 21	11:36 (27)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (32)	15:44	30	12:32 (28)
11	09:21	11:15 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (32)	09:16		11:04 (27)
	16:09 22	11:37 (27)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (32)	15:43	30	12:33 (28)
12	09:20	11:15 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (32)	09:18		11:04 (27)
	16:11 22	11:37 (27)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (32)	15:43	31	12:34 (28)
13	09:19	11:16 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (32)	09:19		11:05 (27)
	16:13 22	11:38 (27)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (32)	15:42	31	12:35 (28)
14	09:17	11:16 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (32)	09:20		11:06 (27)
	16:15 22	11:38 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (32)	15:42	30	12:35 (28)
15	09:16	11:16 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (32)	09:21		11:06 (27)
	16:17 22	11:38 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (32)	15:42	31	12:36 (28)
16	09:15	11:16 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (32)	09:22		11:08 (27)
	16:19 22	11:38 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (32)	15:42	30	12:37 (28)
17	09:13	11:18 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (32)	09:23		11:09 (27)
	16:21 21	11:39 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (27)	15:42	30	12:38 (28)
18	09:12	11:18 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (32)	09:24		11:08 (27)
	16:23 21	11:39 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (27)	15:42	30	12:37 (28)
19	09:10	10:13 (32)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (32)	09:25		11:09 (27)
	16:25 27	11:39 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (27)	15:42	29	12:38 (28)
20	09:09	10:12 (32)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (32)	09:26		11:10 (27)
	16:28 30	11:39 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (27)	15:43	30	12:39 (28)
21	09:07	10:11 (32)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (32)	09:26		11:11 (27)
	16:30 32	11:39 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (27)	15:43	29	12:40 (28)
22	09:05	10:10 (32)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (32)	09:27		11:11 (27)
	16:32 32	11:38 (27)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (27)	15:43	29	12:40 (28)
23	09:03	10:09 (32)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (32)	09:27		11:11 (27)
	16:34 31	11:37 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (27)	15:44	30	12:40 (28)
24	09:02	10:09 (32)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (27)	09:28		11:12 (27)
	16:37 29	11:36 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (27)	15:45	30	12:41 (28)
25	09:00	10:09 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (27)	09:28		11:12 (27)
	16:39 26	11:34 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (27)	15:45	29	12:41 (28)
26	08:58	10:09 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (27)	09:28		11:13 (27)
	16:41 19	10:28 (32)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (27)	15:46	30	12:42 (28)
27	08:56	10:09 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (27)	09:28		11:13 (27)
	16:44 20	10:29 (32)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (27)	15:47	30	12:42 (28)
28	08:54	10:09 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (27)	09:29		11:13 (27)
	16:46 19	10:28 (32)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (27)	15:48	31	12:43 (28)
29	08:52	10:09 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (27)	09:29		11:13 (27)
	16:49 20	10:29 (32)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (27)	15:49	30	12:42 (28)
30	08:50	10:09 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (27)	09:28		11:13 (27)
	16:51 19	10:28 (32)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (27)	15:50	31	12:43 (28)
31	08:48	10:10 (32)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (27)
	16:54 19	10:29 (32)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (28)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (16)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (16)
	15:52	16	13:11 (16)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (16)
2	09:27		12:55 (16)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (16)
	15:54	16	13:11 (16)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (16)
3	09:27		12:55 (16)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (16)
	15:55	17	13:12 (16)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (16)
4	09:26		12:55 (16)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (16)
	15:57	17	13:12 (16)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (16)
5	09:26		12:55 (16)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (16)
	15:58	18	13:13 (16)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (16)
6	09:25		12:55 (16)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (16)
	16:00	19	13:14 (16)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (16)
7	09:24		12:55 (16)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (16)
	16:01	20	13:15 (16)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (16)
8	09:24		12:56 (16)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (16)
	16:03	19	13:15 (16)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (16)
9	09:23		12:55 (16)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (16)
	16:05	20	13:15 (16)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (16)
10	09:22		12:56 (16)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (16)
	16:07	20	13:16 (16)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (16)
11	09:21		12:57 (16)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (16)
	16:09	20	13:17 (16)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (16)
12	09:19		12:57 (16)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (16)
	16:11	20	13:17 (16)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (16)
13	09:18		12:57 (16)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (16)
	16:12	20	13:17 (16)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (16)
14	09:17		12:58 (16)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (16)
	16:14	20	13:18 (16)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (16)
15	09:16		12:58 (16)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (16)
	16:17	20	13:18 (16)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (16)
16	09:14		12:58 (16)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (16)
	16:19	20	13:18 (16)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (16)
17	09:13		12:59 (16)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (16)
	16:21	19	13:18 (16)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (16)
18	09:11		12:59 (16)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (16)
	16:23	19	13:18 (16)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (16)
19	09:10		13:01 (16)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (16)	09:25		12:50 (16)
	16:25	18	13:19 (16)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (16)	15:42	13	13:03 (16)
20	09:08		13:02 (16)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (16)	09:25		12:51 (16)
	16:27	16	13:18 (16)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (16)	15:42	12	13:03 (16)
21	09:07		13:02 (16)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (16)	09:26		12:51 (16)
	16:30	15	13:17 (16)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (16)	15:43	12	13:03 (16)
22	09:05		13:04 (16)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (16)	09:27		12:52 (16)
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	16:34	9	13:15 (16)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (16)	15:44	12	13:04 (16)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (16)	09:28		12:52 (16)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (16)	15:44	12	13:04 (16)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (16)	09:28		12:53 (16)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (16)	15:45	13	13:06 (16)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (16)	09:28		12:53 (16)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (16)	15:46	13	13:06 (16)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (16)	09:28		12:54 (16)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (16)	15:47	13	13:07 (16)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (16)	09:28		12:53 (16)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (16)	15:48	14	13:07 (16)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (16)	09:28		12:53 (16)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (16)	15:49	15	13:08 (16)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (16)	09:28		12:54 (16)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (16)	15:50	15	13:09 (16)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (16)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (16)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (30)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (16)	08:59
	15:52		16:56 19	14:13 (30)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (16)	15:51
2	09:27		08:43	13:56 (30)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (16)	09:01
	15:54		16:58 16	14:12 (30)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (16)	15:50
3	09:27		08:41	13:58 (30)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (16)	09:03
	15:55		17:01 12	14:10 (30)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (16)	15:49
4	09:26		08:39	14:02 (30)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (16)	09:05
	15:57		17:03 5	14:07 (30)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (16)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (16)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (16)	15:47
6	09:25		08:34	15:25 (16)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (16)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (16)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (30)	09:10
	16:01		17:11 11	15:33 (16)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (30)	15:45
8	09:23		08:30	15:20 (16)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (30)	09:12
	16:03		17:13 15	15:35 (16)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (30)	15:44
9	09:23		08:27	15:19 (16)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (30)	09:13
	16:05		17:15 18	15:37 (16)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (30)	15:44
10	09:22		08:25	15:18 (16)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (30)	09:15
	16:07		17:18 19	15:37 (16)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (30)	15:43
11	09:20		08:22	15:17 (16)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (30)	09:16
	16:09		17:20 21	15:38 (16)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (30)	15:43
12	09:19		08:20	15:17 (16)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (30)	09:17
	16:10		17:23 22	15:39 (16)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (30)	15:42
13	09:18	13:53 (30)	08:17	15:17 (16)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (30)	09:19
	16:12 5	13:58 (30)	17:25 22	15:39 (16)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (30)	15:42
14	09:17	13:51 (30)	08:15	15:16 (16)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (30)	09:20
	16:14 9	14:00 (30)	17:28 23	15:39 (16)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (30)	15:42
15	09:16	13:50 (30)	08:12	15:17 (16)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (41)	09:21
	16:17 11	14:01 (30)	17:30 22	15:39 (16)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (30)	15:42
16	09:14	13:50 (30)	08:10	15:17 (16)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (41)	09:22
	16:19 17	14:07 (30)	17:33 22	15:39 (16)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (30)	15:42
17	09:13	13:49 (30)	08:07	15:17 (16)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (41)	09:23
	16:21 21	14:10 (30)	17:35 21	15:38 (16)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (30)	15:42
18	09:11	11:38 (41)	08:05	15:18 (16)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (41)	09:24
	16:23 27	14:11 (30)	17:38 19	15:37 (16)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (30)	15:42
19	09:10	11:35 (41)	08:02	15:20 (16)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (41)	09:25
	16:25 32	14:12 (30)	17:40 17	15:37 (16)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (30)	15:42
20	09:08	11:32 (41)	07:59	15:21 (16)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (41)	09:25
	16:27 36	14:12 (30)	17:43 14	15:35 (16)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (30)	15:42
21	09:07	11:29 (41)	07:57	15:24 (16)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (16)	08:38	11:05 (41)	09:26
	16:30 42	14:13 (30)	17:45 8	15:32 (16)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (16)	16:06 42	13:49 (30)	15:43
22	09:05	11:27 (41)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (16)	08:41	11:08 (41)	09:27
	16:32 45	14:14 (30)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (16)	16:04 36	13:48 (30)	15:43
23	09:03	11:28 (41)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (16)	08:43	11:12 (41)	09:27
	16:34 44	14:14 (30)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (16)	16:02 32	13:49 (30)	15:44
24	09:01	11:29 (41)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (16)	08:45	11:16 (41)	09:27
	16:36 42	14:15 (30)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (16)	16:01 28	13:49 (30)	15:44
25	08:59	11:31 (41)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (16)	08:47	13:27 (30)	09:28
	16:39 40	14:15 (30)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (16)	15:59 21	13:48 (30)	15:45
26	08:58	11:32 (41)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (16)	08:49	13:29 (30)	09:28
	16:41 37	14:15 (30)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (16)	15:57 17	13:46 (30)	15:46
27	08:56	11:34 (41)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (16)	08:51	13:29 (30)	09:28
	16:44 33	14:15 (30)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (16)	15:56 12	13:41 (30)	15:47
28	08:54	13:51 (30)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (16)	08:53	13:30 (30)	09:28
	16:46 24	14:15 (30)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (16)	15:55 9	13:39 (30)	15:47
29	08:52	13:51 (30)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (16)	08:55	13:35 (30)	09:28
	16:48 23	14:14 (30)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (16)	15:53 5	13:40 (30)	15:49
30	08:50	13:52 (30)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (16)	08:57		09:28
	16:51 22	14:14 (30)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (16)	15:52		15:50
31	08:48	13:54 (30)			07:09		04:41		05:22	06:31		07:49	14:47 (16)			09:28
	16:53 20	14:14 (30)			20:14		22:29		22:03	20:42		16:51 20	15:07 (16)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (36)	08:45		10:15 (17)	07:35		13:26 (30)	07:07		18:42 (21)	05:44	04:39
	15:52	47	14:26 (18)	16:56	119	15:37 (39)	18:04	35	17:05 (13)	20:16	19	19:01 (21)	21:26	22:30
2	09:27		12:11 (36)	08:43		12:16 (36)	07:32		15:45 (11)	07:04		18:43 (21)	05:41	04:38
	15:54	53	14:28 (18)	16:58	114	15:38 (39)	18:07	27	17:09 (13)	20:19	16	18:59 (21)	21:28	22:32
3	09:27		12:10 (36)	08:41		12:17 (36)	07:30		16:34 (16)	07:01		18:46 (21)	05:38	04:37
	15:55	58	14:29 (18)	17:01	113	15:38 (39)	18:09	33	17:12 (13)	20:21	11	18:57 (21)	21:30	22:33
4	09:26		12:10 (36)	08:39		09:39 (41)	07:27		16:31 (16)	06:58			05:36	04:36
	15:57	61	14:29 (18)	17:03	109	15:39 (39)	18:12	43	17:15 (13)	20:23			21:33	22:35
5	09:26		12:10 (36)	08:36		09:39 (41)	07:24		16:29 (16)	06:55			05:34	04:35
	15:58	64	14:30 (18)	17:06	105	15:39 (39)	18:14	46	17:15 (13)	20:26			21:35	22:36
6	09:25		12:09 (36)	08:34		09:40 (41)	07:21		16:26 (16)	06:52			05:31	04:34
	16:00	70	14:31 (18)	17:08	95	15:39 (39)	18:16	49	17:15 (13)	20:28			21:37	22:38
7	09:24		10:10 (17)	08:32		09:40 (41)	07:18		16:25 (16)	06:49			05:29	04:33
	16:01	78	14:32 (18)	17:11	96	15:39 (39)	18:19	50	17:15 (13)	20:30			21:39	22:39
8	09:23		10:10 (17)	08:30		09:38 (41)	07:15		16:23 (16)	06:46			05:26	04:32
	16:03	84	14:33 (18)	17:13	96	15:38 (39)	18:21	52	17:15 (13)	20:32			21:42	22:40
9	09:22		10:10 (17)	08:27		09:36 (41)	07:13		16:22 (16)	06:44			05:24	04:31
	16:05	86	14:33 (18)	17:16	98	15:38 (39)	18:23	53	17:15 (13)	20:35			21:44	22:41
10	09:21		10:11 (17)	08:25		09:33 (41)	07:10		16:20 (16)	06:41			05:21	04:30
	16:07	91	14:34 (18)	17:18	107	15:57 (11)	18:26	54	17:14 (13)	20:37			21:46	22:42
11	09:20		10:10 (17)	08:22		09:29 (41)	07:07		16:19 (16)	06:38			05:19	04:29
	16:09	97	14:34 (18)	17:20	114	16:00 (11)	18:28	54	17:13 (13)	20:39			21:48	22:44
12	09:19		10:09 (17)	08:20		09:27 (41)	07:04		16:18 (16)	06:35			05:17	04:29
	16:11	102	14:35 (18)	17:23	118	16:03 (11)	18:30	54	17:12 (13)	20:42			21:51	22:44
13	09:18		10:09 (17)	08:17		09:24 (41)	07:01		16:18 (16)	06:32			05:15	04:28
	16:13	105	14:35 (18)	17:25	118	16:04 (11)	18:33	52	17:10 (13)	20:44			21:53	22:45
14	09:17		10:10 (17)	08:15		09:21 (41)	06:58		16:17 (16)	06:29			05:12	04:28
	16:15	107	14:36 (18)	17:28	114	16:05 (11)	18:35	51	17:08 (13)	20:46			21:55	22:46
15	09:16		10:10 (17)	08:12		09:18 (41)	06:56		16:17 (16)	06:27			05:10	04:27
	16:17	112	14:37 (18)	17:30	120	16:07 (11)	18:37	47	17:04 (13)	20:49			21:57	22:47
16	09:14		10:02 (17)	08:10		09:13 (41)	06:53		16:17 (16)	06:24			05:08	04:27
	16:19	119	14:37 (18)	17:33	125	16:08 (11)	18:40	46	17:03 (16)	20:51			21:59	22:48
17	09:13		10:02 (17)	08:07		09:13 (41)	06:50		16:17 (16)	06:21			05:06	04:27
	16:21	126	14:37 (18)	17:35	123	16:08 (11)	18:42	46	17:03 (16)	20:53			22:02	22:48
18	09:11		10:02 (17)	08:05		09:13 (41)	06:47		16:16 (16)	06:18			05:04	04:27
	16:23	127	14:37 (18)	17:38	121	16:08 (11)	18:44	46	17:02 (16)	20:56			22:04	22:49
19	09:10		10:02 (17)	08:02		09:15 (41)	06:44		16:16 (16)	06:16			05:02	04:26
	16:25	129	14:37 (18)	17:40	118	16:09 (11)	18:47	56	18:01 (21)	20:58			22:06	22:49
20	09:08		10:02 (17)	07:59		09:16 (41)	06:41		16:16 (16)	06:13			05:00	04:26
	16:27	130	14:37 (18)	17:43	114	16:09 (11)	18:49	60	18:03 (21)	21:00			22:08	22:50
21	09:07		10:03 (17)	07:57		09:17 (41)	06:38		16:16 (16)	06:10			04:58	04:27
	16:30	131	14:37 (18)	17:45	110	16:09 (11)	18:51	64	18:05 (21)	21:02			22:10	22:50
22	09:05		10:03 (17)	07:54		09:18 (41)	06:35		16:17 (16)	06:07			04:56	04:27
	16:32	129	14:36 (18)	17:48	104	16:08 (11)	18:54	63	18:05 (21)	21:05			22:12	22:50
23	09:03		10:04 (17)	07:51		09:20 (41)	06:32		16:17 (16)	06:05			04:54	04:27
	16:34	131	14:36 (18)	17:50	95	16:08 (11)	18:56	64	18:06 (21)	21:07			22:14	22:50
24	09:01		10:04 (17)	07:49		13:09 (30)	06:30		16:18 (16)	06:02			04:52	04:27
	16:37	128	14:35 (18)	17:52	77	16:08 (11)	18:58	64	18:06 (21)	21:09			22:16	22:50
25	08:59		10:05 (17)	07:46		13:11 (30)	06:27		16:18 (16)	05:59			04:50	04:28
	16:39	125	14:34 (18)	17:55	71	16:07 (11)	19:00	62	18:06 (21)	21:12			22:18	22:50
26	08:58		10:05 (17)	07:43		13:13 (30)	06:24		16:20 (16)	05:57			04:49	04:28
	16:41	124	15:28 (39)	17:57	66	16:06 (11)	19:03	61	18:07 (21)	21:14			22:20	22:50
27	08:56		10:06 (17)	07:41		13:16 (30)	06:21		16:22 (16)	05:54			04:47	04:29
	16:44	127	15:30 (39)	18:00	58	16:05 (11)	19:05	57	18:07 (21)	21:16			22:22	22:50
28	08:54		10:07 (17)	07:38		13:19 (30)	06:18		16:23 (16)	05:51			04:45	04:29
	16:46	130	15:33 (39)	18:02	49	16:04 (11)	19:07	54	18:06 (21)	21:19			22:23	22:50
29	08:52		10:08 (17)				07:15		17:26 (16)	05:49			04:44	04:30
	16:48	131	15:35 (39)				20:10	47	19:05 (21)	21:21			22:25	22:49
30	08:50		10:09 (17)				07:12		17:29 (16)	05:46			04:42	04:31
	16:51	129	15:36 (39)				20:12	38	19:04 (21)	21:23			22:27	22:49
31	08:47		10:12 (17)				07:09		18:41 (21)				04:41	
	16:53	126	15:37 (39)				20:14	22	19:03 (21)				22:29	
Potential sun hours	221			260			365			432			521	547
Total, worst case		3257			2867			1550			46			
Sun reduction		0,50			0,50			0,50			0,50			
Oper. time red.		0,80			0,80			0,80			0,80			
Wind dir. red.		0,60			0,59			0,58			0,62			
Total reduction		0,24			0,24			0,23			0,25			
Total, real		786			675			361			11			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December		
1	04:32	05:24	06:33		07:39		16:57 (16)	07:51	09:03 (41)	08:59	09:52 (17)
	22:48	22:01	20:39		19:13	53	17:50 (13)	16:49 107	15:26 (11)	15:51 96	14:16 (18)
2	04:33	05:26	06:35		07:41		16:58 (16)	07:53	09:06 (41)	09:01	09:53 (17)
	22:48	21:58	20:37		19:10	54	17:52 (13)	16:46 98	15:08 (39)	15:50 91	14:16 (18)
3	04:34	05:28	06:37		07:44		16:58 (16)	07:56	09:08 (41)	09:03	09:54 (17)
	22:47	21:56	20:34		19:07	54	17:52 (13)	16:44 96	15:08 (39)	15:49 88	14:17 (18)
4	04:35	05:30	06:39		07:46		16:58 (16)	07:58	09:10 (41)	09:05	09:54 (17)
	22:46	21:54	20:31		19:04	54	17:52 (13)	16:41 94	15:08 (39)	15:48 83	14:17 (18)
5	04:36	05:33	06:42		07:48		17:00 (16)	08:01	09:10 (41)	09:07	09:55 (17)
	22:45	21:51	20:28		19:01	52	17:52 (13)	16:39 95	15:09 (39)	15:47 77	14:17 (18)
6	04:37	05:35	06:44		07:50		17:00 (16)	08:03	09:10 (41)	09:08	09:57 (17)
	22:45	21:49	20:25		18:58	52	17:52 (13)	16:37 105	15:09 (39)	15:46 71	14:17 (18)
7	04:38	05:37	06:46		07:53		17:01 (16)	08:06	09:08 (41)	09:10	11:57 (36)
	22:44	21:46	20:22		18:56	50	17:51 (13)	16:34 111	15:09 (39)	15:45 64	14:17 (18)
8	04:40	05:39	06:48		07:55		17:03 (16)	08:08	11:48 (36)	09:12	11:57 (36)
	22:43	21:44	20:19		18:53	48	17:51 (13)	16:32 112	15:09 (39)	15:44 62	14:17 (18)
9	04:41	05:41	06:51	18:40 (21)	07:57		17:04 (16)	08:10	11:47 (36)	09:13	11:59 (36)
	22:41	21:41	20:16 10	18:50 (21)	18:50	46	17:50 (13)	16:30 113	15:09 (39)	15:44 57	14:17 (18)
10	04:42	05:44	06:53	18:37 (21)	07:59		17:06 (16)	08:13	09:45 (17)	09:15	12:00 (36)
	22:40	21:39	20:14 15	18:52 (21)	18:47	40	17:48 (13)	16:27 121	15:08 (39)	15:43 53	14:17 (18)
11	04:44	05:46	06:55	18:35 (21)	08:02		16:22 (11)	08:15	09:42 (17)	09:16	12:01 (36)
	22:39	21:36	20:11 19	18:54 (21)	18:44	36	17:45 (13)	16:25 127	15:08 (39)	15:43 47	14:16 (18)
12	04:45	05:48	06:57	18:34 (21)	08:04		16:18 (11)	08:17	09:41 (17)	09:17	12:03 (36)
	22:38	21:34	20:08 21	18:55 (21)	18:42	25	17:41 (13)	16:23 130	15:08 (39)	15:42 44	14:17 (18)
13	04:47	05:50	06:59	17:21 (16)	08:06		13:56 (30)	08:20	09:39 (17)	09:19	12:04 (36)
	22:36	21:31	20:05 37	18:55 (21)	18:39	42	17:38 (13)	16:21 131	15:06 (39)	15:42 39	14:17 (18)
14	04:49	05:53	07:02	17:17 (16)	08:09		13:50 (30)	08:22	09:39 (17)	09:20	12:07 (36)
	22:35	21:29	20:02 45	18:55 (21)	18:36	53	16:37 (11)	16:19 131	15:05 (39)	15:42 34	14:17 (18)
15	04:50	05:55	07:04	17:13 (16)	08:11		13:46 (30)	08:25	09:39 (17)	09:21	13:06 (30)
	22:33	21:26	19:59 52	18:55 (21)	18:33	62	16:37 (11)	16:17 128	15:03 (39)	15:42 26	14:16 (18)
16	04:52	05:57	07:06	17:11 (16)	08:13		13:44 (30)	08:27	09:39 (17)	09:22	13:08 (30)
	22:32	21:23	19:56 56	18:55 (21)	18:30	69	16:39 (11)	16:15 124	15:02 (39)	15:42 22	14:15 (18)
17	04:54	05:59	07:08	17:08 (16)	08:16		13:41 (30)	08:29	09:38 (17)	09:23	13:10 (30)
	22:30	21:21	19:53 59	18:54 (21)	18:28	75	16:39 (11)	16:13 125	14:07 (18)	15:42 18	14:15 (18)
18	04:56	06:02	07:10	17:07 (16)	08:18		09:55 (41)	08:32	09:38 (17)	09:24	13:12 (30)
	22:29	21:18	19:50 63	18:55 (21)	18:25	86	16:39 (11)	16:11 129	14:09 (18)	15:42 16	14:15 (18)
19	04:58	06:04	07:12	17:06 (16)	08:20		09:51 (41)	08:34	09:39 (17)	09:25	13:16 (7)
	22:27	21:15	19:47 63	18:54 (21)	18:22	98	16:39 (11)	16:09 131	14:11 (18)	15:42 11	14:15 (18)
20	04:59	06:06	07:15	17:04 (16)	08:23		09:49 (41)	08:36	09:38 (17)	09:25	13:16 (7)
	22:25	21:13	19:45 65	18:53 (21)	18:20	106	16:40 (11)	16:07 129	14:11 (18)	15:42 9	14:14 (18)
21	05:01	06:08	07:17	17:03 (16)	08:25		09:46 (41)	08:38	09:39 (17)	09:26	13:17 (7)
	22:23	21:10	19:42 64	18:51 (21)	18:17	113	16:39 (11)	16:06 131	14:13 (18)	15:43 9	14:15 (18)
22	05:03	06:11	07:19	17:01 (16)	08:27		09:45 (41)	08:41	09:38 (17)	09:26	13:18 (7)
	22:21	21:07	19:39 64	18:50 (21)	18:14	116	16:39 (11)	16:04 131	14:13 (18)	15:43 9	14:16 (18)
23	05:05	06:13	07:21	17:00 (16)	08:30		09:44 (41)	08:43	09:39 (17)	09:27	13:18 (7)
	22:19	21:05	19:36 62	18:48 (21)	18:12	119	16:38 (11)	16:02 128	14:14 (18)	15:44 9	14:16 (18)
24	05:07	06:15	07:24	17:00 (16)	08:32		09:43 (41)	08:45	09:39 (17)	09:27	13:18 (7)
	22:18	21:02	19:33 58	18:46 (21)	18:09	122	16:38 (11)	16:01 127	14:14 (18)	15:44 11	14:17 (18)
25	05:09	06:17	07:26	16:59 (16)	07:34		08:43 (41)	08:47	09:40 (17)	09:28	13:15 (30)
	22:16	20:59	19:30 46	17:45 (16)	17:06	123	15:38 (11)	15:59 124	14:15 (18)	15:45 14	14:17 (18)
26	05:11	06:19	07:28	16:58 (16)	07:37		08:44 (41)	08:49	09:40 (17)	09:28	13:14 (30)
	22:14	20:56	19:27 47	17:45 (16)	17:04	122	15:37 (11)	15:58 119	14:15 (18)	15:46 17	14:18 (18)
27	05:13	06:22	07:30	16:58 (16)	07:39		08:48 (41)	08:51	09:49 (17)	09:28	13:13 (30)
	22:11	20:53	19:24 46	17:44 (16)	17:01	118	15:36 (11)	15:56 112	14:16 (18)	15:47 20	14:19 (18)
28	05:15	06:24	07:32	16:58 (16)	07:41		08:51 (41)	08:53	09:49 (17)	09:28	13:12 (30)
	22:09	20:51	19:21 46	17:44 (16)	16:59	115	15:35 (11)	15:55 109	14:16 (18)	15:48 24	14:21 (18)
29	05:17	06:26	07:35	16:58 (16)	07:44		08:54 (41)	08:55	09:50 (17)	09:28	12:14 (36)
	22:07	20:48	19:19 50	17:48 (13)	16:56	119	15:34 (11)	15:53 106	14:16 (18)	15:49 31	14:23 (18)
30	05:20	06:28	07:37	16:57 (16)	07:46		08:57 (41)	08:57	09:50 (17)	09:28	12:13 (36)
	22:05	20:45	19:16 52	17:49 (13)	16:53	117	15:32 (11)	15:52 103	14:16 (18)	15:50 37	14:25 (18)
31	05:22	06:31			07:49		08:59 (41)			09:28	12:12 (36)
	22:03	20:42			16:51	115	15:29 (11)			15:51 41	14:25 (18)
Potential sun hours	546	478	386		319			236		199	
Total, worst case				1040		2454			3527		1230
Sun reduction				0,50		0,50			0,50		0,50
Oper. time red.				0,80		0,80			0,80		0,80
Wind dir. red.				0,59		0,59			0,60		0,59
Total reduction				0,24		0,24			0,24		0,24
Total, real				245		577			846		289

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (5)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (5)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (5)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43 1	20:40 (5)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (5)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44 1	20:41 (5)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (5)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45 1	20:40 (5)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (5)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46 1	20:41 (5)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (5)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47 2	20:42 (5)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (5)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47 2	20:42 (5)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (5)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48 2	20:42 (5)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (5)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48 2	20:43 (5)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (5)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49 2	20:43 (5)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (5)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49 2	20:43 (5)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (5)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49 2	20:43 (5)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (5)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50 2	20:43 (5)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (5)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50 2	20:44 (5)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (5)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50 2	20:44 (5)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (5)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50 2	20:44 (5)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (5)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50 2	20:44 (5)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (5)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49 2	20:44 (5)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (5)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49 1	20:44 (5)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (5)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49 2	20:45 (5)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (5)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48 1	20:44 (5)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (5) 04:32	20:33 (5) 05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (5) 22:48	15 20:48 (5) 22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (5) 04:33	20:33 (5) 05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (5) 22:47	15 20:48 (5) 21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (5) 04:34	20:33 (5) 05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (5) 22:47	15 20:48 (5) 21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (5) 04:35	20:33 (5) 05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (5) 22:46	14 20:47 (5) 21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (5) 04:36	20:33 (5) 05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (5) 22:45	14 20:47 (5) 21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (5) 04:37	20:34 (5) 05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (5) 22:44	13 20:47 (5) 21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (5) 04:39	20:34 (5) 05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (5) 22:43	12 20:46 (5) 21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (5) 04:40	20:34 (5) 05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (5) 22:42	12 20:46 (5) 21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (5) 04:41	20:35 (5) 05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (5) 22:41	11 20:46 (5) 21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (5) 04:43	20:35 (5) 05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (5) 22:40	11 20:46 (5) 21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (5) 04:44	20:35 (5) 05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (5) 22:39	9 20:44 (5) 21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (5) 04:46	20:35 (5) 05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (5) 22:37	4 20:39 (5) 21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (5) 04:47	20:35 (5) 05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (5) 22:36	3 20:38 (5) 21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (5) 04:49	20:35 (5) 05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (5) 22:34	2 20:37 (5) 21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (5) 04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (5) 22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (5) 04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (5) 22:31	21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (5) 04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (5) 22:30	21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (5) 04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (5) 22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (5) 04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (5) 22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (5) 05:00	06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (5) 22:25	21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (5) 05:01	06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (5) 22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (5) 05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (5) 22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (5) 05:05	06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (5) 22:19	21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (5) 05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (5) 22:17	21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (5) 05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (5) 22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (5) 05:11	06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (5) 22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (5) 05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (5) 22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (5) 05:15	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (5) 22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (5) 05:18	06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (5) 22:07	20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (5) 04:31	20:32 (5) 05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (5) 22:48	17 20:49 (5) 22:05	20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (5)	05:22	06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (5)	22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					5	469	150					
Sun reduction					0,50	0,50	0,50					
Oper. time red.					0,80	0,80	0,80					
Wind dir. red.					0,73	0,73	0,73					
Total reduction					0,29	0,29	0,29					
Total, real					1	138	44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (86)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13 22	09:01 (89)	16:49	15:52
2	09:27	08:43		07:33	08:13 (89)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (86)	07:54	09:01
	15:54	16:59		18:07 6	08:19 (89)	20:19	21:28	22:32	22:48	21:58	20:37		19:10 25	09:01 (89)	16:47	15:50
3	09:27	08:41		07:30	08:10 (89)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (86)	07:56	09:03
	15:56	17:01		18:10 12	08:22 (89)	20:21	21:30	22:33	22:47	21:56	20:34		19:07 26	09:01 (89)	16:44	15:49
4	09:26	08:39		07:27	08:07 (89)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (86)	07:59	09:05
	15:57	17:04		18:12 16	08:23 (89)	20:24	21:33	22:35	22:46	21:54	20:31		19:05 28	09:02 (89)	16:42	15:48
5	09:26	08:37		07:24	08:00 (86)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (86)	08:01	09:07
	15:59	17:06		18:14 24	08:24 (89)	20:26	21:35	22:36	22:45	21:51	20:28		19:02 28	09:02 (89)	16:39	15:47
6	09:25	08:34		07:21	07:58 (86)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (86)	08:03	09:08
	16:00	17:09		18:17 26	08:24 (89)	20:28	21:37	22:38	22:45	21:49	20:25		18:59 28	09:01 (89)	16:37	15:47
7	09:24	08:32		07:19	07:57 (86)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (86)	08:06	09:10
	16:02	17:11		18:19 28	08:25 (89)	20:30	21:40	22:39	22:44	21:47	20:23		18:56 27	09:01 (89)	16:35	15:46
8	09:23	08:30		07:16	07:56 (86)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (86)	08:08	09:12
	16:04	17:14		18:21 28	08:24 (89)	20:33	21:42	22:40	22:43	21:44	20:20		18:53 25	09:00 (89)	16:32	15:45
9	09:23	08:27		07:13	07:56 (86)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (86)	08:11	09:13
	16:06	17:16		18:24 28	08:24 (89)	20:35	21:44	22:41	22:41	21:42	20:17		18:50 22	08:58 (89)	16:30	15:44
10	09:22	08:25		07:10	07:56 (86)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (89)	08:13	09:15
	16:07	17:18		18:26 27	08:23 (89)	20:37	21:46	22:43	22:40	21:39	20:14		18:48 14	08:57 (89)	16:28	15:44
11	09:21	08:23		07:07	07:58 (86)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (89)	08:15	09:16
	16:09	17:21		18:28 26	08:24 (89)	20:40	21:49	22:44	22:39	21:37	20:11		18:45 10	08:54 (89)	16:26	15:43
12	09:19	08:20		07:04	07:59 (86)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31 23	08:22 (89)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (85)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (88)	08:07		08:20	09:19
	16:13	17:26		18:33 20	08:21 (89)	20:44	21:53	22:45	22:36	21:31	20:05 8	08:21 (88)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (85)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (88)	08:09		08:22	09:20
	16:15	17:28		18:35 20	08:18 (89)	20:47	21:55	22:46	22:35	21:29	20:02 13	08:23 (88)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (85)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (88)	08:11		08:25	09:21
	16:17	17:31		18:38 14	08:14 (89)	20:49	21:57	22:47	22:33	21:26	19:59 16	08:24 (88)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (85)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (88)	08:13	09:01 (87)	08:27	09:22
	16:19	17:33		18:40 12	07:44 (85)	20:51	22:00	22:48	22:32	21:24	19:57 17	08:25 (88)	18:31 9	09:10 (87)	16:15	15:42
17	09:13	08:07		06:50	07:32 (85)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (88)	08:16	09:00 (87)	08:29	09:23
	16:21	17:36		18:42 12	07:44 (85)	20:53	22:02	22:48	22:30	21:21	19:54 18	08:25 (88)	18:28 12	09:12 (87)	16:13	15:42
18	09:12	08:05	08:36 (87)	06:47	07:32 (85)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (88)	08:18	08:59 (87)	08:32	09:24
	16:24	17:38 3	08:39 (87)	18:45 11	07:43 (85)	20:56	22:04	22:49	22:29	21:18	19:51 19	08:25 (88)	18:25 13	09:12 (87)	16:12	15:42
19	09:10	08:02	08:33 (87)	06:44	07:26 (88)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (88)	08:20	08:59 (87)	08:34	09:25
	16:26	17:41 7	08:40 (87)	18:47 16	07:42 (85)	20:58	22:06	22:49	22:27	21:16	19:48 19	08:24 (88)	18:23 14	09:13 (87)	16:10	15:43
20	09:08	08:00	08:30 (87)	06:42	07:23 (88)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (88)	08:23	08:58 (87)	08:36	09:25
	16:28	17:43 11	08:41 (87)	18:49 17	07:40 (85)	21:00	22:08	22:50	22:25	21:13	19:45 19	08:24 (88)	18:20 14	09:12 (87)	16:08	15:43
21	09:07	07:57	08:27 (87)	06:39	07:21 (88)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (88)	08:25	08:58 (87)	08:39	09:26
	16:30	17:46 14	08:41 (87)	18:52 15	07:36 (88)	21:03	22:10	22:50	22:23	21:10	19:42 17	08:22 (88)	18:17 14	09:12 (87)	16:06	15:43
22	09:05	07:54	08:27 (87)	06:36	07:20 (88)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (88)	08:27	09:01 (87)	08:41	09:27
	16:32	17:48 14	08:41 (87)	18:54 18	07:38 (88)	21:05	22:12	22:50	22:22	21:08	19:39 16	08:22 (88)	18:15 10	09:11 (87)	16:04	15:44
23	09:03	07:52	08:28 (87)	06:33	07:19 (88)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (88)	08:30	09:04 (87)	08:43	09:27
	16:35	17:50 13	08:41 (87)	18:56 19	07:38 (88)	21:07	22:14	22:50	22:20	21:05	19:36 17	08:24 (85)	18:12 6	09:10 (87)	16:03	15:44
24	09:01	07:49	08:28 (87)	06:30	07:19 (88)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (88)	08:32	09:06 (87)	08:45	09:27
	16:37	17:53 13	08:41 (87)	18:58 19	07:38 (88)	21:10	22:16	22:50	22:18	21:02	19:33 16	08:25 (85)	18:09 2	09:08 (87)	16:01	15:45
25	09:00	07:46	08:29 (87)	06:27	07:18 (88)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (85)	07:35		08:47	09:28
	16:39	17:55 10	08:39 (87)	19:01 19	07:37 (88)	21:12	22:18	22:50	22:16	20:59	19:30 11	08:26 (85)	17:07		16:00	15:46
26	08:58	07:44	08:30 (87)	06:24	07:18 (88)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (85)	07:37		08:49	09:28
	16:42	17:58 7	08:37 (87)	19:03 19	07:37 (88)	21:14	22:20	22:50	22:14	20:57	19:28 12	08:26 (85)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (88)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (85)	07:39		08:52	09:28
	16:44	18:00		19:05 18	07:36 (88)	21:17	22:22	22:50	22:12	20:54	19:25 12	08:26 (85)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (88)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (85)	07:42		08:54	09:28
	16:47	18:02		19:08 16	07:34 (88)	21:19	22:23	22:50	22:09	20:51	19:22 12	08:26 (85)	16:59		15:55	15:48
29	08:52			07:16	08:19 (88)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (85)	07:44		08:56	09:28
	16:49			20:10 14	08:33 (88)	21:21	22:25	22:49	22:07	20:48	19:19 19	08:57 (89)	16:56		15:54	15:49
30	08:50			07:13	08:21 (88)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (85)	07:47		08:58	09:28
	16:51			20:12 9	08:30 (88)	21:24	22:27	22:49	22:05	20:45	19:16 21	08:59 (89)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		
Sun reduction			0,50		0,50							0,50		0,50		
Oper. time red.			0,80		0,80							0,80		0,80		
Wind dir. red.			0,73		0,70							0,69		0,72		
Total reduction			0,29		0,28							0,28		0,29		
Total, real			27		149							78		100		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April		May			June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (42)	04:40		06:17 (40)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (42)	22:30	23	06:40 (40)
2	09:27	08:43		07:33	07:04		05:42		07:32 (42)	04:39		06:16 (40)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (42)	22:32	24	06:40 (40)
3	09:27	08:41		07:30	07:01		05:39		07:32 (42)	04:37		06:16 (40)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (42)	22:34	25	06:41 (40)
4	09:26	08:39		07:27	06:58		05:36		07:34 (42)	04:36		06:16 (40)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (42)	22:35	26	06:42 (40)
5	09:26	08:37		07:24	06:55		05:34		07:36 (42)	04:35		06:16 (40)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (42)	22:36	27	06:43 (40)
6	09:25	08:34		07:21	06:53		05:32		07:38 (42)	04:34		06:16 (40)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (42)	22:38	27	06:43 (40)
7	09:24	08:32		07:19	06:50		05:29		07:40 (42)	04:33		06:16 (40)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (42)	22:39	27	06:43 (40)
8	09:24	08:30	09:03 (89)	07:16	06:47		05:27			04:32		06:15 (40)
	16:04	17:14	2 09:05 (89)	18:21	20:33		21:42			22:40	29	06:44 (40)
9	09:23	08:27	09:00 (89)	07:13	06:44		05:24			04:31		06:16 (40)
	16:06	17:16	7 09:07 (89)	18:24	20:35		21:44			22:42	29	06:45 (40)
10	09:22	08:25	08:58 (89)	07:10	06:41		07:48 (42)	05:22		04:31		06:15 (40)
	16:07	17:18	10 09:08 (89)	18:26	20:37	10	07:58 (42)	21:46		22:43	30	06:45 (40)
11	09:21	08:23	08:56 (89)	07:07	06:38		07:45 (42)	05:20		04:30		06:16 (40)
	16:09	17:21	13 09:09 (89)	18:28	20:40	17	08:02 (42)	21:49		22:44	29	06:45 (40)
12	09:20	08:20	08:55 (89)	07:04	06:36		07:41 (42)	05:17		04:29		06:15 (40)
	16:11	17:23	14 09:09 (89)	18:31	20:42	22	08:03 (42)	21:51		22:45	30	06:45 (40)
13	09:18	08:18	08:55 (89)	07:02	06:33		07:37 (42)	05:15		04:29		06:16 (40)
	16:13	17:26	14 09:09 (89)	18:33	20:44	27	08:04 (42)	21:53		22:46	30	06:46 (40)
14	09:17	08:15	08:56 (89)	06:59	06:30		07:35 (42)	05:13		04:28		06:16 (40)
	16:15	17:28	13 09:09 (89)	18:35	20:47	30	08:05 (42)	21:55		22:46	30	06:46 (40)
15	09:16	08:13	08:56 (89)	06:56	06:27		07:34 (42)	05:11		04:28		06:15 (40)
	16:17	17:31	13 09:09 (89)	18:38	20:49	33	08:07 (42)	21:57		22:47	31	06:46 (40)
16	09:14	08:10	08:56 (89)	06:53	06:24		07:33 (42)	05:09		04:28		06:16 (40)
	16:19	17:33	11 09:07 (89)	18:40	20:51	34	08:07 (42)	22:00		22:48	30	06:46 (40)
17	09:13	08:07	08:58 (89)	06:50	06:22		07:32 (42)	05:06		04:27		06:16 (40)
	16:21	17:36	7 09:05 (89)	18:42	20:54	35	08:07 (42)	22:02		22:48	31	06:47 (40)
18	09:12	08:05		06:47	06:19		07:31 (42)	05:04		04:27		06:16 (40)
	16:24	17:38		18:45	20:56	37	08:08 (42)	22:04		22:49	31	06:47 (40)
19	09:10	08:02		06:44	06:16		07:30 (42)	05:02		04:27		06:16 (40)
	16:26	17:41		18:47	20:58	38	08:08 (42)	22:06		22:49	31	06:47 (40)
20	09:08	08:00		06:42	06:13		07:30 (42)	05:00		04:27		06:16 (40)
	16:28	17:43		18:49	21:00	39	08:09 (42)	22:08		22:50	31	06:47 (40)
21	09:07	07:57		06:39	06:11		07:30 (42)	04:58		04:27		06:16 (40)
	16:30	17:46		18:52	21:03	38	08:08 (42)	22:10		22:50	31	06:47 (40)
22	09:05	07:54		06:36	06:08		07:29 (42)	04:56		04:27		06:17 (40)
	16:32	17:48		18:54	21:05	39	08:08 (42)	22:12		22:50	31	06:48 (40)
23	09:03	07:52		06:33	06:05		07:29 (42)	04:55		04:28		06:17 (40)
	16:35	17:50		18:56	21:07	39	08:08 (42)	22:14		22:50	31	06:48 (40)
24	09:02	07:49		06:30	06:02		07:29 (42)	04:53		04:28		06:17 (40)
	16:37	17:53		18:58	21:10	38	08:07 (42)	22:16		22:50	31	06:48 (40)
25	09:00	07:46		06:27	06:00		07:29 (42)	04:51		04:28		06:18 (40)
	16:39	17:55		19:01	21:12	38	08:07 (42)	22:18		22:50	31	06:49 (40)
26	08:58	07:44		06:24	05:57		07:29 (42)	04:49	06:24 (40)	04:29		06:18 (40)
	16:42	17:58		19:03	21:14	37	08:06 (42)	22:20	8 06:32 (40)	22:50	31	06:49 (40)
27	08:56	07:41		06:21	05:54		07:29 (42)	04:48	06:21 (40)	04:29		06:19 (40)
	16:44	18:00		19:05	21:17	37	08:06 (42)	22:22	13 06:34 (40)	22:50	30	06:49 (40)
28	08:54	07:38		06:18	05:52		07:29 (42)	04:46	06:20 (40)	04:30		06:18 (40)
	16:47	18:02		19:08	21:19	36	08:05 (42)	22:24	16 06:36 (40)	22:50	31	06:49 (40)
29	08:52			07:16	05:49		07:30 (42)	04:44	06:19 (40)	04:31		06:19 (40)
	16:49			20:10	21:21	34	08:04 (42)	22:25	18 06:37 (40)	22:49	30	06:49 (40)
30	08:50			07:13	05:47		07:30 (42)	04:43	06:19 (40)	04:31		06:19 (40)
	16:51			20:12	21:24	33	08:03 (42)	22:27	20 06:39 (40)	22:49	30	06:49 (40)
31	08:48			07:10				04:41	06:17 (40)			
	16:54			20:14				22:29	22 06:39 (40)			
Potential sun hours	221	260		365	432			521		547		
Total, worst case			104			691			254		878	
Sun reduction			0,50			0,50			0,50		0,50	
Oper. time red.			0,80			0,80			0,80		0,80	
Wind dir. red.			0,74			0,65			0,62		0,58	
Total reduction			0,29			0,26			0,25		0,23	
Total, real			31			178			63		204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October		November		December
1	04:32	06:20 (40)	05:24		06:33	07:44 (42)	07:39		07:51	08:28 (89)	09:00
	22:48 30	06:50 (40)	22:01		20:40 17	08:01 (42)	19:13		16:49 9	08:37 (89)	15:51
2	04:33	06:20 (40)	05:27		06:35	07:47 (42)	07:42		07:54	08:30 (89)	09:01
	22:48 30	06:50 (40)	21:58		20:37 10	07:57 (42)	19:10		16:47 6	08:36 (89)	15:50
3	04:34	06:20 (40)	05:29		06:38		07:44		07:56	08:33 (89)	09:03
	22:47 29	06:49 (40)	21:56		20:34		19:07		16:44 1	08:34 (89)	15:49
4	04:35	06:20 (40)	05:31		06:40		07:46		07:59		09:05
	22:46 29	06:49 (40)	21:54		20:31		19:05		16:42		15:48
5	04:36	06:21 (40)	05:33		06:42		07:48		08:01		09:07
	22:46 28	06:49 (40)	21:51		20:28		19:02		16:39		15:47
6	04:38	06:21 (40)	05:35	07:49 (42)	06:44		07:51		08:03		09:09
	22:45 28	06:49 (40)	21:49 13	08:02 (42)	20:25		18:59		16:37		15:47
7	04:39	06:23 (40)	05:38	07:46 (42)	06:47		07:53		08:06		09:10
	22:44 27	06:50 (40)	21:47 18	08:04 (42)	20:23		18:56		16:35		15:46
8	04:40	06:23 (40)	05:40	07:44 (42)	06:49		07:55		08:08		09:12
	22:43 26	06:49 (40)	21:44 22	08:06 (42)	20:20		18:53		16:32		15:45
9	04:42	06:23 (40)	05:42	07:43 (42)	06:51		07:57		08:11		09:13
	22:42 26	06:49 (40)	21:42 25	08:08 (42)	20:17		18:50		16:30		15:44
10	04:43	06:24 (40)	05:44	07:41 (42)	06:53		08:00		08:13		09:15
	22:40 24	06:48 (40)	21:39 28	08:09 (42)	20:14		18:48		16:28		15:44
11	04:45	06:25 (40)	05:46	07:40 (42)	06:55		08:02		08:15		09:16
	22:39 23	06:48 (40)	21:37 30	08:10 (42)	20:11		18:45		16:26		15:43
12	04:46	06:25 (40)	05:49	07:39 (42)	06:58		08:04		08:18		09:17
	22:38 23	06:48 (40)	21:34 32	08:11 (42)	20:08		18:42		16:24		15:43
13	04:48	06:26 (40)	05:51	07:38 (42)	07:00		08:07		08:20		09:19
	22:36 21	06:47 (40)	21:32 33	08:11 (42)	20:05		18:39		16:22		15:43
14	04:49	06:28 (40)	05:53	07:37 (42)	07:02		08:09		08:22		09:20
	22:35 18	06:46 (40)	21:29 35	08:12 (42)	20:02		18:36		16:19		15:43
15	04:51	06:28 (40)	05:55	07:36 (42)	07:04		08:11		08:25		09:21
	22:34 17	06:45 (40)	21:26 36	08:12 (42)	19:59		18:34		16:17		15:42
16	04:53	06:30 (40)	05:58	07:36 (42)	07:06		08:14		08:27		09:22
	22:32 14	06:44 (40)	21:24 37	08:13 (42)	19:57		18:31		16:15		15:42
17	04:54	06:31 (40)	06:00	07:35 (42)	07:09		08:16		08:29		09:23
	22:30 11	06:42 (40)	21:21 38	08:13 (42)	19:54		18:28		16:13		15:42
18	04:56	06:35 (40)	06:02	07:36 (42)	07:11		08:18		08:32		09:24
	22:29 5	06:40 (40)	21:18 38	08:14 (42)	19:51		18:25		16:12		15:42
19	04:58		06:04	07:35 (42)	07:13		08:21		08:34		09:25
	22:27		21:16 39	08:14 (42)	19:48		18:23		16:10		15:43
20	05:00		06:07	07:35 (42)	07:15		08:23		08:36		09:25
	22:25		21:13 38	08:13 (42)	19:45		18:20		16:08		15:43
21	05:02		06:09	07:34 (42)	07:17		08:25		08:39		09:26
	22:23		21:10 39	08:13 (42)	19:42		18:17		16:06		15:43
22	05:04		06:11	07:34 (42)	07:20		08:28		08:41		09:27
	22:22		21:08 39	08:13 (42)	19:39		18:15		16:04		15:44
23	05:06		06:13	07:34 (42)	07:22		08:30		08:43		09:27
	22:20		21:05 38	08:12 (42)	19:36		18:12		16:03		15:44
24	05:08		06:15	07:34 (42)	07:24		08:32	09:30 (89)	08:45		09:28
	22:18		21:02 37	08:11 (42)	19:33		18:09 3	09:33 (89)	16:01		15:45
25	05:10		06:18	07:34 (42)	07:26		07:35	08:28 (89)	08:47		09:28
	22:16		20:59 37	08:11 (42)	19:30		17:07 8	08:36 (89)	16:00		15:46
26	05:12		06:20	07:34 (42)	07:28		07:37	08:27 (89)	08:50		09:28
	22:14		20:57 36	08:10 (42)	19:28		17:04 11	08:38 (89)	15:58		15:46
27	05:14		06:22	07:35 (42)	07:31		07:39	08:25 (89)	08:52		09:28
	22:12		20:54 34	08:09 (42)	19:25		17:02 13	08:38 (89)	15:57		15:47
28	05:16		06:24	07:35 (42)	07:33		07:42	08:25 (89)	08:54		09:28
	22:10		20:51 32	08:07 (42)	19:22		16:59 14	08:39 (89)	15:55		15:48
29	05:18		06:27	07:36 (42)	07:35		07:44	08:24 (89)	08:56		09:28
	22:07		20:48 30	08:06 (42)	19:19		16:56 14	08:38 (89)	15:54		15:49
30	05:20		06:29	07:38 (42)	07:37		07:47	08:25 (89)	08:58		09:28
	22:05		20:45 27	08:05 (42)	19:16		16:54 13	08:38 (89)	15:53		15:50
31	05:22		06:31	07:41 (42)			07:49	08:26 (89)			09:28
	22:03		20:43 22	08:03 (42)			16:51 12	08:38 (89)			15:51
Potential sun hours	545		478		386		319		236		200
Total, worst case	409		833		27		88		16		
Sun reduction	0,50		0,50		0,50		0,50		0,50		
Oper. time red.	0,80		0,80		0,80		0,80		0,80		
Wind dir. red.	0,58		0,65		0,65		0,74		0,74		
Total reduction	0,23		0,26		0,26		0,29		0,29		
Total, real	95		215		7		26		5		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April			May			June		
1	09:28		08:46			07:35		08:16 (89)	07:07			05:44			04:40		06:01 (42)
	15:53		16:56			18:05	15	08:31 (89)	20:17			21:26			22:30	34	06:35 (42)
2	09:27		08:43			07:33		08:17 (89)	07:04			05:42			04:39		06:01 (42)
	15:54		16:59			18:07	13	08:30 (89)	20:19			21:28			22:32	35	06:36 (42)
3	09:27		08:41			07:30		08:18 (89)	07:01			05:39			04:38		06:01 (42)
	15:56		17:01			18:10	10	08:28 (89)	20:21			21:30			22:33	35	06:36 (42)
4	09:26		08:39			07:27		08:20 (89)	06:58			05:37			04:36		06:00 (42)
	15:57		17:04			18:12	5	08:25 (89)	20:24			21:33			22:35	36	06:36 (42)
5	09:26		08:37			07:24			06:55			05:34			04:35		06:01 (42)
	15:59		17:06			18:14			20:26			21:35			22:36	36	06:37 (42)
6	09:25		08:34			07:21			06:53			05:32			04:34		06:01 (42)
	16:00		17:09			18:17			20:28			21:37			22:38	36	06:37 (42)
7	09:24		08:32			07:19			06:50			05:29			04:33		06:01 (42)
	16:02		17:11			18:19			20:31			21:40			22:39	36	06:37 (42)
8	09:24		08:30			07:16		07:46 (88)	06:47			05:27			04:32		06:01 (42)
	16:04		17:14			18:21	7	07:53 (88)	20:33			21:42			22:40	36	06:37 (42)
9	09:23		08:27			07:13		07:44 (88)	06:44			05:24			04:31		06:02 (42)
	16:06		17:16			18:24	10	07:54 (88)	20:35			21:44			22:41	36	06:38 (42)
10	09:22		08:25			07:10		07:43 (88)	06:41			05:22			04:31		06:01 (42)
	16:07		17:19			18:26	13	07:56 (88)	20:37			21:46			22:43	37	06:38 (42)
11	09:21		08:23			07:07		07:42 (88)	06:38			05:20			04:30		06:02 (42)
	16:09		17:21			18:28	14	07:56 (88)	20:40			21:49			22:44	37	06:39 (42)
12	09:20		08:20			07:04		07:42 (88)	06:36			05:17			04:29		06:02 (42)
	16:11		17:23			18:31	14	07:56 (88)	20:42			21:51			22:45	36	06:38 (42)
13	09:18		08:18			07:02		07:41 (88)	06:33			05:15			04:29		06:02 (42)
	16:13		17:26			18:33	15	07:56 (88)	20:44			21:53			22:46	37	06:39 (42)
14	09:17		08:15			06:59		07:42 (88)	06:30			05:13			04:28		06:03 (42)
	16:15		17:28			18:35	13	07:55 (88)	20:47			21:55			22:46	36	06:39 (42)
15	09:16		08:13			06:56		07:42 (88)	06:27			05:11			04:28		06:02 (42)
	16:17		17:31			18:38	11	07:53 (88)	20:49			21:57			22:47	37	06:39 (42)
16	09:14		08:10			06:53		07:44 (88)	06:24			05:09			04:28		06:02 (42)
	16:19		17:33			18:40	7	07:51 (88)	20:51			22:00			22:48	37	06:39 (42)
17	09:13		08:07			06:50			06:22			05:06		06:12 (42)	04:27		06:03 (42)
	16:21		17:36			18:42			20:54			22:02	10	06:22 (42)	22:48	37	06:40 (42)
18	09:12		08:05			06:47			06:19			05:04		06:11 (42)	04:27		06:03 (42)
	16:24		17:38			18:45			20:56			22:04	14	06:25 (42)	22:49	37	06:40 (42)
19	09:10		08:02			06:44			06:16			05:02		06:09 (42)	04:27		06:03 (42)
	16:26		17:41			18:47			20:58			22:06	18	06:27 (42)	22:49	37	06:40 (42)
20	09:08		08:00			06:42			06:13			05:00		06:08 (42)	04:27		06:03 (42)
	16:28		17:43			18:49			21:00			22:08	20	06:28 (42)	22:50	37	06:40 (42)
21	09:07		07:57			06:39			06:11			04:58		06:06 (42)	04:27		06:03 (42)
	16:30		17:46			18:52			21:03			22:10	23	06:29 (42)	22:50	37	06:40 (42)
22	09:05		07:54			06:36			06:08			04:56		06:05 (42)	04:27		06:04 (42)
	16:32		17:48			18:54			21:05			22:12	25	06:30 (42)	22:50	37	06:41 (42)
23	09:03		07:52		08:21 (89)	06:33			06:05			04:55		06:03 (42)	04:28		06:04 (42)
	16:35		17:50	8	08:29 (89)	18:56			21:07			22:14	28	06:31 (42)	22:50	37	06:41 (42)
24	09:02		07:49		08:18 (89)	06:30			06:02			04:53		06:03 (42)	04:28		06:04 (42)
	16:37		17:53	12	08:30 (89)	18:58			21:10			22:16	29	06:32 (42)	22:50	37	06:41 (42)
25	09:00		07:46		08:17 (89)	06:27			06:00			04:51		06:02 (42)	04:28		06:05 (42)
	16:39		17:55	14	08:31 (89)	19:01			21:12			22:18	30	06:32 (42)	22:50	37	06:42 (42)
26	08:58		07:44		08:16 (89)	06:24			05:57			04:49		06:02 (42)	04:29		06:05 (42)
	16:42		17:58	15	08:31 (89)	19:03			21:14			22:20	31	06:33 (42)	22:50	36	06:41 (42)
27	08:56		07:41		08:15 (89)	06:21			05:54			04:48		06:01 (42)	04:29		06:05 (42)
	16:44		18:00	16	08:31 (89)	19:05			21:17			22:22	32	06:33 (42)	22:50	37	06:42 (42)
28	08:54		07:38		08:15 (89)	06:18			05:52			04:46		06:01 (42)	04:30		06:05 (42)
	16:47		18:02	15	08:30 (89)	19:08			21:19			22:24	33	06:34 (42)	22:50	37	06:42 (42)
29	08:52					07:16			05:49			04:44		06:01 (42)	04:31		06:05 (42)
	16:49					20:10			21:21			22:25	34	06:35 (42)	22:49	37	06:42 (42)
30	08:50					07:13			05:47			04:43		06:01 (42)	04:32		06:06 (42)
	16:51					20:12			21:24			22:27	34	06:35 (42)	22:49	37	06:43 (42)
31	08:48					07:10						04:41		06:01 (42)			
	16:54					20:14						22:29	34	06:35 (42)			
Potential sun hours	221		260			365			432			521			547		
Total, worst case				80			147						395			1094	
Sun reduction				0,50			0,50						0,50			0,50	
Oper. time red.				0,80			0,80						0,80			0,80	
Wind dir. red.				0,72			0,71						0,58			0,58	
Total reduction				0,29			0,28						0,23			0,23	
Total, real				23			42						91			252	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August	September			October			November	December
1	04:32		06:06 (42)	05:24	06:33			07:39		08:21 (88)	07:51	09:00
	22:48	37	06:43 (42)	22:01	20:40			19:13	14	08:35 (88)	16:49	15:52
2	04:33		06:07 (42)	05:27	06:35			07:42		08:20 (88)	07:54	09:01
	22:48	36	06:43 (42)	21:58	20:37			19:10	15	08:35 (88)	16:47	15:50
3	04:34		06:06 (42)	05:29	06:38			07:44		08:20 (88)	07:56	09:03
	22:47	37	06:43 (42)	21:56	20:34			19:07	13	08:33 (88)	16:44	15:49
4	04:35		06:06 (42)	05:31	06:40			07:46		08:21 (88)	07:59	09:05
	22:46	37	06:43 (42)	21:54	20:31			19:05	12	08:33 (88)	16:42	15:48
5	04:37		06:06 (42)	05:33	06:42			07:48		08:22 (88)	08:01	09:07
	22:46	37	06:43 (42)	21:51	20:28			19:02	9	08:31 (88)	16:39	15:47
6	04:38		06:08 (42)	05:35	06:44			07:51			08:03	09:09
	22:45	36	06:44 (42)	21:49	20:25			18:59			16:37	15:47
7	04:39		06:08 (42)	05:38	06:47			07:53			08:06	09:10
	22:44	36	06:44 (42)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:08 (42)	05:40	06:49			07:55			08:08	09:12
	22:43	36	06:44 (42)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:08 (42)	05:42	06:51			07:57			08:11	09:13
	22:42	36	06:44 (42)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:08 (42)	05:44	06:53			08:00		08:54 (89)	08:13	09:15
	22:40	35	06:43 (42)	21:39	20:14			18:48	7	09:01 (89)	16:28	15:44
11	04:45		06:09 (42)	05:46	06:55			08:02		08:51 (89)	08:15	09:16
	22:39	35	06:44 (42)	21:37	20:11			18:45	11	09:02 (89)	16:26	15:43
12	04:46		06:09 (42)	05:49	06:58			08:04		08:49 (89)	08:18	09:17
	22:38	35	06:44 (42)	21:34	20:08			18:42	14	09:03 (89)	16:24	15:43
13	04:48		06:09 (42)	05:51	07:00			08:07		08:49 (89)	08:20	09:19
	22:36	34	06:43 (42)	21:31	20:05			18:39	15	09:04 (89)	16:22	15:43
14	04:49		06:10 (42)	05:53	07:02			08:09		08:48 (89)	08:22	09:20
	22:35	33	06:43 (42)	21:29	20:02			18:36	15	09:03 (89)	16:19	15:43
15	04:51		06:10 (42)	05:55	07:04			08:11		08:48 (89)	08:25	09:21
	22:34	33	06:43 (42)	21:26	19:59			18:34	16	09:04 (89)	16:17	15:42
16	04:53		06:11 (42)	05:58	07:06			08:14		08:48 (89)	08:27	09:22
	22:32	32	06:43 (42)	21:24	19:57			18:31	15	09:03 (89)	16:15	15:42
17	04:54		06:11 (42)	06:00	07:09			08:16		08:49 (89)	08:29	09:23
	22:30	31	06:42 (42)	21:21	19:54			18:28	13	09:02 (89)	16:14	15:42
18	04:56		06:12 (42)	06:02	07:11			08:18		08:50 (89)	08:32	09:24
	22:29	30	06:42 (42)	21:18	19:51			18:25	11	09:01 (89)	16:12	15:42
19	04:58		06:13 (42)	06:04	07:13			08:20		08:53 (89)	08:34	09:25
	22:27	29	06:42 (42)	21:16	19:48			18:23	6	08:59 (89)	16:10	15:43
20	05:00		06:13 (42)	06:07	07:15			08:23			08:36	09:25
	22:25	28	06:41 (42)	21:13	19:45			18:20			16:08	15:43
21	05:02		06:14 (42)	06:09	07:17			08:25			08:39	09:26
	22:23	27	06:41 (42)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:16 (42)	06:11	07:20			08:28			08:41	09:27
	22:22	24	06:40 (42)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:17 (42)	06:13	07:22			08:30			08:43	09:27
	22:20	21	06:38 (42)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:18 (42)	06:15	07:24			08:32			08:45	09:28
	22:18	19	06:37 (42)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:20 (42)	06:18	07:26			07:35			08:47	09:28
	22:16	16	06:36 (42)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:22 (42)	06:20	07:28			07:37			08:49	09:28
	22:14	12	06:34 (42)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:25 (42)	06:22	07:31		08:27 (88)	07:39			08:52	09:28
	22:12	6	06:31 (42)	20:54	19:25	5	08:32 (88)	17:02			15:57	15:47
28	05:16			06:24	07:33		08:24 (88)	07:42			08:54	09:28
	22:10			20:51	19:22	10	08:34 (88)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:22 (88)	07:44			08:56	09:28
	22:07			20:48	19:19	12	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:21 (88)	07:47			08:58	09:28
	22:05			20:45	19:16	14	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		808				41			186			
Sun reduction		0,50				0,50			0,50			
Oper. time red.		0,80				0,80			0,80			
Wind dir. red.		0,58				0,70			0,72			
Total reduction		0,23				0,28			0,29			
Total, real		186				11			53			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February			March			April	May			June		
1	09:28	08:46			07:35		08:18 (89)	07:07	05:44			04:40		06:18 (42)
	15:53	16:56			18:05	13	08:31 (89)	20:17	21:26			22:30	28	06:46 (42)
2	09:27	08:43			07:33		08:19 (89)	07:04	05:42			04:39		06:18 (42)
	15:54	16:59			18:07	10	08:29 (89)	20:19	21:28			22:32	28	06:46 (42)
3	09:27	08:41			07:30		08:21 (89)	07:01	05:39			04:38		06:17 (42)
	15:56	17:01			18:10	5	08:26 (89)	20:21	21:31			22:33	29	06:46 (42)
4	09:26	08:39			07:27			06:58	05:37			04:36		06:16 (42)
	15:57	17:04			18:12			20:24	21:33			22:35	30	06:46 (42)
5	09:26	08:37			07:24			06:55	05:34			04:35		06:16 (42)
	15:59	17:06			18:14			20:26	21:35			22:36	31	06:47 (42)
6	09:25	08:34			07:21			06:53	05:32			04:34		06:15 (42)
	16:00	17:09			18:17			20:28	21:37			22:38	32	06:47 (42)
7	09:24	08:32			07:19		07:48 (88)	06:50	05:29			04:33		06:14 (42)
	16:02	17:11			18:19	6	07:54 (88)	20:31	21:40			22:39	32	06:46 (42)
8	09:24	08:30			07:16		07:46 (88)	06:47	05:27			04:32		06:13 (42)
	16:04	17:14			18:21	10	07:56 (88)	20:33	21:42			22:40	33	06:46 (42)
9	09:23	08:27			07:13		07:44 (88)	06:44	05:24			04:31		06:14 (42)
	16:06	17:16			18:24	13	07:57 (88)	20:35	21:44			22:41	33	06:47 (42)
10	09:22	08:25			07:10		07:44 (88)	06:41	05:22			04:31		06:13 (42)
	16:07	17:19			18:26	14	07:58 (88)	20:37	21:46			22:43	33	06:46 (42)
11	09:21	08:23			07:07		07:44 (88)	06:38	05:20			04:30		06:14 (42)
	16:09	17:21			18:28	14	07:58 (88)	20:40	21:49			22:44	33	06:47 (42)
12	09:20	08:20			07:04		07:44 (88)	06:36	05:17			04:29		06:14 (42)
	16:11	17:23			18:31	13	07:57 (88)	20:42	21:51			22:45	32	06:46 (42)
13	09:18	08:18			07:02		07:44 (88)	06:33	05:15			04:29		06:14 (42)
	16:13	17:26			18:33	12	07:56 (88)	20:44	21:53			22:46	33	06:47 (42)
14	09:17	08:15			06:59		07:45 (88)	06:30	05:13			04:28		06:15 (42)
	16:15	17:28			18:35	10	07:55 (88)	20:47	21:55			22:46	32	06:47 (42)
15	09:16	08:13			06:56		07:46 (88)	06:27	05:11			04:28		06:15 (42)
	16:17	17:31			18:38	6	07:52 (88)	20:49	21:57			22:47	32	06:47 (42)
16	09:14	08:10			06:53			06:24	05:09		06:39 (42)	04:28		06:15 (42)
	16:19	17:33			18:40			20:51	22:00	2	06:41 (42)	22:48	32	06:47 (42)
17	09:13	08:07			06:50			06:22	05:06		06:37 (42)	04:27		06:15 (42)
	16:21	17:36			18:42			20:54	22:02	4	06:41 (42)	22:48	32	06:47 (42)
18	09:12	08:05			06:47			06:19	05:04		06:36 (42)	04:27		06:16 (42)
	16:24	17:38			18:45			20:56	22:04	7	06:43 (42)	22:49	31	06:47 (42)
19	09:10	08:02			06:44			06:16	05:02		06:35 (42)	04:27		06:16 (42)
	16:26	17:41			18:47			20:58	22:06	8	06:43 (42)	22:49	31	06:47 (42)
20	09:08	08:00			06:42			06:13	05:00		06:33 (42)	04:27		06:16 (42)
	16:28	17:43			18:49			21:00	22:08	10	06:43 (42)	22:50	31	06:47 (42)
21	09:07	07:57			06:39			06:11	04:58		06:31 (42)	04:27		06:16 (42)
	16:30	17:46			18:52			21:03	22:10	12	06:43 (42)	22:50	31	06:47 (42)
22	09:05	07:54		08:23 (89)	06:36			06:08	04:56		06:30 (42)	04:27		06:17 (42)
	16:32	17:48	5	08:28 (89)	18:54			21:05	22:12	14	06:44 (42)	22:50	31	06:48 (42)
23	09:03	07:52		08:21 (89)	06:33			06:05	04:55		06:29 (42)	04:28		06:17 (42)
	16:35	17:50	10	08:31 (89)	18:56			21:07	22:14	15	06:44 (42)	22:50	31	06:48 (42)
24	09:02	07:49		08:18 (89)	06:30			06:02	04:53		06:28 (42)	04:28		06:17 (42)
	16:37	17:53	13	08:31 (89)	18:58			21:10	22:16	17	06:45 (42)	22:50	31	06:48 (42)
25	09:00	07:46		08:17 (89)	06:27			06:00	04:51		06:26 (42)	04:28		06:18 (42)
	16:39	17:55	15	08:32 (89)	19:01			21:12	22:18	19	06:45 (42)	22:50	31	06:49 (42)
26	08:58	07:44		08:17 (89)	06:24			05:57	04:49		06:25 (42)	04:29		06:17 (42)
	16:42	17:58	15	08:32 (89)	19:03			21:14	22:20	20	06:45 (42)	22:50	32	06:49 (42)
27	08:56	07:41		08:17 (89)	06:21			05:54	04:48		06:23 (42)	04:29		06:18 (42)
	16:44	18:00	14	08:31 (89)	19:05			21:17	22:22	22	06:45 (42)	22:50	32	06:50 (42)
28	08:54	07:38		08:17 (89)	06:18			05:52	04:46		06:23 (42)	04:30		06:17 (42)
	16:47	18:02	14	08:31 (89)	19:08			21:19	22:24	22	06:45 (42)	22:50	32	06:49 (42)
29	08:52				07:16			05:49	04:44		06:22 (42)	04:31		06:18 (42)
	16:49				20:10			21:21	22:25	24	06:46 (42)	22:49	32	06:50 (42)
30	08:50				07:13			05:47	04:43		06:21 (42)	04:32		06:18 (42)
	16:51				20:12			21:24	22:27	25	06:46 (42)	22:49	33	06:51 (42)
31	08:48				07:10				04:41		06:19 (42)			
	16:54				20:14				22:29	26	06:45 (42)			
Potential sun hours	221	260			365			432	521			547		
Total, worst case			86			126				247			944	
Sun reduction			0,50			0,50				0,50			0,50	
Oper. time red.			0,80			0,80				0,80			0,80	
Wind dir. red.			0,73			0,71				0,58			0,58	
Total reduction			0,29			0,28				0,23			0,23	
Total, real			25			36				58			220	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August		September			October			November	December
1	04:32		06:18 (42)	05:24		06:33			07:39		08:23 (88)	07:51	09:00
	22:48	33	06:51 (42)	22:01		20:40			19:13	13	08:36 (88)	16:49	15:52
2	04:33		06:19 (42)	05:27		06:35			07:42		08:22 (88)	07:54	09:01
	22:48	33	06:52 (42)	21:58		20:37			19:10	14	08:36 (88)	16:47	15:50
3	04:34		06:18 (42)	05:29		06:38			07:44		08:21 (88)	07:56	09:03
	22:47	33	06:51 (42)	21:56		20:34			19:07	14	08:35 (88)	16:44	15:49
4	04:35		06:18 (42)	05:31		06:40			07:46		08:22 (88)	07:59	09:05
	22:46	33	06:51 (42)	21:54		20:31			19:05	13	08:35 (88)	16:42	15:48
5	04:37		06:19 (42)	05:33		06:42			07:48		08:22 (88)	08:01	09:07
	22:46	33	06:52 (42)	21:51		20:28			19:02	12	08:34 (88)	16:39	15:47
6	04:38		06:21 (42)	05:35		06:44			07:51		08:23 (88)	08:03	09:09
	22:45	32	06:53 (42)	21:49		20:25			18:59	9	08:32 (88)	16:37	15:47
7	04:39		06:22 (42)	05:38		06:47			07:53			08:06	09:10
	22:44	31	06:53 (42)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:23 (42)	05:40		06:49			07:55			08:08	09:12
	22:43	30	06:53 (42)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:24 (42)	05:42		06:51			07:57			08:11	09:13
	22:42	29	06:53 (42)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:25 (42)	05:44		06:53			08:00			08:13	09:15
	22:40	28	06:53 (42)	21:39		20:14			18:48			16:28	15:44
11	04:45		06:26 (42)	05:46		06:55			08:02		08:54 (89)	08:15	09:16
	22:39	28	06:54 (42)	21:37		20:11			18:45	7	09:01 (89)	16:26	15:43
12	04:46		06:27 (42)	05:49		06:58			08:04		08:51 (89)	08:18	09:17
	22:38	27	06:54 (42)	21:34		20:08			18:42	12	09:03 (89)	16:24	15:43
13	04:48		06:28 (42)	05:51		07:00			08:07		08:51 (89)	08:20	09:19
	22:36	26	06:54 (42)	21:32		20:05			18:39	13	09:04 (89)	16:22	15:43
14	04:49		06:30 (42)	05:53		07:02			08:09		08:49 (89)	08:22	09:20
	22:35	24	06:54 (42)	21:29		20:02			18:36	15	09:04 (89)	16:19	15:43
15	04:51		06:31 (42)	05:55		07:04			08:11		08:49 (89)	08:25	09:21
	22:34	23	06:54 (42)	21:26		19:59			18:34	15	09:04 (89)	16:17	15:42
16	04:53		06:33 (42)	05:58		07:06			08:14		08:49 (89)	08:27	09:22
	22:32	22	06:55 (42)	21:24		19:57			18:31	15	09:04 (89)	16:15	15:42
17	04:54		06:33 (42)	06:00		07:09			08:16		08:50 (89)	08:29	09:23
	22:30	21	06:54 (42)	21:21		19:54			18:28	14	09:04 (89)	16:14	15:42
18	04:56		06:35 (42)	06:02		07:11			08:18		08:50 (89)	08:32	09:24
	22:29	20	06:55 (42)	21:18		19:51			18:25	12	09:02 (89)	16:12	15:42
19	04:58		06:37 (42)	06:04		07:13			08:21		08:53 (89)	08:34	09:25
	22:27	18	06:55 (42)	21:16		19:48			18:23	8	09:01 (89)	16:10	15:43
20	05:00		06:38 (42)	06:07		07:15			08:23		08:55 (89)	08:36	09:25
	22:25	16	06:54 (42)	21:13		19:45			18:20	3	08:58 (89)	16:08	15:43
21	05:02		06:39 (42)	06:09		07:17			08:25			08:39	09:26
	22:23	15	06:54 (42)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:41 (42)	06:11		07:20			08:28			08:41	09:27
	22:22	13	06:54 (42)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:42 (42)	06:13		07:22			08:30			08:43	09:27
	22:20	11	06:53 (42)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:44 (42)	06:15		07:24			08:32			08:45	09:28
	22:18	9	06:53 (42)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:45 (42)	06:18		07:26			07:35			08:47	09:28
	22:16	8	06:53 (42)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:47 (42)	06:20		07:28			07:37			08:49	09:28
	22:14	6	06:53 (42)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:49 (42)	06:22		07:31			07:39			08:52	09:28
	22:12	3	06:52 (42)	20:54		19:25			17:02			15:57	15:47
28	05:16		06:51 (42)	06:24		07:33		08:29 (88)	07:42			08:54	09:28
	22:10	1	06:52 (42)	20:51		19:22	3	08:32 (88)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:25 (88)	07:44			08:56	09:28
	22:07			20:48		19:19	9	08:34 (88)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:23 (88)	07:47			08:58	09:28
	22:05			20:45		19:16	12	08:35 (88)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		606					24			189			
Sun reduction		0,50					0,50			0,50			
Oper. time red.		0,80					0,80			0,80			
Wind dir. red.		0,58					0,70			0,72			
Total reduction		0,23					0,28			0,29			
Total, real		141					7			54			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April		May			June		
1	09:28	08:46			07:35		08:11 (88)	07:07		05:44		07:08 (42)	04:40		06:45 (42)
	15:53	16:56			18:05	6	08:17 (88)	20:17		21:26	1	07:09 (42)	22:30	32	07:17 (42)
2	09:27	08:43			07:33		08:08 (88)	07:04		05:42		07:06 (42)	04:39		06:46 (42)
	15:54	16:59			18:07	11	08:19 (88)	20:19		21:28	6	07:12 (42)	22:32	31	07:17 (42)
3	09:27	08:41			07:30		08:06 (88)	07:01		05:39		07:04 (42)	04:38		06:46 (42)
	15:56	17:01			18:10	13	08:19 (88)	20:21		21:31	9	07:13 (42)	22:33	31	07:17 (42)
4	09:26	08:39			07:27		08:05 (88)	06:58		05:37		07:02 (42)	04:36		06:47 (42)
	15:57	17:04			18:12	14	08:19 (88)	20:24		21:33	13	07:15 (42)	22:35	29	07:16 (42)
5	09:26	08:37			07:24		08:05 (88)	06:55		05:34		07:00 (42)	04:35		06:48 (42)
	15:59	17:06			18:14	14	08:19 (88)	20:26		21:35	16	07:16 (42)	22:36	29	07:17 (42)
6	09:25	08:34			07:21		08:05 (88)	06:53		05:32		06:58 (42)	04:34		06:49 (42)
	16:00	17:09			18:17	13	08:18 (88)	20:28		21:37	19	07:17 (42)	22:38	27	07:16 (42)
7	09:24	08:32			07:19		08:05 (88)	06:50		05:29		06:55 (42)	04:33		06:49 (42)
	16:02	17:11			18:19	12	08:17 (88)	20:31		21:40	22	07:17 (42)	22:39	27	07:16 (42)
8	09:24	08:30			07:16		08:06 (88)	06:47		05:27		06:54 (42)	04:32		06:49 (42)
	16:04	17:14			18:21	10	08:16 (88)	20:33		21:42	24	07:18 (42)	22:40	26	07:15 (42)
9	09:23	08:27			07:13		08:08 (88)	06:44		05:24		06:52 (42)	04:31		06:50 (42)
	16:06	17:16			18:24	5	08:13 (88)	20:35		21:44	27	07:19 (42)	22:42	26	07:16 (42)
10	09:22	08:25			07:10			06:41		05:22		06:50 (42)	04:31		06:51 (42)
	16:07	17:18			18:26			20:37		21:46	29	07:19 (42)	22:43	24	07:15 (42)
11	09:21	08:23			07:07			06:38		05:20		06:48 (42)	04:30		06:52 (42)
	16:09	17:21			18:28			20:40		21:49	32	07:20 (42)	22:44	23	07:15 (42)
12	09:20	08:20			07:04			06:36		05:17		06:46 (42)	04:29		06:52 (42)
	16:11	17:23			18:31			20:42		21:51	34	07:20 (42)	22:45	22	07:14 (42)
13	09:18	08:18			07:02			06:33		05:15		06:45 (42)	04:29		06:53 (42)
	16:13	17:26			18:33			20:44		21:53	35	07:20 (42)	22:46	21	07:14 (42)
14	09:17	08:15			06:59			06:30		05:13		06:43 (42)	04:28		06:53 (42)
	16:15	17:28			18:35			20:47		21:55	37	07:20 (42)	22:46	22	07:15 (42)
15	09:16	08:13		08:44 (89)	06:56			06:27		05:11		06:41 (42)	04:28		06:53 (42)
	16:17	17:31	6	08:50 (89)	18:38			20:49		21:57	39	07:20 (42)	22:47	21	07:14 (42)
16	09:14	08:10		08:42 (89)	06:53			06:24		05:09		06:41 (42)	04:28		06:54 (42)
	16:19	17:33	10	08:52 (89)	18:40			20:51		22:00	39	07:20 (42)	22:48	20	07:14 (42)
17	09:13	08:07		08:40 (89)	06:50			06:22		05:06		06:40 (42)	04:27		06:54 (42)
	16:21	17:36	13	08:53 (89)	18:42			20:54		22:02	40	07:20 (42)	22:48	20	07:14 (42)
18	09:12	08:05		08:40 (89)	06:47			06:19		05:04		06:41 (42)	04:27		06:55 (42)
	16:24	17:38	14	08:54 (89)	18:45			20:56		22:04	40	07:21 (42)	22:49	19	07:14 (42)
19	09:10	08:02		08:39 (89)	06:44			06:16		05:02		06:41 (42)	04:27		06:55 (42)
	16:26	17:41	15	08:54 (89)	18:47			20:58		22:06	40	07:21 (42)	22:49	19	07:14 (42)
20	09:08	08:00		08:39 (89)	06:42			06:13		05:00		06:41 (42)	04:27		06:55 (42)
	16:28	17:43	15	08:54 (89)	18:49			21:00		22:08	39	07:20 (42)	22:50	19	07:14 (42)
21	09:07	07:57		08:39 (89)	06:39			06:11		04:58		06:41 (42)	04:27		06:55 (42)
	16:30	17:46	14	08:53 (89)	18:52			21:03		22:10	39	07:20 (42)	22:50	19	07:14 (42)
22	09:05	07:54		08:39 (89)	06:36			06:08		04:56		06:41 (42)	04:27		06:56 (42)
	16:32	17:48	13	08:52 (89)	18:54			21:05		22:12	39	07:20 (42)	22:50	19	07:15 (42)
23	09:03	07:52		08:41 (89)	06:33			06:05		04:55		06:41 (42)	04:28		06:56 (42)
	16:35	17:50	11	08:52 (89)	18:56			21:07		22:14	39	07:20 (42)	22:50	19	07:15 (42)
24	09:02	07:49		08:42 (89)	06:30			06:02		04:53		06:42 (42)	04:28		06:56 (42)
	16:37	17:53	8	08:50 (89)	18:58			21:10		22:16	38	07:20 (42)	22:50	19	07:15 (42)
25	09:00	07:46			06:27			06:00		04:51		06:42 (42)	04:28		06:57 (42)
	16:39	17:55			19:01			21:12		22:18	37	07:19 (42)	22:50	19	07:16 (42)
26	08:58	07:44			06:24			05:57		04:49		06:43 (42)	04:29		06:56 (42)
	16:42	17:58			19:03			21:14		22:20	37	07:20 (42)	22:50	20	07:16 (42)
27	08:56	07:41			06:21			05:54		04:48		06:43 (42)	04:29		06:56 (42)
	16:44	18:00			19:05			21:17		22:22	36	07:19 (42)	22:50	21	07:17 (42)
28	08:54	07:38			06:18			05:52		04:46		06:43 (42)	04:30		06:56 (42)
	16:47	18:02			19:08			21:19		22:24	36	07:19 (42)	22:50	21	07:17 (42)
29	08:52				07:16			05:49		04:44		06:44 (42)	04:31		06:56 (42)
	16:49				20:10			21:21		22:25	35	07:19 (42)	22:49	21	07:17 (42)
30	08:50				07:13			05:47		04:43		06:45 (42)	04:32		06:56 (42)
	16:51				20:12			21:24		22:27	34	07:19 (42)	22:49	22	07:18 (42)
31	08:48				07:10					04:41		06:44 (42)			
	16:54				20:14					22:29	34	07:18 (42)			
Potential sun hours	221	260			365			432		521			547		
Total, worst case			119			98				945			688		
Sun reduction			0,50			0,50				0,50			0,50		
Oper. time red.			0,80			0,80				0,80			0,80		
Wind dir. red.			0,74			0,72				0,59			0,59		
Total reduction			0,29			0,29				0,24			0,24		
Total, real			35			28				224			163		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September	October		November	December
1	04:32	06:56 (42)	05:24	06:57 (42)	06:33	07:39		07:51	09:00
	22:48	23 07:19 (42)	22:01	33 07:30 (42)	20:40	19:13		16:49	15:52
2	04:33	06:56 (42)	05:27	06:59 (42)	06:35	07:42		07:54	09:01
	22:48	24 07:20 (42)	21:58	31 07:30 (42)	20:37	19:10		16:47	15:50
3	04:34	06:55 (42)	05:29	07:01 (42)	06:38	07:44		07:56	09:03
	22:47	25 07:20 (42)	21:56	28 07:29 (42)	20:34	19:07		16:44	15:49
4	04:35	06:55 (42)	05:31	07:03 (42)	06:40	07:46		07:59	09:05
	22:46	25 07:20 (42)	21:54	26 07:29 (42)	20:31	19:05		16:42	15:48
5	04:37	06:54 (42)	05:33	07:05 (42)	06:42	07:48	08:44 (88)	08:01	09:07
	22:46	27 07:21 (42)	21:51	23 07:28 (42)	20:28	19:02	8 08:52 (88)	16:39	15:47
6	04:38	06:55 (42)	05:35	07:06 (42)	06:44	07:51	08:42 (88)	08:03	09:09
	22:45	28 07:23 (42)	21:49	21 07:27 (42)	20:25	18:59	11 08:53 (88)	16:37	15:47
7	04:39	06:55 (42)	05:38	07:08 (42)	06:47	07:53	08:41 (88)	08:06	09:10
	22:44	28 07:23 (42)	21:47	18 07:26 (42)	20:23	18:56	13 08:54 (88)	16:35	15:46
8	04:40	06:54 (42)	05:40	07:10 (42)	06:49	07:55	08:40 (88)	08:08	09:12
	22:43	30 07:24 (42)	21:44	15 07:25 (42)	20:20	18:53	14 08:54 (88)	16:32	15:45
9	04:42	06:54 (42)	05:42	07:12 (42)	06:51	07:57	08:39 (88)	08:11	09:13
	22:42	30 07:24 (42)	21:42	12 07:24 (42)	20:17	18:50	15 08:54 (88)	16:30	15:44
10	04:43	06:53 (42)	05:44	07:13 (42)	06:53	08:00	08:40 (88)	08:13	09:15
	22:40	31 07:24 (42)	21:39	9 07:22 (42)	20:14	18:48	14 08:54 (88)	16:28	15:44
11	04:45	06:54 (42)	05:46	07:15 (42)	06:55	08:02	08:40 (88)	08:15	09:16
	22:39	32 07:26 (42)	21:37	5 07:20 (42)	20:11	18:45	13 08:53 (88)	16:26	15:43
12	04:46	06:53 (42)	05:49		06:58	08:04	08:42 (88)	08:18	09:17
	22:38	33 07:26 (42)	21:34		20:08	18:42	9 08:51 (88)	16:24	15:43
13	04:48	06:53 (42)	05:51		07:00	08:07	08:45 (88)	08:20	09:19
	22:36	33 07:26 (42)	21:32		20:05	18:39	4 08:49 (88)	16:22	15:43
14	04:49	06:53 (42)	05:53		07:02	08:09		08:22	09:20
	22:35	34 07:27 (42)	21:29		20:02	18:36		16:19	15:43
15	04:51	06:52 (42)	05:55		07:04	08:11		08:25	09:21
	22:34	35 07:27 (42)	21:26		19:59	18:34		16:17	15:42
16	04:53	06:52 (42)	05:58		07:06	08:14		08:27	09:22
	22:32	36 07:28 (42)	21:24		19:57	18:31		16:15	15:42
17	04:54	06:52 (42)	06:00		07:09	08:16	09:17 (89)	08:29	09:23
	22:30	36 07:28 (42)	21:21		19:54	18:28	2 09:19 (89)	16:13	15:42
18	04:56	06:52 (42)	06:02		07:11	08:18	09:13 (89)	08:32	09:24
	22:29	37 07:29 (42)	21:18		19:51	18:25	9 09:22 (89)	16:12	15:42
19	04:58	06:52 (42)	06:04		07:13	08:21	09:12 (89)	08:34	09:25
	22:27	38 07:30 (42)	21:16		19:48	18:23	12 09:24 (89)	16:10	15:43
20	05:00	06:51 (42)	06:07		07:15	08:23	09:10 (89)	08:36	09:25
	22:25	38 07:29 (42)	21:13		19:45	18:20	14 09:24 (89)	16:08	15:43
21	05:02	06:51 (42)	06:09		07:17	08:25	09:10 (89)	08:39	09:26
	22:23	39 07:30 (42)	21:10		19:42	18:17	15 09:25 (89)	16:06	15:43
22	05:04	06:52 (42)	06:11		07:19	08:28	09:09 (89)	08:41	09:27
	22:22	39 07:31 (42)	21:08		19:39	18:15	15 09:24 (89)	16:04	15:44
23	05:06	06:51 (42)	06:13		07:22	08:30	09:09 (89)	08:43	09:27
	22:20	39 07:30 (42)	21:05		19:36	18:12	15 09:24 (89)	16:03	15:44
24	05:08	06:51 (42)	06:15		07:24	08:32	09:09 (89)	08:45	09:28
	22:18	40 07:31 (42)	21:02		19:33	18:09	14 09:23 (89)	16:01	15:45
25	05:10	06:51 (42)	06:18		07:26	07:35	08:10 (89)	08:47	09:28
	22:16	40 07:31 (42)	20:59		19:30	17:07	13 08:23 (89)	16:00	15:46
26	05:12	06:51 (42)	06:20		07:28	07:37	08:13 (89)	08:49	09:28
	22:14	40 07:31 (42)	20:57		19:28	17:04	9 08:22 (89)	15:58	15:46
27	05:14	06:52 (42)	06:22		07:31	07:39	08:14 (89)	08:52	09:28
	22:12	39 07:31 (42)	20:54		19:25	17:02	5 08:19 (89)	15:57	15:47
28	05:16	06:52 (42)	06:24		07:33	07:42		08:54	09:28
	22:10	39 07:31 (42)	20:51		19:22	16:59		15:55	15:48
29	05:18	06:52 (42)	06:27		07:35	07:44		08:56	09:28
	22:07	38 07:30 (42)	20:48		19:19	16:56		15:54	15:49
30	05:20	06:54 (42)	06:29		07:37	07:47		08:58	09:28
	22:05	36 07:30 (42)	20:45		19:16	16:54		15:53	15:50
31	05:22	06:55 (42)	06:31			07:49			09:28
	22:03	35 07:30 (42)	20:43			16:51			15:51
Potential sun hours	545		478		386	319		236	200
Total, worst case		1047		221			224		
Sun reduction		0,50		0,50			0,50		
Oper. time red.		0,80		0,80			0,80		
Wind dir. red.		0,59		0,59			0,73		
Total reduction		0,24		0,24			0,29		
Total, real		248		52			65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:24 (2)	08:46	10:12 (1)	07:35	08:22 (26)	07:07	05:44	04:40
	15:53	50 12:55 (4)	16:56	65 13:08 (4)	18:05	42 09:51 (3)	20:17	21:26	22:31
2	09:28	11:22 (2)	08:44	10:12 (1)	07:33	08:21 (26)	07:04	05:41	04:39
	15:54	54 12:56 (4)	16:59	63 13:07 (4)	18:07	37 09:47 (3)	20:19	21:28	22:32
3	09:27	11:20 (2)	08:41	10:13 (1)	07:30	08:21 (26)	07:01	05:39	04:37
	15:56	57 12:56 (4)	17:01	61 13:07 (4)	18:10	24 08:45 (26)	20:21	21:31	22:34
4	09:27	11:20 (2)	08:39	10:13 (1)	07:27	08:20 (26)	06:58	05:36	04:36
	15:57	58 12:57 (4)	17:04	57 13:05 (4)	18:12	25 08:45 (26)	20:24	21:33	22:35
5	09:26	11:20 (2)	08:37	10:14 (1)	07:24	08:20 (26)	06:55	05:34	04:35
	15:59	60 12:58 (4)	17:06	54 13:05 (4)	18:14	24 08:44 (26)	20:26	21:35	22:37
6	09:25	11:20 (2)	08:35	10:15 (1)	07:22	08:20 (26)	06:53	05:31	04:34
	16:00	61 12:58 (4)	17:09	49 13:03 (4)	18:17	24 08:44 (26)	20:28	21:38	22:38
7	09:25	11:20 (2)	08:32	09:40 (3)	07:19	08:20 (26)	06:50	05:29	04:33
	16:02	62 12:59 (4)	17:11	47 13:01 (4)	18:19	23 08:43 (26)	20:31	21:40	22:39
8	09:24	11:21 (2)	08:30	09:36 (3)	07:16	08:21 (26)	06:47	05:27	04:32
	16:04	63 13:00 (4)	17:13	49 12:59 (4)	18:21	20 08:41 (26)	20:33	21:42	22:41
9	09:23	11:21 (2)	08:28	09:21 (6)	07:13	08:22 (26)	06:44	05:24	04:31
	16:05	65 13:01 (4)	17:16	44 12:56 (4)	18:24	19 08:41 (26)	20:35	21:44	22:42
10	09:22	11:21 (2)	08:25	09:18 (6)	07:10	08:24 (26)	06:41	05:22	04:30
	16:07	65 13:01 (4)	17:18	32 09:54 (3)	18:26	15 08:39 (26)	20:38	21:47	22:43
11	09:21	11:21 (2)	08:23	09:16 (6)	07:07	08:26 (26)	06:38	05:20	04:30
	16:09	68 13:03 (4)	17:21	39 09:56 (3)	18:28	10 08:36 (26)	20:40	21:49	22:44
12	09:20	11:21 (2)	08:20	09:14 (6)	07:05		06:36	05:17	04:29
	16:11	68 13:03 (4)	17:23	42 09:56 (3)	18:31		20:42	21:51	22:45
13	09:19	11:22 (2)	08:18	09:13 (6)	07:02		06:33	05:15	04:29
	16:13	68 13:04 (4)	17:26	44 09:57 (3)	18:33		20:44	21:53	22:46
14	09:17	11:22 (2)	08:15	09:13 (6)	06:59	07:37 (28)	06:30	05:13	04:28
	16:15	68 13:04 (4)	17:28	46 09:59 (3)	18:35	4 07:41 (28)	20:47	21:55	22:47
15	09:16	11:22 (2)	08:13	09:13 (6)	06:56	07:33 (28)	06:27	05:11	04:28
	16:17	70 13:05 (4)	17:31	46 09:59 (3)	18:38	11 07:44 (28)	20:49	21:58	22:47
16	09:15	11:22 (2)	08:10	09:12 (6)	06:53	07:31 (28)	06:24	05:08	04:27
	16:19	71 13:05 (4)	17:33	47 09:59 (3)	18:40	15 07:46 (28)	20:51	22:00	22:48
17	09:13	11:23 (2)	08:08	09:13 (6)	06:50	07:30 (28)	06:22	05:06	04:27
	16:21	71 13:06 (4)	17:36	47 10:00 (3)	18:42	16 07:46 (28)	20:54	22:02	22:49
18	09:12	11:23 (2)	08:05	09:13 (6)	06:47	07:29 (28)	06:19	05:04	04:27
	16:23	72 13:07 (4)	17:38	47 10:00 (3)	18:45	18 07:47 (28)	20:56	22:04	22:49
19	09:10	11:24 (2)	08:02	09:14 (6)	06:44	07:28 (28)	06:16	05:02	04:27
	16:26	70 13:07 (4)	17:41	46 10:00 (3)	18:47	19 07:47 (28)	20:58	22:06	22:50
20	09:09	11:24 (2)	08:00	09:14 (6)	06:42	07:27 (28)	06:13	05:00	04:27
	16:28	71 13:08 (4)	17:43	46 10:00 (3)	18:49	19 07:46 (28)	21:01	22:08	22:50
21	09:07	11:25 (2)	07:57	09:15 (6)	06:39	07:28 (28)	06:11	04:58	04:27
	16:30	70 13:08 (4)	17:46	44 09:59 (3)	18:52	19 07:47 (28)	21:03	22:10	22:50
22	09:05	11:25 (2)	07:54	09:19 (6)	06:36	07:28 (28)	06:08	04:56	04:27
	16:32	70 13:08 (4)	17:48	40 10:00 (3)	18:54	18 07:46 (28)	21:05	22:12	22:50
23	09:04	11:25 (2)	07:52	09:26 (3)	06:33	07:28 (28)	06:05	04:54	04:27
	16:35	69 13:08 (4)	17:50	33 09:59 (3)	18:56	17 07:45 (28)	21:08	22:14	22:51
24	09:02	11:26 (2)	07:49	08:32 (26)	06:30	07:29 (28)	06:02	04:53	04:28
	16:37	68 13:08 (4)	17:53	35 09:58 (3)	18:59	14 07:43 (28)	21:10	22:16	22:51
25	09:00	10:27 (1)	07:46	08:28 (26)	06:27	07:31 (28)	06:00	04:51	04:28
	16:39	72 13:09 (4)	17:55	42 09:57 (3)	19:01	10 07:41 (28)	21:12	22:18	22:51
26	08:58	10:23 (1)	07:44	08:25 (26)	06:24		05:57	04:49	04:29
	16:42	74 13:09 (4)	17:58	45 09:56 (3)	19:03		21:14	22:20	22:50
27	08:56	10:20 (1)	07:41	08:23 (26)	06:21		05:54	04:47	04:29
	16:44	75 13:09 (4)	18:00	45 09:54 (3)	19:05		21:17	22:22	22:50
28	08:54	10:15 (1)	07:38	08:23 (26)	06:18		05:52	04:46	04:30
	16:46	76 13:08 (4)	18:02	44 09:53 (3)	19:08		21:19	22:24	22:50
29	08:52	10:11 (1)			07:16		05:49	04:44	04:31
	16:49	73 13:09 (4)			20:10		21:21	22:26	22:50
30	08:50	10:11 (1)			07:13		05:47	04:43	04:31
	16:51	67 13:08 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54	67 13:08 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case		2073		1299		443			
Sun reduction		0,50		0,50		0,50			
Oper. time red.		0,80		0,80		0,80			
Wind dir. red.		0,64		0,71		0,71			
Total reduction		0,26		0,28		0,29			
Total, real		532		366		126			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
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+47 21 58 60 15
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:40		07:52	08:47 (6)	09:00	11:03 (2)
	22:49	22:01	20:40		19:13		16:49 36	12:20 (4)	15:51 67	12:45 (4)
2	04:33	05:26	06:35		07:42	09:06 (26)	07:54	09:03 (3)	09:02	11:04 (2)
	22:48	21:59	20:37		19:10 6	09:12 (26)	16:46 43	12:26 (4)	15:50 66	12:45 (4)
3	04:34	05:29	06:38		07:44	09:02 (26)	07:56	09:06 (3)	09:04	11:04 (2)
	22:47	21:56	20:34		19:07 13	09:15 (26)	16:44 50	12:29 (4)	15:49 64	12:44 (4)
4	04:35	05:31	06:40		07:46	09:00 (26)	07:59	09:46 (1)	09:05	11:05 (2)
	22:47	21:54	20:31		19:05 17	09:17 (26)	16:42 44	12:32 (4)	15:48 63	12:44 (4)
5	04:36	05:33	06:42		07:48	08:58 (26)	08:01	09:44 (1)	09:07	11:05 (2)
	22:46	21:52	20:28		19:02 20	09:18 (26)	16:39 51	12:33 (4)	15:47 62	12:44 (4)
6	04:38	05:35	06:44		07:51	08:57 (26)	08:04	09:44 (1)	09:09	11:06 (2)
	22:45	21:49	20:26		18:59 22	09:19 (26)	16:37 55	12:35 (4)	15:46 61	12:45 (4)
7	04:39	05:37	06:47		07:53	08:57 (26)	08:06	09:44 (1)	09:10	11:07 (2)
	22:44	21:47	20:23		18:56 23	09:20 (26)	16:35 58	12:36 (4)	15:46 60	12:45 (4)
8	04:40	05:40	06:49		07:55	08:55 (26)	08:08	09:43 (1)	09:12	11:08 (2)
	22:43	21:44	20:20		18:53 24	09:19 (26)	16:32 60	12:36 (4)	15:45 58	12:45 (4)
9	04:41	05:42	06:51		07:58	08:55 (26)	08:11	09:43 (1)	09:14	11:09 (2)
	22:42	21:42	20:17		18:50 24	09:19 (26)	16:30 64	12:38 (4)	15:44 57	12:45 (4)
10	04:43	05:44	06:53		08:00	08:55 (26)	08:13	09:43 (1)	09:15	11:11 (2)
	22:41	21:39	20:14		18:48 24	09:19 (26)	16:28 65	12:39 (4)	15:44 54	12:45 (4)
11	04:44	05:46	06:55		08:02	08:54 (26)	08:16	09:42 (1)	09:16	11:14 (2)
	22:39	21:37	20:11		18:45 32	10:18 (3)	16:26 67	12:39 (4)	15:43 51	12:45 (4)
12	04:46	05:49	06:58		08:04	08:55 (26)	08:18	09:43 (1)	09:18	11:15 (2)
	22:38	21:34	20:08		18:42 39	10:23 (3)	16:24 67	12:40 (4)	15:43 48	12:45 (4)
13	04:48	05:51	07:00		08:07	08:55 (26)	08:20	09:43 (1)	09:19	11:18 (2)
	22:37	21:32	20:05		18:39 43	10:25 (3)	16:21 73	12:41 (4)	15:43 46	12:46 (4)
14	04:49	05:53	07:02		08:09	08:55 (26)	08:23	09:48 (1)	09:20	11:20 (2)
	22:35	21:29	20:02		18:36 46	10:26 (3)	16:19 75	12:41 (4)	15:42 44	12:46 (4)
15	04:51	05:55	07:04		08:11	08:57 (26)	08:25	09:52 (1)	09:21	11:21 (2)
	22:34	21:26	20:00		18:34 46	10:28 (3)	16:17 75	12:41 (4)	15:42 42	12:46 (4)
16	04:53	05:58	07:06		08:14	08:58 (26)	08:27	09:56 (1)	09:22	11:22 (2)
	22:32	21:24	19:57		18:31 44	10:28 (3)	16:15 74	12:42 (4)	15:42 41	12:46 (4)
17	04:54	06:00	07:09		08:16	09:01 (26)	08:30	10:01 (1)	09:23	11:24 (2)
	22:31	21:21	19:54		18:28 41	10:29 (3)	16:13 71	12:42 (4)	15:42 38	12:46 (4)
18	04:56	06:02	07:11	08:19 (28)	08:18	09:57 (3)	08:32	11:00 (2)	09:24	11:25 (2)
	22:29	21:19	19:51 9	08:28 (28)	18:25 32	10:29 (3)	16:11 68	12:42 (4)	15:42 37	12:47 (4)
19	04:58	06:04	07:13	08:16 (28)	08:21	09:57 (3)	08:34	11:00 (2)	09:25	11:27 (2)
	22:27	21:16	19:48 13	08:29 (28)	18:23 33	10:30 (3)	16:10 69	12:43 (4)	15:43 36	12:47 (4)
20	05:00	06:06	07:15	08:14 (28)	08:23	09:48 (6)	08:37	11:00 (2)	09:26	11:28 (2)
	22:25	21:13	19:45 16	08:30 (28)	18:20 42	10:30 (3)	16:08 70	12:43 (4)	15:43 35	12:48 (4)
21	05:02	06:09	07:17	08:14 (28)	08:25	09:46 (6)	08:39	11:00 (2)	09:26	11:28 (2)
	22:24	21:10	19:42 17	08:31 (28)	18:17 45	10:31 (3)	16:06 70	12:43 (4)	15:43 35	12:48 (4)
22	05:04	06:11	07:20	08:13 (28)	08:28	09:44 (6)	08:41	11:00 (2)	09:27	11:29 (2)
	22:22	21:08	19:39 18	08:31 (28)	18:15 46	10:30 (3)	16:04 71	12:44 (4)	15:44 35	12:49 (4)
23	05:06	06:13	07:22	08:12 (28)	08:30	09:44 (6)	08:43	11:00 (2)	09:27	11:29 (2)
	22:20	21:05	19:36 19	08:31 (28)	18:12 46	10:30 (3)	16:03 70	12:43 (4)	15:44 35	12:49 (4)
24	05:08	06:15	07:24	08:12 (28)	08:32	09:42 (6)	08:45	11:00 (2)	09:28	11:30 (2)
	22:18	21:02	19:33 19	08:31 (28)	18:09 47	10:29 (3)	16:01 72	12:44 (4)	15:45 35	12:50 (4)
25	05:10	06:18	07:26	08:11 (28)	07:35	08:42 (6)	08:48	11:00 (2)	09:28	11:29 (2)
	22:16	20:59	19:31 19	08:30 (28)	17:07 47	09:29 (3)	15:59 71	12:43 (4)	15:45 36	12:50 (4)
26	05:12	06:20	07:28	08:12 (28)	07:37	08:43 (6)	08:50	11:01 (2)	09:28	11:29 (2)
	22:14	20:57	19:28 17	08:29 (28)	17:04 46	09:29 (3)	15:58 71	12:44 (4)	15:46 37	12:51 (4)
27	05:14	06:22	07:31	08:13 (28)	07:40	08:42 (6)	08:52	11:01 (2)	09:28	11:29 (2)
	22:12	20:54	19:25 15	08:28 (28)	17:02 46	09:28 (3)	15:57 71	12:44 (4)	15:47 39	12:52 (4)
28	05:16	06:24	07:33	08:14 (28)	07:42	08:43 (6)	08:54	11:02 (2)	09:29	11:28 (2)
	22:10	20:51	19:22 12	08:26 (28)	16:59 45	09:28 (3)	15:55 68	12:44 (4)	15:48 40	12:52 (4)
29	05:18	06:27	07:35	08:15 (28)	07:44	08:44 (6)	08:56	11:02 (2)	09:29	11:27 (2)
	22:08	20:48	19:19 8	08:23 (28)	16:56 43	09:27 (3)	15:54 68	12:44 (4)	15:49 42	12:52 (4)
30	05:20	06:29	07:37		07:47	08:44 (6)	08:58	11:02 (2)	09:28	11:26 (2)
	22:05	20:45	19:16		16:54 42	09:26 (3)	15:53 68	12:44 (4)	15:50 44	12:53 (4)
31	05:22	06:31			07:49	08:45 (6)			09:28	11:25 (2)
	22:03	20:43			16:51 38	09:25 (3)			15:51 48	12:54 (4)
Potential sun hours	545	478	386		319		236		200	
Total, worst case			182		1062		1935		1456	
Sun reduction			0,50		0,50		0,50		0,50	
Oper. time red.			0,80		0,80		0,80		0,80	
Wind dir. red.			0,70		0,73		0,65		0,63	
Total reduction			0,28		0,29		0,26		0,25	
Total, real			51		310		503		369	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		07:34 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	5	07:39 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:30 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	12	07:42 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:28 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	15	07:43 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:26 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:44 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50		07:25 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	19	07:44 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:24 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:16 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:44 (4)	20:56	22:04	22:49	22:29	21:19	19:51	8 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:24 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:13 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	20	07:44 (4)	20:58	22:06	22:50	22:27	21:16	19:48	13 08:26 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:25 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:11 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:45 (4)	21:01	22:08	22:50	22:26	21:13	19:45	16 08:27 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:25 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:11 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	19	07:44 (4)	21:03	22:10	22:50	22:24	21:11	19:42	17 08:28 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:25 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	18	07:43 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20 08:29 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:25 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:08 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17	07:42 (4)	21:08	22:14	22:51	22:20	21:05	19:36	20 08:28 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:26 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	14	07:40 (4)	21:10	22:16	22:51	22:18	21:02	19:34	20 08:28 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:28 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:07 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	9	07:37 (4)	21:12	22:18	22:51	22:16	21:00	19:31	20 08:27 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:29	08:08 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	19 08:27 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:08 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54	19:25	18 08:26 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:08 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	17 08:25 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:09 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	14 08:23 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:13 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	8 08:21 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31			07:49		09:28
	16:54		20:15				22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				206							210			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				57							58			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:25 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38 10	07:35 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:18	15:42
16	09:15	08:10	06:53	07:23 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40 13	07:36 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:16	15:42
17	09:13	08:08	06:50	07:21 (4)	06:22	05:06	04:27	04:54	06:00	07:09	08:13 (4)	08:16	08:30	09:23
	16:21	17:36	18:43 16	07:37 (4)	20:54	22:02	22:49	22:31	21:21	19:54 4	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47	07:20 (4)	06:19	05:04	04:27	04:56	06:02	07:11	08:09 (4)	08:18	08:32	09:24
	16:24	17:38	18:45 18	07:38 (4)	20:56	22:04	22:49	22:29	21:19	19:51 11	08:20 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:19 (4)	06:16	05:02	04:27	04:58	06:04	07:13	08:07 (4)	08:21	08:34	09:25
	16:26	17:41	18:47 19	07:38 (4)	20:58	22:06	22:50	22:27	21:16	19:48 14	08:21 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:19 (4)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (4)	08:23	08:37	09:26
	16:28	17:43	18:49 20	07:39 (4)	21:01	22:08	22:50	22:26	21:13	19:45 17	08:22 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (4)	08:25	08:39	09:26
	16:30	17:46	18:52 19	07:38 (4)	21:03	22:10	22:50	22:24	21:11	19:42 18	08:23 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:19 (4)	06:08	04:56	04:27	05:04	06:11	07:20	08:04 (4)	08:28	08:41	09:27
	16:33	17:48	18:54 18	07:37 (4)	21:05	22:12	22:51	22:22	21:08	19:39 19	08:23 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:19 (4)	06:05	04:55	04:28	05:06	06:13	07:22	08:03 (4)	08:30	08:43	09:27
	16:35	17:51	18:56 17	07:36 (4)	21:08	22:14	22:51	22:20	21:05	19:36 19	08:22 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:20 (4)	06:03	04:53	04:28	05:08	06:16	07:24	08:03 (4)	08:32	08:46	09:28
	16:37	17:53	18:59 15	07:35 (4)	21:10	22:16	22:51	22:18	21:02	19:34 19	08:22 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:21 (4)	06:00	04:51	04:28	05:10	06:18	07:26	08:02 (4)	07:35	08:48	09:28
	16:40	17:55	19:01 12	07:33 (4)	21:12	22:18	22:51	22:16	21:00	19:31 19	08:21 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24	07:23 (4)	05:57	04:49	04:29	05:12	06:20	07:29	08:04 (4)	07:37	08:50	09:28
	16:42	17:58	19:03 7	07:30 (4)	21:15	22:20	22:51	22:14	20:57	19:28 16	08:20 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31	08:04 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25 15	08:19 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:25	07:33	08:05 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22 11	08:16 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:08 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19 4	08:12 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37		07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:06	20:46	19:16		16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31			07:49		09:28
	16:54		20:15			22:29		22:03	20:43			16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				184							186			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,28							0,28			
Total, real				51							51			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:17 (2)	08:46	10:11 (1)	07:35	08:24 (26)	07:07	05:44	04:40
	15:53 54	12:46 (4)	16:56 61	12:57 (4)	18:05 32	09:46 (3)	20:17	21:26	22:31
2	09:28	11:17 (2)	08:44	10:11 (1)	07:33	08:23 (26)	07:04	05:41	04:39
	15:54 54	12:46 (4)	16:59 58	12:56 (4)	18:07 24	08:47 (26)	20:19	21:28	22:32
3	09:27	11:17 (2)	08:41	10:12 (1)	07:30	08:23 (26)	07:01	05:39	04:37
	15:56 56	12:47 (4)	17:01 55	12:55 (4)	18:10 24	08:47 (26)	20:21	21:31	22:34
4	09:27	11:17 (2)	08:39	10:12 (1)	07:27	08:23 (26)	06:58	05:36	04:36
	15:57 57	12:48 (4)	17:04 52	12:54 (4)	18:12 23	08:46 (26)	20:24	21:33	22:35
5	09:26	11:17 (2)	08:37	10:14 (1)	07:24	08:23 (26)	06:55	05:34	04:35
	15:59 58	12:48 (4)	17:06 46	12:53 (4)	18:14 22	08:45 (26)	20:26	21:35	22:37
6	09:25	11:17 (2)	08:35	10:14 (1)	07:22	08:23 (26)	06:53	05:31	04:34
	16:00 59	12:49 (4)	17:09 41	12:50 (4)	18:17 22	08:45 (26)	20:28	21:38	22:38
7	09:25	11:17 (2)	08:32	09:37 (3)	07:19	08:24 (26)	06:50	05:29	04:33
	16:02 61	12:50 (4)	17:11 43	12:47 (4)	18:19 19	08:43 (26)	20:31	21:40	22:39
8	09:24	11:17 (2)	08:30	09:35 (3)	07:16	08:24 (26)	06:47	05:27	04:32
	16:04 63	12:51 (4)	17:13 36	12:44 (4)	18:21 18	08:42 (26)	20:33	21:42	22:41
9	09:23	11:18 (2)	08:28	09:32 (3)	07:13	08:27 (26)	06:44	05:24	04:31
	16:05 63	12:52 (4)	17:16 21	09:53 (3)	18:24 13	08:40 (26)	20:35	21:44	22:42
10	09:22	11:17 (2)	08:25	09:31 (3)	07:10	08:30 (26)	06:41	05:22	04:30
	16:07 65	12:52 (4)	17:18 24	09:55 (3)	18:26 7	08:37 (26)	20:38	21:47	22:43
11	09:21	11:18 (2)	08:23	09:30 (3)	07:07		06:38	05:20	04:30
	16:09 65	12:53 (4)	17:21 26	09:56 (3)	18:28		20:40	21:49	22:44
12	09:20	11:18 (2)	08:20	09:29 (3)	07:05		06:36	05:17	04:29
	16:11 66	12:53 (4)	17:23 28	09:57 (3)	18:31		20:42	21:51	22:45
13	09:19	11:18 (2)	08:18	09:28 (3)	07:02	07:40 (28)	06:33	05:15	04:29
	16:13 67	12:54 (4)	17:26 29	09:57 (3)	18:33 5	07:45 (28)	20:44	21:53	22:46
14	09:17	11:18 (2)	08:15	09:28 (3)	06:59	07:36 (28)	06:30	05:13	04:28
	16:15 68	12:55 (4)	17:28 31	09:59 (3)	18:35 11	07:47 (28)	20:47	21:55	22:47
15	09:16	11:18 (2)	08:13	09:27 (3)	06:56	07:34 (28)	06:27	05:11	04:28
	16:17 69	12:55 (4)	17:31 32	09:59 (3)	18:38 15	07:49 (28)	20:49	21:58	22:47
16	09:15	11:19 (2)	08:10	09:26 (3)	06:53	07:33 (28)	06:24	05:08	04:27
	16:19 68	12:55 (4)	17:33 33	09:59 (3)	18:40 16	07:49 (28)	20:51	22:00	22:48
17	09:13	11:20 (2)	08:08	09:27 (3)	06:50	07:32 (28)	06:22	05:06	04:27
	16:21 69	12:57 (4)	17:36 33	10:00 (3)	18:42 18	07:50 (28)	20:54	22:02	22:49
18	09:12	11:20 (2)	08:05	09:26 (3)	06:47	07:31 (28)	06:19	05:04	04:27
	16:23 69	12:57 (4)	17:38 34	10:00 (3)	18:45 19	07:50 (28)	20:56	22:04	22:49
19	09:10	11:20 (2)	08:02	09:26 (3)	06:44	07:31 (28)	06:16	05:02	04:27
	16:26 69	12:57 (4)	17:41 33	09:59 (3)	18:47 18	07:49 (28)	20:58	22:06	22:50
20	09:09	11:21 (2)	08:00	09:26 (3)	06:42	07:30 (28)	06:13	05:00	04:27
	16:28 69	12:58 (4)	17:43 33	09:59 (3)	18:49 19	07:49 (28)	21:01	22:08	22:50
21	09:07	11:22 (2)	07:57	09:26 (3)	06:39	07:32 (28)	06:11	04:58	04:27
	16:30 67	12:58 (4)	17:46 32	09:58 (3)	18:52 17	07:49 (28)	21:03	22:10	22:50
22	09:05	11:22 (2)	07:54	09:27 (3)	06:36	07:32 (28)	06:08	04:56	04:27
	16:32 67	12:58 (4)	17:48 32	09:59 (3)	18:54 15	07:47 (28)	21:05	22:12	22:50
23	09:04	11:22 (2)	07:52	09:27 (3)	06:33	07:33 (28)	06:05	04:54	04:27
	16:35 66	12:58 (4)	17:50 31	09:58 (3)	18:56 13	07:46 (28)	21:08	22:14	22:51
24	09:02	10:25 (1)	07:49	08:30 (26)	06:30	07:35 (28)	06:02	04:53	04:28
	16:37 70	12:58 (4)	17:53 41	09:57 (3)	18:59 8	07:43 (28)	21:10	22:16	22:51
25	09:00	10:21 (1)	07:46	08:28 (26)	06:27		06:00	04:51	04:28
	16:39 72	12:58 (4)	17:55 42	09:55 (3)	19:01		21:12	22:18	22:51
26	08:58	10:18 (1)	07:44	08:26 (26)	06:24		05:57	04:49	04:29
	16:42 74	12:59 (4)	17:58 44	09:54 (3)	19:03		21:14	22:20	22:50
27	08:56	10:14 (1)	07:41	08:25 (26)	06:21		05:54	04:47	04:29
	16:44 76	12:59 (4)	18:00 41	09:52 (3)	19:05		21:17	22:22	22:50
28	08:54	10:10 (1)	07:38	08:25 (26)	06:18		05:52	04:46	04:30
	16:46 74	12:58 (4)	18:02 38	09:50 (3)	19:08		21:19	22:24	22:50
29	08:52	10:10 (1)			07:16		05:49	04:44	04:31
	16:49 65	12:58 (4)			20:10		21:21	22:26	22:50
30	08:50	10:10 (1)			07:13		05:47	04:43	04:31
	16:51 63	12:57 (4)			20:12		21:24	22:27	22:49
31	08:48	10:11 (1)			07:10			04:41	
	16:54 61	12:57 (4)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	2024		1050		378				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,65		0,71		0,71				
Total reduction	0,26		0,28		0,29				
Total, real	524		297		108				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:40		07:52		09:00 (3)	09:00		11:00 (2)
	22:49	22:01	20:40		19:13		16:49	23	09:23 (3)	15:51	65	12:35 (4)
2	04:33	05:26	06:35		07:42		07:54		09:02 (3)	09:02		11:00 (2)
	22:48	21:59	20:37		19:10		16:46	23	09:54 (1)	15:50	65	12:35 (4)
3	04:34	05:29	06:38		07:44		07:56		09:05 (3)	09:04		11:01 (2)
	22:47	21:56	20:34		19:07		16:44	38	12:14 (4)	15:49	63	12:35 (4)
4	04:35	05:31	06:40		07:46		09:05 (26)	07:59		09:08 (3)	09:05		11:01 (2)
	22:47	21:54	20:31		19:05	11	09:16 (26)	16:42	44	12:19 (4)	15:48	63	12:35 (4)
5	04:36	05:33	06:42		07:48		09:02 (26)	08:01		09:44 (1)	09:07		11:02 (2)
	22:46	21:52	20:28		19:02	16	09:18 (26)	16:39	42	12:20 (4)	15:47	61	12:35 (4)
6	04:38	05:35	06:44		07:51		09:00 (26)	08:04		09:43 (1)	09:09		11:03 (2)
	22:45	21:49	20:26		18:59	19	09:19 (26)	16:37	48	12:23 (4)	15:46	59	12:35 (4)
7	04:39	05:37	06:47		07:53		09:00 (26)	08:06		09:43 (1)	09:10		11:04 (2)
	22:44	21:47	20:23		18:56	20	09:20 (26)	16:35	51	12:24 (4)	15:46	58	12:35 (4)
8	04:40	05:40	06:49		07:55		08:58 (26)	08:08		09:42 (1)	09:12		11:05 (2)
	22:43	21:44	20:20		18:53	23	09:21 (26)	16:32	55	12:25 (4)	15:45	58	12:36 (4)
9	04:41	05:42	06:51		07:58		08:57 (26)	08:11		09:42 (1)	09:14		11:06 (2)
	22:42	21:42	20:17		18:50	23	09:20 (26)	16:30	59	12:27 (4)	15:44	56	12:36 (4)
10	04:43	05:44	06:53		08:00		08:57 (26)	08:13		09:42 (1)	09:15		11:06 (2)
	22:41	21:39	20:14		18:48	24	09:21 (26)	16:28	60	12:28 (4)	15:44	55	12:36 (4)
11	04:44	05:46	06:55		08:02		08:57 (26)	08:16		09:41 (1)	09:16		11:07 (2)
	22:39	21:37	20:11		18:45	23	09:20 (26)	16:26	62	12:28 (4)	15:43	54	12:36 (4)
12	04:46	05:49	06:58		08:04		08:57 (26)	08:18		09:42 (1)	09:18		11:07 (2)
	22:38	21:34	20:08		18:42	24	09:21 (26)	16:24	63	12:29 (4)	15:43	52	12:36 (4)
13	04:48	05:51	07:00		08:07		08:57 (26)	08:20		09:42 (1)	09:19		11:10 (2)
	22:37	21:32	20:05		18:39	35	10:20 (3)	16:21	65	12:30 (4)	15:43	50	12:37 (4)
14	04:49	05:53	07:02		08:09		08:57 (26)	08:23		09:43 (1)	09:20		11:11 (2)
	22:35	21:29	20:02		18:36	39	10:23 (3)	16:19	74	12:31 (4)	15:42	49	12:37 (4)
15	04:51	05:55	07:04		08:11		08:58 (26)	08:25		09:46 (1)	09:21		11:13 (2)
	22:34	21:26	20:00		18:34	42	10:25 (3)	16:17	76	12:31 (4)	15:42	46	12:37 (4)
16	04:53	05:58	07:06		08:14		08:58 (26)	08:27		09:51 (1)	09:22		11:14 (2)
	22:32	21:24	19:57		18:31	43	10:26 (3)	16:15	74	12:32 (4)	15:42	45	12:37 (4)
17	04:54	06:00	07:09		08:16		09:00 (26)	08:30		09:55 (1)	09:23		11:15 (2)
	22:31	21:21	19:54		18:28	43	10:28 (3)	16:13	72	12:32 (4)	15:42	43	12:37 (4)
18	04:56	06:02	07:11		08:18		09:02 (26)	08:32		09:59 (1)	09:24		11:17 (2)
	22:29	21:19	19:51		18:25	39	10:28 (3)	16:11	70	12:32 (4)	15:42	40	12:37 (4)
19	04:58	06:04	07:13	08:22 (28)	08:21		09:58 (3)	08:34		10:57 (2)	09:25		11:18 (2)
	22:27	21:16	19:48	7 08:29 (28)	18:23	31	10:29 (3)	16:10	66	12:33 (4)	15:43	41	12:38 (4)
20	05:00	06:06	07:15	08:19 (28)	08:23		09:57 (3)	08:37		10:57 (2)	09:26		11:19 (2)
	22:25	21:13	19:45	12 08:31 (28)	18:20	32	10:29 (3)	16:08	67	12:33 (4)	15:43	40	12:39 (4)
21	05:02	06:09	07:17	08:18 (28)	08:25		09:57 (3)	08:39		10:57 (2)	09:26		11:19 (2)
	22:24	21:10	19:42	15 08:33 (28)	18:17	33	10:30 (3)	16:06	67	12:33 (4)	15:43	39	12:38 (4)
22	05:04	06:11	07:20	08:16 (28)	08:28		09:56 (3)	08:41		10:57 (2)	09:27		11:20 (2)
	22:22	21:08	19:39	17 08:33 (28)	18:15	33	10:29 (3)	16:04	68	12:34 (4)	15:44	39	12:39 (4)
23	05:06	06:13	07:22	08:15 (28)	08:30		09:56 (3)	08:43		10:57 (2)	09:27		11:20 (2)
	22:20	21:05	19:36	18 08:33 (28)	18:12	34	10:30 (3)	16:03	68	12:33 (4)	15:44	40	12:40 (4)
24	05:08	06:15	07:24	08:14 (28)	08:32		09:56 (3)	08:45		10:57 (2)	09:28		11:21 (2)
	22:18	21:02	19:33	19 08:33 (28)	18:09	33	10:29 (3)	16:01	69	12:34 (4)	15:45	41	12:41 (4)
25	05:10	06:18	07:26	08:14 (28)	07:35		08:56 (3)	08:48		10:57 (2)	09:28		11:21 (2)
	22:16	20:59	19:31	18 08:32 (28)	17:07	33	09:29 (3)	15:59	69	12:34 (4)	15:45	41	12:41 (4)
26	05:12	06:20	07:28	08:14 (28)	07:37		08:57 (3)	08:50		10:58 (2)	09:28		11:21 (2)
	22:14	20:57	19:28	19 08:33 (28)	17:04	32	09:29 (3)	15:58	68	12:34 (4)	15:46	42	12:42 (4)
27	05:14	06:22	07:31	08:14 (28)	07:40		08:56 (3)	08:52		10:57 (2)	09:28		11:20 (2)
	22:12	20:54	19:25	18 08:32 (28)	17:02	32	09:28 (3)	15:57	69	12:34 (4)	15:47	43	12:42 (4)
28	05:16	06:24	07:33	08:15 (28)	07:42		08:57 (3)	08:54		10:58 (2)	09:29		11:20 (2)
	22:10	20:51	19:22	15 08:30 (28)	16:59	31	09:28 (3)	15:55	68	12:35 (4)	15:48	44	12:43 (4)
29	05:18	06:27	07:35	08:15 (28)	07:44		08:58 (3)	08:56		10:59 (2)	09:29		11:18 (2)
	22:08	20:48	19:19	13 08:28 (28)	16:56	29	09:27 (3)	15:54	67	12:35 (4)	15:49	47	12:43 (4)
30	05:20	06:29	07:37	08:18 (28)	07:47		08:58 (3)	08:58		10:59 (2)	09:28		11:18 (2)
	22:05	20:45	19:16	8 08:26 (28)	16:54	28	09:26 (3)	15:53	65	12:34 (4)	15:50	49	12:44 (4)
31	05:22	06:31			07:49		09:00 (3)				09:28		11:16 (2)
	22:03	20:43			16:51	25	09:25 (3)				15:51	52	12:44 (4)
Potential sun hours	545	478	386		319		236		200			
Total, worst case				179		830		1810		1540		
Sun reduction				0,50		0,50		0,50		0,50		
Oper. time red.				0,80		0,80		0,80		0,80		
Wind dir. red.				0,70		0,73		0,66		0,64		
Total reduction				0,28		0,29		0,26		0,26		
Total, real				50		242		475		394		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:37	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02		06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33		20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		06:30	05:13	04:28	04:49	05:53	07:02		08:05 (4)	08:09	08:23	09:20
	16:15	17:28	18:36		20:47	21:56	22:47	22:35	21:29	20:03	10	08:15 (4)	18:37	16:20	15:43
15	09:16	08:13	06:56		06:27	05:11	04:28	04:51	05:55	07:04		08:02 (4)	08:11	08:25	09:21
	16:17	17:31	18:38		20:49	21:58	22:47	22:34	21:27	20:00	14	08:16 (4)	18:34	16:18	15:42
16	09:15	08:10	06:53		06:24	05:09	04:28	04:53	05:58	07:06		08:00 (4)	08:14	08:27	09:22
	16:19	17:33	18:40		20:51	22:00	22:48	22:32	21:24	19:57	17	08:17 (4)	18:31	16:16	15:42
17	09:13	08:08	06:50		06:22	05:06	04:27	04:54	06:00	07:09		07:59 (4)	08:16	08:30	09:23
	16:21	17:36	18:43		20:54	22:02	22:49	22:31	21:21	19:54	18	08:17 (4)	18:28	16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11		07:58 (4)	08:18	08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	19	08:17 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:25 (4)	06:16	05:02	04:27	04:58	06:04	07:13		07:57 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	3 07:28 (4)	20:58	22:06	22:50	22:27	21:16	19:48	20	08:17 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:22 (4)	06:13	05:00	04:27	05:00	06:07	07:15		07:57 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	8 07:30 (4)	21:01	22:08	22:50	22:26	21:13	19:45	19	08:16 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:19 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:00 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	11 07:30 (4)	21:03	22:10	22:50	22:24	21:11	19:42	16	08:16 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:15 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:02 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	16 07:31 (4)	21:05	22:12	22:51	22:22	21:08	19:39	13	08:15 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:11 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:05 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	20 07:31 (4)	21:08	22:14	22:51	22:20	21:05	19:36	9	08:14 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:11 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:08 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	19 07:30 (4)	21:10	22:16	22:51	22:18	21:02	19:34	4	08:12 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:10 (4)	06:00	04:51	04:28	05:10	06:18	07:26			07:35	08:48	09:28
	16:40	17:55	19:01	20 07:30 (4)	21:12	22:18	22:51	22:16	21:00	19:31			17:07	16:00	15:46
26	08:58	07:44	06:24	07:10 (4)	05:57	04:49	04:29	05:12	06:20	07:29			07:37	08:50	09:28
	16:42	17:58	19:03	19 07:29 (4)	21:15	22:20	22:51	22:14	20:57	19:28			17:04	15:58	15:46
27	08:56	07:41	06:21	07:11 (4)	05:55	04:48	04:29	05:14	06:22	07:31			07:40	08:52	09:29
	16:44	18:00	19:06	17 07:28 (4)	21:17	22:22	22:50	22:12	20:54	19:25			17:02	15:57	15:47
28	08:54	07:38	06:19	07:12 (4)	05:52	04:46	04:30	05:16	06:25	07:33			07:42	08:54	09:29
	16:47	18:03	19:08	14 07:26 (4)	21:19	22:24	22:50	22:10	20:51	19:22			16:59	15:55	15:48
29	08:52		07:16	08:13 (4)	05:49	04:44	04:31	05:18	06:27	07:35			07:44	08:56	09:29
	16:49		20:10	11 08:24 (4)	21:22	22:26	22:50	22:08	20:48	19:19			16:57	15:54	15:49
30	08:50		07:13	08:18 (4)	05:47	04:43	04:32	05:20	06:29	07:37			07:47	08:58	09:29
	16:51		20:12	2 08:20 (4)	21:24	22:27	22:49	22:05	20:46	19:16			16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:52
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				160							159			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,69							0,69			
Total reduction				0,27							0,27			
Total, real				44							44			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October	November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40	07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42	07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10	16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44	07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08	16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46	07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05	16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49	08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02	16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59	16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56	16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53	16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58	08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51	16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48	16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05	08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	16:24	15:43
13	09:19	08:18	07:02	07:35 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:20	09:19
	16:13	17:26	18:33	8 07:43 (4)	20:45	21:53	22:46	22:37	21:32	20:05		18:39	16:22	15:43
14	09:17	08:15	06:59	07:32 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13 07:45 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:37	16:20	15:43
15	09:16	08:13	06:56	07:30 (4)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16 07:46 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	16:17	15:42
16	09:15	08:10	06:53	07:28 (4)	06:24	05:09	04:28	04:53	05:58	07:06		08:14	08:27	09:22
	16:19	17:33	18:40	19 07:47 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	16:15	15:42
17	09:13	08:08	06:50	07:27 (4)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20 07:47 (4)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	16:14	15:42
18	09:12	08:05	06:47	07:26 (4)	06:19	05:04	04:27	04:56	06:02	07:11		08:18 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	21 07:47 (4)	20:56	22:04	22:49	22:29	21:19	19:51	9	08:27 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45	07:26 (4)	06:16	05:02	04:27	04:58	06:04	07:13		08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21 07:47 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14	08:29 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:27 (4)	06:13	05:00	04:27	05:00	06:07	07:15		08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	21 07:48 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17	08:30 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:26 (4)	06:11	04:58	04:27	05:02	06:09	07:17		08:13 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	21 07:47 (4)	21:03	22:10	22:50	22:24	21:11	19:42	18	08:31 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36	07:27 (4)	06:08	04:56	04:27	05:04	06:11	07:20		08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19 07:46 (4)	21:05	22:12	22:51	22:22	21:08	19:39	20	08:31 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:27 (4)	06:05	04:55	04:28	05:06	06:13	07:22		08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	17 07:44 (4)	21:08	22:14	22:51	22:20	21:05	19:36	21	08:31 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30	07:28 (4)	06:03	04:53	04:28	05:08	06:16	07:24		08:10 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	15 07:43 (4)	21:10	22:16	22:51	22:18	21:02	19:34	21	08:31 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27	07:30 (4)	06:00	04:51	04:28	05:10	06:18	07:26		08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	10 07:40 (4)	21:12	22:18	22:51	22:16	21:00	19:31	21	08:30 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28		08:10 (4)	07:37	08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28	20	08:30 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31		08:10 (4)	07:40	08:52	09:29
	16:44	18:00	19:06		21:17	22:22	22:50	22:12	20:54	19:25	19	08:29 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19		05:52	04:46	04:30	05:16	06:24	07:33		08:10 (4)	07:42	08:54	09:29
	16:47	18:03	19:08		21:19	22:24	22:50	22:10	20:51	19:22	18	08:28 (4)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35		08:11 (4)	07:44	08:56	09:29
	16:49		20:10		21:22	22:26	22:50	22:08	20:48	19:19	15	08:26 (4)	16:57	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37		08:13 (4)	07:47	08:58	09:29
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16	11	08:24 (4)	16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31				07:49		09:28
	16:54		20:15			22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319	236	200
Total, worst case				221							224			
Sun reduction				0,50							0,50			
Oper. time red.				0,80							0,80			
Wind dir. red.				0,70							0,70			
Total reduction				0,28							0,28			
Total, real				61							62			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March			April	May	June	July	August	September			October			November	December
1	09:28	08:46	07:36			07:07	05:44	04:40	04:32	05:24	06:33			07:40		08:36 (4)	07:52	09:00
	15:53	16:56	18:05			20:17	21:26	22:31	22:49	22:01	20:40			19:13	24	09:00 (4)	16:49	15:51
2	09:28	08:44	07:33			07:04	05:42	04:39	04:33	05:27	06:36			07:42		08:35 (4)	07:54	09:02
	15:54	16:59	18:07			20:19	21:28	22:32	22:48	21:59	20:37			19:10	25	09:00 (4)	16:47	15:50
3	09:27	08:41	07:30		08:05 (4)	07:01	05:39	04:37	04:34	05:29	06:38			07:44		08:34 (4)	07:56	09:04
	15:56	17:01	18:10	12	08:17 (4)	20:22	21:31	22:34	22:47	21:56	20:34			19:08	25	08:59 (4)	16:44	15:49
4	09:27	08:39	07:27		08:02 (4)	06:58	05:37	04:36	04:35	05:31	06:40			07:46		08:34 (4)	07:59	09:05
	15:57	17:04	18:12	17	08:19 (4)	20:24	21:33	22:35	22:47	21:54	20:31			19:05	26	09:00 (4)	16:42	15:48
5	09:26	08:37	07:24		08:01 (4)	06:56	05:34	04:35	04:36	05:33	06:42			07:49		08:34 (4)	08:01	09:07
	15:59	17:06	18:14	19	08:20 (4)	20:26	21:35	22:37	22:46	21:52	20:28			19:02	25	08:59 (4)	16:39	15:47
6	09:25	08:35	07:22		07:59 (4)	06:53	05:32	04:34	04:38	05:35	06:44			07:51		08:34 (4)	08:04	09:09
	16:00	17:09	18:17	22	08:21 (4)	20:28	21:38	22:38	22:45	21:49	20:26			18:59	24	08:58 (4)	16:37	15:47
7	09:25	08:32	07:19		07:58 (4)	06:50	05:29	04:33	04:39	05:38	06:47			07:53		08:35 (4)	08:06	09:10
	16:02	17:11	18:19	23	08:21 (4)	20:31	21:40	22:39	22:44	21:47	20:23			18:56	22	08:57 (4)	16:35	15:46
8	09:24	08:30	07:16		07:58 (4)	06:47	05:27	04:32	04:40	05:40	06:49			07:55		08:35 (4)	08:08	09:12
	16:04	17:14	18:22	24	08:22 (4)	20:33	21:42	22:41	22:43	21:44	20:20			18:53	21	08:56 (4)	16:32	15:45
9	09:23	08:28	07:13		07:57 (4)	06:44	05:24	04:31	04:42	05:42	06:51			07:58		08:36 (4)	08:11	09:14
	16:06	17:16	18:24	25	08:22 (4)	20:35	21:44	22:42	22:42	21:42	20:17			18:50	18	08:54 (4)	16:30	15:44
10	09:22	08:25	07:10		07:57 (4)	06:41	05:22	04:31	04:43	05:44	06:53			08:00		08:38 (4)	08:13	09:15
	16:07	17:19	18:26	25	08:22 (4)	20:38	21:47	22:43	22:41	21:39	20:14			18:48	15	08:53 (4)	16:28	15:44
11	09:21	08:23	07:07		07:57 (4)	06:38	05:20	04:30	04:45	05:46	06:55			08:02		08:41 (4)	08:16	09:16
	16:09	17:21	18:29	25	08:22 (4)	20:40	21:49	22:44	22:39	21:37	20:11			18:45	8	08:49 (4)	16:26	15:43
12	09:20	08:20	07:05		07:57 (4)	06:36	05:17	04:29	04:46	05:49	06:58			08:04			08:18	09:18
	16:11	17:24	18:31	24	08:21 (4)	20:42	21:51	22:45	22:38	21:34	20:08			18:42			16:24	15:43
13	09:19	08:18	07:02		07:57 (4)	06:33	05:15	04:29	04:48	05:51	07:00			08:07			08:20	09:19
	16:13	17:26	18:33	23	08:20 (4)	20:45	21:53	22:46	22:37	21:32	20:05			18:39			16:22	15:43
14	09:17	08:15	06:59		07:57 (4)	06:30	05:13	04:28	04:49	05:53	07:02			08:09			08:23	09:20
	16:15	17:28	18:36	22	08:19 (4)	20:47	21:56	22:47	22:35	21:29	20:03			18:36			16:19	15:42
15	09:16	08:13	06:56		07:58 (4)	06:27	05:11	04:28	04:51	05:55	07:04			08:11			08:25	09:21
	16:17	17:31	18:38	20	08:18 (4)	20:49	21:58	22:47	22:34	21:27	20:00			18:34			16:17	15:42
16	09:15	08:10	06:53		07:59 (4)	06:24	05:09	04:27	04:53	05:58	07:06			08:14			08:27	09:22
	16:19	17:33	18:40	17	08:16 (4)	20:51	22:00	22:48	22:32	21:24	19:57			18:31			16:15	15:42
17	09:13	08:08	06:50		08:00 (4)	06:22	05:06	04:27	04:54	06:00	07:09			08:16			08:30	09:23
	16:21	17:36	18:43	14	08:14 (4)	20:54	22:02	22:49	22:31	21:21	19:54			18:28			16:14	15:42
18	09:12	08:05	06:47		08:04 (4)	06:19	05:04	04:27	04:56	06:02	07:11			08:18			08:32	09:24
	16:24	17:38	18:45	5	08:09 (4)	20:56	22:04	22:49	22:29	21:19	19:51			18:25			16:12	15:42
19	09:10	08:02	06:45			06:16	05:02	04:27	04:58	06:04	07:13			08:21			08:34	09:25
	16:26	17:41	18:47			20:58	22:06	22:50	22:27	21:16	19:48			18:23			16:10	15:43
20	09:09	08:00	06:42			06:13	05:00	04:27	05:00	06:07	07:15			08:23			08:37	09:26
	16:28	17:43	18:49			21:01	22:08	22:50	22:26	21:13	19:45			18:20			16:08	15:43
21	09:07	07:57	06:39			06:11	04:58	04:27	05:02	06:09	07:17			08:25			08:39	09:26
	16:30	17:46	18:52			21:03	22:10	22:50	22:24	21:11	19:42			18:17			16:06	15:43
22	09:05	07:55	06:36			06:08	04:56	04:27	05:04	06:11	07:20			08:28			08:41	09:27
	16:32	17:48	18:54			21:05	22:12	22:51	22:22	21:08	19:39			18:15			16:04	15:44
23	09:04	07:52	06:33			06:05	04:55	04:28	05:06	06:13	07:22			08:30			08:43	09:27
	16:35	17:50	18:56			21:08	22:14	22:51	22:20	21:05	19:36			18:12			16:03	15:44
24	09:02	07:49	06:30			06:03	04:53	04:28	05:08	06:16	07:24			08:32			08:45	09:28
	16:37	17:53	18:59			21:10	22:16	22:51	22:18	21:02	19:34			18:09			16:01	15:45
25	09:00	07:47	06:27			06:00	04:51	04:28	05:10	06:18	07:26			07:35			08:48	09:28
	16:39	17:55	19:01			21:12	22:18	22:51	22:16	21:00	19:31			17:07			16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20	07:28		08:44 (4)	07:37			08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57	19:28	11	08:55 (4)	17:04			15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22	07:31		08:41 (4)	07:40			08:52	09:29
	16:44	18:00	19:05			21:17	22:22	22:50	22:12	20:54	19:25	16	08:57 (4)	17:02			15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24	07:33		08:39 (4)	07:42			08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51	19:22	19	08:58 (4)	16:59			15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27	07:35		08:37 (4)	07:44			08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48	19:19	22	08:59 (4)	16:57			15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29	07:37		08:37 (4)	07:47			08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46	19:16	23	09:00 (4)	16:54			15:53	15:50
31	08:48		07:10				04:41		05:22	06:31				07:49				09:28
	16:54		20:15				22:29		22:03	20:43				16:52				15:51
Potential sun hours	221	260	365			432	521	547	545	478	386			319			236	200
Total, worst case				317								91			233			
Sun reduction				0,50								0,50			0,50			
Oper. time red.				0,80								0,80			0,80			
Wind dir. red.				0,71								0,71			0,71			
Total reduction				0,28								0,28			0,28			
Total, real				90								26			66			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:36		09:02 (2)	07:07	05:44	04:40	04:32	05:24	06:33		07:40		08:45 (4)	07:52	09:00
	15:53	16:56		18:05	4	09:06 (2)	20:17	21:26	22:31	22:49	22:01	20:40		19:13	28	09:13 (4)	16:49	15:51
2	09:28	08:44		07:33			07:04	05:42	04:39	04:33	05:27	06:36		07:42		08:44 (4)	07:54	09:02
	15:54	16:59		18:07			20:19	21:28	22:32	22:48	21:59	20:37		19:10	29	09:13 (4)	16:47	15:50
3	09:27	08:41		07:30		08:17 (4)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		08:43 (4)	07:56	09:04
	15:56	17:01		18:10	10	08:27 (4)	20:22	21:31	22:34	22:47	21:56	20:34		19:08	29	09:12 (4)	16:44	15:49
4	09:27	08:39		07:27		08:13 (4)	06:58	05:37	04:36	04:35	05:31	06:40		07:46		08:44 (4)	07:59	09:05
	15:57	17:04		18:12	17	08:30 (4)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	28	09:12 (4)	16:42	15:48
5	09:26	08:37		07:24		08:11 (4)	06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:44 (4)	08:01	09:07
	15:59	17:06		18:14	20	08:31 (4)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	27	09:11 (4)	16:39	15:47
6	09:25	08:35		07:22		08:09 (4)	06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:44 (4)	08:04	09:09
	16:00	17:09		18:17	24	08:33 (4)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	26	09:10 (4)	16:37	15:47
7	09:25	08:32		07:19		08:08 (4)	06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:45 (4)	08:06	09:10
	16:02	17:11		18:19	25	08:33 (4)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	24	09:09 (4)	16:35	15:46
8	09:24	08:30		07:16		08:07 (4)	06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:46 (4)	08:08	09:12
	16:04	17:14		18:22	27	08:34 (4)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	22	09:08 (4)	16:32	15:45
9	09:23	08:28		07:13		08:07 (4)	06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:47 (4)	08:11	09:14
	16:06	17:16		18:24	28	08:35 (4)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	18	09:05 (4)	16:30	15:44
10	09:22	08:25		07:10		08:06 (4)	06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:49 (4)	08:13	09:15
	16:07	17:19		18:26	29	08:35 (4)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	15	09:04 (4)	16:28	15:44
11	09:21	08:23		07:07		08:06 (4)	06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:53 (4)	08:16	09:16
	16:09	17:21		18:29	29	08:35 (4)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	6	08:59 (4)	16:26	15:43
12	09:20	08:20		07:05		08:05 (4)	06:36	05:17	04:29	04:46	05:49	06:58		08:04			08:18	09:18
	16:11	17:23		18:31	29	08:34 (4)	20:42	21:51	22:45	22:38	21:34	20:08		18:42			16:24	15:43
13	09:19	08:18		07:02		08:05 (4)	06:33	05:15	04:29	04:48	05:51	07:00		08:07		09:33 (2)	08:20	09:19
	16:13	17:26		18:33	29	08:34 (4)	20:44	21:53	22:46	22:37	21:32	20:05		18:39	7	09:40 (2)	16:22	15:43
14	09:17	08:15		06:59		08:05 (4)	06:30	05:13	04:28	04:49	05:53	07:02		08:09		09:30 (2)	08:23	09:20
	16:15	17:28		18:36	28	08:33 (4)	20:47	21:56	22:47	22:35	21:29	20:03		18:36	12	09:42 (2)	16:19	15:42
15	09:16	08:13		06:56		07:33 (3)	06:27	05:11	04:28	04:51	05:55	07:04		08:11		09:29 (2)	08:25	09:21
	16:17	17:31		18:38	32	08:32 (4)	20:49	21:58	22:47	22:34	21:27	20:00		18:34	15	09:44 (2)	16:17	15:42
16	09:15	08:10		06:53		07:30 (3)	06:24	05:09	04:27	04:53	05:58	07:06		08:14		09:27 (2)	08:27	09:22
	16:19	17:33		18:40	36	08:31 (4)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	17	09:44 (2)	16:15	15:42
17	09:13	08:08	09:01 (2)	06:50		07:28 (3)	06:22	05:06	04:27	04:54	06:00	07:09	08:18 (3)	08:16		09:27 (2)	08:30	09:23
	16:21	17:36	9 09:10 (2)	18:43	38	08:30 (4)	20:54	22:02	22:49	22:31	21:21	19:54	5 08:23 (3)	18:28	18	09:45 (2)	16:14	15:42
18	09:12	08:05	08:58 (2)	06:47		07:27 (3)	06:19	05:04	04:27	04:56	06:02	07:11	08:14 (3)	08:18		09:26 (2)	08:32	09:24
	16:24	17:38	14 09:12 (2)	18:45	36	08:28 (4)	20:56	22:04	22:49	22:29	21:19	19:51	11 08:25 (3)	18:25	19	09:45 (2)	16:12	15:42
19	09:10	08:02	08:57 (2)	06:45		07:25 (3)	06:16	05:02	04:27	04:58	06:04	07:13	08:12 (3)	08:21		09:26 (2)	08:34	09:25
	16:26	17:41	16 09:13 (2)	18:47	34	08:25 (4)	20:58	22:06	22:50	22:27	21:16	19:48	14 08:26 (3)	18:23	19	09:45 (2)	16:10	15:43
20	09:09	08:00	08:56 (2)	06:42		07:25 (3)	06:13	05:00	04:27	05:00	06:07	07:15	08:10 (3)	08:23		09:25 (2)	08:37	09:26
	16:28	17:43	17 09:13 (2)	18:49	30	08:23 (4)	21:01	22:08	22:50	22:26	21:13	19:45	17 08:27 (3)	18:20	19	09:44 (2)	16:08	15:43
21	09:07	07:57	08:55 (2)	06:39		07:25 (3)	06:11	04:58	04:27	05:02	06:09	07:17	08:10 (3)	08:25		09:26 (2)	08:39	09:26
	16:30	17:46	18 09:13 (2)	18:52	18	07:43 (3)	21:03	22:10	22:50	22:24	21:10	19:42	18 08:28 (3)	18:17	18	09:44 (2)	16:06	15:43
22	09:05	07:55	08:55 (2)	06:36		07:24 (3)	06:08	04:56	04:27	05:04	06:11	07:20	08:09 (3)	08:28		09:26 (2)	08:41	09:27
	16:32	17:48	19 09:14 (2)	18:54	18	07:42 (3)	21:05	22:12	22:51	22:22	21:08	19:39	19 08:28 (3)	18:15	17	09:43 (2)	16:04	15:44
23	09:04	07:52	08:55 (2)	06:33		07:25 (3)	06:05	04:55	04:28	05:06	06:13	07:22	08:09 (3)	08:30		09:27 (2)	08:43	09:27
	16:35	17:50	19 09:14 (2)	18:56	16	07:41 (3)	21:08	22:14	22:51	22:20	21:05	19:36	27 09:06 (4)	18:12	15	09:42 (2)	16:03	15:44
24	09:02	07:49	08:55 (2)	06:30		07:25 (3)	06:02	04:53	04:28	05:08	06:16	07:24	08:08 (3)	08:32		09:29 (2)	08:45	09:28
	16:37	17:53	19 09:14 (2)	18:59	15	07:40 (3)	21:10	22:16	22:51	22:18	21:02	19:33	35 09:09 (4)	18:09	12	09:41 (2)	16:01	15:45
25	09:00	07:46	08:55 (2)	06:27		07:26 (3)	06:00	04:51	04:28	05:10	06:18	07:26	08:09 (3)	07:35		08:31 (2)	08:48	09:28
	16:39	17:55	18 09:13 (2)	19:01	12	07:38 (3)	21:12	22:18	22:51	22:16	21:00	19:31	35 09:10 (4)	17:07	7	08:38 (2)	16:00	15:46
26	08:58	07:44	08:55 (2)	06:24		07:28 (3)	05:57	04:49	04:29	05:12	06:20	07:28	08:11 (3)	07:37			08:50	09:28
	16:42	17:58	17 09:12 (2)	19:03	7	07:35 (3)	21:15	22:20	22:51	22:14	20:57	19:28	36 09:12 (4)	17:04			15:58	15:46
27	08:56	07:41	08:56 (2)	06:21			05:55	04:48	04:29	05:14	06:22	07:31	08:11 (3)	07:40			08:52	09:29
	16:44	18:00	15 09:11 (2)	19:05			21:17	22:22	22:50	22:12	20:54	19:25	37 09:13 (4)	17:02			15:57	15:47
28	08:54	07:38	08:58 (2)	06:19			05:52	04:46	04:30	05:16	06:24	07:33	08:13 (3)	07:42			08:54	09:29
	16:47	18:03	11 09:09 (2)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	34 09:13 (4)	16:59			15:55	15:48
29	08:52			07:16			05:49	04:44	04:31	05:18	06:27	07:35	08:45 (4)	07:44			08:56	09:29
	16:49			20:10			21:21	22:26	22:50	22:08	20:48	19:19	28 09:13 (4)	16:57			15:54	15:49
30	08:50			07:13			05:47	04:43	04:31	05:20	06:29	07:37	08:45 (4)	07:47			08:58	09:28
	16:51			20:12			21:24	22:27	22:49	22:05	20:46	19:16	29 09:14 (4)	16:54			15:53	15:50
31	08:48			07:10				04:41		05:22	06:31			07:49				09:28
	16:54			20:15				22:29		22:03	20:43			16:52				15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			192		591							345		447				
Sun reduction			0,50		0,50							0,50		0,50				
Oper. time red.			0,80		0,80							0,80		0,80				
Wind dir. red.			0,74		0,71							0,71		0,73				
Total reduction			0,29		0,28							0,28		0,29				
Total, real			57		168							97		130				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:18 (2)	08:46	10:00 (3)	07:35	07:07	05:44	04:40
	15:53	49	12:27 (4)	16:56	25	10:25 (3)	18:05	20:17	21:26	22:31
2	09:28		11:18 (2)	08:44	09:59 (3)	07:33	07:04	05:41	04:39
	15:54	50	12:28 (4)	16:59	25	10:24 (3)	18:07	20:19	21:28	22:32
3	09:27		11:18 (2)	08:41	10:00 (3)	07:30	07:01	05:39	04:37
	15:56	51	12:28 (4)	17:01	25	10:25 (3)	18:10	20:21	21:31	22:34
4	09:27		11:18 (2)	08:39	09:59 (3)	07:27	06:58	05:36	04:36
	15:57	51	12:28 (4)	17:04	26	10:25 (3)	18:12	20:24	21:33	22:35
5	09:26		11:19 (2)	08:37	10:00 (3)	07:24	06:55	05:34	04:35
	15:59	51	12:29 (4)	17:06	26	10:26 (3)	18:14	20:26	21:35	22:37
6	09:25		11:19 (2)	08:35	10:00 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:29 (4)	17:09	25	10:25 (3)	18:17	20:28	21:38	22:38
7	09:25		11:20 (2)	08:32	10:00 (3)	07:19	06:50	05:29	04:33
	16:02	51	12:30 (4)	17:11	25	10:25 (3)	18:19	20:31	21:40	22:39
8	09:24		11:20 (2)	08:30	10:01 (3)	07:16	06:47	05:27	04:32
	16:04	51	12:30 (4)	17:13	24	10:25 (3)	18:21	20:33	21:42	22:41
9	09:23		11:21 (2)	08:28	10:01 (3)	07:13	06:44	05:24	04:31
	16:05	51	12:31 (4)	17:16	23	10:24 (3)	18:24	20:35	21:44	22:42
10	09:22		11:21 (2)	08:25	10:03 (3)	07:10	06:41	05:22	04:30
	16:07	51	12:31 (4)	17:18	21	10:24 (3)	18:26	20:38	21:47	22:43
11	09:21		11:22 (2)	08:23	09:07 (26)	07:07	06:38	05:20	04:30
	16:09	50	12:31 (4)	17:21	25	10:22 (3)	18:28	20:40	21:49	22:44
12	09:20		11:22 (2)	08:20	09:04 (26)	07:05	06:36	05:17	04:29
	16:11	49	12:31 (4)	17:23	27	10:20 (3)	18:31	20:42	21:51	22:45
13	09:19		11:23 (2)	08:18	09:03 (26)	07:02	06:33	05:15	04:28
	16:13	49	12:32 (4)	17:26	26	10:18 (3)	18:33	20:44	21:53	22:46
14	09:17		11:24 (2)	08:15	09:02 (26)	06:59	06:30	05:13	04:28
	16:15	47	12:32 (4)	17:28	17	09:19 (26)	18:35	20:47	21:56	22:47
15	09:16		11:24 (2)	08:13	09:01 (26)	06:56	06:27	05:11	04:28
	16:17	47	12:32 (4)	17:31	19	09:20 (26)	18:38	20:49	21:58	22:47
16	09:15		11:25 (2)	08:10	09:00 (26)	06:53	06:24	05:08	04:27
	16:19	44	12:31 (4)	17:33	20	09:20 (26)	18:40	20:51	22:00	22:48
17	09:13		11:27 (2)	08:08	09:01 (26)	06:50	06:22	05:06	04:27
	16:21	42	12:32 (4)	17:36	20	09:21 (26)	18:42	20:54	22:02	22:49
18	09:12		11:28 (2)	08:05	09:00 (26)	06:47	06:19	05:04	04:27
	16:23	39	12:32 (4)	17:38	21	09:21 (26)	18:45	20:56	22:04	22:49
19	09:10		11:29 (2)	08:02	09:00 (26)	06:44	06:16	05:02	04:27
	16:26	35	12:31 (4)	17:41	20	09:20 (26)	18:47	20:58	22:06	22:50
20	09:09		11:31 (2)	08:00	09:00 (26)	06:42	06:13	05:00	04:27
	16:28	30	12:31 (4)	17:43	19	09:19 (26)	18:49	21:01	22:08	22:50
21	09:07		12:09 (4)	07:57	09:01 (26)	06:39	06:11	04:58	04:27
	16:30	21	12:30 (4)	17:46	17	09:18 (26)	18:52	21:03	22:10	22:50
22	09:05		12:11 (4)	07:55	09:02 (26)	06:36	06:08	04:56	04:27
	16:32	19	12:30 (4)	17:48	16	09:18 (26)	18:54	21:05	22:12	22:51
23	09:04		12:12 (4)	07:52	09:04 (26)	06:33	06:05	04:54	04:27
	16:35	17	12:29 (4)	17:50	12	09:16 (26)	18:56	21:08	22:14	22:51
24	09:02		10:08 (3)	07:49	09:06 (26)	06:30	06:02	04:53	04:28
	16:37	16	12:26 (4)	17:53	7	09:13 (26)	18:59	21:10	22:16	22:51
25	09:00		10:05 (3)	07:46		06:27	06:00	04:51	04:28
	16:39	14	12:22 (4)	17:55		19:01	21:12	22:18	22:51
26	08:58		10:03 (3)	07:44		06:24	05:57	04:49	04:29
	16:42	15	10:18 (3)	17:58		19:03	21:15	22:20	22:51
27	08:56		10:03 (3)	07:41		06:21	05:54	04:47	04:29
	16:44	17	10:20 (3)	18:00		19:05	21:17	22:22	22:50
28	08:54		10:01 (3)	07:38		06:18	05:52	04:46	04:30
	16:46	20	10:21 (3)	18:02		19:08	21:19	22:24	22:50
29	08:52		10:01 (3)			07:16	05:49	04:44	04:31
	16:49	21	10:22 (3)			20:10	21:21	22:26	22:50
30	08:50		10:01 (3)			07:13	05:47	04:43	04:31
	16:51	22	10:23 (3)			20:12	21:24	22:27	22:49
31	08:48		10:00 (3)			07:10		04:41	
	16:54	24	10:24 (3)			20:15		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1145			511				
Sun reduction		0,50			0,50				
Oper. time red.		0,80			0,80				
Wind dir. red.		0,66			0,73				
Total reduction		0,26			0,29				
Total, real		300			149				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:40			07:52		09:32 (3)	09:00		11:04 (2)
	22:49	22:01	20:40	19:13			16:49	21	09:53 (3)	15:51	51	12:14 (4)
2	04:33	05:26	06:35	07:42			07:54		09:31 (3)	09:02		11:04 (2)
	22:48	21:59	20:37	19:10			16:46	22	09:53 (3)	15:50	51	12:14 (4)
3	04:34	05:29	06:38	07:44			07:56		09:31 (3)	09:04		11:04 (2)
	22:47	21:56	20:34	19:07			16:44	23	09:54 (3)	15:49	51	12:14 (4)
4	04:35	05:31	06:40	07:46			07:59		09:30 (3)	09:05		11:04 (2)
	22:47	21:54	20:31	19:05			16:42	25	09:55 (3)	15:48	51	12:14 (4)
5	04:36	05:33	06:42	07:49			08:01		09:29 (3)	09:07		11:05 (2)
	22:46	21:52	20:28	19:02			16:39	26	09:55 (3)	15:47	51	12:15 (4)
6	04:38	05:35	06:44	07:51			08:04		09:30 (3)	09:09		11:05 (2)
	22:45	21:49	20:26	18:59			16:37	25	09:55 (3)	15:46	51	12:15 (4)
7	04:39	05:37	06:47	07:53			08:06		09:30 (3)	09:10		11:06 (2)
	22:44	21:47	20:23	18:56			16:35	26	09:56 (3)	15:46	51	12:16 (4)
8	04:40	05:40	06:49	07:55			08:08		09:29 (3)	09:12		11:06 (2)
	22:43	21:44	20:20	18:53			16:32	26	09:55 (3)	15:45	51	12:16 (4)
9	04:41	05:42	06:51	07:58			08:11		09:30 (3)	09:14		11:07 (2)
	22:42	21:42	20:17	18:50			16:30	25	09:55 (3)	15:44	51	12:17 (4)
10	04:43	05:44	06:53	08:00			08:13		09:31 (3)	09:15		11:07 (2)
	22:41	21:39	20:14	18:48			16:28	24	09:55 (3)	15:44	51	12:17 (4)
11	04:44	05:46	06:55	08:02			08:16		09:31 (3)	09:16		11:08 (2)
	22:39	21:37	20:11	18:45			16:26	23	09:54 (3)	15:43	49	12:17 (4)
12	04:46	05:49	06:58	08:04			08:18		09:32 (3)	09:18		11:08 (2)
	22:38	21:34	20:08	18:42			16:24	22	09:54 (3)	15:43	49	12:17 (4)
13	04:48	05:51	07:00	08:07			08:20		09:33 (3)	09:19		11:09 (2)
	22:37	21:32	20:05	18:39			16:21	21	09:54 (3)	15:43	49	12:18 (4)
14	04:49	05:53	07:02	08:09			08:23		09:34 (3)	09:20		11:09 (2)
	22:35	21:29	20:02	18:36			16:19	20	09:54 (3)	15:42	49	12:18 (4)
15	04:51	05:55	07:04	08:11			08:25		09:35 (3)	09:21		11:10 (2)
	22:34	21:26	20:00	18:34			16:17	17	09:52 (3)	15:42	49	12:19 (4)
16	04:53	05:58	07:06	08:14			08:27		09:36 (3)	09:22		11:11 (2)
	22:32	21:24	19:57	18:31			16:15	15	09:51 (3)	15:42	48	12:20 (4)
17	04:54	06:00	07:09	08:16			08:30		09:39 (3)	09:23		11:12 (2)
	22:31	21:21	19:54	18:28			16:13	15	11:56 (4)	15:42	48	12:20 (4)
18	04:56	06:02	07:11	08:18		09:36 (26)	08:32		09:42 (3)	09:24		11:11 (2)
	22:29	21:19	19:51	18:25	10	09:46 (26)	16:11	16	12:00 (4)	15:42	48	12:20 (4)
19	04:58	06:04	07:13	08:21		09:34 (26)	08:34		11:46 (4)	09:25		11:12 (2)
	22:27	21:16	19:48	18:23	14	09:48 (26)	16:10	17	12:03 (4)	15:42	47	12:20 (4)
20	05:00	06:06	07:15	08:23		09:32 (26)	08:37		11:46 (4)	09:26		11:13 (2)
	22:26	21:13	19:45	18:20	17	09:49 (26)	16:08	19	12:05 (4)	15:43	48	12:21 (4)
21	05:02	06:09	07:17	08:25		09:32 (26)	08:39		11:44 (4)	09:26		11:14 (2)
	22:24	21:10	19:42	18:17	18	09:50 (26)	16:06	21	12:05 (4)	15:43	47	12:22 (4)
22	05:04	06:11	07:20	08:28		09:30 (26)	08:41		11:07 (2)	09:27		11:14 (2)
	22:22	21:08	19:39	18:15	20	09:50 (26)	16:04	30	12:07 (4)	15:44	47	12:22 (4)
23	05:06	06:13	07:22	08:30		09:30 (26)	08:43		11:05 (2)	09:27		11:14 (2)
	22:20	21:05	19:36	18:12	20	09:50 (26)	16:03	36	12:08 (4)	15:44	48	12:22 (4)
24	05:08	06:15	07:24	08:32		09:31 (26)	08:45		11:05 (2)	09:28		11:15 (2)
	22:18	21:02	19:33	18:09	20	09:51 (26)	16:01	39	12:09 (4)	15:45	48	12:23 (4)
25	05:10	06:18	07:26	07:35		08:30 (26)	08:48		11:04 (2)	09:28		11:15 (2)
	22:16	20:59	19:31	17:07	20	08:50 (26)	15:59	42	12:09 (4)	15:45	48	12:24 (4)
26	05:12	06:20	07:28	07:37		08:31 (26)	08:50		11:04 (2)	09:28		11:16 (2)
	22:14	20:57	19:28	17:04	19	08:50 (26)	15:58	43	12:10 (4)	15:46	48	12:24 (4)
27	05:14	06:22	07:31	07:40		08:30 (26)	08:52		11:03 (2)	09:29		11:16 (2)
	22:12	20:54	19:25	17:02	19	08:49 (26)	15:57	47	12:11 (4)	15:47	48	12:25 (4)
28	05:16	06:24	07:33	07:42		08:31 (26)	08:54		11:04 (2)	09:29		11:17 (2)
	22:10	20:51	19:22	16:59	17	08:48 (26)	15:55	47	12:12 (4)	15:48	48	12:25 (4)
29	05:18	06:27	07:35	07:44		08:33 (26)	08:56		11:03 (2)	09:29		11:16 (2)
	22:08	20:48	19:19	16:56	26	09:48 (3)	15:54	49	12:12 (4)	15:49	49	12:25 (4)
30	05:20	06:29	07:37	07:47		08:34 (26)	08:58		11:03 (2)	09:28		11:17 (2)
	22:05	20:45	19:16	16:54	27	09:50 (3)	15:53	50	12:12 (4)	15:50	49	12:26 (4)
31	05:22	06:31		07:49		08:37 (26)				09:28		11:18 (2)
	22:03	20:43		16:51	25	09:52 (3)				15:51	49	12:27 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					272			832			1523	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,68			0,65	
Total reduction					0,29			0,27			0,26	
Total, real					80			226			394	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:00 (1)	08:46		09:41 (26)	07:35	08:28 (28)	07:07	05:44	04:40
	15:53	67 13:34 (4)	16:56	27	11:17 (3)	18:05	19 08:47 (28)	20:17	21:26	22:31
2	09:28	11:00 (1)	08:44		09:37 (26)	07:33	08:27 (28)	07:04	05:41	04:39
	15:54	68 13:34 (4)	16:59	32	11:16 (3)	18:07	20 08:47 (28)	20:19	21:28	22:32
3	09:27	11:00 (1)	08:41		09:35 (26)	07:30	08:27 (28)	07:01	05:39	04:37
	15:56	69 13:34 (4)	17:01	35	11:15 (3)	18:10	20 08:47 (28)	20:21	21:31	22:34
4	09:27	11:00 (1)	08:39		09:34 (26)	07:27	08:27 (28)	06:58	05:36	04:36
	15:57	69 13:35 (4)	17:04	33	11:13 (3)	18:12	19 08:46 (28)	20:24	21:33	22:35
5	09:26	11:00 (1)	08:37		09:33 (26)	07:24	08:28 (28)	06:55	05:34	04:35
	15:59	69 13:35 (4)	17:06	33	11:12 (3)	18:14	17 08:45 (28)	20:26	21:35	22:37
6	09:25	11:00 (1)	08:35		09:32 (26)	07:22	08:28 (28)	06:53	05:31	04:34
	16:00	69 13:35 (4)	17:08	23	11:06 (3)	18:17	16 08:44 (28)	20:28	21:38	22:38
7	09:25	10:54 (3)	08:32		09:31 (26)	07:19	08:29 (28)	06:50	05:29	04:33
	16:02	75 13:36 (4)	17:11	22	09:53 (26)	18:19	13 08:42 (28)	20:31	21:40	22:39
8	09:24	10:53 (3)	08:30		09:32 (26)	07:16	08:31 (28)	06:47	05:27	04:32
	16:04	77 13:37 (4)	17:13	22	09:54 (26)	18:21	8 08:39 (28)	20:33	21:42	22:41
9	09:23	10:52 (3)	08:28		09:31 (26)	07:13		06:44	05:24	04:31
	16:05	76 13:37 (4)	17:16	23	09:54 (26)	18:24		20:35	21:44	22:42
10	09:22	10:51 (3)	08:25		09:32 (26)	07:10		06:41	05:22	04:30
	16:07	78 13:37 (4)	17:18	23	09:55 (26)	18:26		20:38	21:47	22:43
11	09:21	10:50 (3)	08:23		09:31 (26)	07:07		06:38	05:20	04:30
	16:09	78 13:38 (4)	17:21	24	09:55 (26)	18:28		20:40	21:49	22:44
12	09:20	10:49 (3)	08:20		09:31 (26)	07:05		06:36	05:17	04:29
	16:11	76 13:37 (4)	17:23	23	09:54 (26)	18:31		20:42	21:51	22:45
13	09:19	10:50 (3)	08:18		09:31 (26)	07:02		06:33	05:15	04:28
	16:13	74 13:38 (4)	17:26	23	09:54 (26)	18:33		20:44	21:53	22:46
14	09:17	10:49 (3)	08:15		09:33 (26)	06:59		06:30	05:13	04:28
	16:15	73 13:38 (4)	17:28	21	09:54 (26)	18:35		20:47	21:55	22:47
15	09:16	10:48 (3)	08:13		09:33 (26)	06:56		06:27	05:11	04:28
	16:17	69 13:38 (4)	17:31	20	09:53 (26)	18:38		20:49	21:58	22:47
16	09:15	10:48 (3)	08:10		09:34 (26)	06:53		06:24	05:08	04:27
	16:19	62 13:37 (4)	17:33	17	09:51 (26)	18:40		20:51	22:00	22:48
17	09:13	10:49 (3)	08:08		09:36 (26)	06:50		06:22	05:06	04:27
	16:21	61 13:38 (4)	17:36	14	09:50 (26)	18:42		20:54	22:02	22:49
18	09:12	10:48 (3)	08:05		09:39 (26)	06:47		06:19	05:04	04:27
	16:23	61 13:38 (4)	17:38	8	09:47 (26)	18:45		20:56	22:04	22:49
19	09:10	10:48 (3)	08:02			06:44		06:16	05:02	04:27
	16:26	58 13:37 (4)	17:41			18:47		20:58	22:06	22:50
20	09:09	10:48 (3)	08:00			06:42		06:13	05:00	04:27
	16:28	57 13:37 (4)	17:43			18:49		21:01	22:08	22:50
21	09:07	10:48 (3)	07:57			06:39		06:10	04:58	04:27
	16:30	53 13:36 (4)	17:45			18:52		21:03	22:10	22:50
22	09:05	10:49 (3)	07:54			06:36		06:08	04:56	04:27
	16:32	49 13:35 (4)	17:48			18:54		21:05	22:12	22:51
23	09:04	10:49 (3)	07:52			06:33		06:05	04:54	04:27
	16:35	43 13:33 (4)	17:50			18:56		21:08	22:14	22:51
24	09:02	10:48 (3)	07:49		08:36 (28)	06:30		06:02	04:53	04:28
	16:37	29 11:17 (3)	17:53	5	08:41 (28)	18:59		21:10	22:16	22:51
25	09:00	10:49 (3)	07:46		08:32 (28)	06:27		06:00	04:51	04:28
	16:39	29 11:18 (3)	17:55	12	08:44 (28)	19:01		21:12	22:18	22:51
26	08:58	10:49 (3)	07:44		08:30 (28)	06:24		05:57	04:49	04:29
	16:42	29 11:18 (3)	17:58	15	08:45 (28)	19:03		21:14	22:20	22:51
27	08:56	10:50 (3)	07:41		08:29 (28)	06:21		05:54	04:47	04:29
	16:44	29 11:19 (3)	18:00	17	08:46 (28)	19:05		21:17	22:22	22:50
28	08:54	10:50 (3)	07:38		08:29 (28)	06:18		05:52	04:46	04:30
	16:46	28 11:18 (3)	18:02	18	08:47 (28)	19:08		21:19	22:24	22:50
29	08:52	10:51 (3)				07:16		05:49	04:44	04:30
	16:49	27 11:18 (3)				20:10		21:21	22:26	22:50
30	08:50	10:51 (3)				07:13		05:47	04:43	04:31
	16:51	26 11:17 (3)				20:12		21:24	22:27	22:49
31	08:48	10:52 (3)				07:10			04:41	
	16:54	25 11:17 (3)				20:15			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1753		490			132			
Sun reduction		0,50		0,50			0,50			
Oper. time red.		0,80		0,80			0,80			
Wind dir. red.		0,65		0,72			0,73			
Total reduction		0,26		0,29			0,29			
Total, real		456		141			38			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:52		09:00 (26)	09:00		10:33 (3)
	22:49		22:01		20:40		19:13			16:49	24	09:24 (26)	15:51	76	13:20 (4)
2	04:33		05:26		06:35		07:42			07:54		09:01 (26)	09:02		10:34 (3)
	22:48		21:59		20:37		19:10			16:46	23	09:24 (26)	15:50	78	13:20 (4)
3	04:34		05:29		06:38		07:44			07:56		09:01 (26)	09:04		10:35 (3)
	22:47		21:56		20:34		19:07			16:44	23	09:24 (26)	15:49	78	13:20 (4)
4	04:35		05:31		06:40		07:46			07:59		09:02 (26)	09:05		10:37 (3)
	22:47		21:54		20:31		19:05			16:42	22	09:24 (26)	15:48	77	13:21 (4)
5	04:36		05:33		06:42		07:48		09:11 (28)	08:01		09:02 (26)	09:07		10:39 (3)
	22:46		21:52		20:28		19:02	3	09:14 (28)	16:39	26	10:37 (3)	15:47	76	13:21 (4)
6	04:37		05:35		06:44		07:51		09:06 (28)	08:04		09:03 (26)	09:09		10:46 (1)
	22:45		21:49		20:26		18:59	11	09:17 (28)	16:37	32	10:42 (3)	15:46	70	13:22 (4)
7	04:39		05:37		06:47		07:53		09:05 (28)	08:06		09:05 (26)	09:10		10:47 (1)
	22:44		21:47		20:23		18:56	15	09:20 (28)	16:35	34	10:44 (3)	15:46	69	13:22 (4)
8	04:40		05:40		06:49		07:55		09:03 (28)	08:08		09:05 (26)	09:12		10:48 (1)
	22:43		21:44		20:20		18:53	17	09:20 (28)	16:32	35	10:45 (3)	15:45	69	13:23 (4)
9	04:41		05:42		06:51		07:58		09:02 (28)	08:11		09:08 (26)	09:14		10:49 (1)
	22:42		21:42		20:17		18:50	18	09:20 (28)	16:30	33	10:47 (3)	15:44	68	13:23 (4)
10	04:43		05:44		06:53		08:00		09:02 (28)	08:13		09:13 (26)	09:15		10:49 (1)
	22:41		21:39		20:14		18:48	19	09:21 (28)	16:28	25	10:48 (3)	15:44	69	13:23 (4)
11	04:44		05:46		06:55		08:02		09:01 (28)	08:16		10:22 (3)	09:16		10:50 (1)
	22:39		21:37		20:11		18:45	20	09:21 (28)	16:26	26	10:48 (3)	15:43	69	13:24 (4)
12	04:46		05:49		06:58		08:04		09:01 (28)	08:18		10:22 (3)	09:18		10:50 (1)
	22:38		21:34		20:08		18:42	20	09:21 (28)	16:24	27	10:49 (3)	15:43	67	13:24 (4)
13	04:47		05:51		07:00		08:07		09:01 (28)	08:20		10:22 (3)	09:19		10:51 (1)
	22:37		21:32		20:05		18:39	19	09:20 (28)	16:21	28	10:50 (3)	15:43	68	13:25 (4)
14	04:49		05:53		07:02		08:09		09:01 (28)	08:23		10:23 (3)	09:20		10:52 (1)
	22:35		21:29		20:02		18:36	18	09:19 (28)	16:19	28	10:51 (3)	15:42	67	13:25 (4)
15	04:51		05:55		07:04		08:11		09:02 (28)	08:25		10:22 (3)	09:21		10:52 (1)
	22:34		21:26		20:00		18:34	16	09:18 (28)	16:17	29	10:51 (3)	15:42	66	13:25 (4)
16	04:53		05:57		07:06		08:14		09:03 (28)	08:27		10:22 (3)	09:22		10:53 (1)
	22:32		21:24		19:57		18:31	13	09:16 (28)	16:15	29	10:51 (3)	15:42	64	13:25 (4)
17	04:54		06:00		07:09		08:16		09:05 (28)	08:30		10:23 (3)	09:23		10:54 (1)
	22:31		21:21		19:54		18:28	10	09:15 (28)	16:13	29	10:52 (3)	15:42	67	13:27 (4)
18	04:56		06:02		07:11		08:18			08:32		10:22 (3)	09:24		10:54 (1)
	22:29		21:19		19:51		18:25			16:11	29	10:51 (3)	15:42	64	13:26 (4)
19	04:58		06:04		07:13		08:21			08:34		10:23 (3)	09:25		10:55 (1)
	22:27		21:16		19:48		18:23			16:10	43	13:07 (4)	15:42	65	13:27 (4)
20	05:00		06:06		07:15		08:23			08:37		10:24 (3)	09:26		10:55 (1)
	22:25		21:13		19:45		18:20			16:08	49	13:10 (4)	15:43	66	13:28 (4)
21	05:02		06:09		07:17		08:25			08:39		10:23 (3)	09:26		10:56 (1)
	22:24		21:10		19:42		18:17			16:06	53	13:11 (4)	15:43	66	13:29 (4)
22	05:04		06:11		07:20		08:28			08:41		10:24 (3)	09:27		10:56 (1)
	22:22		21:08		19:39		18:15			16:04	57	13:13 (4)	15:44	65	13:28 (4)
23	05:06		06:13		07:22		08:30			08:43		10:24 (3)	09:27		10:56 (1)
	22:20		21:05		19:36		18:12			16:03	58	13:13 (4)	15:44	66	13:29 (4)
24	05:08		06:15		07:24		08:32		10:07 (26)	08:45		10:26 (3)	09:28		10:58 (1)
	22:18		21:02		19:33		18:09	10	10:17 (26)	16:01	60	13:15 (4)	15:45	64	13:30 (4)
25	05:10		06:18		07:26		07:35		09:05 (26)	08:48		10:26 (3)	09:28		10:58 (1)
	22:16		20:59		19:30		17:07	15	09:20 (26)	15:59	61	13:15 (4)	15:45	65	13:30 (4)
26	05:12		06:20		07:28		07:37		09:04 (26)	08:50		10:27 (3)	09:28		10:58 (1)
	22:14		20:57		19:28		17:04	18	09:22 (26)	15:58	62	13:16 (4)	15:46	66	13:31 (4)
27	05:14		06:22		07:31		07:40		09:02 (26)	08:52		10:28 (3)	09:28		10:58 (1)
	22:12		20:54		19:25		17:02	20	09:22 (26)	15:56	67	13:17 (4)	15:47	66	13:31 (4)
28	05:16		06:24		07:33		07:42		09:02 (26)	08:54		10:29 (3)	09:29		10:59 (1)
	22:10		20:51		19:22		16:59	21	09:23 (26)	15:55	72	13:18 (4)	15:48	67	13:32 (4)
29	05:18		06:27		07:35		07:44		09:02 (26)	08:56		10:30 (3)	09:29		10:58 (1)
	22:08		20:48		19:19		16:56	22	09:24 (26)	15:54	74	13:18 (4)	15:49	67	13:32 (4)
30	05:20		06:29		07:37		07:47		09:01 (26)	08:58		10:31 (3)	09:28		10:59 (1)
	22:05		20:45		19:16		16:54	23	09:24 (26)	15:53	75	13:18 (4)	15:50	66	13:32 (4)
31	05:22		06:31				07:49		09:01 (26)				09:28		11:00 (1)
	22:03		20:43				16:51	23	09:24 (26)				15:51	66	13:33 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								351			1233			2117	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,68			0,63	
Total reduction								0,29			0,27			0,25	
Total, real								102			333			533	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28	11:05 (1)	08:46	09:41 (26)	07:35	08:31 (28)	07:07	05:44	04:40
	15:53 69	13:41 (4)	16:56 36	11:24 (3)	18:05 20	08:51 (28)	20:17	21:26	22:31
2	09:28	11:05 (1)	08:44	09:40 (26)	07:33	08:31 (28)	07:04	05:41	04:39
	15:54 68	13:41 (4)	16:59 35	11:22 (3)	18:07 20	08:51 (28)	20:19	21:28	22:32
3	09:27	11:05 (1)	08:41	09:39 (26)	07:30	08:31 (28)	07:01	05:39	04:37
	15:56 69	13:41 (4)	17:01 35	11:21 (3)	18:10 19	08:50 (28)	20:21	21:31	22:34
4	09:27	11:00 (3)	08:39	09:38 (26)	07:27	08:31 (28)	06:58	05:36	04:36
	15:57 74	13:42 (4)	17:04 32	11:19 (3)	18:12 19	08:50 (28)	20:24	21:33	22:35
5	09:26	10:59 (3)	08:37	09:38 (26)	07:24	08:32 (28)	06:55	05:34	04:35
	15:59 76	13:42 (4)	17:06 22	10:00 (26)	18:14 16	08:48 (28)	20:26	21:35	22:37
6	09:25	10:58 (3)	08:35	09:37 (26)	07:22	08:33 (28)	06:53	05:31	04:34
	16:00 77	13:43 (4)	17:08 23	10:00 (26)	18:17 14	08:47 (28)	20:28	21:38	22:38
7	09:25	10:58 (3)	08:32	09:36 (26)	07:19	08:35 (28)	06:50	05:29	04:33
	16:02 76	13:43 (4)	17:11 24	10:00 (26)	18:19 9	08:44 (28)	20:31	21:40	22:39
8	09:24	10:57 (3)	08:30	09:37 (26)	07:16		06:47	05:27	04:32
	16:04 78	13:44 (4)	17:13 24	10:01 (26)	18:21		20:33	21:42	22:41
9	09:23	10:57 (3)	08:28	09:36 (26)	07:13		06:44	05:24	04:31
	16:05 77	13:44 (4)	17:16 24	10:00 (26)	18:24		20:35	21:44	22:42
10	09:22	10:56 (3)	08:25	09:37 (26)	07:10		06:41	05:22	04:30
	16:07 77	13:44 (4)	17:18 24	10:01 (26)	18:26		20:38	21:47	22:43
11	09:21	10:56 (3)	08:23	09:37 (26)	07:07		06:38	05:20	04:30
	16:09 76	13:45 (4)	17:21 23	10:00 (26)	18:28		20:40	21:49	22:44
12	09:20	10:56 (3)	08:20	09:37 (26)	07:05		06:36	05:17	04:29
	16:11 74	13:44 (4)	17:23 23	10:00 (26)	18:31		20:42	21:51	22:45
13	09:19	10:56 (3)	08:18	09:38 (26)	07:02		06:33	05:15	04:28
	16:13 73	13:45 (4)	17:26 21	09:59 (26)	18:33		20:44	21:53	22:46
14	09:17	10:56 (3)	08:15	09:39 (26)	06:59		06:30	05:13	04:28
	16:15 69	13:45 (4)	17:28 20	09:59 (26)	18:35		20:47	21:55	22:47
15	09:16	10:55 (3)	08:13	09:40 (26)	06:56		06:27	05:11	04:28
	16:17 61	13:45 (4)	17:31 17	09:57 (26)	18:38		20:49	21:58	22:47
16	09:15	10:55 (3)	08:10	09:42 (26)	06:53		06:24	05:08	04:27
	16:19 59	13:44 (4)	17:33 13	09:55 (26)	18:40		20:51	22:00	22:48
17	09:13	10:56 (3)	08:08	09:45 (26)	06:50		06:21	05:06	04:27
	16:21 59	13:45 (4)	17:36 8	09:53 (26)	18:42		20:54	22:02	22:49
18	09:12	10:56 (3)	08:05		06:47		06:19	05:04	04:27
	16:23 58	13:45 (4)	17:38		18:45		20:56	22:04	22:49
19	09:10	10:56 (3)	08:02		06:44		06:16	05:02	04:27
	16:26 55	13:44 (4)	17:41		18:47		20:58	22:06	22:50
20	09:09	10:56 (3)	08:00		06:42		06:13	05:00	04:27
	16:28 54	13:44 (4)	17:43		18:49		21:01	22:08	22:50
21	09:07	10:56 (3)	07:57		06:39		06:10	04:58	04:27
	16:30 50	13:43 (4)	17:45		18:52		21:03	22:10	22:50
22	09:05	10:56 (3)	07:54		06:36		06:08	04:56	04:27
	16:32 45	13:42 (4)	17:48		18:54		21:05	22:12	22:51
23	09:04	10:57 (3)	07:52	08:40 (28)	06:33		06:05	04:54	04:27
	16:35 40	13:40 (4)	17:50 5	08:45 (28)	18:56		21:08	22:14	22:51
24	09:02	10:56 (3)	07:49	08:36 (28)	06:30		06:02	04:53	04:28
	16:37 32	13:36 (4)	17:53 12	08:48 (28)	18:59		21:10	22:16	22:51
25	09:00	10:57 (3)	07:46	08:34 (28)	06:27		06:00	04:51	04:28
	16:39 29	11:26 (3)	17:55 15	08:49 (28)	19:01		21:12	22:18	22:51
26	08:58	10:57 (3)	07:44	08:33 (28)	06:24		05:57	04:49	04:29
	16:42 29	11:26 (3)	17:58 17	08:50 (28)	19:03		21:14	22:20	22:51
27	08:56	10:58 (3)	07:41	08:32 (28)	06:21		05:54	04:47	04:29
	16:44 28	11:26 (3)	18:00 18	08:50 (28)	19:05		21:17	22:22	22:50
28	08:54	10:58 (3)	07:38	08:32 (28)	06:18		05:52	04:46	04:30
	16:46 28	11:26 (3)	18:02 19	08:51 (28)	19:08		21:19	22:24	22:50
29	08:52	10:59 (3)			07:16		05:49	04:44	04:30
	16:49 27	11:26 (3)			20:10		21:21	22:26	22:50
30	08:50	10:59 (3)			07:13		05:47	04:43	04:31
	16:51 26	11:25 (3)			20:12		21:24	22:27	22:49
31	08:48	09:43 (26)			07:10			04:41	
	16:54 32	11:24 (3)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	1745		490		117				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,65		0,72		0,73				
Total reduction	0,26		0,29		0,29				
Total, real	452		141		34				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:06 (26)	09:00		10:39 (3)
	22:49	22:01	20:40	19:13			16:49	24	09:30 (26)	15:51	75	13:27 (4)
2	04:33	05:26	06:35	07:42			07:54		09:06 (26)	09:02		10:39 (3)
	22:48	21:59	20:37	19:10			16:46	24	09:30 (26)	15:50	77	13:27 (4)
3	04:34	05:29	06:38	07:44			07:56		09:06 (26)	09:04		10:40 (3)
	22:47	21:56	20:34	19:07			16:44	24	09:30 (26)	15:49	78	13:27 (4)
4	04:35	05:31	06:40	07:46			07:59		09:07 (26)	09:05		10:41 (3)
	22:47	21:54	20:31	19:05			16:42	23	09:30 (26)	15:48	79	13:28 (4)
5	04:36	05:33	06:42	07:48			08:01		09:07 (26)	09:07		10:43 (3)
	22:46	21:52	20:28	19:02			16:39	22	09:29 (26)	15:47	76	13:28 (4)
6	04:37	05:35	06:44	07:51		09:12 (28)	08:04		09:08 (26)	09:09		10:44 (3)
	22:45	21:49	20:26	18:59	7	09:19 (28)	16:37	21	09:29 (26)	15:46	77	13:29 (4)
7	04:39	05:37	06:47	07:53		09:10 (28)	08:06		09:09 (26)	09:10		10:46 (3)
	22:44	21:47	20:23	18:56	12	09:22 (28)	16:35	32	10:50 (3)	15:46	76	13:29 (4)
8	04:40	05:40	06:49	07:55		09:08 (28)	08:08		09:09 (26)	09:12		10:48 (3)
	22:43	21:44	20:20	18:53	15	09:23 (28)	16:32	34	10:51 (3)	15:45	74	13:30 (4)
9	04:41	05:42	06:51	07:58		09:06 (28)	08:11		09:10 (26)	09:14		10:51 (3)
	22:42	21:42	20:17	18:50	18	09:24 (28)	16:30	36	10:53 (3)	15:44	72	13:30 (4)
10	04:43	05:44	06:53	08:00		09:06 (28)	08:13		09:12 (26)	09:15		10:54 (1)
	22:41	21:39	20:14	18:48	19	09:25 (28)	16:28	35	10:55 (3)	15:44	68	13:30 (4)
11	04:44	05:46	06:55	08:02		09:05 (28)	08:16		09:14 (26)	09:16		10:55 (1)
	22:39	21:37	20:11	18:45	19	09:24 (28)	16:26	33	10:55 (3)	15:43	68	13:31 (4)
12	04:46	05:49	06:58	08:04		09:05 (28)	08:18		10:31 (3)	09:18		10:55 (1)
	22:38	21:34	20:08	18:42	20	09:25 (28)	16:24	26	10:57 (3)	15:43	68	13:31 (4)
13	04:47	05:51	07:00	08:07		09:04 (28)	08:20		10:31 (3)	09:19		10:56 (1)
	22:37	21:32	20:05	18:39	20	09:24 (28)	16:21	27	10:58 (3)	15:43	68	13:32 (4)
14	04:49	05:53	07:02	08:09		09:04 (28)	08:23		10:31 (3)	09:20		10:57 (1)
	22:35	21:29	20:02	18:36	19	09:23 (28)	16:19	28	10:59 (3)	15:42	67	13:32 (4)
15	04:51	05:55	07:04	08:11		09:05 (28)	08:25		10:30 (3)	09:21		10:57 (1)
	22:34	21:26	20:00	18:34	18	09:23 (28)	16:17	28	10:58 (3)	15:42	68	13:32 (4)
16	04:53	05:57	07:06	08:14		09:05 (28)	08:27		10:30 (3)	09:22		10:57 (1)
	22:32	21:24	19:57	18:31	16	09:21 (28)	16:15	29	10:59 (3)	15:42	68	13:32 (4)
17	04:54	06:00	07:09	08:16		09:07 (28)	08:30		10:31 (3)	09:23		10:59 (1)
	22:31	21:21	19:54	18:28	14	09:21 (28)	16:13	29	11:00 (3)	15:42	66	13:34 (4)
18	04:56	06:02	07:11	08:18		09:08 (28)	08:32		10:30 (3)	09:24		10:59 (1)
	22:29	21:19	19:51	18:25	10	09:18 (28)	16:11	32	13:10 (4)	15:42	66	13:33 (4)
19	04:58	06:04	07:13	08:21			08:34		10:31 (3)	09:25		10:59 (1)
	22:27	21:16	19:48	18:23			16:10	40	13:14 (4)	15:42	67	13:34 (4)
20	05:00	06:06	07:15	08:23			08:37		10:31 (3)	09:26		11:00 (1)
	22:25	21:13	19:45	18:20			16:08	45	13:17 (4)	15:43	66	13:35 (4)
21	05:02	06:09	07:17	08:25			08:39		10:31 (3)	09:26		11:01 (1)
	22:24	21:10	19:42	18:17			16:06	50	13:18 (4)	15:43	66	13:35 (4)
22	05:04	06:11	07:20	08:28			08:41		10:32 (3)	09:27		11:01 (1)
	22:22	21:08	19:39	18:15			16:04	54	13:20 (4)	15:44	66	13:35 (4)
23	05:06	06:13	07:22	08:30			08:43		10:32 (3)	09:27		11:01 (1)
	22:20	21:05	19:36	18:12			16:03	55	13:20 (4)	15:44	66	13:36 (4)
24	05:08	06:15	07:24	08:32			08:45		10:33 (3)	09:28		11:02 (1)
	22:18	21:02	19:33	18:09			16:01	58	13:22 (4)	15:45	66	13:37 (4)
25	05:10	06:18	07:26	07:35		09:13 (26)	08:48		10:33 (3)	09:28		11:03 (1)
	22:16	20:59	19:30	17:07	10	09:23 (26)	15:59	59	13:22 (4)	15:45	66	13:37 (4)
26	05:12	06:20	07:28	07:37		09:11 (26)	08:50		10:34 (3)	09:28		11:03 (1)
	22:14	20:57	19:28	17:04	15	09:26 (26)	15:58	60	13:24 (4)	15:46	67	13:38 (4)
27	05:14	06:22	07:31	07:40		09:09 (26)	08:52		10:34 (3)	09:28		11:03 (1)
	22:12	20:54	19:25	17:01	18	09:27 (26)	15:56	62	13:24 (4)	15:47	68	13:38 (4)
28	05:16	06:24	07:33	07:42		09:08 (26)	08:54		10:36 (3)	09:29		11:04 (1)
	22:10	20:51	19:22	16:59	20	09:28 (26)	15:55	69	13:25 (4)	15:48	66	13:39 (4)
29	05:18	06:27	07:35	07:44		09:08 (26)	08:56		10:36 (3)	09:29		11:03 (1)
	22:08	20:48	19:19	16:56	21	09:29 (26)	15:54	72	13:25 (4)	15:49	68	13:39 (4)
30	05:20	06:29	07:37	07:47		09:07 (26)	08:58		10:37 (3)	09:28		11:04 (1)
	22:05	20:45	19:16	16:54	22	09:29 (26)	15:53	74	13:26 (4)	15:50	68	13:39 (4)
31	05:22	06:31		07:49		09:07 (26)				09:28		11:05 (1)
	22:03	20:43		16:51	23	09:30 (26)				15:51	68	13:40 (4)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					336			1205			2159	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,67			0,63	
Total reduction					0,29			0,27			0,25	
Total, real					98			324			541	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March		April	May	June	July	August	September		October		November	December
1	09:28	08:46	07:36		07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56	18:05		20:17	21:26	22:31	22:49	22:01	20:40		19:13	3	16:49	15:52
2	09:28	08:44	07:33		07:04	05:42	04:39	04:33	05:27	06:36		07:42		07:54	09:02
	15:54	16:59	18:07		20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:47	15:50
3	09:27	08:42	07:30		07:01	05:39	04:38	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01	18:10		20:22	21:31	22:34	22:47	21:56	20:34		19:08		16:44	15:49
4	09:27	08:39	07:27		06:58	05:37	04:36	04:35	05:31	06:40		07:46		07:59	09:05
	15:57	17:04	18:12		20:24	21:33	22:35	22:47	21:54	20:31		19:05		16:42	15:48
5	09:26	08:37	07:24		06:56	05:34	04:35	04:36	05:33	06:42		07:49		08:01	09:07
	15:59	17:06	18:14		20:26	21:35	22:37	22:46	21:52	20:29		19:02		16:39	15:47
6	09:25	08:35	07:22		06:53	05:32	04:34	04:38	05:35	06:44		07:51		08:04	09:09
	16:00	17:09	18:17		20:28	21:38	22:38	22:45	21:49	20:26		18:59		16:37	15:47
7	09:25	08:32	07:19		06:50	05:29	04:33	04:39	05:38	06:47		07:53		08:06	09:11
	16:02	17:11	18:19		20:31	21:40	22:39	22:44	21:47	20:23		18:56		16:35	15:46
8	09:24	08:30	07:16		06:47	05:27	04:32	04:40	05:40	06:49		07:55		08:08	09:12
	16:04	17:14	18:22		20:33	21:42	22:41	22:43	21:44	20:20		18:53		16:33	15:45
9	09:23	08:28	07:13		06:44	05:24	04:31	04:42	05:42	06:51		07:58		08:11	09:14
	16:06	17:16	18:24		20:35	21:44	22:42	22:42	21:42	20:17		18:51		16:30	15:44
10	09:22	08:25	07:10		06:41	05:22	04:31	04:43	05:44	06:53		08:00		08:13	09:15
	16:07	17:19	18:26		20:38	21:47	22:43	22:41	21:39	20:14		18:48		16:28	15:44
11	09:21	08:23	07:08		06:38	05:20	04:30	04:45	05:46	06:55		08:02		08:16	09:16
	16:09	17:21	18:29		20:40	21:49	22:44	22:39	21:37	20:11		18:45		16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:05		08:18	09:18
	16:11	17:24	18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:19	08:18	07:02		07:33 (4)	06:33	05:15	04:29	04:48	05:51		07:00		08:07	08:20	09:19
	16:13	17:26	18:33	9	07:42 (4)	20:45	21:53	22:46	22:37	21:32		20:05		18:39	16:22	15:43
14	09:17	08:15	06:59		07:31 (4)	06:30	05:13	04:28	04:49	05:53		07:02		08:09	08:23	09:20
	16:15	17:28	18:36	13	07:44 (4)	20:47	21:56	22:47	22:35	21:29		20:03		18:37	16:20	15:43
15	09:16	08:13	06:56		07:29 (4)	06:27	05:11	04:28	04:51	05:55		07:04		08:11	08:25	09:21
	16:17	17:31	18:38	16	07:45 (4)	20:49	21:58	22:47	22:34	21:27		20:00		18:34	16:17	15:42
16	09:15	08:10	06:53		07:28 (4)	06:24	05:09	04:28	04:53	05:58		07:06		08:14	08:27	09:22
	16:19	17:33	18:40	18	07:46 (4)	20:51	22:00	22:48	22:32	21:24		19:57		18:31	16:15	15:42
17	09:13	08:08	06:50		07:26 (4)	06:22	05:06	04:27	04:54	06:00		07:09		08:16	08:30	09:23
	16:21	17:36	18:43	20	07:46 (4)	20:54	22:02	22:49	22:31	21:21		19:54		18:28	16:14	15:42
18	09:12	08:05	06:47		07:26 (4)	06:19	05:04	04:27	04:56	06:02		07:11	08:19 (4)	08:18	08:32	09:24
	16:24	17:38	18:45	20	07:46 (4)	20:56	22:04	22:49	22:29	21:19		19:51	5 08:24 (4)	18:26	16:12	15:42
19	09:10	08:03	06:45		07:25 (4)	06:16	05:02	04:27	04:58	06:04		07:13	08:15 (4)	08:21	08:34	09:25
	16:26	17:41	18:47	21	07:46 (4)	20:58	22:06	22:50	22:27	21:16		19:48	12 08:27 (4)	18:23	16:10	15:43
20	09:09	08:00	06:42		07:26 (4)	06:13	05:00	04:27	05:00	06:07		07:15	08:13 (4)	08:23	08:37	09:26
	16:28	17:43	18:49	20	07:46 (4)	21:01	22:08	22:50	22:26	21:13		19:45	15 08:28 (4)	18:20	16:08	15:43
21	09:07	07:57	06:39		07:26 (4)	06:11	04:58	04:27	05:02	06:09		07:17	08:12 (4)	08:25	08:39	09:26
	16:30	17:46	18:52	20	07:46 (4)	21:03	22:10	22:50	22:24	21:11		19:42	18 08:30 (4)	18:17	16:06	15:43
22	09:05	07:55	06:36		07:26 (4)	06:08	04:56	04:27	05:04	06:11		07:20	08:11 (4)	08:28	08:41	09:27
	16:33	17:48	18:54	19	07:45 (4)	21:05	22:12	22:51	22:22	21:08		19:39	19 08:30 (4)	18:15	16:04	15:44
23	09:04	07:52	06:33		07:27 (4)	06:05	04:55	04:28	05:06	06:13		07:22	08:10 (4)	08:30	08:43	09:27
	16:35	17:51	18:56	16	07:43 (4)	21:08	22:14	22:51	22:20	21:05		19:36	20 08:30 (4)	18:12	16:03	15:44
24	09:02	07:49	06:30		07:28 (4)	06:03	04:53	04:28	05:08	06:16		07:24	08:09 (4)	08:32	08:46	09:28
	16:37	17:53	18:59	13	07:41 (4)	21:10	22:16	22:51	22:18	21:02		19:34	21 08:30 (4)	18:09	16:01	15:45
25	09:00	07:47	06:27		07:30 (4)	06:00	04:51	04:28	05:10	06:18		07:26	08:09 (4)	07:35	08:48	09:28
	16:39	17:55	19:01	8	07:38 (4)	21:12	22:18	22:51	22:16	21:00		19:31	20 08:29 (4)	17:07	16:00	15:46
26	08:58	07:44	06:24			05:57	04:49	04:29	05:12	06:20		07:28	08:09 (4)	07:37	08:50	09:28
	16:42	17:58	19:03			21:15	22:20	22:51	22:14	20:57		19:28	20 08:29 (4)	17:04	15:58	15:46
27	08:56	07:41	06:21			05:55	04:48	04:29	05:14	06:22		07:31	08:09 (4)	07:40	08:52	09:29
	16:44	18:00	19:06			21:17	22:22	22:50	22:12	20:54		19:25	19 08:28 (4)	17:02	15:57	15:47
28	08:54	07:38	06:19			05:52	04:46	04:30	05:16	06:24		07:33	08:09 (4)	07:42	08:54	09:29
	16:47	18:03	19:08			21:19	22:24	22:50	22:10	20:51		19:22	18 08:27 (4)	16:59	15:55	15:48
29	08:52		07:16			05:49	04:44	04:31	05:18	06:27		07:35	08:10 (4)	07:44	08:56	09:29
	16:49		20:10			21:22	22:26	22:50	22:08	20:48		19:19	15 08:25 (4)	16:57	15:54	15:49
30	08:50		07:13			05:47	04:43	04:31	05:20	06:29		07:37	08:12 (4)	07:47	08:58	09:29
	16:51		20:12			21:24	22:27	22:49	22:05	20:46		19:16	12 08:24 (4)	16:54	15:53	15:50
31	08:48		07:10				04:41		05:22	06:31				07:49		09:28
	16:54		20:15				22:29		22:03	20:43				16:52		15:51
Potential sun hours	221	260	365		432	521	547	545	478	386		319		236	200
Total, worst case				213							214		3		
Sun reduction				0,50							0,50		0,50		
Oper. time red.				0,80							0,80		0,80		
Wind dir. red.				0,70							0,70		0,70		
Total reduction				0,28							0,28		0,28		
Total, real				59							59		1		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		11:26 (2)	08:46		10:08 (3)	07:35	07:07	05:44	04:40
	15:53	51	12:42 (4)	16:56	26	10:34 (3)	18:05	20:17	21:26	22:31
2	09:28		11:26 (2)	08:44		10:07 (3)	07:33	07:04	05:41	04:39
	15:54	51	12:42 (4)	16:59	27	10:34 (3)	18:07	20:19	21:28	22:32
3	09:27		11:26 (2)	08:41		10:08 (3)	07:30	07:01	05:39	04:37
	15:56	52	12:42 (4)	17:01	26	10:34 (3)	18:10	20:21	21:31	22:34
4	09:27		11:27 (2)	08:39		10:07 (3)	07:27	06:58	05:36	04:36
	15:57	52	12:43 (4)	17:04	27	10:34 (3)	18:12	20:24	21:33	22:35
5	09:26		11:27 (2)	08:37		10:08 (3)	07:24	06:55	05:34	04:35
	15:59	52	12:43 (4)	17:06	26	10:34 (3)	18:14	20:26	21:35	22:37
6	09:25		11:28 (2)	08:35		10:08 (3)	07:22	06:53	05:31	04:34
	16:00	51	12:43 (4)	17:09	26	10:34 (3)	18:17	20:28	21:38	22:38
7	09:25		11:28 (2)	08:32		10:08 (3)	07:19	06:50	05:29	04:33
	16:02	52	12:44 (4)	17:11	25	10:33 (3)	18:19	20:31	21:40	22:39
8	09:24		10:35 (1)	08:30		10:10 (3)	07:16	06:47	05:27	04:32
	16:04	58	12:45 (4)	17:13	23	10:33 (3)	18:21	20:33	21:42	22:41
9	09:23		10:34 (1)	08:28		10:10 (3)	07:13	06:44	05:24	04:31
	16:05	60	12:45 (4)	17:16	22	10:32 (3)	18:24	20:35	21:44	22:42
10	09:22		10:33 (1)	08:25		09:11 (26)	07:10	06:41	05:22	04:30
	16:07	62	12:45 (4)	17:18	27	10:31 (3)	18:26	20:38	21:47	22:43
11	09:21		10:33 (1)	08:23		09:09 (26)	07:07	06:38	05:20	04:30
	16:09	63	12:46 (4)	17:21	28	10:29 (3)	18:28	20:40	21:49	22:44
12	09:20		10:32 (1)	08:20		09:07 (26)	07:05	06:36	05:17	04:29
	16:11	64	12:46 (4)	17:23	27	10:27 (3)	18:31	20:42	21:51	22:45
13	09:19		10:33 (1)	08:18		09:06 (26)	07:02	06:33	05:15	04:28
	16:13	64	12:46 (4)	17:26	18	09:24 (26)	18:33	20:44	21:53	22:46
14	09:17		10:32 (1)	08:15		09:05 (26)	06:59	06:30	05:13	04:28
	16:15	64	12:46 (4)	17:28	20	09:25 (26)	18:35	20:47	21:56	22:47
15	09:16		10:32 (1)	08:13		09:05 (26)	06:56	06:27	05:11	04:28
	16:17	63	12:46 (4)	17:31	20	09:25 (26)	18:38	20:49	21:58	22:47
16	09:15		10:31 (1)	08:10		09:04 (26)	06:53	06:24	05:08	04:27
	16:19	63	12:46 (4)	17:33	21	09:25 (26)	18:40	20:51	22:00	22:48
17	09:13		10:32 (1)	08:08		09:05 (26)	06:50	06:22	05:06	04:27
	16:21	60	12:46 (4)	17:36	21	09:26 (26)	18:42	20:54	22:02	22:49
18	09:12		10:32 (1)	08:05		09:05 (26)	06:47	06:19	05:04	04:27
	16:23	58	12:46 (4)	17:38	20	09:25 (26)	18:45	20:56	22:04	22:49
19	09:10		10:32 (1)	08:02		09:05 (26)	06:44	06:16	05:02	04:27
	16:26	53	12:46 (4)	17:41	20	09:25 (26)	18:47	20:58	22:06	22:50
20	09:09		10:33 (1)	08:00		09:05 (26)	06:42	06:13	05:00	04:27
	16:28	42	12:45 (4)	17:43	19	09:24 (26)	18:49	21:01	22:08	22:50
21	09:07		10:33 (1)	07:57		09:05 (26)	06:39	06:11	04:58	04:27
	16:30	42	12:45 (4)	17:46	18	09:23 (26)	18:52	21:03	22:10	22:50
22	09:05		10:16 (3)	07:54		09:07 (26)	06:36	06:08	04:56	04:27
	16:32	44	12:44 (4)	17:48	15	09:22 (26)	18:54	21:05	22:12	22:51
23	09:04		10:13 (3)	07:52		09:09 (26)	06:33	06:05	04:54	04:27
	16:35	48	12:43 (4)	17:50	11	09:20 (26)	18:56	21:08	22:14	22:51
24	09:02		10:11 (3)	07:49		09:13 (26)	06:30	06:02	04:53	04:28
	16:37	45	12:40 (4)	17:53	3	09:16 (26)	18:59	21:10	22:16	22:51
25	09:00		10:10 (3)	07:46			06:27	06:00	04:51	04:28
	16:39	40	12:37 (4)	17:55			19:01	21:12	22:18	22:51
26	08:58		10:09 (3)	07:44			06:24	05:57	04:49	04:29
	16:42	36	10:52 (1)	17:58			19:03	21:15	22:20	22:51
27	08:56		10:09 (3)	07:41			06:21	05:54	04:47	04:29
	16:44	37	10:52 (1)	18:00			19:05	21:17	22:22	22:50
28	08:54		10:08 (3)	07:38			06:18	05:52	04:46	04:30
	16:46	35	10:50 (1)	18:02			19:08	21:19	22:24	22:50
29	08:52		10:08 (3)				07:16	05:49	04:44	04:30
	16:49	33	10:49 (1)				20:10	21:21	22:26	22:50
30	08:50		10:08 (3)				07:13	05:47	04:43	04:31
	16:51	25	10:33 (3)				20:12	21:24	22:27	22:49
31	08:48		10:07 (3)				07:10		04:41	
	16:54	26	10:33 (3)				20:15		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1546			516					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,67			0,73					
Total reduction		0,27			0,29					
Total, real		411			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:40			07:52		08:41 (26)	09:00		10:15 (1)
	22:49		22:01		20:40		19:13			16:49	27	10:01 (3)	15:51	63	12:28 (4)
2	04:33		05:26		06:35		07:42			07:54		09:40 (3)	09:02		10:16 (1)
	22:48		21:59		20:37		19:10			16:46	22	10:02 (3)	15:50	62	12:28 (4)
3	04:34		05:29		06:38		07:44			07:56		09:39 (3)	09:04		10:17 (1)
	22:47		21:56		20:34		19:07			16:44	24	10:03 (3)	15:49	60	12:28 (4)
4	04:35		05:31		06:40		07:46			07:59		09:39 (3)	09:05		10:19 (1)
	22:47		21:54		20:31		19:05			16:42	25	10:04 (3)	15:48	57	12:29 (4)
5	04:36		05:33		06:42		07:48			08:01		09:38 (3)	09:07		11:13 (2)
	22:46		21:52		20:28		19:02			16:39	26	10:04 (3)	15:47	52	12:29 (4)
6	04:37		05:35		06:44		07:51			08:04		09:38 (3)	09:09		11:14 (2)
	22:45		21:49		20:26		18:59			16:37	26	10:04 (3)	15:46	52	12:30 (4)
7	04:39		05:37		06:47		07:53			08:06		09:38 (3)	09:10		11:14 (2)
	22:44		21:47		20:23		18:56			16:35	27	10:05 (3)	15:46	52	12:30 (4)
8	04:40		05:40		06:49		07:55			08:08		09:37 (3)	09:12		11:15 (2)
	22:43		21:44		20:20		18:53			16:32	27	10:04 (3)	15:45	52	12:31 (4)
9	04:41		05:42		06:51		07:58			08:11		09:38 (3)	09:14		11:16 (2)
	22:42		21:42		20:17		18:50			16:30	26	10:04 (3)	15:44	51	12:31 (4)
10	04:43		05:44		06:53		08:00			08:13		09:38 (3)	09:15		11:15 (2)
	22:41		21:39		20:14		18:48			16:28	27	10:05 (3)	15:44	52	12:31 (4)
11	04:44		05:46		06:55		08:02			08:16		09:38 (3)	09:16		11:16 (2)
	22:39		21:37		20:11		18:45			16:26	26	10:04 (3)	15:43	51	12:32 (4)
12	04:46		05:49		06:58		08:04			08:18		09:39 (3)	09:18		11:16 (2)
	22:38		21:34		20:08		18:42			16:24	25	10:04 (3)	15:43	51	12:32 (4)
13	04:48		05:51		07:00		08:07			08:20		09:40 (3)	09:19		11:17 (2)
	22:37		21:32		20:05		18:39			16:21	33	10:21 (1)	15:43	51	12:33 (4)
14	04:49		05:53		07:02		08:09			08:23		09:41 (3)	09:20		11:18 (2)
	22:35		21:29		20:02		18:36			16:19	35	10:23 (1)	15:42	50	12:33 (4)
15	04:51		05:55		07:04		08:11			08:25		09:41 (3)	09:21		11:18 (2)
	22:34		21:26		20:00		18:34			16:17	37	10:24 (1)	15:42	50	12:33 (4)
16	04:53		05:58		07:06		08:14			08:27		09:42 (3)	09:22		11:19 (2)
	22:32		21:24		19:57		18:31			16:15	36	10:25 (1)	15:42	50	12:34 (4)
17	04:54		06:00		07:09		08:16			08:30		09:44 (3)	09:23		11:20 (2)
	22:31		21:21		19:54		18:28			16:13	40	12:11 (4)	15:42	50	12:35 (4)
18	04:56		06:02		07:11		08:18		09:42 (26)	08:32		09:45 (3)	09:24		11:19 (2)
	22:29		21:19		19:51		18:25	7	09:49 (26)	16:11	45	12:14 (4)	15:42	49	12:34 (4)
19	04:58		06:04		07:13		08:21		09:39 (26)	08:34		09:47 (3)	09:25		11:20 (2)
	22:27		21:16		19:48		18:23	13	09:52 (26)	16:10	48	12:17 (4)	15:42	50	12:35 (4)
20	05:00		06:06		07:15		08:23		09:37 (26)	08:37		09:51 (3)	09:26		11:21 (2)
	22:26		21:13		19:45		18:20	16	09:53 (26)	16:08	44	12:19 (4)	15:43	50	12:36 (4)
21	05:02		06:09		07:17		08:25		09:36 (26)	08:39		10:08 (1)	09:26		11:22 (2)
	22:24		21:10		19:42		18:17	18	09:54 (26)	16:06	42	12:20 (4)	15:43	49	12:36 (4)
22	05:04		06:11		07:20		08:28		09:35 (26)	08:41		10:09 (1)	09:27		11:22 (2)
	22:22		21:08		19:39		18:15	19	09:54 (26)	16:04	42	12:21 (4)	15:44	49	12:36 (4)
23	05:06		06:13		07:22		08:30		09:35 (26)	08:43		10:08 (1)	09:27		11:22 (2)
	22:20		21:05		19:36		18:12	20	09:55 (26)	16:03	54	12:22 (4)	15:44	49	12:36 (4)
24	05:08		06:15		07:24		08:32		09:34 (26)	08:45		10:09 (1)	09:28		11:23 (2)
	22:18		21:02		19:33		18:09	21	09:55 (26)	16:01	58	12:23 (4)	15:45	50	12:38 (4)
25	05:10		06:18		07:26		07:35		08:34 (26)	08:48		10:09 (1)	09:28		11:23 (2)
	22:16		20:59		19:31		17:07	21	08:55 (26)	15:59	61	12:24 (4)	15:45	49	12:38 (4)
26	05:12		06:20		07:28		07:37		08:34 (26)	08:50		10:10 (1)	09:28		11:24 (2)
	22:14		20:57		19:28		17:04	21	08:55 (26)	15:58	62	12:25 (4)	15:46	49	12:38 (4)
27	05:14		06:22		07:31		07:40		08:34 (26)	08:52		10:11 (1)	09:29		11:24 (2)
	22:12		20:54		19:25		17:02	20	08:54 (26)	15:57	63	12:25 (4)	15:47	50	12:39 (4)
28	05:16		06:24		07:33		07:42		08:35 (26)	08:54		10:12 (1)	09:29		11:25 (2)
	22:10		20:51		19:22		16:59	19	08:54 (26)	15:55	63	12:26 (4)	15:48	50	12:40 (4)
29	05:18		06:27		07:35		07:44		08:36 (26)	08:56		10:13 (1)	09:29		11:24 (2)
	22:08		20:48		19:19		16:56	21	09:53 (3)	15:54	64	12:26 (4)	15:49	50	12:39 (4)
30	05:20		06:29		07:37		07:47		08:36 (26)	08:58		10:13 (1)	09:28		11:25 (2)
	22:05		20:45		19:16		16:54	29	09:57 (3)	15:53	65	12:27 (4)	15:50	50	12:40 (4)
31	05:22		06:31				07:49		08:38 (26)				09:28		11:26 (2)
	22:03		20:43				16:51	29	09:59 (3)				15:51	51	12:41 (4)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								274			1200			1601	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,69			0,64	
Total reduction								0,29			0,27			0,26	
Total, real								80			329			411	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
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+47 21 58 60 15
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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	08:20 (4)	07:07	05:44	04:40	04:32	05:24	06:33	07:40	08:51 (4)	07:52	09:00
	15:53	16:56	18:05 13	08:33 (4)	20:17	21:26	22:31	22:49	22:01	20:40	19:13 25	09:16 (4)	16:49	15:51
2	09:28	08:44	07:33	08:18 (4)	07:04	05:42	04:39	04:33	05:27	06:36	07:42	08:49 (4)	07:54	09:02
	15:54	16:59	18:07 17	08:35 (4)	20:19	21:28	22:32	22:48	21:59	20:37	19:10 27	09:16 (4)	16:47	15:50
3	09:27	08:41	07:30	08:16 (4)	07:01	05:39	04:37	04:34	05:29	06:38	07:44	08:48 (4)	07:56	09:04
	15:56	17:01	18:10 20	08:36 (4)	20:22	21:31	22:34	22:47	21:56	20:34	19:08 28	09:16 (4)	16:44	15:49
4	09:27	08:39	07:27	08:14 (4)	06:58	05:37	04:36	04:35	05:31	06:40	07:46	08:49 (4)	07:59	09:05
	15:57	17:04	18:12 23	08:37 (4)	20:24	21:33	22:35	22:47	21:54	20:31	19:05 27	09:16 (4)	16:42	15:48
5	09:26	08:37	07:24	08:13 (4)	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:48 (4)	08:01	09:07
	15:59	17:06	18:14 25	08:38 (4)	20:26	21:35	22:37	22:46	21:52	20:28	19:02 28	09:16 (4)	16:39	15:47
6	09:25	08:35	07:22	08:12 (4)	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:47 (4)	08:04	09:09
	16:00	17:09	18:17 26	08:38 (4)	20:28	21:38	22:38	22:45	21:49	20:26	18:59 28	09:15 (4)	16:37	15:47
7	09:25	08:32	07:19	08:11 (4)	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:48 (4)	08:06	09:10
	16:02	17:11	18:19 27	08:38 (4)	20:31	21:40	22:39	22:44	21:47	20:23	18:56 27	09:15 (4)	16:35	15:46
8	09:24	08:30	07:16	08:11 (4)	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:48 (4)	08:08	09:12
	16:04	17:14	18:22 27	08:38 (4)	20:33	21:42	22:41	22:43	21:44	20:20	18:53 26	09:14 (4)	16:32	15:45
9	09:23	08:28	07:13	08:11 (4)	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:48 (4)	08:11	09:14
	16:06	17:16	18:24 28	08:39 (4)	20:35	21:44	22:42	22:42	21:42	20:17	18:50 24	09:12 (4)	16:30	15:44
10	09:22	08:25	07:10	08:11 (4)	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:50 (4)	08:13	09:15
	16:07	17:19	18:26 28	08:39 (4)	20:38	21:47	22:43	22:41	21:39	20:14	18:48 22	09:12 (4)	16:28	15:44
11	09:21	08:23	07:07	08:11 (4)	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:50 (4)	08:16	09:16
	16:09	17:21	18:29 27	08:38 (4)	20:40	21:49	22:44	22:39	21:37	20:11	18:45 20	09:10 (4)	16:26	15:43
12	09:20	08:20	07:05	08:11 (4)	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:53 (4)	08:18	09:18
	16:11	17:23	18:31 26	08:37 (4)	20:42	21:51	22:45	22:38	21:34	20:08	18:42 15	09:08 (4)	16:24	15:43
13	09:19	08:18	07:02	08:12 (4)	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:55 (4)	08:20	09:19
	16:13	17:26	18:33 24	08:36 (4)	20:45	21:53	22:46	22:37	21:32	20:05	18:39 10	09:05 (4)	16:22	15:43
14	09:17	08:15	06:59	08:12 (4)	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	18:36 23	08:35 (4)	20:47	21:56	22:47	22:35	21:29	20:03	18:36		16:19	15:42
15	09:16	08:13	06:56	08:13 (4)	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	18:38 20	08:33 (4)	20:49	21:58	22:47	22:34	21:27	20:00	18:34		16:17	15:42
16	09:15	08:10	06:53	08:15 (4)	06:24	05:09	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	18:40 15	08:30 (4)	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	06:50	08:17 (4)	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	18:43 10	08:27 (4)	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:14	15:42
18	09:12	08:05	06:47		06:19	05:04	04:27	04:56	06:02	07:11	08:18		08:32	09:24
	16:24	17:38	18:45		20:56	22:04	22:49	22:29	21:19	19:51	18:25		16:12	15:42
19	09:10	08:02	06:45		06:16	05:02	04:27	04:58	06:04	07:13	08:21		08:34	09:25
	16:26	17:41	18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23		16:10	15:43
20	09:09	08:00	06:42		06:13	05:00	04:27	05:00	06:07	07:15	08:23		08:37	09:26
	16:28	17:43	18:49		21:01	22:08	22:50	22:26	21:13	19:45	18:20		16:08	15:43
21	09:07	07:57	06:39		06:11	04:58	04:27	05:02	06:09	07:17	08:25		08:39	09:26
	16:30	17:46	18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17		16:06	15:43
22	09:05	07:55	06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28		08:41	09:27
	16:32	17:48	18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15		16:04	15:44
23	09:04	07:52	06:33		06:05	04:55	04:28	05:06	06:13	07:22	08:30		08:43	09:27
	16:35	17:50	18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12		16:03	15:44
24	09:02	07:49	06:30		06:02	04:53	04:28	05:08	06:16	07:24	08:32		08:45	09:28
	16:37	17:53	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09		16:01	15:45
25	09:00	07:46	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		08:48	09:28
	16:39	17:55	19:01		21:12	22:18	22:51	22:16	21:00	19:31	17:07		16:00	15:46
26	08:58	07:44	06:24		05:57	04:49	04:29	05:12	06:20	07:28 09:02 (4)	07:37		08:50	09:28
	16:42	17:58	19:03		21:15	22:20	22:51	22:14	20:57	19:28 6 09:08 (4)	17:04		15:58	15:46
27	08:56	07:41	06:21		05:55	04:48	04:29	05:14	06:22	07:31 08:57 (4)	07:40		08:52	09:29
	16:44	18:00	19:05		21:17	22:22	22:50	22:12	20:54	19:25 14 09:11 (4)	17:02		15:57	15:47
28	08:54	07:38 08:26 (4)	06:19		05:52	04:46	04:30	05:16	06:24	07:33 08:55 (4)	07:42		08:54	09:29
	16:47	18:03 2 08:28 (4)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 18 09:13 (4)	16:59		15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35 08:53 (4)	07:44		08:56	09:29
	16:49		20:10		21:21	22:26	22:50	22:08	20:48	19:19 21 09:14 (4)	16:57		15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37 08:52 (4)	07:47		08:58	09:28
	16:51		20:12		21:24	22:27	22:49	22:05	20:46	19:16 24 09:16 (4)	16:54		15:53	15:50
31	08:48		07:10			04:41		05:22	06:31		07:49			09:28
	16:54		20:15			22:29		22:03	20:43		16:52			15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case		2	379						83	307		
Sun reduction		0,50	0,50						0,50	0,50		
Oper. time red.		0,80	0,80						0,80	0,80		
Wind dir. red.		0,72	0,72						0,72	0,72		
Total reduction		0,29	0,29						0,29	0,29		
Total, real		1	109						24	88		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (28)	08:46	10:00 (32)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (32)	09:00	10:51 (27)	
	15:53	20 12:41 (28)	16:56	20 10:20 (32)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (32)	15:51	28 12:23 (28)	
2	09:28	12:22 (28)	08:44	09:59 (32)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (32)	09:02	10:51 (27)	
	15:54	19 12:41 (28)	16:58	21 10:20 (32)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (32)	15:50	30 12:24 (28)	
3	09:27	12:22 (28)	08:41	10:00 (32)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (32)	09:04	10:52 (27)	
	15:55	19 12:41 (28)	17:01	20 10:20 (32)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (32)	15:49	29 12:25 (28)	
4	09:27	11:12 (27)	08:39	10:00 (32)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (32)	09:05	10:53 (27)	
	15:57	22 12:41 (28)	17:03	20 10:20 (32)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (32)	15:48	30 12:26 (28)	
5	09:26	11:11 (27)	08:37	10:01 (32)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (32)	09:07	10:54 (27)	
	15:58	26 12:42 (28)	17:06	19 10:20 (32)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (32)	15:47	29 12:27 (28)	
6	09:25	11:10 (27)	08:35	10:01 (32)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (32)	09:09	10:56 (27)	
	16:00	28 12:42 (28)	17:08	18 10:19 (32)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (32)	15:46	28 12:28 (28)	
7	09:25	11:09 (27)	08:32	10:01 (32)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (32)	09:10	10:58 (27)	
	16:02	29 12:42 (28)	17:11	17 10:18 (32)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (32)	15:45	26 12:29 (28)	
8	09:24	11:09 (27)	08:30	10:03 (32)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (32)	09:12	11:00 (27)	
	16:03	30 12:42 (28)	17:13	15 10:18 (32)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (32)	15:45	23 12:30 (28)	
9	09:23	11:09 (27)	08:27	10:04 (32)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (32)	09:13	12:11 (28)	
	16:05	30 12:42 (28)	17:16	12 10:16 (32)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (32)	15:44	19 12:30 (28)	
10	09:22	11:08 (27)	08:25	10:07 (32)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (32)	09:15	12:11 (28)	
	16:07	30 12:41 (28)	17:18	5 10:12 (32)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (32)	15:44	19 12:30 (28)	
11	09:21	11:09 (27)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (32)	09:16	12:11 (28)	
	16:09	28 12:41 (28)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (32)	15:43	20 12:31 (28)	
12	09:20	11:08 (27)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (32)	09:18	12:11 (28)	
	16:11	27 12:40 (28)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (27)	15:43	20 12:31 (28)	
13	09:19	11:08 (27)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (32)	09:19	12:12 (28)	
	16:13	25 12:39 (28)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (27)	15:42	21 12:33 (28)	
14	09:17	11:08 (27)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (32)	09:20	12:12 (28)	
	16:15	20 11:28 (27)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (27)	15:42	21 12:33 (28)	
15	09:16	11:08 (27)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (32)	09:21	12:12 (28)	
	16:17	21 11:29 (27)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (27)	15:42	21 12:33 (28)	
16	09:15	11:08 (27)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (32)	09:22	12:13 (28)	
	16:19	21 11:29 (27)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (27)	15:42	20 12:33 (28)	
17	09:13	11:09 (27)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (32)	09:23	12:14 (28)	
	16:21	22 11:31 (27)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (27)	15:42	21 12:35 (28)	
18	09:12	11:09 (27)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (27)	09:24	12:14 (28)	
	16:23	22 11:31 (27)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (27)	15:42	21 12:35 (28)	
19	09:10	11:09 (27)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (27)	09:25	12:14 (28)	
	16:25	22 11:31 (27)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (27)	15:42	21 12:35 (28)	
20	09:09	11:09 (27)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (27)	09:26	12:15 (28)	
	16:28	23 11:32 (27)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (27)	15:43	21 12:36 (28)	
21	09:07	11:09 (27)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (27)	09:26	12:16 (28)	
	16:30	23 11:32 (27)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (27)	15:43	21 12:37 (28)	
22	09:05	11:10 (27)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (27)	09:27	12:16 (28)	
	16:32	22 11:32 (27)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (27)	15:43	21 12:37 (28)	
23	09:03	11:10 (27)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (27)	09:27	12:16 (28)	
	16:34	22 11:32 (27)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (27)	15:44	21 12:37 (28)	
24	09:02	11:10 (27)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (27)	09:28	12:17 (28)	
	16:37	22 11:32 (27)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (27)	15:45	21 12:38 (28)	
25	09:00	10:04 (32)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (27)	09:28	12:17 (28)	
	16:39	28 11:32 (27)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (27)	15:45	21 12:38 (28)	
26	08:58	10:03 (32)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (27)	09:28	12:18 (28)	
	16:42	31 11:32 (27)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (27)	15:46	21 12:39 (28)	
27	08:56	10:02 (32)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (27)	09:28	12:18 (28)	
	16:44	31 11:31 (27)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (27)	15:47	21 12:39 (28)	
28	08:54	10:00 (32)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (27)	09:29	12:19 (28)	
	16:46	32 11:30 (27)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (27)	15:48	21 12:40 (28)	
29	08:52	10:00 (32)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (27)	09:29	12:19 (28)	
	16:49	31 11:29 (27)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (28)	15:49	21 12:40 (28)	
30	08:50	09:59 (32)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (27)	09:28	12:20 (28)	
	16:51	27 11:26 (27)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (28)	15:50	20 12:40 (28)	
31	08:48	09:59 (32)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (28)	
	16:54	20 10:19 (32)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (28)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06		05:44	04:40
	15:53	16:56		18:04		20:16		21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58	19:38 (67)	05:36	04:36
	15:57	17:03		18:12		20:23	2 19:40 (67)	21:32	22:34
5	09:25	08:36		07:24		06:55	19:34 (67)	05:34	04:35
	15:58	17:06		18:14		20:25	8 19:42 (67)	21:35	22:36
6	09:25	08:34		07:21		06:52	19:32 (67)	05:31	04:34
	16:00	17:08		18:16		20:28	11 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:31 (67)	05:29	04:33
	16:02	17:11		18:19		20:30	12 19:43 (67)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:31 (67)	05:26	04:32
	16:03	17:13		18:21		20:32	13 19:44 (67)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:31 (67)	05:24	04:31
	16:05	17:16		18:23		20:35	12 19:43 (67)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:31 (67)	05:22	04:30
	16:07	17:18		18:26		20:37	11 19:42 (67)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:32 (67)	05:19	04:30
	16:09	17:21		18:28		20:39	8 19:40 (67)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:34 (67)	05:17	04:29
	16:11	17:23		18:30		20:42	4 19:38 (67)	21:50	22:44
13	09:18	08:17		07:01		06:32		05:15	04:28
	16:13	17:25		18:33		20:44		21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27	19:48 (66)	05:10	04:27
	16:17	17:30		18:37		20:48	9 19:57 (66)	21:57	22:47
16	09:14	08:10	16:48 (70)	06:53		06:24	19:47 (66)	05:08	04:27
	16:19	17:33	1 16:49 (70)	18:40		20:51	13 20:00 (66)	21:59	22:47
17	09:13	08:07	16:44 (70)	06:50		06:21	19:45 (66)	05:06	04:27
	16:21	17:35	8 16:52 (70)	18:42		20:53	15 20:00 (66)	22:01	22:48
18	09:11	08:04	16:42 (70)	06:47		06:18	19:44 (66)	05:04	04:27
	16:23	17:38	12 16:54 (70)	18:44		20:55	16 20:00 (66)	22:03	22:48
19	09:09	08:02	16:41 (70)	06:44		06:16	19:44 (66)	05:02	04:27
	16:25	17:40	13 16:54 (70)	18:47		20:58	17 20:01 (66)	22:05	22:49
20	09:08	07:59	16:42 (70)	06:41		06:13	19:43 (66)	05:00	04:27
	16:28	17:43	13 16:55 (70)	18:49		21:00	18 20:01 (66)	22:08	22:49
21	09:06	07:57	16:41 (70)	06:38	18:02 (69)	06:10	19:42 (66)	04:58	04:27
	16:30	17:45	14 16:55 (70)	18:51	2 18:04 (69)	21:02	18 20:00 (66)	22:10	22:49
22	09:05	07:54	16:41 (70)	06:35	17:58 (69)	06:07	19:43 (66)	04:56	04:27
	16:32	17:48	13 16:54 (70)	18:53	9 18:07 (69)	21:05	17 20:00 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32	17:56 (69)	06:05	19:43 (66)	04:54	04:27
	16:34	17:50	11 16:53 (70)	18:56	12 18:08 (69)	21:07	16 19:59 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30	17:55 (69)	06:02	19:44 (66)	04:52	04:28
	16:37	17:52	9 16:52 (70)	18:58	14 18:09 (69)	21:09	15 19:59 (66)	22:16	22:50
25	08:59	07:46	16:45 (70)	06:27	17:54 (69)	05:59	19:45 (66)	04:51	04:28
	16:39	17:55	4 16:49 (70)	19:00	15 18:09 (69)	21:12	12 19:57 (66)	22:17	22:50
26	08:57	07:43		06:24	17:53 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57		19:03	15 18:08 (69)	21:14	8 19:55 (66)	22:19	22:50
27	08:55	07:40		06:21	17:54 (69)	05:54		04:47	04:29
	16:44	18:00		19:05	15 18:09 (69)	21:16		22:21	22:49
28	08:53	07:38		06:18	17:55 (69)	05:51		04:46	04:30
	16:46	18:02		19:07	13 18:08 (69)	21:18		22:23	22:49
29	08:51			07:15	18:55 (69)	05:49		04:44	04:30
	16:49			20:09	11 19:06 (69)	21:21		22:25	22:49
30	08:49			07:12	18:57 (69)	05:46		04:43	04:31
	16:51			20:12	6 19:03 (69)	21:23		22:26	22:48
31	08:47			07:09				04:41	
	16:53			20:14				22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			98		112		255		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,62		0,69		
Total reduction			0,23		0,25		0,27		
Total, real			22		28		70		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August		September		October		November	December
1	04:32	05:24		06:33	19:31 (67)	07:39		07:51	08:59
	22:48	22:00		20:39	8 19:39 (67)	19:13		16:49	15:51
2	04:33	05:26		06:35	19:29 (67)	07:41		07:53	09:01
	22:47	21:58		20:36	11 19:40 (67)	19:10		16:46	15:50
3	04:34	05:28		06:37	19:29 (67)	07:43		07:56	09:03
	22:47	21:56		20:34	12 19:41 (67)	19:07		16:44	15:49
4	04:35	05:31		06:39	19:28 (67)	07:46		07:58	09:05
	22:46	21:53		20:31	13 19:41 (67)	19:04		16:41	15:48
5	04:36	05:33		06:42	19:28 (67)	07:48		08:00	09:06
	22:45	21:51		20:28	12 19:40 (67)	19:01		16:39	15:47
6	04:37	05:35		06:44	19:28 (67)	07:50		08:03	09:08
	22:44	21:48		20:25	11 19:39 (67)	18:58		16:37	15:46
7	04:39	05:37		06:46	19:29 (67)	07:52		08:05	09:10
	22:43	21:46		20:22	8 19:37 (67)	18:56		16:34	15:45
8	04:40	05:39		06:48	19:31 (67)	07:55		08:08	09:11
	22:42	21:44		20:19	3 19:34 (67)	18:53		16:32	15:45
9	04:41	05:42		06:50		07:57		08:10	09:13
	22:41	21:41		20:16		18:50		16:30	15:44
10	04:43	05:44		06:53		07:59		08:12	09:14
	22:40	21:39		20:13		18:47		16:28	15:44
11	04:44	05:46		06:55		08:02		08:15	09:16
	22:39	21:36		20:11		18:44		16:25	15:43
12	04:46	05:48		06:57		08:04		08:17	09:17
	22:37	21:34		20:08		18:42		16:23	15:43
13	04:47	05:50		06:59	18:49 (69)	08:06		08:20	09:18
	22:36	21:31		20:05	5 18:54 (69)	18:39		16:21	15:42
14	04:49	05:53		07:01	18:46 (69)	08:08		08:22	09:19
	22:34	21:28		20:02	10 18:56 (69)	18:36		16:19	15:42
15	04:51	05:55		07:04	18:44 (69)	08:11		08:24	09:20
	22:33	21:26		19:59	13 18:57 (69)	18:33		16:17	15:42
16	04:52	05:57	19:56 (66)	07:06	18:43 (69)	08:13		08:27	09:21
	22:31	21:23	4 20:00 (66)	19:56	14 18:57 (69)	18:30		16:15	15:42
17	04:54	05:59	19:53 (66)	07:08	18:42 (69)	08:15	17:16 (70)	08:29	09:22
	22:30	21:21	9 20:02 (66)	19:53	15 18:57 (69)	18:28	6 17:22 (70)	16:13	15:42
18	04:56	06:02	19:51 (66)	07:10	18:41 (69)	08:18	17:14 (70)	08:31	09:23
	22:28	21:18	13 20:04 (66)	19:50	15 18:56 (69)	18:25	10 17:24 (70)	16:11	15:42
19	04:58	06:04	19:49 (66)	07:12	18:42 (69)	08:20	17:13 (70)	08:34	09:24
	22:26	21:15	15 20:04 (66)	19:47	14 18:56 (69)	18:22	12 17:25 (70)	16:09	15:42
20	05:00	06:06	19:48 (66)	07:15	18:42 (69)	08:22	17:12 (70)	08:36	09:25
	22:25	21:12	17 20:05 (66)	19:44	13 18:55 (69)	18:20	14 17:26 (70)	16:08	15:43
21	05:01	06:08	19:48 (66)	07:17	18:43 (69)	08:25	17:12 (70)	08:38	09:26
	22:23	21:10	17 20:05 (66)	19:42	10 18:53 (69)	18:17	13 17:25 (70)	16:06	15:43
22	05:03	06:11	19:47 (66)	07:19	18:45 (69)	08:27	17:12 (70)	08:40	09:26
	22:21	21:07	18 20:05 (66)	19:39	5 18:50 (69)	18:14	13 17:25 (70)	16:04	15:43
23	05:05	06:13	19:48 (66)	07:21		08:29	17:12 (70)	08:43	09:27
	22:19	21:04	18 20:06 (66)	19:36		18:12	12 17:24 (70)	16:02	15:44
24	05:07	06:15	19:48 (66)	07:23		08:32	17:13 (70)	08:45	09:27
	22:17	21:02	17 20:05 (66)	19:33		18:09	10 17:23 (70)	16:01	15:45
25	05:09	06:17	19:48 (66)	07:26		07:34	16:14 (70)	08:47	09:27
	22:15	20:59	16 20:04 (66)	19:30		17:06	7 16:21 (70)	15:59	15:45
26	05:11	06:20	19:48 (66)	07:28		07:37		08:49	09:28
	22:13	20:56	15 20:03 (66)	19:27		17:04		15:58	15:46
27	05:13	06:22	19:49 (66)	07:30		07:39		08:51	09:28
	22:11	20:53	12 20:01 (66)	19:24		17:01		15:56	15:47
28	05:16	06:24	19:50 (66)	07:32		07:41		08:53	09:28
	22:09	20:50	9 19:59 (66)	19:21		16:59		15:55	15:48
29	05:18	06:26		07:35		07:44		08:55	09:28
	22:07	20:48		19:18		16:56		15:54	15:49
30	05:20	06:28		07:37		07:46		08:57	09:28
	22:05	20:45		19:16		16:54		15:52	15:50
31	05:22	06:31	19:33 (67)			07:48			09:27
	22:02	20:42	5 19:38 (67)			16:51			15:51
Potential sun hours	545	478		386		319		236	200
Total, worst case			185		192		97		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,69		0,65		0,57		
Total reduction			0,28		0,26		0,23		
Total, real			51		49		22		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06	19:00 (69)	05:44	04:40
	15:53	16:56		18:04		20:16	4 19:04 (69)	21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58		05:36	04:36
	15:57	17:03		18:12		20:23		21:32	22:34
5	09:25	08:36		07:24		06:55		05:34	04:35
	15:58	17:06		18:14		20:25		21:35	22:36
6	09:25	08:34		07:21		06:52	19:37 (67)	05:31	04:34
	16:00	17:08		18:16		20:28	6 19:43 (67)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:35 (67)	05:29	04:33
	16:02	17:11		18:19		20:30	10 19:45 (67)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:34 (67)	05:26	04:32
	16:03	17:13		18:21		20:32	12 19:46 (67)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:33 (67)	05:24	04:31
	16:05	17:16		18:23		20:35	13 19:46 (67)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:33 (67)	05:22	04:30
	16:07	17:18		18:26		20:37	12 19:45 (67)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:33 (67)	05:19	04:30
	16:09	17:21		18:28		20:39	11 19:44 (67)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:33 (67)	05:17	04:29
	16:11	17:23		18:30		20:42	10 19:43 (67)	21:50	22:44
13	09:18	08:17		07:01		06:32	19:35 (67)	05:15	04:28
	16:13	17:25		18:33		20:44	7 19:42 (67)	21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27		05:10	04:27
	16:17	17:30		18:37		20:48		21:57	22:47
16	09:14	08:10		06:53		06:24		05:08	04:27
	16:19	17:33		18:40		20:51		21:59	22:47
17	09:13	08:07		06:50		06:21	19:53 (66)	05:06	04:27
	16:21	17:35		18:42		20:53	8 20:01 (66)	22:01	22:48
18	09:11	08:04	16:45 (70)	06:47		06:18	19:50 (66)	05:04	04:27
	16:23	17:38	8 16:53 (70)	18:44		20:55	12 20:02 (66)	22:03	22:48
19	09:09	08:02	16:43 (70)	06:44		06:16	19:49 (66)	05:02	04:27
	16:25	17:40	12 16:55 (70)	18:47		20:58	15 20:04 (66)	22:05	22:49
20	09:08	07:59	16:43 (70)	06:41		06:13	19:48 (66)	05:00	04:27
	16:28	17:43	13 16:56 (70)	18:49		21:00	16 20:04 (66)	22:08	22:49
21	09:06	07:57	16:43 (70)	06:38		06:10	19:46 (66)	04:58	04:27
	16:30	17:45	13 16:56 (70)	18:51		21:02	18 20:04 (66)	22:10	22:49
22	09:05	07:54	16:42 (70)	06:35		06:07	19:47 (66)	04:56	04:27
	16:32	17:48	14 16:56 (70)	18:53		21:05	17 20:04 (66)	22:12	22:50
23	09:03	07:51	16:42 (70)	06:32	18:01 (69)	06:05	19:46 (66)	04:54	04:27
	16:34	17:50	13 16:55 (70)	18:56	7 18:08 (69)	21:07	18 20:04 (66)	22:14	22:50
24	09:01	07:49	16:43 (70)	06:30	17:59 (69)	06:02	19:46 (66)	04:52	04:28
	16:37	17:52	11 16:54 (70)	18:58	11 18:10 (69)	21:09	18 20:04 (66)	22:16	22:50
25	08:59	07:46	16:44 (70)	06:27	17:57 (69)	05:59	19:46 (66)	04:51	04:28
	16:39	17:55	9 16:53 (70)	19:00	14 18:11 (69)	21:12	17 20:03 (66)	22:17	22:50
26	08:57	07:43	16:47 (70)	06:24	17:56 (69)	05:57	19:47 (66)	04:49	04:28
	16:41	17:57	4 16:51 (70)	19:03	15 18:11 (69)	21:14	16 20:03 (66)	22:19	22:50
27	08:55	07:40		06:21	17:56 (69)	05:54	19:47 (66)	04:47	04:29
	16:44	18:00		19:05	16 18:12 (69)	21:16	14 20:01 (66)	22:21	22:49
28	08:53	07:38		06:18	17:56 (69)	05:51	19:49 (66)	04:46	04:30
	16:46	18:02		19:07	15 18:11 (69)	21:18	11 20:00 (66)	22:23	22:49
29	08:51			07:15	18:56 (69)	05:49	19:50 (66)	04:44	04:30
	16:49			20:09	14 19:10 (69)	21:21	7 19:57 (66)	22:25	22:49
30	08:49			07:12	18:56 (69)	05:46		04:43	04:31
	16:51			20:12	13 19:09 (69)	21:23		22:26	22:48
31	08:47			07:09	18:57 (69)			04:41	
	16:53			20:14	10 19:07 (69)			22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			97		115		272		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,63		0,69		
Total reduction			0,23		0,25		0,28		
Total, real			22		29		75		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:32 (67)	07:39			07:51	08:59
	22:48	22:00			20:39	11	19:43 (67)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:31 (67)	07:41			07:53	09:01
	22:47	21:58			20:36	12	19:43 (67)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:31 (67)	07:43			07:56	09:03
	22:47	21:56			20:34	13	19:44 (67)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:31 (67)	07:46			07:58	09:05
	22:46	21:53			20:31	12	19:43 (67)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:32 (67)	07:48			08:00	09:06
	22:45	21:51			20:28	10	19:42 (67)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:33 (67)	07:50			08:03	09:08
	22:44	21:48			20:25	7	19:40 (67)	18:58			16:37	15:46
7	04:39	05:37			06:46			07:52			08:05	09:10
	22:43	21:46			20:22			18:56			16:34	15:45
8	04:40	05:39			06:48			07:55			08:08	09:11
	22:42	21:44			20:19			18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55		18:54 (69)	08:02			08:15	09:16
	22:39	21:36			20:11	1	18:55 (69)	18:44			16:25	15:43
12	04:46	05:48			06:57		18:50 (69)	08:04			08:17	09:17
	22:37	21:34			20:08	9	18:59 (69)	18:42			16:23	15:43
13	04:47	05:50			06:59		18:48 (69)	08:06			08:20	09:18
	22:36	21:31			20:05	12	19:00 (69)	18:39			16:21	15:42
14	04:49	05:53		19:58 (66)	07:01		18:47 (69)	08:08			08:22	09:19
	22:34	21:28	8	20:06 (66)	20:02	14	19:01 (69)	18:36			16:19	15:42
15	04:51	05:55		19:56 (66)	07:04		18:46 (69)	08:11			08:24	09:20
	22:33	21:26	12	20:08 (66)	19:59	15	19:01 (69)	18:33			16:17	15:42
16	04:52	05:57		19:54 (66)	07:06		18:45 (69)	08:13		17:18 (70)	08:27	09:21
	22:31	21:23	15	20:09 (66)	19:56	15	19:00 (69)	18:30	7	17:25 (70)	16:15	15:42
17	04:54	05:59		19:53 (66)	07:08		18:45 (69)	08:15		17:15 (70)	08:29	09:22
	22:30	21:21	16	20:09 (66)	19:53	14	18:59 (69)	18:28	11	17:26 (70)	16:13	15:42
18	04:56	06:02		19:52 (66)	07:10		18:45 (69)	08:18		17:14 (70)	08:31	09:23
	22:28	21:18	18	20:10 (66)	19:50	13	18:58 (69)	18:25	13	17:27 (70)	16:11	15:42
19	04:58	06:04		19:52 (66)	07:12		18:46 (69)	08:20		17:13 (70)	08:34	09:24
	22:26	21:15	18	20:10 (66)	19:47	12	18:58 (69)	18:22	14	17:27 (70)	16:09	15:42
20	05:00	06:06		19:51 (66)	07:15		18:47 (69)	08:22		17:13 (70)	08:36	09:25
	22:25	21:12	18	20:09 (66)	19:44	8	18:55 (69)	18:20	14	17:27 (70)	16:08	15:43
21	05:01	06:08		19:51 (66)	07:17			08:25		17:13 (70)	08:38	09:26
	22:23	21:10	18	20:09 (66)	19:42			18:17	13	17:26 (70)	16:06	15:43
22	05:03	06:11		19:51 (66)	07:19			08:27		17:14 (70)	08:40	09:26
	22:21	21:07	17	20:08 (66)	19:39			18:14	12	17:26 (70)	16:04	15:43
23	05:05	06:13		19:52 (66)	07:21			08:29		17:14 (70)	08:43	09:27
	22:19	21:04	17	20:09 (66)	19:36			18:12	10	17:24 (70)	16:02	15:44
24	05:07	06:15		19:53 (66)	07:23			08:32		17:16 (70)	08:45	09:27
	22:17	21:02	14	20:07 (66)	19:33			18:09	7	17:23 (70)	16:01	15:45
25	05:09	06:17		19:54 (66)	07:26			07:34			08:47	09:27
	22:15	20:59	12	20:06 (66)	19:30			17:06			15:59	15:45
26	05:11	06:20		19:56 (66)	07:28			07:37			08:49	09:28
	22:13	20:56	7	20:03 (66)	19:27			17:04			15:58	15:46
27	05:13	06:22			07:30			07:39			08:51	09:28
	22:11	20:53			19:24			17:01			15:56	15:47
28	05:16	06:24			07:32			07:41			08:53	09:28
	22:09	20:50			19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28		19:35 (67)	07:37			07:46			08:57	09:28
	22:05	20:45	7	19:42 (67)	19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (67)				07:48				09:27
	22:02	20:42	10	19:43 (67)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			207			178			101			
Sun reduction			0,50			0,50			0,50			
Oper. time red.			0,80			0,80			0,80			
Wind dir. red.			0,69			0,65			0,57			
Total reduction			0,28			0,26			0,23			
Total, real			57			46			23			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 4.2

Grafisk Moifjellet og Mellomstrand vindkraftverk

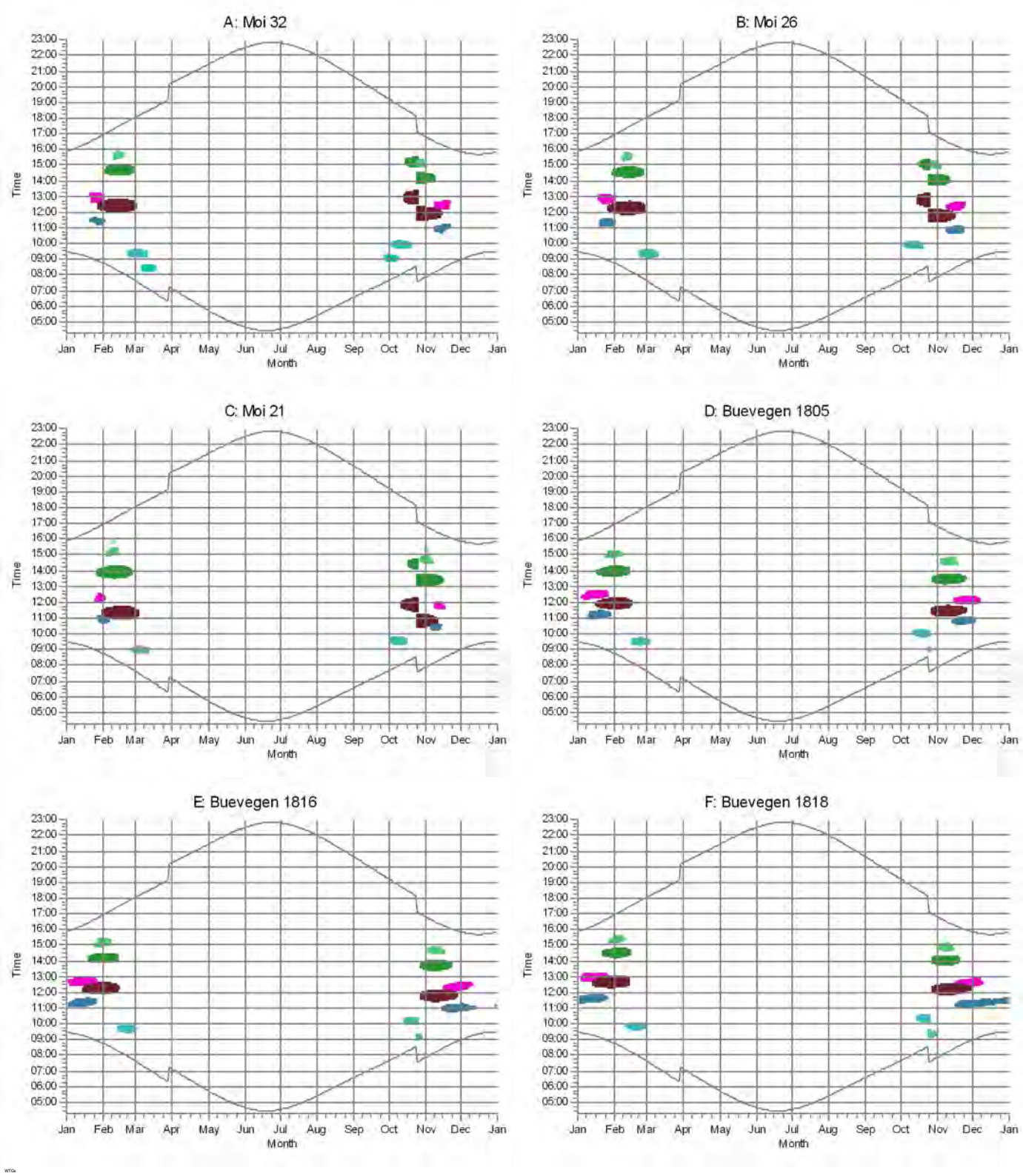
Med nærliggende – realistic case

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

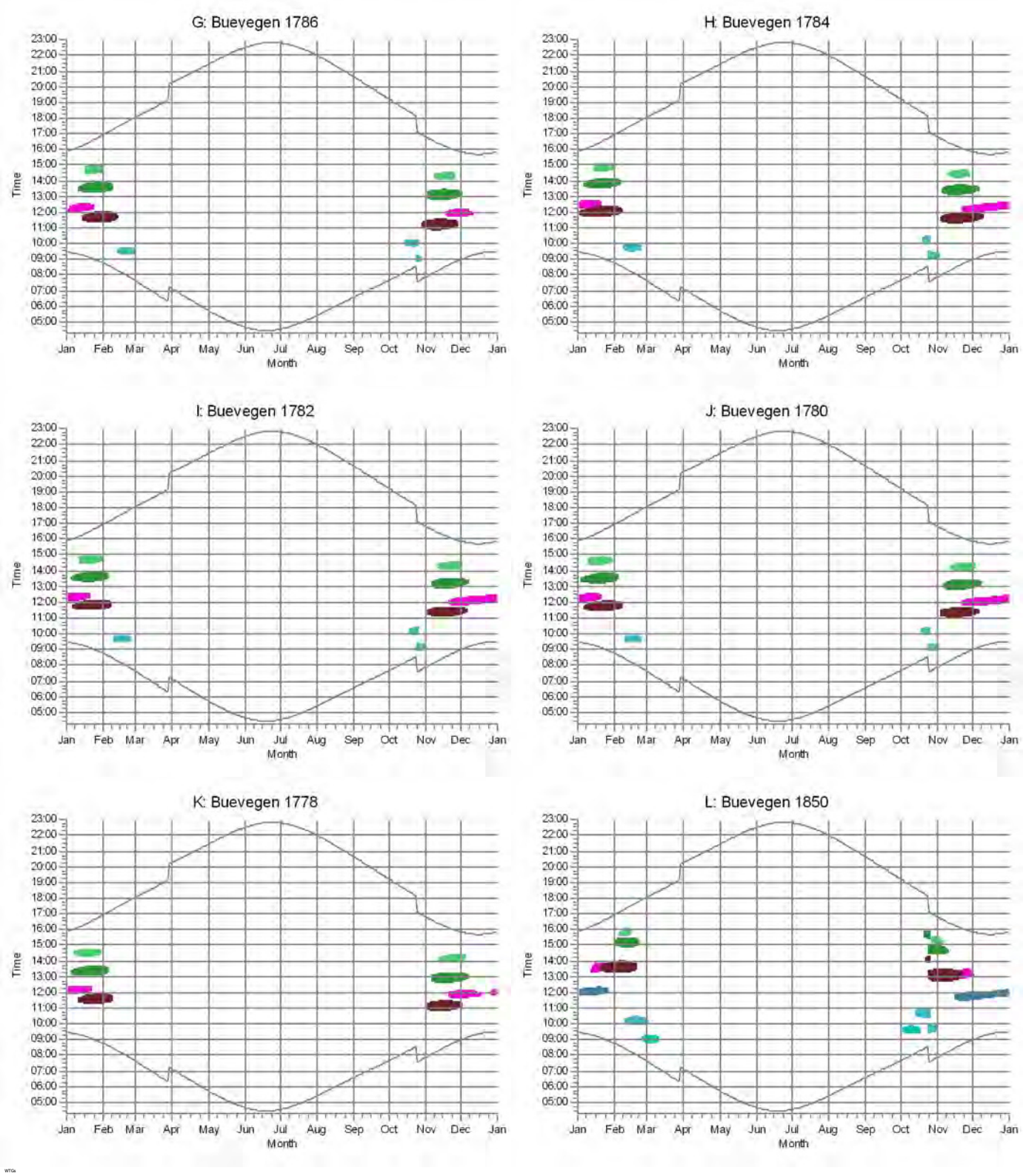


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

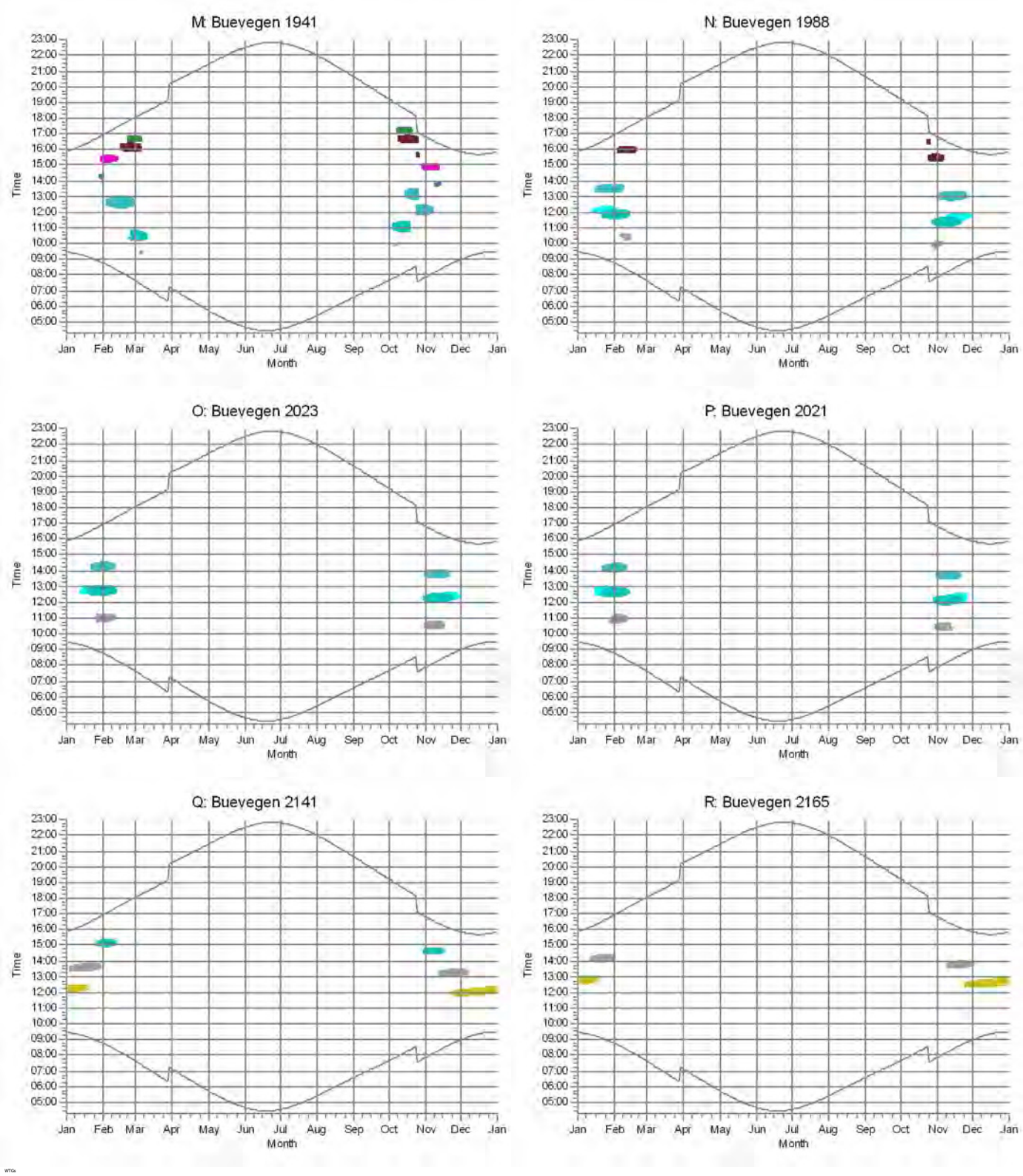


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

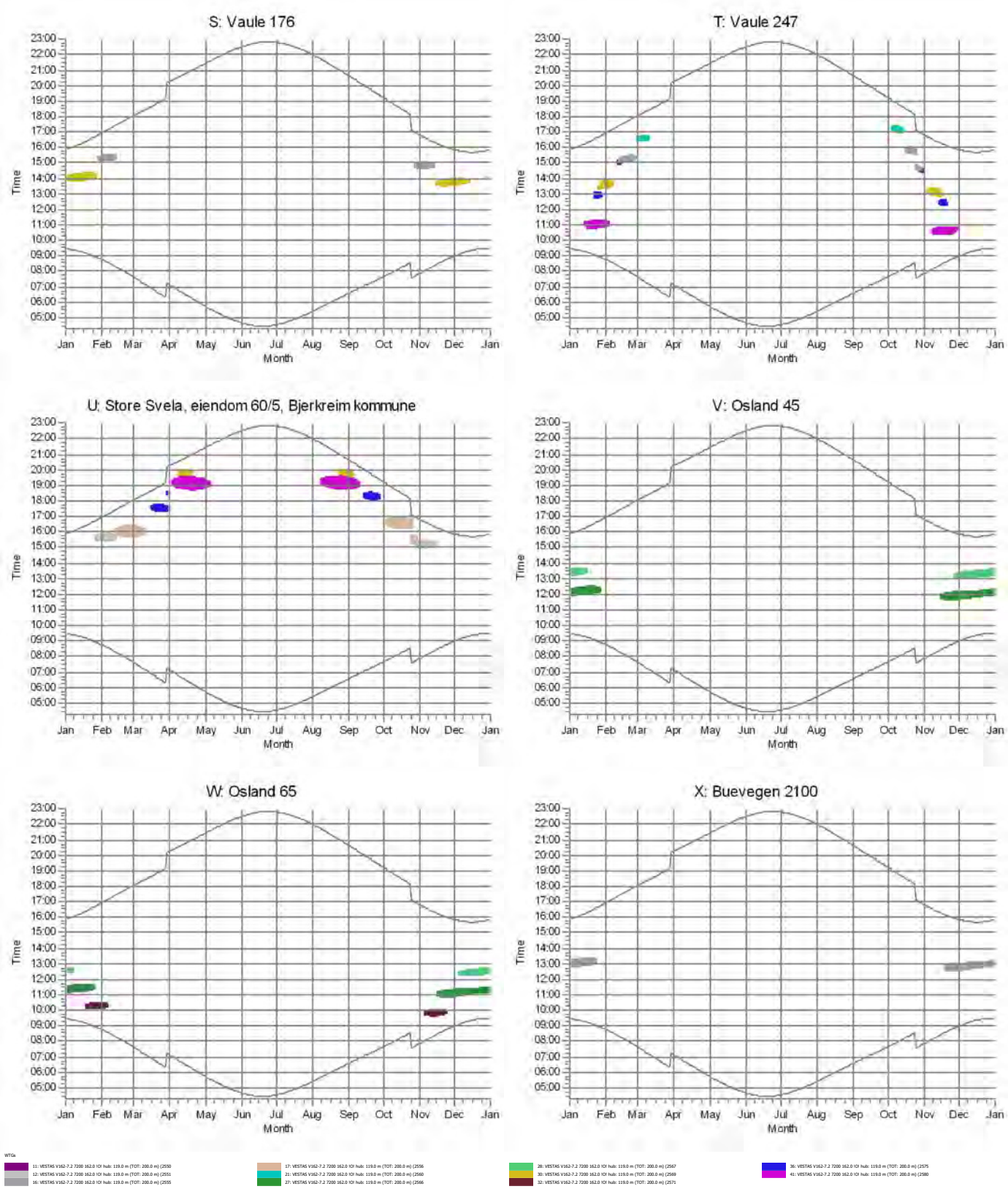


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

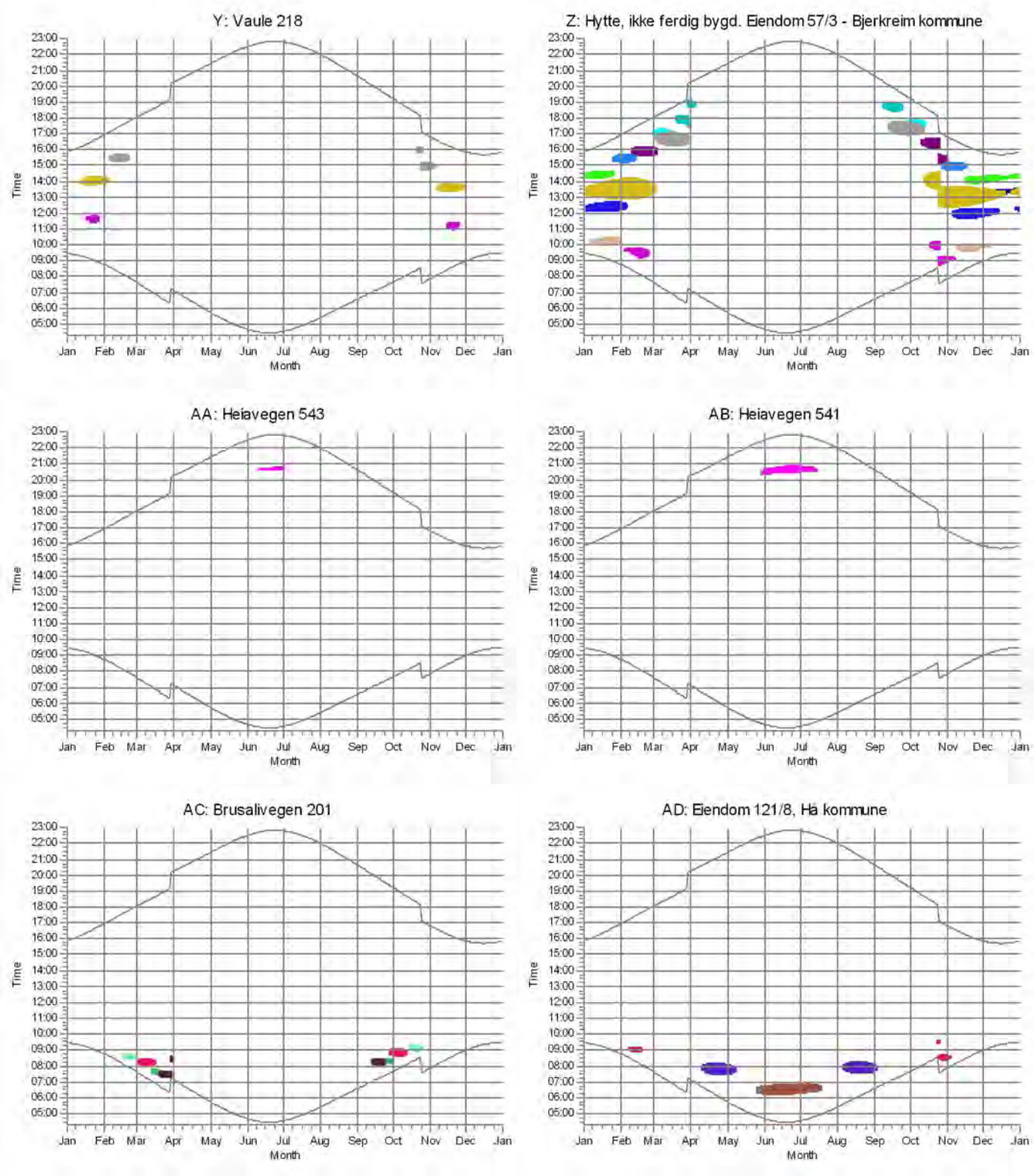


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

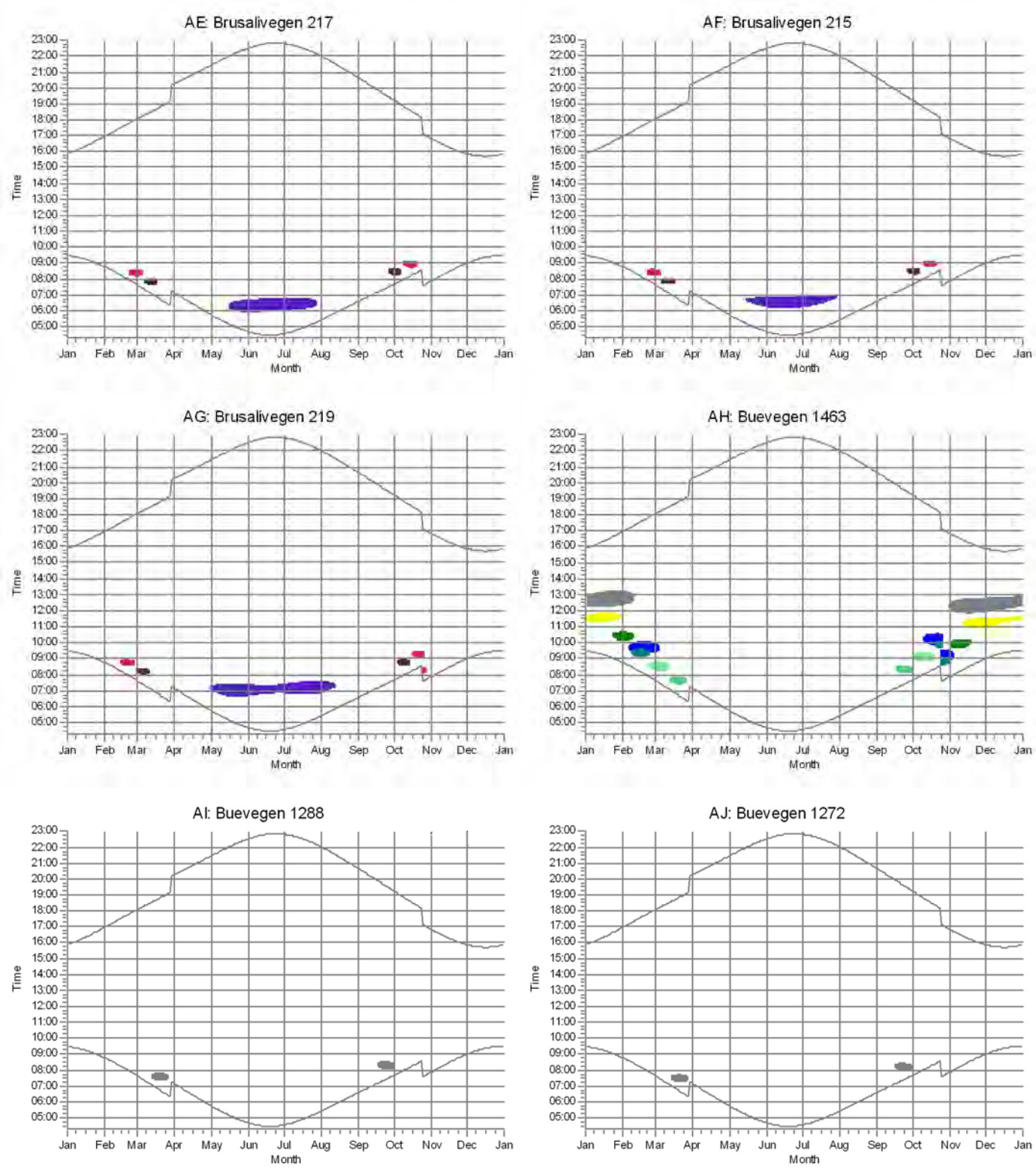


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

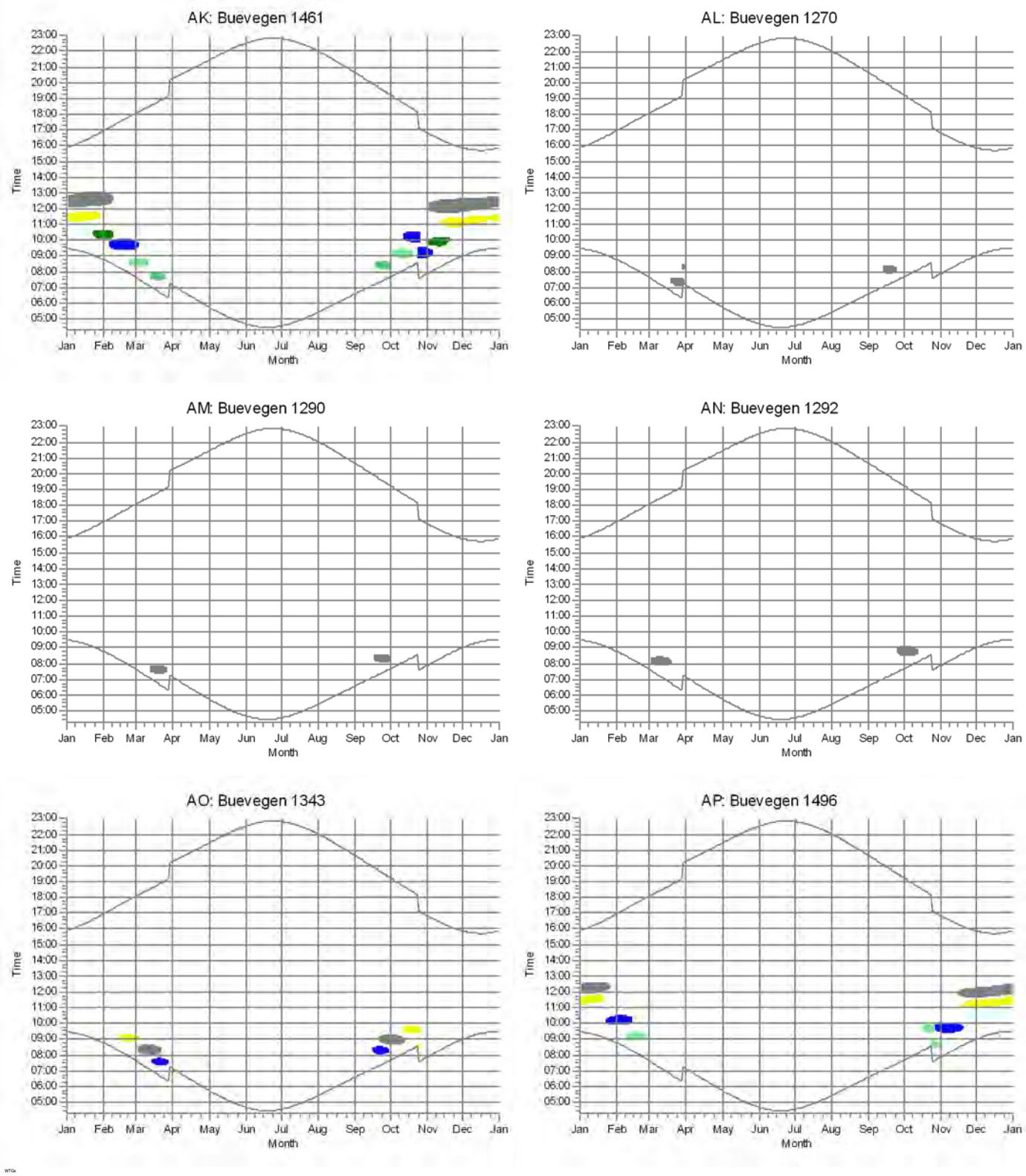


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

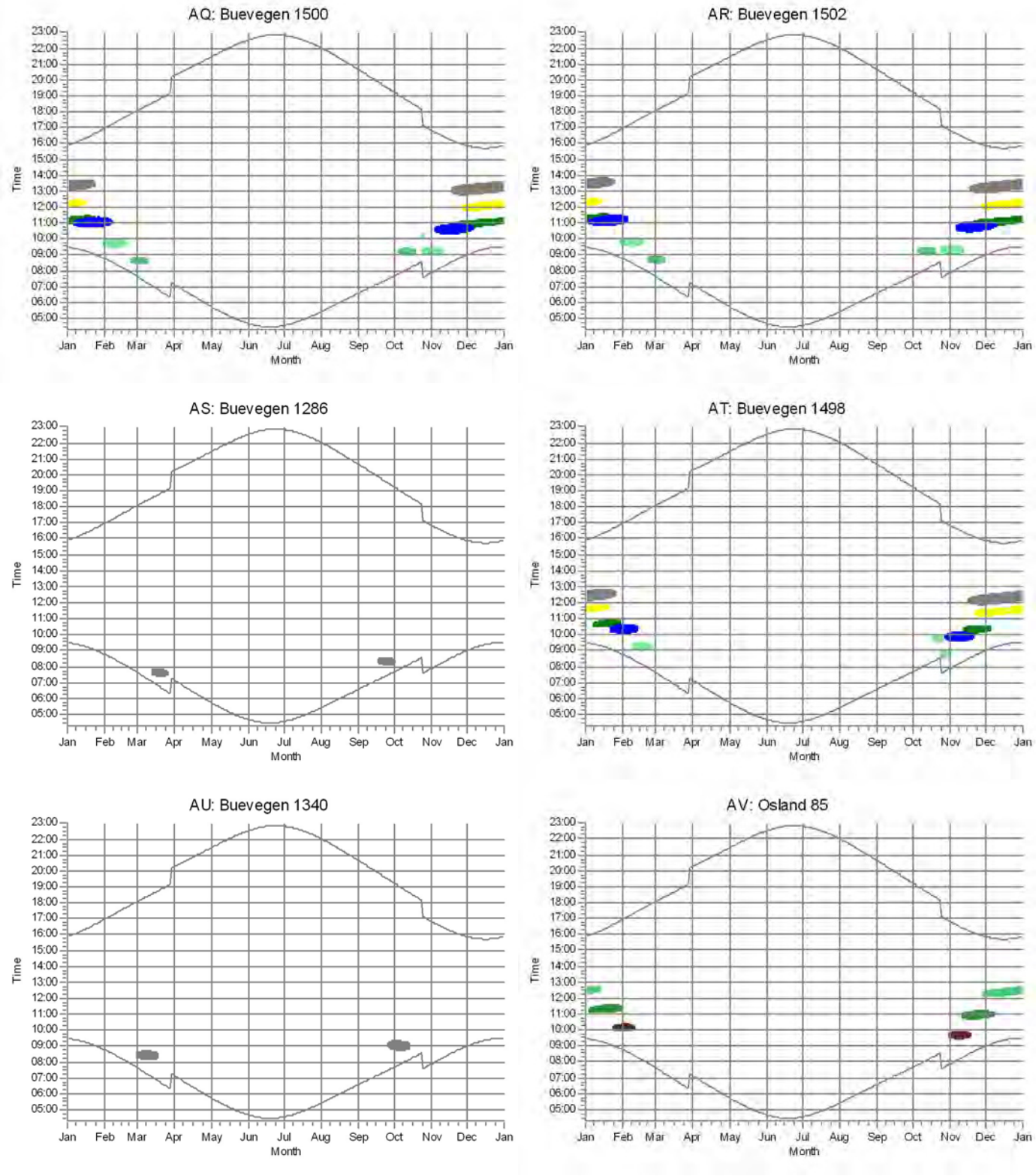


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere

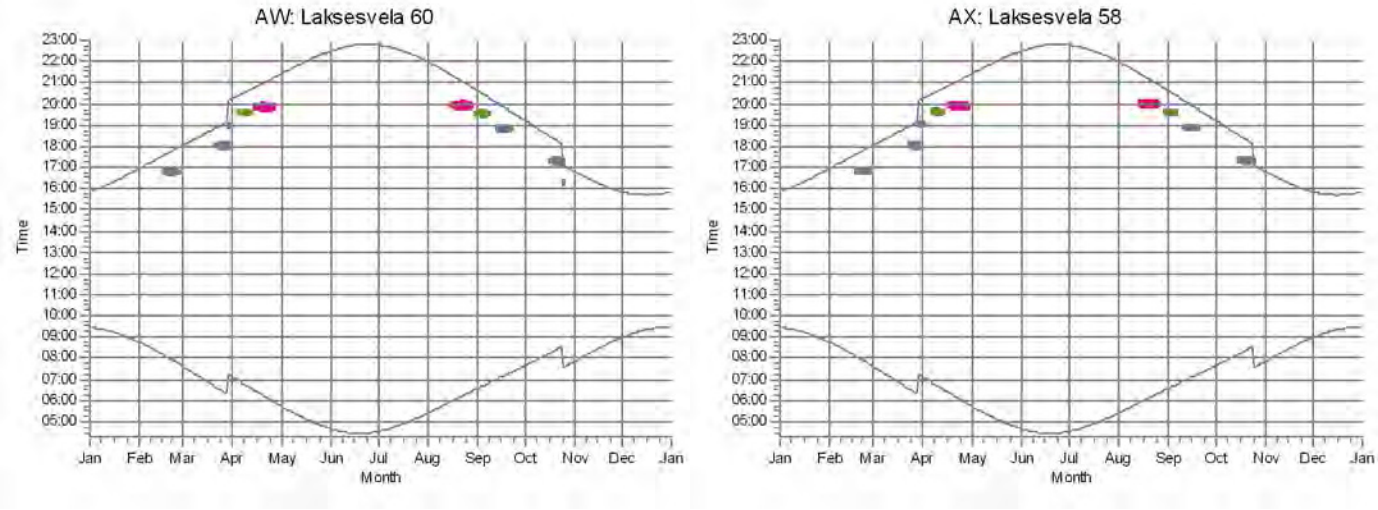


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Calculated:
19.11.2025 14:47/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet & Mellomstrand med eksisterende vkv - real case - mottakere



Vedlegg 5.1

Tabell Moifjellet vindkraftverk

Worst case

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07		05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17		21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04		05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19		21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01		05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21		21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58		05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24		21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55		05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26		21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52		05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28		21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50		05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30		21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47		05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33		21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44		05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35		21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41		05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37		21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38		05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40		21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35		05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42		21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32		05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44		21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30		05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47		21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27		05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49		21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24		05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51		22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21		05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53		22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00		22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10		04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03		22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08		04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05		22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05		04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07		22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02		04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10		22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59		04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12		22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57		04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14		22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54		04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17		22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52		04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19		22:24	22:50
29	08:52		11:15 (33)				07:15			05:49		04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21		22:25	22:50
30	08:50		11:15 (33)				07:12			05:46		04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24		22:27	22:49
31	08:48		11:17 (33)				07:10					04:41	
	16:54	57	13:05 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		421			1966			363					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	04:32	05:24	06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49	22:01	20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33	05:26	06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48	21:58	20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34	05:28	06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47	21:56	20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35	05:31	06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47	21:54	20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36	05:33	06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46	21:51	20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37	05:35	06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45	21:49	20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39	05:37	06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44	21:47	20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40	05:39	06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43	21:44	20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41	05:42	06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42	21:42	20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43	05:44	06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40	21:39	20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44	05:46	06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39	21:37	20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46	05:48	06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38	21:34	20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47	05:51	07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37	21:31	20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49	05:53	07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35	21:29	20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51	05:55	07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34	21:26	19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52	05:57	07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32	21:24	19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54	06:00	07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30	21:21	19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56	06:02	07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29	21:18	19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58	06:04	07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27	21:16	19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00	06:06	07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25	21:13	19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01	06:08	07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24	21:10	19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03	06:11	07:19			08:27		12:35 (28)	08:41			09:27
	22:22	21:08	19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05	06:13	07:22			08:30		12:35 (28)	08:43			09:27
	22:20	21:05	19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07	06:15	07:24			08:32		12:34 (28)	08:45			09:28
	22:18	21:02	19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09	06:17	07:26			07:35		11:34 (28)	08:47			09:28
	22:16	20:59	19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11	06:20	07:28			07:37		11:33 (28)	08:50			09:28
	22:14	20:56	19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13	06:22	07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12	20:54	19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16	06:24	07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10	20:51	19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18	06:26	07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07	20:48	19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20	06:29	07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05	20:45	19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22	06:31				07:49		11:34 (28)				09:28
	22:03	20:42				16:51	90	15:09 (24)				15:51
Potential sun hours	546	478	386			319			236			199
Total, worst case				57			1700			1022		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		11:25 (28)	09:00
	22:49		22:01		20:40		19:13			16:49	96	15:09 (24)	15:51
2	04:33		05:26		06:35		07:42			07:54		11:25 (28)	09:02
	22:48		21:58		20:37		19:10			16:46	90	15:04 (24)	15:50
3	04:34		05:28		06:37		07:44			07:56		11:26 (28)	09:03
	22:47		21:56		20:34		19:07			16:44	82	14:58 (24)	15:49
4	04:35		05:31		06:40		07:46			07:59		11:26 (28)	09:05
	22:47		21:54		20:31		19:04			16:41	72	14:17 (23)	15:48
5	04:36		05:33		06:42		07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46		21:51		20:28		19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37		05:35		06:44		07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45		21:49		20:25		18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39		05:37		06:46		07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44		21:47		20:22		18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40		05:39		06:49		07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43		21:44		20:20		18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41		05:42		06:51		07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42		21:42		20:17		18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43		05:44		06:53		08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40		21:39		20:14		18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44		05:46		06:55		08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39		21:37		20:11		18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46		05:48		06:57		08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38		21:34		20:08		18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47		05:51		07:00		08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37		21:31		20:05		18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49		05:53		07:02		08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35		21:29		20:02		18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51		05:55		07:04		08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34		21:26		19:59		18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52		05:57		07:06		08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32		21:24		19:56		18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54		06:00		07:08		08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30		21:21		19:54		18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56		06:02		07:11		08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29		21:18		19:51		18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58		06:04		07:13		08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27		21:16		19:48		18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00		06:06		07:15		08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25		21:13		19:45		18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01		06:08		07:17		08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24		21:10		19:42		18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03		06:11		07:19		08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22		21:08		19:39		18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05		06:13		07:22		08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20		21:05		19:36		18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07		06:15		07:24		08:32		12:26 (28)	08:45			09:28
	22:18		21:02		19:33		18:09	75	15:19 (23)	16:01			15:44
25	05:09		06:17		07:26		07:35		11:26 (28)	08:47			09:28
	22:16		20:59		19:30		17:06	76	14:20 (23)	15:59			15:45
26	05:11		06:20		07:28		07:37		11:25 (28)	08:50			09:28
	22:14		20:56		19:27		17:04	81	15:04 (24)	15:58			15:46
27	05:13		06:22		07:30		07:39		11:25 (28)	08:52			09:28
	22:12		20:54		19:25		17:01	91	15:08 (24)	15:56			15:47
28	05:16		06:24		07:33		07:42		11:25 (28)	08:54			09:28
	22:10		20:51		19:22		16:59	95	15:10 (24)	15:55			15:48
29	05:18		06:26		07:35		07:44		11:24 (28)	08:56			09:28
	22:07		20:48		19:19		16:56	99	15:11 (24)	15:54			15:49
30	05:20		06:29		07:37		07:47		11:25 (28)	08:58			09:28
	22:05		20:45		19:16		16:54	99	15:12 (24)	15:52			15:50
31	05:22		06:31				07:49		11:25 (28)				09:28
	22:03		20:42				16:51	101	15:13 (24)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1425			1286		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07		05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17		21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04		05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19		21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01		05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21		21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58		05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24		21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55		05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26		21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52		05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28		21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50		05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30		21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47		05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33		21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44		05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35		21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41		05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37		21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38		05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40		21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35		05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42		21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33		05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44		21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30		05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47		21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27		05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49		21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24		05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51		22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21		05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53		22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00		22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10		04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03		22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08		04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05		04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07		22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02		04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10		22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00		04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12		22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57		04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14		22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54		04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17		22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52		04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19		22:24	22:50
29	08:52		10:56 (33)				07:15			05:49		04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21		22:25	22:50
30	08:50		10:50 (33)				07:13			05:46		04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24		22:27	22:49
31	08:48		10:44 (33)				07:10					04:41	
	16:54	62	14:05 (23)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		228			2114			237					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		10:30 (28)	09:00
	22:49	22:01	20:40	19:13		16:49	107	15:21 (22)	15:51
2	04:33	05:26	06:35	07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48	21:58	20:37	19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34	05:28	06:37	07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47	21:56	20:34	19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35	05:31	06:40	07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47	21:54	20:31	19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36	05:33	06:42	07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46	21:51	20:28	19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37	05:35	06:44	07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45	21:49	20:25	18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39	05:37	06:46	07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44	21:47	20:22	18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40	05:39	06:49	07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43	21:44	20:20	18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41	05:42	06:51	07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42	21:42	20:17	18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43	05:44	06:53	08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40	21:39	20:14	18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44	05:46	06:55	08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39	21:37	20:11	18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46	05:48	06:57	08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38	21:34	20:08	18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47	05:51	07:00	08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37	21:31	20:05	18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49	05:53	07:02	08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35	21:29	20:02	18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51	05:55	07:04	08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34	21:26	19:59	18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52	05:57	07:06	08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32	21:24	19:56	18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54	06:00	07:08	08:16		11:34 (28)	08:29			09:23
	22:30	21:21	19:54	18:28	36	12:10 (28)	16:13			15:42
18	04:56	06:02	07:11	08:18		11:32 (28)	08:32			09:24
	22:29	21:18	19:51	18:25	55	14:33 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		11:32 (28)	08:34			09:25
	22:27	21:16	19:48	18:22	62	14:36 (23)	16:09			15:42
20	05:00	06:06	07:15	08:23		11:31 (28)	08:36			09:26
	22:25	21:13	19:45	18:20	67	14:37 (23)	16:08			15:43
21	05:01	06:09	07:17	08:25		11:30 (28)	08:39			09:26
	22:24	21:10	19:42	18:17	72	14:39 (23)	16:06			15:43
22	05:03	06:11	07:19	08:27		11:29 (28)	08:41			09:27
	22:22	21:08	19:39	18:14	75	14:40 (23)	16:04			15:43
23	05:05	06:13	07:22	08:30		11:29 (28)	08:43			09:27
	22:20	21:05	19:36	18:12	78	14:41 (23)	16:02			15:44
24	05:07	06:15	07:24	08:32		11:29 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	79	14:41 (23)	16:01			15:45
25	05:09	06:17	07:26	07:35		10:29 (28)	08:47			09:28
	22:16	20:59	19:30	17:07	81	13:42 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		10:29 (28)	08:50			09:28
	22:14	20:57	19:27	17:04	82	13:43 (23)	15:58			15:46
27	05:13	06:22	07:30	07:39		10:29 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	81	13:42 (23)	15:56			15:47
28	05:16	06:24	07:33	07:42		10:29 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	87	14:45 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		10:29 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	95	14:48 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		10:30 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	14:51 (24)	15:52			15:50
31	05:22	06:31		07:49		10:31 (28)				09:28
	22:03	20:42		16:51	99	14:52 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1521			1074		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		08:46		11:39 (28)	07:35	09:25 (15)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (24)	18:05	9 09:34 (15)	20:17	21:26	22:31
2	09:27		08:43		11:39 (28)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (24)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (28)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (24)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (28)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (24)	18:12		20:24	21:33	22:35
5	09:26	12:20 (20)	08:37		11:39 (28)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (20)	17:06	80	15:09 (24)	18:14		20:26	21:35	22:37
6	09:25	12:19 (20)	08:34		11:40 (28)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (20)	17:08	74	15:08 (24)	18:17		20:28	21:37	22:38
7	09:24	12:17 (20)	08:32		11:40 (28)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (20)	17:11	62	14:11 (23)	18:19		20:30	21:40	22:39
8	09:24	12:17 (20)	08:30		11:41 (28)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (20)	17:13	61	14:11 (23)	18:21		20:33	21:42	22:40
9	09:23	12:18 (20)	08:27		11:42 (28)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (20)	17:16	57	14:10 (23)	18:24		20:35	21:44	22:42
10	09:22	11:06 (33)	08:25		11:42 (28)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (20)	17:18	54	14:09 (23)	18:26		20:37	21:46	22:43
11	09:21	11:02 (33)	08:23		11:44 (28)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (20)	17:21	48	14:08 (23)	18:28		20:40	21:49	22:44
12	09:20	11:01 (33)	08:20		11:45 (28)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (20)	17:23	42	14:06 (23)	18:31		20:42	21:51	22:45
13	09:18	11:02 (33)	08:18		11:46 (28)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (20)	17:26	32	14:02 (23)	18:33		20:44	21:53	22:46
14	09:17	11:02 (33)	08:15		11:49 (28)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (20)	17:28	18	12:07 (28)	18:35		20:47	21:55	22:47
15	09:16	11:02 (33)	08:13		11:52 (28)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (20)	17:31	12	12:04 (28)	18:38		20:49	21:58	22:47
16	09:15	11:02 (33)	08:10		09:29 (15)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (20)	17:33	5	09:34 (15)	18:40		20:51	22:00	22:48
17	09:13	11:02 (33)	08:07		09:25 (15)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (20)	17:36	12	09:37 (15)	18:42		20:53	22:02	22:49
18	09:12	11:03 (33)	08:05		09:24 (15)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (23)	17:38	16	09:40 (15)	18:45		20:56	22:04	22:49
19	09:10	11:03 (33)	08:02		09:23 (15)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (23)	17:40	17	09:40 (15)	18:47		20:58	22:06	22:50
20	09:08	11:04 (33)	08:00		09:22 (15)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (23)	17:43	19	09:41 (15)	18:49		21:00	22:08	22:50
21	09:07	11:04 (33)	07:57		09:21 (15)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (23)	17:45	20	09:41 (15)	18:51		21:03	22:10	22:50
22	09:05	11:05 (33)	07:54		09:20 (15)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (23)	17:48	21	09:41 (15)	18:54		21:05	22:12	22:50
23	09:03	11:05 (33)	07:52		09:21 (15)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (23)	17:50	21	09:42 (15)	18:56		21:07	22:14	22:51
24	09:02	11:06 (33)	07:49		09:21 (15)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (23)	17:53	20	09:41 (15)	18:58		21:10	22:16	22:51
25	09:00	11:07 (33)	07:46		09:21 (15)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (24)	17:55	20	09:41 (15)	19:01		21:12	22:18	22:51
26	08:58	11:09 (33)	07:44		09:21 (15)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (24)	17:57	19	09:40 (15)	19:03		21:14	22:20	22:50
27	08:56	11:10 (33)	07:41		09:22 (15)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (24)	18:00	16	09:38 (15)	19:05		21:17	22:22	22:50
28	08:54	11:13 (33)	07:38		09:23 (15)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (24)	18:02	14	09:37 (15)	19:08		21:19	22:24	22:50
29	08:52	11:40 (28)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (24)				20:10		21:21	22:25	22:50
30	08:50	11:39 (28)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (24)				20:12		21:24	22:27	22:49
31	08:48	11:39 (28)				07:10			04:41	
	16:54	88 15:13 (24)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49		22:01		20:40		19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33		05:26		06:35		07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48		21:58		20:37		19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34		05:28		06:37		07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47		21:56		20:34		19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35		05:31		06:40		07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47		21:54		20:31		19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36		05:33		06:42		07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46		21:51		20:28		19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37		05:35		06:44		07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45		21:49		20:25		18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39		05:37		06:46		07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44		21:47		20:22		18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40		05:39		06:49		07:55			08:08		11:09 (28)	09:12		
	22:43		21:44		20:20		18:53			16:32	87	14:42 (24)	15:45		
9	04:41		05:42		06:51		07:57			08:11		11:10 (28)	09:13		
	22:42		21:42		20:17		18:50			16:30	87	14:43 (24)	15:44		
10	04:43		05:44		06:53		08:00			08:13		11:10 (28)	09:15		
	22:41		21:39		20:14		18:47			16:28	88	14:44 (24)	15:43		
11	04:44		05:46		06:55		08:02			08:15		11:10 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	88	14:44 (24)	15:43		
12	04:46		05:48		06:57		08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38		21:34		20:08		18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47		05:51		07:00		08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37		21:32		20:05		18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49		05:53		07:02		08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35		21:29		20:02		18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51		05:55		07:04		08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34		21:26		19:59		18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32		21:24		19:56		18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30		21:21		19:54		18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29		21:18		19:51		18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58		06:04		07:13		08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00		06:06		07:15		08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25		21:13		19:45		18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01		06:08		07:17		08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24		21:10		19:42		18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22		21:08		19:39		18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20		21:05		19:36		18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07		06:15		07:24		08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18		21:02		19:33		18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09		06:17		07:26		07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16		20:59		19:30		17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14		20:57		19:27		17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13		06:22		07:30		07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12		20:54		19:25		17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16		06:24		07:33		07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10		20:51		19:22		16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07		20:48		19:19		16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05		20:45		19:16		16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22		06:31				07:49		11:13 (28)				09:28		
	22:03		20:42				16:51	50	13:38 (23)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								389			2122			106	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46		11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43		11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41		12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39		11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34		12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32		12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30		12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27		12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25		12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23		12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20		12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18		12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15		09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13		09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10		09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07		09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05		09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02		09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00		09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57		09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54		09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52		09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49		09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46		09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44		09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41		09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38		09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)				20:10	21:21	22:25	22:50
30	08:50		11:58 (28)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)				20:12	21:24	22:27	22:49
31	08:48		11:58 (28)				07:10		04:41	
	16:54	88	15:22 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49	22:01	20:40	19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33	05:26	06:35	07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48	21:58	20:37	19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34	05:28	06:37	07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47	21:56	20:34	19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35	05:31	06:40	07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47	21:54	20:31	19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36	05:33	06:42	07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46	21:51	20:28	19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37	05:35	06:44	07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45	21:49	20:25	18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39	05:37	06:46	07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44	21:47	20:22	18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40	05:39	06:49	07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43	21:44	20:20	18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41	05:42	06:51	07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42	21:42	20:17	18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43	05:44	06:53	08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41	21:39	20:14	18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44	05:46	06:55	08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39	21:37	20:11	18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46	05:48	06:57	08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38	21:34	20:08	18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47	05:51	07:00	08:07			08:20		11:30 (28)	09:19		
	22:37	21:31	20:05	18:39			16:21	83	14:50 (24)	15:42		
14	04:49	05:53	07:02	08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35	21:29	20:02	18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34	21:26	19:59	18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52	05:57	07:06	08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32	21:24	19:56	18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54	06:00	07:08	08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30	21:21	19:54	18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56	06:02	07:11	08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29	21:18	19:51	18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58	06:04	07:13	08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00	06:06	07:15	08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25	21:13	19:45	18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01	06:08	07:17	08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24	21:10	19:42	18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03	06:11	07:19	08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22	21:08	19:39	18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05	06:13	07:22	08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20	21:05	19:36	18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09	06:17	07:26	07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16	20:59	19:30	17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14	20:57	19:27	17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13	06:22	07:30	07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12	20:54	19:25	17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16	06:24	07:33	07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10	20:51	19:22	16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07	20:48	19:19	16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05	20:45	19:16	16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22	06:31		07:49		11:35 (28)				09:28		11:11 (33)
	22:03	20:42		16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					362			2086			298	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (28)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)				20:10	21:21	22:25	22:50
30	08:50		12:23 (28)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)				20:12	21:24	22:27	22:49
31	08:48		12:24 (28)				07:10		04:41	
	16:53	77	15:26 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27	12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27	12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27	12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26	12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25	12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24	12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24	12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23	12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22	12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21	12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20	12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18	12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16	11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13	11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12	11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09	11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07	11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05	11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03	11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02	11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00	11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58	11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56	11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54	11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (24)				20:10	21:21	22:25	22:50
30	08:50	11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (24)				20:12	21:24	22:27	22:49
31	08:48	11:26 (28)				07:10		04:41	
	16:54	76 14:52 (24)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49	22:01	20:40	19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33	05:26	06:35	07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48	21:59	20:37	19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34	05:28	06:37	07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47	21:56	20:34	19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35	05:31	06:40	07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47	21:54	20:31	19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36	05:33	06:42	07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46	21:51	20:28	19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37	05:35	06:44	07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45	21:49	20:25	18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39	05:37	06:46	07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44	21:47	20:23	18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40	05:39	06:49	07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43	21:44	20:20	18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41	05:42	06:51	07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42	21:42	20:17	18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43	05:44	06:53	08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41	21:39	20:14	18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44	05:46	06:55	08:02			08:15		10:57 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	76	14:23 (24)	15:43		
12	04:46	05:48	06:57	08:04			08:18		10:57 (28)	09:18		
	22:38	21:34	20:08	18:42			16:23	80	14:25 (24)	15:43		
13	04:47	05:51	07:00	08:07			08:20		10:58 (28)	09:19		
	22:37	21:32	20:05	18:39			16:21	81	14:26 (24)	15:42		
14	04:49	05:53	07:02	08:09			08:22		10:58 (28)	09:20		
	22:35	21:29	20:02	18:36			16:19	82	14:26 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34	21:26	19:59	18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32	21:24	19:56	18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31	21:21	19:54	18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29	21:18	19:51	18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58	06:04	07:13	08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27	21:16	19:48	18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00	06:06	07:15	08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25	21:13	19:45	18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01	06:08	07:17	08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24	21:10	19:42	18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22	21:08	19:39	18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20	21:05	19:36	18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07	06:15	07:24	08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18	21:02	19:33	18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09	06:17	07:26	07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16	20:59	19:30	17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11	06:20	07:28	07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14	20:57	19:27	17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13	06:22	07:30	07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12	20:54	19:25	17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16	06:24	07:33	07:42			08:54		11:48 (20)	09:28		
	22:10	20:51	19:22	16:59			15:55	35	13:18 (23)	15:48		
29	05:18	06:26	07:35	07:44			08:56		11:48 (20)	09:28		
	22:07	20:48	19:19	16:56			15:54	33	13:17 (23)	15:49		
30	05:20	06:29	07:37	07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05	20:45	19:16	16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22	06:31		07:49		11:06 (28)				09:28		
	22:03	20:42		16:51	15	11:21 (28)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					225			1881			154	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46		11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43		11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41		11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39		11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34		12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32			07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27		09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25		09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23		09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20		09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18		09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15		09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13		09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10		09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07		09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05		09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02		09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00		09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57		09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54		09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (28)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)				20:10	21:21	22:25	22:50
30	08:50		11:51 (28)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)				20:12	21:24	22:27	22:49
31	08:48		11:52 (28)				07:10		04:41	
	16:54	55	14:55 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1930			409					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		12:08 (20)	08:46		11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (20)	16:56	49	13:50 (23)	18:05	20:17	21:26	22:31
2	09:27		12:08 (20)	08:43		11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (20)	16:58	44	13:48 (23)	18:07	20:19	21:28	22:32
3	09:27		12:09 (20)	08:41		11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (20)	17:01	39	13:47 (23)	18:09	20:21	21:31	22:34
4	09:27		12:09 (20)	08:39		11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (20)	17:03	32	13:45 (23)	18:12	20:24	21:33	22:35
5	09:26		12:09 (20)	08:37		11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (20)	17:06	19	12:02 (28)	18:14	20:26	21:35	22:37
6	09:25		12:10 (20)	08:34		11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (23)	17:08	14	12:00 (28)	18:17	20:28	21:37	22:38
7	09:24		11:43 (28)	08:32		11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (23)	17:11	6	11:56 (28)	18:19	20:30	21:40	22:39
8	09:24		11:41 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	41	13:37 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:40 (28)	08:27			07:13	06:44	05:24	04:31
	16:05	47	13:39 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:38 (28)	08:25		09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (23)	17:18	3	09:42 (15)	18:26	20:37	21:46	22:43
11	09:21		11:38 (28)	08:23		09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (23)	17:21	10	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:37 (28)	08:20		09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (24)	17:23	14	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:37 (28)	08:18		09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (24)	17:26	16	09:49 (15)	18:33	20:44	21:53	22:46
14	09:17		11:36 (28)	08:15		09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (24)	17:28	17	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:36 (28)	08:13		09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (24)	17:31	18	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:35 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:36 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:36 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (24)	17:38	19	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:36 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (24)	17:40	18	09:50 (15)	18:47	20:58	22:06	22:50
20	09:09		11:35 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (24)	17:43	17	09:49 (15)	18:49	21:00	22:08	22:50
21	09:07		11:35 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (24)	17:45	15	09:48 (15)	18:51	21:03	22:10	22:50
22	09:05		11:36 (28)	07:54		09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (24)	17:48	12	09:46 (15)	18:54	21:05	22:12	22:50
23	09:03		11:35 (28)	07:52		09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (24)	17:50	6	09:44 (15)	18:56	21:07	22:14	22:51
24	09:02		11:35 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (28)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (24)				20:10	21:21	22:25	22:50
30	08:50		11:37 (28)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (24)				20:12	21:24	22:27	22:49
31	08:48		11:38 (28)				07:10		04:41	
	16:54	51	13:50 (23)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28	12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (20)	16:56	45 13:44 (23)	18:05	20:17	21:26	22:31
2	09:27	12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (20)	16:58	40 13:42 (23)	18:07	20:19	21:28	22:32
3	09:27	12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (20)	17:01	34 13:40 (23)	18:09	20:21	21:31	22:34
4	09:27	12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (20)	17:03	20 11:59 (28)	18:12	20:24	21:33	22:35
5	09:26	12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (23)	17:06	16 11:57 (28)	18:14	20:26	21:35	22:37
6	09:25	12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (23)	17:08	11 11:55 (28)	18:17	20:28	21:37	22:38
7	09:24	11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (28)	08:25	09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (24)	17:18	6 09:43 (15)	18:26	20:37	21:46	22:43
11	09:21	11:34 (28)	08:23	09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (24)	17:21	11 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:33 (28)	08:20	09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (24)	17:23	15 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:34 (28)	08:18	09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (24)	17:26	16 09:48 (15)	18:33	20:44	21:53	22:46
14	09:17	11:33 (28)	08:15	09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (24)	17:28	18 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:32 (28)	08:13	09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (24)	17:31	19 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:32 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:32 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (24)	17:38	18 09:50 (15)	18:45	20:56	22:04	22:49
19	09:10	11:32 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (24)	17:40	17 09:49 (15)	18:47	20:58	22:06	22:50
20	09:09	11:32 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (24)	17:43	16 09:48 (15)	18:49	21:00	22:08	22:50
21	09:07	11:32 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (24)	17:45	14 09:47 (15)	18:51	21:03	22:10	22:50
22	09:05	11:32 (28)	07:54	09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (24)	17:48	10 09:45 (15)	18:54	21:05	22:12	22:50
23	09:03	11:31 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (28)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (24)			20:10	21:21	22:25	22:50
30	08:50	11:34 (28)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (23)			20:12	21:24	22:27	22:49
31	08:48	11:35 (28)			07:10		04:41	
	16:54	48 13:44 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49		22:01		20:40		19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33		05:26		06:35		07:42			07:54			09:02		11:18 (28)
	22:48		21:59		20:37		19:10			16:46			15:50	58	14:24 (24)
3	04:34		05:28		06:37		07:44			07:56			09:03		11:19 (28)
	22:47		21:56		20:34		19:07			16:44			15:49	51	13:19 (23)
4	04:35		05:31		06:40		07:46			07:59			09:05		11:21 (28)
	22:47		21:54		20:31		19:04			16:41			15:48	46	13:18 (23)
5	04:36		05:33		06:42		07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46		21:51		20:28		19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37		05:35		06:44		07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45		21:49		20:25		18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38		05:37		06:46		07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44		21:47		20:23		18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40		05:39		06:49		07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43		21:44		20:20		18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41		05:42		06:51		07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42		21:42		20:17		18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43		05:44		06:53		08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41		21:39		20:14		18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44		05:46		06:55		08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39		21:37		20:11		18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46		05:48		06:57		08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38		21:34		20:08		18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47		05:51		07:00		08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37		21:32		20:05		18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49		05:53		07:02		08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35		21:29		20:02		18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51		05:55		07:04		08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34		21:26		19:59		18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52		05:57		07:06		08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32		21:24		19:56		18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54		06:00		07:08		08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31		21:21		19:54		18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56		06:02		07:11		08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29		21:18		19:51		18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58		06:04		07:13		08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27		21:16		19:48		18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00		06:06		07:15		08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25		21:13		19:45		18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01		06:08		07:17		08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24		21:10		19:42		18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03		06:11		07:19		08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22		21:08		19:39		18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05		06:13		07:22		08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20		21:05		19:36		18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18		21:02		19:33		18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09		06:17		07:26		07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16		20:59		19:30		17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14		20:57		19:27		17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13		06:22		07:30		07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12		20:54		19:25		17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16		06:24		07:33		07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10		20:51		19:22		16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18		06:26		07:35		07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07		20:48		19:19		16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20		06:29		07:37		07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05		20:45		19:16		16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22		06:31				07:49		09:05 (15)				09:28		12:04 (20)
	22:03		20:42				16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								197			1686			799	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	11:58 (20)	08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00	11:44 (20)
	15:53	16 12:14 (20)	16:56	49 13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	57 14:20 (24)
2	09:28	11:58 (20)	08:43	11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02	11:44 (20)
	15:54	18 12:16 (20)	16:58	47 13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	50 14:19 (24)
3	09:27	11:58 (20)	08:41	11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (28)	09:03	11:44 (20)
	15:55	20 12:18 (20)	17:01	42 13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12 11:14 (28)	15:49	40 14:19 (24)
4	09:27	11:58 (20)	08:39	11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (28)	09:05	11:44 (20)
	15:57	21 12:19 (20)	17:03	35 13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 11:16 (28)	15:48	34 14:19 (24)
5	09:26	11:59 (20)	08:37	11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (28)	09:07	11:45 (20)
	15:58	20 12:19 (20)	17:06	23 11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20 11:18 (28)	15:47	31 13:06 (23)
6	09:25	11:59 (20)	08:34	11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (28)	09:09	11:45 (20)
	16:00	26 13:18 (23)	17:08	20 11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23 11:20 (28)	15:46	27 13:05 (23)
7	09:25	12:00 (20)	08:32	11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (28)	09:10	11:46 (20)
	16:02	30 13:21 (23)	17:11	16 11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37 13:01 (23)	15:45	20 12:06 (20)
8	09:24	12:00 (20)	08:30	11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (28)	09:12	11:47 (20)
	16:03	34 14:35 (24)	17:13	11 11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43 13:03 (23)	15:45	20 12:07 (20)
9	09:23	12:01 (20)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (28)	09:13	11:47 (20)
	16:05	41 14:36 (24)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48 13:05 (23)	15:44	20 12:07 (20)
10	09:22	12:01 (20)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (28)	09:15	11:47 (20)
	16:07	50 14:36 (24)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51 13:06 (23)	15:43	19 12:07 (20)
11	09:21	12:02 (20)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (28)	09:16	11:48 (20)
	16:09	57 14:37 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52 13:06 (23)	15:43	16 12:04 (20)
12	09:20	11:28 (28)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (28)	09:18	11:48 (20)
	16:11	68 14:38 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55 13:08 (23)	15:43	11 11:59 (20)
13	09:18	11:26 (28)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (28)	09:19	11:49 (20)
	16:13	75 14:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62 14:08 (24)	15:42	11 12:00 (20)
14	09:17	11:25 (28)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (28)	09:20	11:50 (20)
	16:15	78 14:39 (24)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69 14:10 (24)	15:42	7 12:00 (20)
15	09:16	11:24 (28)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (28)	09:21	11:50 (20)
	16:17	82 14:40 (24)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71 14:12 (24)	15:42	3 11:53 (20)
16	09:15	11:23 (28)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (28)	09:22	11:50 (20)
	16:19	85 14:40 (24)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75 14:14 (24)	15:42	3 11:53 (20)
17	09:13	11:23 (28)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (28)	09:23	11:51 (20)
	16:21	86 14:41 (24)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77 14:15 (24)	15:42	1 11:52 (20)
18	09:12	11:23 (28)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (28)	09:24	
	16:23	87 14:42 (24)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76 14:15 (24)	15:42	
19	09:10	11:22 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (28)	09:25	
	16:25	88 14:42 (24)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77 14:16 (24)	15:42	
20	09:09	11:22 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (28)	09:26	
	16:28	86 14:42 (24)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77 14:16 (24)	15:43	
21	09:07	11:22 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (28)	09:26	
	16:30	83 14:42 (24)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83 14:17 (24)	15:43	
22	09:05	11:22 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (28)	09:27	
	16:32	77 14:42 (24)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86 14:18 (24)	15:43	
23	09:03	11:21 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (28)	09:27	
	16:34	77 14:41 (24)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88 14:18 (24)	15:44	
24	09:02	11:21 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (28)	09:28	
	16:37	76 14:41 (24)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87 14:19 (24)	15:44	
25	09:00	11:21 (28)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (28)	09:28	
	16:39	77 14:41 (24)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86 14:18 (24)	15:45	
26	08:58	11:22 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (28)	09:28	
	16:41	74 14:41 (24)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85 14:19 (24)	15:46	
27	08:56	11:21 (28)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (28)	09:28	11:56 (20)
	16:44	71 14:39 (24)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83 14:19 (24)	15:47	3 11:59 (20)
28	08:54	11:21 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (28)	09:28	11:57 (20)
	16:46	69 14:38 (24)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79 14:19 (24)	15:48	3 12:00 (20)
29	08:52	11:22 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (28)	09:28	11:56 (20)
	16:49	61 14:36 (24)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73 14:19 (24)	15:49	5 12:07 (20)
30	08:50	11:22 (28)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (28)	09:28	11:57 (20)
	16:51	55 13:36 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69 14:19 (24)	15:50	11 12:08 (20)
31	08:48	11:23 (28)			07:10		04:41		05:22	06:31		07:49			09:28	11:57 (20)
	16:54	53 13:36 (23)			20:14		22:29		22:03	20:42		16:51			15:51	11 12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case		1841		243										1761		403

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35	08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13		16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42		07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10		16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44		07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07		16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46	09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7 09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48	09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12 09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51	09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15 09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53	09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18 09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55	09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19 09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57	09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20 09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00	09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20 09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02	09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20 09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04	09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19 09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06	09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18 09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09	09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26 10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11	09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29 10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13	09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28 10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16	10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21 10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18	10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23 10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20	10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24 10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23	10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25 10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25	10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37 15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27	10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42 15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30	10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50 15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32	10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63 15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35	09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69 14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37	09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74 14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39	09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82 15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42	09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89 15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44	09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90 15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47	09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90 15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49	12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81 15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319		236			199		
Total, worst case					1111		1317			529	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07		05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17		21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04		05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19		21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01		05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21		21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58		05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23		21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55		05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26		21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52		05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28		21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49		05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30		21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47		05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33		21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44		05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35		21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41		05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37		21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38		05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40		21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35		05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42		21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32		05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44		21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30		05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46		21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27		05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49		21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24		05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51		22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21		05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53		22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18		05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56		22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16		05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58		22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13		05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00		22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10		04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03		22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07		04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05		04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07		22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02		04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10		22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59		04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12		22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57		04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14		22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54		04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17		22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51		04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19		22:24	22:50
29	08:52						07:15			05:49		04:44	04:30
	16:49						20:10			21:21		22:25	22:49
30	08:50		14:16 (33)				07:12			05:46		04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23		22:27	22:49
31	08:48		14:08 (33)				07:10					04:41	
	16:53	21	15:27 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		24			1365			367					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17) / 07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12) / 09:00
	15:53		16:56	63	13:43 (15) / 18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28) / 15:51
2	09:27		08:43		11:39 (17) / 07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12) / 09:01
	15:54		16:58	59	13:43 (15) / 18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28) / 15:50
3	09:27		08:41		11:38 (17) / 07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12) / 09:03
	15:55		17:01	51	13:42 (15) / 18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28) / 15:49
4	09:26		08:39		11:39 (17) / 07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12) / 09:05
	15:57		17:03	51	15:59 (28) / 18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28) / 15:48
5	09:26		08:37		11:39 (17) / 07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12) / 09:07
	15:58		17:06	56	16:02 (28) / 18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28) / 15:47
6	09:25		08:34		10:34 (12) / 07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17) / 09:09
	16:00		17:08	57	16:05 (28) / 18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28) / 15:46
7	09:24		08:32		10:32 (12) / 07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17) / 09:10
	16:02		17:11	55	16:05 (28) / 18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15) / 15:45
8	09:24		08:30		10:27 (12) / 07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17) / 09:12
	16:03		17:13	53	16:07 (28) / 18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15) / 15:45
9	09:23		08:27		10:26 (12) / 07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17) / 09:13
	16:05		17:16	49	16:07 (28) / 18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15) / 15:44
10	09:22		08:25		10:15 (12) / 07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17) / 09:15
	16:07		17:18	58	16:07 (28) / 18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15) / 15:43
11	09:21		08:22		10:16 (12) / 07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17) / 09:16
	16:09		17:21	55	16:08 (28) / 18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15) / 15:43
12	09:20		08:20		10:17 (12) / 07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17) / 09:17
	16:11		17:23	48	16:08 (28) / 18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15) / 15:43
13	09:18		08:17		10:18 (12) / 07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17) / 09:19
	16:13		17:26	33	16:07 (28) / 18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15) / 15:42
14	09:17	12:02 (9)	08:15		10:21 (12) / 06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17) / 09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28) / 18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15) / 15:42
15	09:16	12:02 (9)	08:12		15:50 (28) / 06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17) / 09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28) / 18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15) / 15:42
16	09:14	12:02 (9)	08:10		15:51 (28) / 06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17) / 09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28) / 18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15) / 15:42
17	09:13	12:02 (9)	08:07		15:52 (28) / 06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17) / 09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28) / 18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15) / 15:42
18	09:12	11:58 (9)	08:05		15:56 (28) / 06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17) / 09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28) / 18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15) / 15:42
19	09:10	11:58 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17) / 09:25
	16:25	33 13:35 (15)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15) / 15:42
20	09:08	11:58 (9)	08:00		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17) / 09:25
	16:27	36 13:37 (15)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15) / 15:42
21	09:07	11:58 (9)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9) / 09:26
	16:30	39 13:38 (15)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15) / 15:43
22	09:05	11:46 (17)	07:54		06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9) / 09:27
	16:32	47 13:38 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15) / 15:43
23	09:03	11:44 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9) / 09:27
	16:34	55 13:39 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15) / 15:44
24	09:01	11:42 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (28)	08:45		11:35 (9) / 09:28
	16:37	60 13:40 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:32 (28)	16:01	30	13:11 (15) / 15:44
25	09:00	11:42 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47		11:41 (9) / 09:28
	16:39	61 13:41 (15)	17:55		19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20	13:09 (15) / 15:45
26	08:58	11:41 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49		11:41 (9) / 09:28
	16:41	62 13:42 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11	11:52 (9) / 15:46
27	08:56	11:40 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52		11:41 (9) / 09:28
	16:44	64 13:42 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10	11:51 (9) / 15:47
28	08:54	11:40 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54		11:42 (9) / 09:28
	16:46	65 13:43 (15)	18:02		19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8	11:50 (9) / 15:48
29	08:52	11:39 (17)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56		09:28
	16:49	65 13:43 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53		15:49
30	08:50	11:39 (17)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58		09:28
	16:51	65 13:43 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52		15:50
31	08:48	11:39 (17)			07:09		04:41		05:22	06:31		07:49	09:46 (12)			09:28
	16:53	63 13:43 (15)			20:14		22:29		22:03	20:42		16:51	55 15:38 (28)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		793		765									221		1347	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46	10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56 74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49 30	13:49 (15)	15:51
2	09:27		08:43	10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58 73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 45	13:52 (15)	15:50
3	09:27		08:41	10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01 74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44 54	13:54 (15)	15:49
4	09:26		08:39	10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03 71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 61	13:55 (15)	15:48
5	09:26		08:37	10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06 68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39 65	13:56 (15)	15:47
6	09:25		08:34	10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08 64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37 69	13:57 (15)	15:46
7	09:24		08:32	10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11 59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34 72	13:57 (15)	15:45
8	09:24		08:30	10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13 52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32 73	13:57 (15)	15:45
9	09:23		08:27	10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16 43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30 75	13:58 (15)	15:44
10	09:22		08:25	10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18 26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28 72	13:58 (15)	15:43
11	09:21		08:22	12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21 5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25 75	13:58 (15)	15:43
12	09:20		08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23 72	13:58 (15)	15:42
13	09:18	12:39 (9)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13 5	12:44 (9)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21 72	13:58 (15)	15:42
14	09:17	12:39 (9)	08:15		06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15 7	12:46 (9)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 68	13:57 (15)	15:42
15	09:16	12:39 (9)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17 15	12:54 (9)	17:30		18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17 63	13:57 (15)	15:42
16	09:14	12:38 (9)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19 17	12:55 (9)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15 50	13:57 (15)	15:42
17	09:13	12:38 (9)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21 18	12:56 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 45	13:55 (15)	15:42
18	09:12	12:37 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23 19	12:56 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11 42	13:55 (15)	15:42
19	09:10	12:38 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25 20	12:58 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09 39	13:54 (15)	15:42
20	09:08	12:37 (17)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27 22	12:59 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07 33	13:51 (15)	15:42
21	09:07	12:35 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30 23	12:58 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06 23	12:34 (9)	15:43
22	09:05	12:34 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32 33	14:16 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04 22	12:35 (9)	15:43
23	09:03	12:33 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34 39	14:19 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02 20	12:34 (9)	15:44
24	09:01	12:33 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37 42	14:21 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01 20	12:35 (9)	15:44
25	09:00	12:32 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39 45	14:22 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59 18	12:34 (9)	15:45
26	08:58	10:57 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41 50	14:24 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58 17	12:34 (9)	15:46
27	08:56	10:51 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44 64	14:24 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56 15	12:33 (9)	15:47
28	08:54	10:51 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46 69	14:25 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55 7	12:26 (9)	15:48
29	08:52	10:51 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49 70	14:26 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53 5	12:25 (9)	15:49
30	08:50	10:50 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51 72	14:26 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)			07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53 74	14:27 (15)			20:14		22:29		22:03	20:42		16:51 7	12:20 (17)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case	704		609									7		1322		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October			November			December
1	09:28			08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39			07:51		10:19 (12)	09:00
	15:53			16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13			16:49	43	13:46 (15)	15:51
2	09:27			08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:54		10:18 (12)	09:01
	15:54			16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	53	13:48 (15)	15:50
3	09:27			08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44			07:56		10:18 (12)	09:03
	15:55			17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07			16:44	59	13:50 (15)	15:49
4	09:26			08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46			07:58		10:16 (12)	09:05
	15:57			17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	65	13:51 (15)	15:48
5	09:26			08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48			08:01		10:16 (12)	09:07
	15:58			17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01			16:39	70	13:52 (15)	15:47
6	09:25			08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50			08:03		10:16 (12)	09:09
	16:00			17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59			16:37	73	13:53 (15)	15:46
7	09:24			08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53			08:06		10:16 (12)	09:10
	16:02			17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56			16:34	73	13:52 (15)	15:45
8	09:24			08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55			08:08		10:16 (12)	09:12
	16:03			17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53			16:32	73	13:53 (15)	15:45
9	09:23			08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57			08:10		10:16 (12)	09:13
	16:05			17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50			16:30	75	13:53 (15)	15:44
10	09:22			08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00			08:13		10:17 (12)	09:15
	16:07			17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:28	74	13:54 (15)	15:43
11	09:21			08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		10:17 (12)	09:16
	16:09			17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44			16:25	69	13:53 (15)	15:43
12	09:20			08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04			08:18		10:18 (12)	09:17
	16:11			17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42			16:23	54	13:53 (15)	15:42
13	09:18			08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		10:20 (12)	09:19
	16:13			17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39			16:21	53	13:53 (15)	15:42
14	09:17			08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09			08:22		11:57 (17)	09:20
	16:15			17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	51	13:52 (15)	15:42
15	09:16			08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:58 (17)	09:21
	16:17			17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33			16:17	50	13:52 (15)	15:42
16	09:14			08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:59 (17)	09:22
	16:19			17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31			16:15	49	13:52 (15)	15:42
17	09:13		12:33 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18			08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25			16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20			08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22			16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20			16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25			08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17			16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27			08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14			16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30			08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12			16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32			08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09			16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34			08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06			15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37			08:49			09:28
	16:41	49	14:19 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04			15:58			15:46
27	08:56		12:25 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39			08:52			09:28
	16:44	50	14:19 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01			15:56			15:47
28	08:54		12:25 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42			08:54			09:28
	16:46	51	14:20 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59			15:55			15:48
29	08:52		10:48 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44			08:56			09:28
	16:49	53	14:21 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56			15:53			15:49
30	08:50		10:46 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7	12:13 (17)	15:52			15:50
31	08:48		10:46 (12)				07:09		04:41		05:22	06:31		07:49		10:22 (12)				09:28
	16:53	69	14:22 (15)				20:14		22:29		22:03	20:42		16:51	25	12:17 (17)				15:51
Potential sun hours	221			260			365	432	521	547	546	478	386	319			236			199
Total, worst case		564			672										32			1221		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:03 (26)	08:45		14:59 (17)	07:35	07:07	05:44	04:39
	15:52	20	12:23 (26)	16:56	18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27		12:03 (26)	08:43		14:59 (17)	07:32	07:04	05:41	04:38
	15:54	20	12:23 (26)	16:58	19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27		12:03 (26)	08:41		14:58 (17)	07:30	07:01	05:38	04:37
	15:55	20	12:23 (26)	17:01	19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26		12:03 (26)	08:39		14:59 (17)	07:27	06:58	05:36	04:36
	15:57	21	12:24 (26)	17:03	19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26		12:04 (26)	08:37		14:59 (17)	07:24	06:55	05:33	04:34
	15:58	26	13:33 (12)	17:06	19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25		12:04 (26)	08:34		15:00 (17)	07:21	06:52	05:31	04:33
	16:00	29	13:35 (12)	17:08	18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24		12:05 (26)	08:32		15:00 (17)	07:18	06:49	05:29	04:32
	16:01	31	13:37 (12)	17:11	17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23		12:06 (26)	08:30		15:00 (17)	07:16	06:46	05:26	04:31
	16:03	33	13:39 (12)	17:13	16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23		12:06 (26)	08:27		15:02 (17)	07:13	06:44	05:24	04:31
	16:05	33	13:39 (12)	17:15	14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22		12:07 (26)	08:25		15:03 (17)	07:10	06:41	05:21	04:30
	16:07	35	13:41 (12)	17:18	11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21		12:07 (26)	08:22		15:07 (17)	07:07	06:38	05:19	04:29
	16:09	35	13:41 (12)	17:20	5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19		12:08 (26)	08:20			07:04	06:35	05:17	04:29
	16:11	35	13:42 (12)	17:23			18:30	20:42	21:51	22:45
13	09:18		12:09 (26)	08:17			07:01	06:32	05:15	04:28
	16:12	35	13:43 (12)	17:25			18:33	20:44	21:53	22:46
14	09:17		12:10 (26)	08:15			06:58	06:29	05:12	04:28
	16:14	35	13:44 (12)	17:28			18:35	20:46	21:55	22:46
15	09:16		12:11 (26)	08:12			06:56	06:27	05:10	04:27
	16:17	34	13:45 (12)	17:30			18:37	20:49	21:57	22:47
16	09:14		12:12 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	32	13:45 (12)	17:33			18:40	20:51	22:00	22:48
17	09:13		12:14 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	29	13:45 (12)	17:35			18:42	20:53	22:02	22:48
18	09:11		12:16 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	26	13:46 (12)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:25 (12)	08:02			06:44	06:16	05:02	04:26
	16:25	21	13:46 (12)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:25 (12)	07:59			06:41	06:13	05:00	04:26
	16:27	22	13:47 (12)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:26 (12)	07:57			06:38	06:10	04:58	04:26
	16:30	21	13:47 (12)	17:45			18:51	21:03	22:10	22:50
22	09:05		13:26 (12)	07:54			06:35	06:07	04:56	04:27
	16:32	21	13:47 (12)	17:48			18:54	21:05	22:12	22:50
23	09:03		13:27 (12)	07:51			06:33	06:05	04:54	04:27
	16:34	20	13:47 (12)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:28 (12)	07:49			06:30	06:02	04:52	04:27
	16:37	19	13:47 (12)	17:52			18:58	21:09	22:16	22:50
25	09:00		13:29 (12)	07:46			06:27	05:59	04:50	04:28
	16:39	18	13:47 (12)	17:55			19:00	21:12	22:18	22:50
26	08:58		13:30 (12)	07:43			06:24	05:57	04:49	04:28
	16:41	17	13:47 (12)	17:57			19:03	21:14	22:20	22:50
27	08:56		13:30 (12)	07:41			06:21	05:54	04:47	04:29
	16:44	20	15:09 (17)	18:00			19:05	21:16	22:22	22:50
28	08:54		13:32 (12)	07:38			06:18	05:51	04:45	04:29
	16:46	23	15:12 (17)	18:02			19:07	21:19	22:23	22:50
29	08:52		13:35 (12)				07:15	05:49	04:44	04:30
	16:48	21	15:14 (17)				20:10	21:21	22:25	22:49
30	08:50		15:00 (17)				07:12	05:46	04:42	04:31
	16:51	15	15:15 (17)				20:12	21:23	22:27	22:49
31	08:48		15:00 (17)				07:09		04:41	
	16:53	16	15:16 (17)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		783			175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59	12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51 18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01	12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50 19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03	12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49 20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05	12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48 20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07	12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47 20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08	12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46 20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10	12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45 21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12	12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44 20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13	12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44 21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15	12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43 21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16	12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43 21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17	12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42 20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19	12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42 20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20	12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42 21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21	12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42 21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22	12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42 20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23	12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42 20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24	12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42 20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25	12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42 20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25	12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42 20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26	12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43 20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27	12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43 20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27	12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44 20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27	12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44 21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28	12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45 20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28	12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46 20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28	12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47 20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28	12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47 21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28	12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49 20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28	12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50 20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28	12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51 20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case		631		5										419		625

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:45		10:57 (37)	07:35		16:28 (17)	07:06		05:44	04:39
	15:52			16:56	40	13:50 (26)	18:04	11	16:39 (17)	20:16		21:26	22:30
2	09:27			08:43		10:59 (37)	07:32		16:27 (17)	07:04		05:41	04:38
	15:54			16:58	37	13:51 (26)	18:07	13	16:40 (17)	20:19		21:28	22:32
3	09:27			08:41		11:02 (37)	07:30		16:27 (17)	07:01		05:38	04:37
	15:55			17:01	28	13:49 (26)	18:09	14	16:41 (17)	20:21		21:30	22:33
4	09:26			08:39		13:29 (26)	07:27		16:27 (17)	06:58		05:36	04:36
	15:57			17:03	20	13:49 (26)	18:12	17	16:44 (17)	20:23		21:33	22:35
5	09:26			08:37		13:30 (26)	07:24		16:27 (17)	06:55		05:33	04:34
	15:58			17:06	17	13:47 (26)	18:14	19	16:46 (17)	20:26		21:35	22:36
6	09:25			08:34		13:33 (26)	07:21		16:28 (17)	06:52		05:31	04:33
	16:00			17:08	12	13:45 (26)	18:16	17	16:45 (17)	20:28		21:37	22:38
7	09:24			08:32			07:18		16:29 (17)	06:49		05:29	04:32
	16:01			17:11			18:19	15	16:44 (17)	20:30		21:39	22:39
8	09:23			08:30			07:15		16:30 (17)	06:46		05:26	04:32
	16:03			17:13			18:21	12	16:42 (17)	20:32		21:42	22:40
9	09:23			08:27			07:13		16:33 (17)	06:44		05:24	04:31
	16:05			17:15			18:23	6	16:39 (17)	20:35		21:44	22:41
10	09:22			08:25			07:10			06:41		05:21	04:30
	16:07			17:18			18:26			20:37		21:46	22:43
11	09:20			08:22			07:07			06:38		05:19	04:29
	16:09			17:20			18:28			20:39		21:48	22:44
12	09:19			08:20		14:57 (7)	07:04			06:35		05:17	04:29
	16:11			17:23	8	15:05 (7)	18:30			20:42		21:51	22:45
13	09:18			08:17		14:59 (7)	07:01			06:32		05:15	04:28
	16:12			17:25	11	15:10 (7)	18:33			20:44		21:53	22:45
14	09:17		11:05 (37)	08:15		15:02 (7)	06:58			06:29		05:12	04:28
	16:14	3	11:08 (37)	17:28	12	15:14 (12)	18:35			20:46		21:55	22:46
15	09:16		10:59 (37)	08:12		15:06 (12)	06:56			06:27		05:10	04:27
	16:17	10	11:09 (37)	17:30	12	15:18 (12)	18:37			20:49		21:57	22:47
16	09:14		10:52 (37)	08:10		15:06 (12)	06:53			06:24		05:08	04:27
	16:19	18	11:10 (37)	17:33	15	15:21 (12)	18:40			20:51		21:59	22:48
17	09:13		10:51 (37)	08:07		15:05 (12)	06:50			06:21		05:06	04:27
	16:21	19	11:10 (37)	17:35	16	15:21 (12)	18:42			20:53		22:02	22:48
18	09:11		10:51 (37)	08:05		15:05 (12)	06:47			06:18		05:04	04:26
	16:23	20	11:11 (37)	17:38	15	15:20 (12)	18:44			20:56		22:04	22:49
19	09:10		10:51 (37)	08:02		15:06 (12)	06:44			06:16		05:02	04:26
	16:25	21	11:12 (37)	17:40	16	15:22 (12)	18:47			20:58		22:06	22:49
20	09:08		10:51 (37)	07:59		15:07 (12)	06:41			06:13		05:00	04:26
	16:27	22	11:13 (37)	17:43	17	15:24 (12)	18:49			21:00		22:08	22:50
21	09:07		10:51 (37)	07:57		15:07 (12)	06:38			06:10		04:58	04:26
	16:30	22	11:13 (37)	17:45	20	15:27 (12)	18:51			21:02		22:10	22:50
22	09:05		10:51 (37)	07:54		15:08 (12)	06:35			06:07		04:56	04:27
	16:32	27	12:49 (32)	17:47	20	15:28 (12)	18:53			21:05		22:12	22:50
23	09:03		10:51 (37)	07:51		15:09 (12)	06:32			06:05		04:54	04:27
	16:34	39	13:02 (32)	17:50	18	15:27 (12)	18:56			21:07		22:14	22:50
24	09:01		10:52 (37)	07:49		15:12 (12)	06:30			06:02		04:52	04:27
	16:37	40	13:04 (32)	17:52	13	15:25 (12)	18:58			21:09		22:16	22:50
25	08:59		10:52 (37)	07:46		15:16 (12)	06:27			05:59		04:50	04:28
	16:39	39	13:04 (32)	17:55	5	15:21 (12)	19:00			21:12		22:18	22:50
26	08:58		10:52 (37)	07:43			06:24			05:57		04:49	04:28
	16:41	39	13:24 (26)	17:57			19:03			21:14		22:20	22:50
27	08:56		10:53 (37)	07:41			06:21			05:54		04:47	04:29
	16:44	39	13:28 (26)	18:00			19:05			21:16		22:22	22:50
28	08:54		10:53 (37)	07:38		16:32 (17)	06:18			05:51		04:45	04:29
	16:46	41	13:35 (26)	18:02	4	16:36 (17)	19:07			21:19		22:23	22:50
29	08:52		10:54 (37)				07:15			05:49		04:44	04:30
	16:48	41	13:44 (26)				20:10			21:21		22:25	22:49
30	08:50		10:55 (37)				07:12			05:46		04:42	04:31
	16:51	42	13:47 (26)				20:12			21:23		22:27	22:49
31	08:48		10:56 (37)				07:09					04:41	
	16:53	42	13:49 (26)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		524			356			124					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		08:59
	22:48	22:01	20:39	19:13		16:48		15:51
2	04:33	05:26	06:35	07:41		07:54		09:01
	22:48	21:58	20:37	19:10		16:46		15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44		15:49
4	04:35	05:30	06:39	07:46		07:58	13:07 (26)	09:05
	22:46	21:54	20:31	19:04		16:41	4 13:11 (26)	15:48
5	04:36	05:33	06:42	07:48	17:09 (17)	08:01	13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9 17:18 (17)	16:39	13 13:15 (26)	15:47
6	04:37	05:35	06:44	07:50	17:06 (17)	08:03	13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14 17:20 (17)	16:36	17 13:18 (26)	15:46
7	04:38	05:37	06:46	07:53	17:04 (17)	08:06	12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16 17:20 (17)	16:34	21 13:19 (26)	15:45
8	04:40	05:39	06:48	07:55	17:03 (17)	08:08	10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18 17:21 (17)	16:32	29 13:20 (26)	15:44
9	04:41	05:41	06:50	07:57	17:02 (17)	08:10	10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18 17:20 (17)	16:30	37 13:22 (26)	15:44
10	04:42	05:44	06:53	07:59	17:01 (17)	08:13	10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16 17:17 (17)	16:27	40 13:21 (26)	15:43
11	04:44	05:46	06:55	08:02	17:01 (17)	08:15	10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14 17:15 (17)	16:25	41 13:19 (26)	15:43
12	04:45	05:48	06:57	08:04	17:01 (17)	08:18	10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12 17:13 (17)	16:23	42 13:19 (26)	15:42
13	04:47	05:50	06:59	08:06	17:02 (17)	08:20	10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10 17:12 (17)	16:21	41 13:15 (26)	15:42
14	04:49	05:53	07:01	08:09	17:06 (17)	08:22	10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2 17:08 (17)	16:19	41 13:07 (26)	15:42
15	04:50	05:55	07:04	08:11		08:25	10:25 (37)	09:21
	22:33	21:26	19:59	18:33		16:17	40 13:01 (26)	15:42
16	04:52	05:57	07:06	08:13		08:27	10:26 (37)	09:22
	22:32	21:23	19:56	18:30		16:15	39 12:58 (26)	15:42
17	04:54	05:59	07:08	08:16	15:45 (12)	08:29	10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9 15:54 (12)	16:13	39 12:37 (32)	15:42
18	04:56	06:02	07:10	08:18	15:42 (12)	08:32	10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15 15:57 (12)	16:11	40 12:38 (32)	15:42
19	04:57	06:04	07:12	08:20	15:40 (12)	08:34	10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18 15:58 (12)	16:09	39 12:37 (32)	15:42
20	04:59	06:06	07:15	08:23	15:39 (12)	08:36	10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21 16:00 (12)	16:07	28 12:25 (32)	15:42
21	05:01	06:08	07:17	08:25	15:37 (12)	08:38	10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18 15:55 (12)	16:06	22 10:49 (37)	15:43
22	05:03	06:10	07:19	08:27	15:37 (12)	08:41	10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16 15:53 (12)	16:04	22 10:49 (37)	15:43
23	05:05	06:13	07:21	08:30	15:36 (12)	08:43	10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16 15:52 (12)	16:02	21 10:49 (37)	15:44
24	05:07	06:15	07:24	08:32	15:35 (12)	08:45	10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16 15:51 (12)	16:01	20 10:49 (37)	15:44
25	05:09	06:17	07:26	07:34	14:36 (12)	08:47	10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15 14:51 (12)	15:59	19 10:48 (37)	15:45
26	05:11	06:19	07:28	07:37	14:35 (12)	08:49	10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14 14:49 (12)	15:57	18 10:49 (37)	15:46
27	05:13	06:22	07:30	07:39	14:35 (12)	08:51	10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12 14:47 (12)	15:56	10 10:48 (37)	15:47
28	05:15	06:24	07:32	07:41	14:30 (7)	08:53	10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12 14:42 (12)	15:55	3 10:47 (37)	15:48
29	05:17	06:26	07:35	07:44	14:27 (7)	08:55		09:28
	22:07	20:48	19:19	16:56	11 14:38 (7)	15:53		15:49
30	05:20	06:28	07:37	07:46	14:26 (7)	08:57		09:28
	22:05	20:45	19:16	16:53	8 14:34 (7)	15:52		15:50
31	05:22	06:31		07:49				09:28
	22:03	20:42		16:51				15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					330		686	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June	
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39	
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30	
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38	
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32	
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37	
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33	
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36	
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35	
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35	
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36	
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33	
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37	
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32	
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39	
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32	
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40	
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31	
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41	
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30	
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42	
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29	
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43	
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29	
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44	
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28	
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45	
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28	
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46	
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27	
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47	
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27	
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47	
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27	
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48	
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26	
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49	
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26	
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49	
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26	
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49	
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26	
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50	
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27	
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50	
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27	
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50	
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27	
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50	
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28	
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50	
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28	
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50	
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29	
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50	
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29	
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49	
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30	
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49	
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31	
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49	
31	08:47		15:29 (8)				07:09						04:41				
	16:53	20	15:49 (8)				20:14						22:28				
Potential sun hours	221			260			365			432			521			547	
Total, worst case		77			781			508			1216			65			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	04:32	05:24			06:33			18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60		19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35			18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57		19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37			18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54		19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39			18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35		19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42			18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31		19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44			18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28		19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46			18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25		19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48			18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18		19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50			19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11		19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53				07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13				18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55				08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11				18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57				08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08				18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59				08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05				18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01			18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7		18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04			18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13		18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06			18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16		18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08			18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19		18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10			18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20		18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12			18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21		18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15			18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22		18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17			18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22		18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19			18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22		18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21			18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21		18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23			18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19		18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26			18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18		18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28			18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15		18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30			18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11		18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32				07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21				16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34				07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18				16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37				07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16				16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)					07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)					16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319				236			200
Total, worst case			983			565			839				305		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		11:14 (23)	08:46		10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53	31	12:43 (24)	16:56	18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28		11:14 (23)	08:44		10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54	30	12:43 (24)	16:58	17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27		11:13 (23)	08:41		10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55	31	12:43 (24)	17:01	14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27		11:13 (23)	08:39		10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57	30	12:43 (24)	17:03	11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26		11:14 (23)	08:37		10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58	28	12:42 (24)	17:06	7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25		11:14 (23)	08:35			07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:47 (28)		09:09		11:00 (23)
	16:00	28	12:42 (24)	17:08			18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	7	09:54 (28)		15:46	28	12:28 (24)
7	09:25		11:14 (23)	08:32			07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:45 (28)		09:10		11:01 (23)
	16:02	26	12:41 (24)	17:11			18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	11	09:56 (28)		15:45	29	12:30 (24)
8	09:24		11:14 (23)	08:30			07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:43 (28)		09:12		11:02 (23)
	16:03	21	11:35 (23)	17:13			18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	14	09:57 (28)		15:45	30	12:31 (24)
9	09:23		11:15 (23)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:42 (28)		09:14		11:03 (23)
	16:05	21	11:36 (23)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	17	09:59 (28)		15:44	30	12:32 (24)
10	09:22		11:15 (23)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:42 (28)		09:15		11:03 (23)
	16:07	21	11:36 (23)	17:18			18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	18	10:00 (28)		15:44	30	12:32 (24)
11	09:21		11:15 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:41 (28)		09:16		11:04 (23)
	16:09	22	11:37 (23)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	19	10:00 (28)		15:43	30	12:33 (24)
12	09:20		11:15 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:41 (28)		09:18		11:04 (23)
	16:11	22	11:37 (23)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	19	10:00 (28)		15:43	31	12:34 (24)
13	09:19		11:16 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:41 (28)		09:19		11:05 (23)
	16:13	22	11:38 (23)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	20	10:01 (28)		15:42	31	12:35 (24)
14	09:17		11:16 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:42 (28)		09:20		11:06 (23)
	16:15	22	11:38 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	19	10:01 (28)		15:42	30	12:35 (24)
15	09:16		11:16 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:41 (28)		09:21		11:06 (23)
	16:17	22	11:38 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	20	10:01 (28)		15:42	31	12:36 (24)
16	09:15		11:16 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:42 (28)		09:22		11:08 (23)
	16:19	22	11:38 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	19	10:01 (28)		15:42	30	12:37 (24)
17	09:13		11:18 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:43 (28)		09:23		11:09 (23)
	16:21	21	11:39 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	26	11:08 (23)		15:42	30	12:38 (24)
18	09:12		11:18 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		09:43 (28)		09:24		11:08 (23)
	16:23	21	11:39 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	29	11:10 (23)		15:42	30	12:37 (24)
19	09:10		10:13 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		09:44 (28)		09:25		11:09 (23)
	16:25	27	11:39 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	31	11:12 (23)		15:42	29	12:38 (24)
20	09:09		10:12 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		09:45 (28)		09:26		11:10 (23)
	16:28	30	11:39 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	32	11:13 (23)		15:43	30	12:39 (24)
21	09:07		10:11 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		09:46 (28)		09:26		11:11 (23)
	16:30	32	11:39 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	32	11:14 (23)		15:43	29	12:40 (24)
22	09:05		10:10 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		09:48 (28)		09:27		11:11 (23)
	16:32	32	11:38 (23)	17:48			18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04	29	11:15 (23)		15:43	29	12:40 (24)
23	09:03		10:09 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		09:49 (28)		09:27		11:11 (23)
	16:34	31	11:37 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	27	11:15 (23)		15:44	30	12:40 (24)
24	09:02		10:09 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:55 (23)		09:28		11:12 (23)
	16:37	29	11:36 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	21	11:16 (23)		15:45	30	12:41 (24)
25	09:00		10:09 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:55 (23)		09:28		11:12 (23)
	16:39	26	11:34 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	21	11:16 (23)		15:45	29	12:41 (24)
26	08:58		10:09 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:55 (23)		09:28		11:13 (23)
	16:41	19	10:28 (28)	17:57			19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58	22	11:17 (23)		15:46	30	12:42 (24)
27	08:56		10:09 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:55 (23)		09:28		11:13 (23)
	16:44	20	10:29 (28)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	22	11:17 (23)		15:47	30	12:42 (24)
28	08:54		10:09 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:56 (23)		09:29		11:13 (23)
	16:46	19	10:28 (28)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	22	11:18 (23)		15:48	31	12:43 (24)
29	08:52		10:09 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:56 (23)		09:29		11:13 (23)
	16:49	20	10:29 (28)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	11:18 (23)		15:49	30	12:42 (24)
30	08:50		10:09 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:56 (23)		09:28		11:13 (23)
	16:51	19	10:28 (28)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	22	11:18 (23)		15:50	31	12:43 (24)
31	08:48		10:10 (28)				07:10		04:41		05:22	06:31		07:49					09:28		11:14 (23)
	16:54	19	10:29 (28)				20:14		22:29		22:03	20:43		16:51					15:51	30	12:43 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236				199		
Total, worst case		764			67											541				888	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May	June	July	August	September	October	November	December
1	09:28	12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51	09:00 12:38 (12)
	15:52 16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48	15:51 20 12:58 (12)
2	09:27	12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54	09:01 12:39 (12)
	15:54 16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46	15:50 20 12:59 (12)
3	09:27	12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56	09:03 12:40 (12)
	15:55 17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49 20 13:00 (12)
4	09:26	12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58	09:05 12:40 (12)
	15:57 17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41	15:48 20 13:00 (12)
5	09:26	12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01	09:07 12:41 (12)
	15:58 18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39	15:47 19 13:00 (12)
6	09:25	12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03	09:09 12:41 (12)
	16:00 19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36	15:46 19 13:00 (12)
7	09:24	12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06	09:10 12:42 (12)
	16:01 20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34	15:45 18 13:00 (12)
8	09:24	12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08	09:12 12:43 (12)
	16:03 19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32	15:44 18 13:01 (12)
9	09:23	12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10	09:13 12:43 (12)
	16:05 20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44 17 13:00 (12)
10	09:22	12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	09:15 12:44 (12)
	16:07 20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27	15:43 17 13:01 (12)
11	09:21	12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:16 12:45 (12)
	16:09 20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25	15:43 16 13:01 (12)
12	09:19	12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	09:17 12:45 (12)
	16:11 20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	15:42 16 13:01 (12)
13	09:18	12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:19 12:46 (12)
	16:12 20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21	15:42 16 13:02 (12)
14	09:17	12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22	09:20 12:47 (12)
	16:14 20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:42 14 13:01 (12)
15	09:16	12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	09:21 12:47 (12)
	16:17 20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17	15:42 14 13:01 (12)
16	09:14	12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:22 12:48 (12)
	16:19 20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15	15:42 13 13:01 (12)
17	09:13	12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	09:23 12:48 (12)
	16:21 19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13	15:42 14 13:02 (12)
18	09:11	12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	09:24 12:49 (12)
	16:23 19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11	15:42 13 13:02 (12)
19	09:10	13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34 12:41 (12)	09:25 12:50 (12)
	16:25 18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 9 12:50 (12)	15:42 13 13:03 (12)
20	09:08	13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36 12:39 (12)	09:25 12:51 (12)
	16:27 16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 12 12:51 (12)	15:42 12 13:03 (12)
21	09:07	13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38 12:38 (12)	09:26 12:51 (12)
	16:30 15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 15 12:53 (12)	15:43 12 13:03 (12)
22	09:05	13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41 12:38 (12)	09:27 12:52 (12)
	16:32 12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 16 12:54 (12)	15:43 12 13:04 (12)
23	09:03	13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43 12:37 (12)	09:27 12:52 (12)
	16:34 9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 18 12:55 (12)	15:44 12 13:04 (12)
24	09:01		07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45 12:38 (12)	09:28 12:52 (12)
	16:37		17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18 12:56 (12)	15:44 12 13:04 (12)
25	09:00		07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47 12:37 (12)	09:28 12:53 (12)
	16:39		17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 19 12:56 (12)	15:45 13 13:06 (12)
26	08:58		07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49 12:37 (12)	09:28 12:53 (12)
	16:41		17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 20 12:57 (12)	15:46 13 13:06 (12)
27	08:56		07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52 12:37 (12)	09:28 12:54 (12)
	16:44		18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 20 12:57 (12)	15:47 13 13:07 (12)
28	08:54		07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54 12:37 (12)	09:28 12:53 (12)
	16:46		18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55 20 12:57 (12)	15:48 14 13:07 (12)
29	08:52			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56 12:38 (12)	09:28 12:53 (12)
	16:48			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 20 12:58 (12)	15:49 15 13:08 (12)
30	08:50			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58 12:38 (12)	09:28 12:54 (12)
	16:51			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 20 12:58 (12)	15:50 15 13:09 (12)
31	08:48			07:09		04:41		05:22	06:31		07:49		09:28 12:54 (12)
	16:53			20:14		22:29		22:03	20:42		16:51		15:51 15 13:09 (12)
Potential sun hours	221		260	365	432	521	547	546	478	386	319	236	199
Total, worst case		410										207	475

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February			March	April	May	June	July	August	September	October			November			December
1	09:28		08:45		13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39			07:51		14:48 (12)	08:59
	15:52		16:56	19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13			16:48	19	15:07 (12)	15:51
2	09:27		08:43		13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:53		14:49 (12)	09:01
	15:54		16:58	16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	17	15:06 (12)	15:50
3	09:27		08:41		13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44			07:56		14:49 (12)	09:03
	15:55		17:01	12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07			16:44	15	15:04 (12)	15:49
4	09:26		08:39		14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46			07:58		14:52 (12)	09:05
	15:57		17:03	5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	10	15:02 (12)	15:48
5	09:26		08:37			07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48			08:01		14:56 (12)	09:07
	15:58		17:06			18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01			16:39	2	14:58 (12)	15:47
6	09:25		08:34		15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50			08:03			09:08
	16:00		17:08	4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58			16:36			15:46
7	09:24		08:32		15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53			08:06		13:31 (26)	09:10
	16:01		17:11	11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56			16:34	7	13:38 (26)	15:45
8	09:23		08:30		15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55			08:08		13:28 (26)	09:12
	16:03		17:13	15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53			16:32	13	13:41 (26)	15:44
9	09:23		08:27		15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57			08:10		13:27 (26)	09:13
	16:05		17:15	18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50			16:30	16	13:43 (26)	15:44
10	09:22		08:25		15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59			08:13		13:25 (26)	09:15
	16:07		17:18	19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:27	19	13:44 (26)	15:43
11	09:20		08:22		15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		13:24 (26)	09:16
	16:09		17:20	21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44			16:25	21	13:45 (26)	15:43
12	09:19		08:20		15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04			08:17		13:24 (26)	09:17
	16:10		17:23	22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41			16:23	22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17		15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		13:23 (26)	09:19
	16:12	5 13:58 (26)	17:25	22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39			16:21	23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15		15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09			08:22		13:23 (26)	09:20
	16:14	9 14:00 (26)	17:28	23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12		15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:07 (37)	09:21
	16:17	11 14:01 (26)	17:30	22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33			16:17	33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10		15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:06 (37)	09:22
	16:19	17 14:07 (26)	17:33	22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30			16:15	36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07		15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		11:04 (37)	09:23
	16:21	21 14:10 (26)	17:35	21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05		15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18			08:32		11:03 (37)	09:24
	16:23	27 14:11 (26)	17:38	19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25			16:11	42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02		15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20			08:34		11:03 (37)	09:25
	16:25	32 14:12 (26)	17:40	17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22			16:09	44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59		15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23			08:36		11:02 (37)	09:25
	16:27	36 14:12 (26)	17:43	14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19			16:07	45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57		15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25		15:53 (12)	08:38		11:05 (37)	09:26
	16:30	42 14:13 (26)	17:45	8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17	10	16:03 (12)	16:06	42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54			06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27		15:51 (12)	08:41		11:08 (37)	09:27
	16:32	45 14:14 (26)	17:47			18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	15	16:06 (12)	16:04	36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51			06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30		15:49 (12)	08:43		11:12 (37)	09:27
	16:34	44 14:14 (26)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	17	16:06 (12)	16:02	32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32		15:48 (12)	08:45		11:16 (37)	09:27
	16:36	42 14:15 (26)	17:52			18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	19	16:07 (12)	16:01	28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		14:48 (12)	08:47		13:27 (26)	09:28
	16:39	40 14:15 (26)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	20	15:08 (12)	15:59	21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43			06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37		14:46 (12)	08:49		13:29 (26)	09:28
	16:41	37 14:15 (26)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	22	15:08 (12)	15:57	17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		14:46 (12)	08:51		13:29 (26)	09:28
	16:44	33 14:15 (26)	18:00			19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01	23	15:09 (12)	15:56	12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41		14:46 (12)	08:53		13:30 (26)	09:28
	16:46	24 14:15 (26)	18:02			19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	22	15:08 (12)	15:55	9	13:39 (26)	15:47
29	08:52	13:51 (26)				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44		14:46 (12)	08:55		13:35 (26)	09:28
	16:48	23 14:14 (26)				20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56	22	15:08 (12)	15:53	5	13:40 (26)	15:49
30	08:50	13:52 (26)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		14:47 (12)	08:57			09:28
	16:51	22 14:14 (26)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	21	15:08 (12)	15:52			15:50
31	08:48	13:54 (26)				07:09		04:41		05:22	06:31		07:49		14:47 (12)				09:28
	16:53	20 14:14 (26)				20:14		22:29		22:03	20:42		16:51	20	15:07 (12)				15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319			236			199
Total, worst case		530		330										211			650		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June
1	09:28		12:11 (32)	08:45		10:15 (13)	07:35		13:26 (26)	07:07		18:42 (17)	05:44		04:39
	15:52	47	14:26 (14)	16:56	119	15:37 (35)	18:04	35	17:05 (9)	20:16	19	19:01 (17)	21:26		22:30
2	09:27		12:11 (32)	08:43		12:16 (32)	07:32		15:45 (7)	07:04		18:43 (17)	05:41		04:38
	15:54	53	14:28 (14)	16:58	114	15:38 (35)	18:07	27	17:09 (9)	20:19	16	18:59 (17)	21:28		22:32
3	09:27		12:10 (32)	08:41		12:17 (32)	07:30		16:34 (12)	07:01		18:46 (17)	05:38		04:37
	15:55	58	14:29 (14)	17:01	113	15:38 (35)	18:09	33	17:12 (9)	20:21	11	18:57 (17)	21:30		22:33
4	09:26		12:10 (32)	08:39		09:39 (37)	07:27		16:31 (12)	06:58			05:36		04:36
	15:57	61	14:29 (14)	17:03	109	15:39 (35)	18:12	43	17:15 (9)	20:23			21:33		22:35
5	09:26		12:10 (32)	08:36		09:39 (37)	07:24		16:29 (12)	06:55			05:34		04:35
	15:58	64	14:30 (14)	17:06	105	15:39 (35)	18:14	46	17:15 (9)	20:26			21:35		22:36
6	09:25		12:09 (32)	08:34		09:40 (37)	07:21		16:26 (12)	06:52			05:31		04:34
	16:00	70	14:31 (14)	17:08	95	15:39 (35)	18:16	49	17:15 (9)	20:28			21:37		22:38
7	09:24		10:10 (13)	08:32		09:40 (37)	07:18		16:25 (12)	06:49			05:29		04:33
	16:01	78	14:32 (14)	17:11	96	15:39 (35)	18:19	50	17:15 (9)	20:30			21:39		22:39
8	09:23		10:10 (13)	08:30		09:38 (37)	07:15		16:23 (12)	06:46			05:26		04:32
	16:03	84	14:33 (14)	17:13	96	15:38 (35)	18:21	52	17:15 (9)	20:32			21:42		22:40
9	09:22		10:10 (13)	08:27		09:36 (37)	07:13		16:22 (12)	06:44			05:24		04:31
	16:05	86	14:33 (14)	17:16	98	15:38 (35)	18:23	53	17:15 (9)	20:35			21:44		22:41
10	09:21		10:11 (13)	08:25		09:33 (37)	07:10		16:20 (12)	06:41			05:21		04:30
	16:07	91	14:34 (14)	17:18	107	15:57 (7)	18:26	54	17:14 (9)	20:37			21:46		22:42
11	09:20		10:10 (13)	08:22		09:29 (37)	07:07		16:19 (12)	06:38			05:19		04:29
	16:09	97	14:34 (14)	17:20	114	16:00 (7)	18:28	54	17:13 (9)	20:39			21:48		22:44
12	09:19		10:09 (13)	08:20		09:27 (37)	07:04		16:18 (12)	06:35			05:17		04:29
	16:11	102	14:35 (14)	17:23	118	16:03 (7)	18:30	54	17:12 (9)	20:42			21:51		22:44
13	09:18		10:09 (13)	08:17		09:24 (37)	07:01		16:18 (12)	06:32			05:15		04:28
	16:13	105	14:35 (14)	17:25	118	16:04 (7)	18:33	52	17:10 (9)	20:44			21:53		22:45
14	09:17		10:10 (13)	08:15		09:21 (37)	06:58		16:17 (12)	06:29			05:12		04:28
	16:15	107	14:36 (14)	17:28	114	16:05 (7)	18:35	51	17:08 (9)	20:46			21:55		22:46
15	09:16		10:10 (13)	08:12		09:18 (37)	06:56		16:17 (12)	06:27			05:10		04:27
	16:17	112	14:37 (14)	17:30	120	16:07 (7)	18:37	47	17:04 (9)	20:49			21:57		22:47
16	09:14		10:02 (13)	08:10		09:13 (37)	06:53		16:17 (12)	06:24			05:08		04:27
	16:19	119	14:37 (14)	17:33	125	16:08 (7)	18:40	46	17:03 (12)	20:51			21:59		22:48
17	09:13		10:02 (13)	08:07		09:13 (37)	06:50		16:17 (12)	06:21			05:06		04:27
	16:21	126	14:37 (14)	17:35	123	16:08 (7)	18:42	46	17:03 (12)	20:53			22:02		22:48
18	09:11		10:02 (13)	08:05		09:13 (37)	06:47		16:16 (12)	06:18			05:04		04:27
	16:23	127	14:37 (14)	17:38	121	16:08 (7)	18:44	46	17:02 (12)	20:56			22:04		22:49
19	09:10		10:02 (13)	08:02		09:15 (37)	06:44		16:16 (12)	06:16			05:02		04:26
	16:25	129	14:37 (14)	17:40	118	16:09 (7)	18:47	56	18:01 (17)	20:58			22:06		22:49
20	09:08		10:02 (13)	07:59		09:16 (37)	06:41		16:16 (12)	06:13			05:00		04:26
	16:27	130	14:37 (14)	17:43	114	16:09 (7)	18:49	60	18:03 (17)	21:00			22:08		22:50
21	09:07		10:03 (13)	07:57		09:17 (37)	06:38		16:16 (12)	06:10			04:58		04:27
	16:30	131	14:37 (14)	17:45	110	16:09 (7)	18:51	64	18:05 (17)	21:02			22:10		22:50
22	09:05		10:03 (13)	07:54		09:18 (37)	06:35		16:17 (12)	06:07			04:56		04:27
	16:32	129	14:36 (14)	17:48	104	16:08 (7)	18:54	63	18:05 (17)	21:05			22:12		22:50
23	09:03		10:04 (13)	07:51		09:20 (37)	06:32		16:17 (12)	06:05			04:54		04:27
	16:34	131	14:36 (14)	17:50	95	16:08 (7)	18:56	64	18:06 (17)	21:07			22:14		22:50
24	09:01		10:04 (13)	07:49		13:09 (26)	06:30		16:18 (12)	06:02			04:52		04:27
	16:37	128	14:35 (14)	17:52	77	16:08 (7)	18:58	64	18:06 (17)	21:09			22:16		22:50
25	08:59		10:05 (13)	07:46		13:11 (26)	06:27		16:18 (12)	05:59			04:50		04:28
	16:39	125	14:34 (14)	17:55	71	16:07 (7)	19:00	62	18:06 (17)	21:12			22:18		22:50
26	08:58		10:05 (13)	07:43		13:13 (26)	06:24		16:20 (12)	05:57			04:49		04:28
	16:41	124	15:28 (35)	17:57	66	16:06 (7)	19:03	61	18:07 (17)	21:14			22:20		22:50
27	08:56		10:06 (13)	07:41		13:16 (26)	06:21		16:22 (12)	05:54			04:47		04:29
	16:44	127	15:30 (35)	18:00	58	16:05 (7)	19:05	57	18:07 (17)	21:16			22:22		22:50
28	08:54		10:07 (13)	07:38		13:19 (26)	06:18		16:23 (12)	05:51			04:45		04:29
	16:46	130	15:33 (35)	18:02	49	16:04 (7)	19:07	54	18:06 (17)	21:19			22:23		22:50
29	08:52		10:08 (13)				07:15		17:26 (12)	05:49			04:44		04:30
	16:48	131	15:35 (35)				20:10	47	19:05 (17)	21:21			22:25		22:49
30	08:50		10:09 (13)				07:12		17:29 (12)	05:46			04:42		04:31
	16:51	129	15:36 (35)				20:12	38	19:04 (17)	21:23			22:27		22:49
31	08:47		10:12 (13)				07:09		18:41 (17)				04:41		
	16:53	126	15:37 (35)				20:14	22	19:03 (17)				22:29		
Potential sun hours	221			260			365			432			521		547
Total, worst case		3257			2867			1550			46				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:39		16:57 (12)	07:51		09:03 (37)	08:59		09:52 (13)
	22:48	22:01	20:39			19:13	53	17:50 (9)	16:49	107	15:26 (7)	15:51	96	14:16 (14)
2	04:33	05:26	06:35			07:41		16:58 (12)	07:53		09:06 (37)	09:01		09:53 (13)
	22:48	21:58	20:37			19:10	54	17:52 (9)	16:46	98	15:08 (35)	15:50	91	14:16 (14)
3	04:34	05:28	06:37			07:44		16:58 (12)	07:56		09:08 (37)	09:03		09:54 (13)
	22:47	21:56	20:34			19:07	54	17:52 (9)	16:44	96	15:08 (35)	15:49	88	14:17 (14)
4	04:35	05:30	06:39			07:46		16:58 (12)	07:58		09:10 (37)	09:05		09:54 (13)
	22:46	21:54	20:31			19:04	54	17:52 (9)	16:41	94	15:08 (35)	15:48	83	14:17 (14)
5	04:36	05:33	06:42			07:48		17:00 (12)	08:01		09:10 (37)	09:07		09:55 (13)
	22:45	21:51	20:28			19:01	52	17:52 (9)	16:39	95	15:09 (35)	15:47	77	14:17 (14)
6	04:37	05:35	06:44			07:50		17:00 (12)	08:03		09:10 (37)	09:08		09:57 (13)
	22:45	21:49	20:25			18:58	52	17:52 (9)	16:37	105	15:09 (35)	15:46	71	14:17 (14)
7	04:38	05:37	06:46			07:53		17:01 (12)	08:06		09:08 (37)	09:10		11:57 (32)
	22:44	21:46	20:22			18:56	50	17:51 (9)	16:34	111	15:09 (35)	15:45	64	14:17 (14)
8	04:40	05:39	06:48			07:55		17:03 (12)	08:08		11:48 (32)	09:12		11:57 (32)
	22:43	21:44	20:19			18:53	48	17:51 (9)	16:32	112	15:09 (35)	15:44	62	14:17 (14)
9	04:41	05:41	06:51		18:40 (17)	07:57		17:04 (12)	08:10		11:47 (32)	09:13		11:59 (32)
	22:41	21:41	20:16	10	18:50 (17)	18:50	46	17:50 (9)	16:30	113	15:09 (35)	15:44	57	14:17 (14)
10	04:42	05:44	06:53		18:37 (17)	07:59		17:06 (12)	08:13		09:45 (13)	09:15		12:00 (32)
	22:40	21:39	20:14	15	18:52 (17)	18:47	40	17:48 (9)	16:27	121	15:08 (35)	15:43	53	14:17 (14)
11	04:44	05:46	06:55		18:35 (17)	08:02		16:22 (7)	08:15		09:42 (13)	09:16		12:01 (32)
	22:39	21:36	20:11	19	18:54 (17)	18:44	36	17:45 (9)	16:25	127	15:08 (35)	15:43	47	14:16 (14)
12	04:45	05:48	06:57		18:34 (17)	08:04		16:18 (7)	08:17		09:41 (13)	09:17		12:03 (32)
	22:38	21:34	20:08	21	18:55 (17)	18:42	25	17:41 (9)	16:23	130	15:08 (35)	15:42	44	14:17 (14)
13	04:47	05:50	06:59		17:21 (12)	08:06		13:56 (26)	08:20		09:39 (13)	09:19		12:04 (32)
	22:36	21:31	20:05	37	18:55 (17)	18:39	42	17:38 (9)	16:21	131	15:06 (35)	15:42	39	14:17 (14)
14	04:49	05:53	07:02		17:17 (12)	08:09		13:50 (26)	08:22		09:39 (13)	09:20		12:07 (32)
	22:35	21:29	20:02	45	18:55 (17)	18:36	53	16:37 (7)	16:19	131	15:05 (35)	15:42	34	14:17 (14)
15	04:50	05:55	07:04		17:13 (12)	08:11		13:46 (26)	08:25		09:39 (13)	09:21		13:06 (26)
	22:33	21:26	19:59	52	18:55 (17)	18:33	62	16:37 (7)	16:17	128	15:03 (35)	15:42	26	14:16 (14)
16	04:52	05:57	07:06		17:11 (12)	08:13		13:44 (26)	08:27		09:39 (13)	09:22		13:08 (26)
	22:32	21:23	19:56	56	18:55 (17)	18:30	69	16:39 (7)	16:15	124	15:02 (35)	15:42	22	14:15 (14)
17	04:54	05:59	07:08		17:08 (12)	08:16		13:41 (26)	08:29		09:38 (13)	09:23		13:10 (26)
	22:30	21:21	19:53	59	18:54 (17)	18:28	75	16:39 (7)	16:13	125	14:07 (14)	15:42	18	14:15 (14)
18	04:56	06:02	07:10		17:07 (12)	08:18		09:55 (37)	08:32		09:38 (13)	09:24		13:12 (26)
	22:29	21:18	19:50	63	18:55 (17)	18:25	86	16:39 (7)	16:11	129	14:09 (14)	15:42	16	14:15 (14)
19	04:58	06:04	07:12		17:06 (12)	08:20		09:51 (37)	08:34		09:39 (13)	09:25		13:16 (3)
	22:27	21:15	19:47	63	18:54 (17)	18:22	98	16:39 (7)	16:09	131	14:11 (14)	15:42	11	14:15 (14)
20	04:59	06:06	07:15		17:04 (12)	08:23		09:49 (37)	08:36		09:38 (13)	09:25		13:16 (3)
	22:25	21:13	19:45	65	18:53 (17)	18:20	106	16:40 (7)	16:07	129	14:11 (14)	15:42	9	14:14 (14)
21	05:01	06:08	07:17		17:03 (12)	08:25		09:46 (37)	08:38		09:39 (13)	09:26		13:17 (3)
	22:23	21:10	19:42	64	18:51 (17)	18:17	113	16:39 (7)	16:06	131	14:13 (14)	15:43	9	14:15 (14)
22	05:03	06:11	07:19		17:01 (12)	08:27		09:45 (37)	08:41		09:38 (13)	09:26		13:18 (3)
	22:21	21:07	19:39	64	18:50 (17)	18:14	116	16:39 (7)	16:04	131	14:13 (14)	15:43	9	14:16 (14)
23	05:05	06:13	07:21		17:00 (12)	08:30		09:44 (37)	08:43		09:39 (13)	09:27		13:18 (3)
	22:19	21:05	19:36	62	18:48 (17)	18:12	119	16:38 (7)	16:02	128	14:14 (14)	15:44	9	14:16 (14)
24	05:07	06:15	07:24		17:00 (12)	08:32		09:43 (37)	08:45		09:39 (13)	09:27		13:18 (3)
	22:18	21:02	19:33	58	18:46 (17)	18:09	122	16:38 (7)	16:01	127	14:14 (14)	15:44	11	14:17 (14)
25	05:09	06:17	07:26		16:59 (12)	07:34		08:43 (37)	08:47		09:40 (13)	09:28		13:15 (26)
	22:16	20:59	19:30	46	17:45 (12)	17:06	123	15:38 (7)	15:59	124	14:15 (14)	15:45	14	14:17 (14)
26	05:11	06:19	07:28		16:58 (12)	07:37		08:44 (37)	08:49		09:40 (13)	09:28		13:14 (26)
	22:14	20:56	19:27	47	17:45 (12)	17:04	122	15:37 (7)	15:58	119	14:15 (14)	15:46	17	14:18 (14)
27	05:13	06:22	07:30		16:58 (12)	07:39		08:48 (37)	08:51		09:49 (13)	09:28		13:13 (26)
	22:11	20:53	19:24	46	17:44 (12)	17:01	118	15:36 (7)	15:56	112	14:16 (14)	15:47	20	14:19 (14)
28	05:15	06:24	07:32		16:58 (12)	07:41		08:51 (37)	08:53		09:49 (13)	09:28		13:12 (26)
	22:09	20:51	19:21	46	17:44 (12)	16:59	115	15:35 (7)	15:55	109	14:16 (14)	15:48	24	14:21 (14)
29	05:17	06:26	07:35		16:58 (12)	07:44		08:54 (37)	08:55		09:50 (13)	09:28		12:14 (32)
	22:07	20:48	19:19	50	17:48 (9)	16:56	119	15:34 (7)	15:53	106	14:16 (14)	15:49	31	14:23 (14)
30	05:20	06:28	07:37		16:57 (12)	07:46		08:57 (37)	08:57		09:50 (13)	09:28		12:13 (32)
	22:05	20:45	19:16	52	17:49 (9)	16:53	117	15:32 (7)	15:52	103	14:16 (14)	15:50	37	14:25 (14)
31	05:22	06:31				07:49		08:59 (37)				09:28		12:12 (32)
	22:03	20:42				16:51	115	15:29 (7)				15:51	41	14:25 (14)
Potential sun hours	546	478	386			319			236			199		
Total, worst case				1040			2454			3527			1230	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case							34		1					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44		04:40		20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25		22:30	8	20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41		04:38		20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28		22:31	11	20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39		04:37		20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30		22:33	12	20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36		04:36		20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32		22:34	12	20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34		04:35		20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35		22:36	13	20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31		04:34		20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37		22:37	13	20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29		04:33		20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39		22:38	14	20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26		04:32		20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41		22:40	14	20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24		04:31		20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44		22:41	14	20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22		04:30		20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46		22:42	14	20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19		04:29		20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48		22:43	16	20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17		04:29		20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50		22:44	16	20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15		04:28		20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53		22:45	16	20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12		04:28		20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55		22:46	17	20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10		04:27		20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57		22:47	17	20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08		04:27		20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59		22:47	17	20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06		04:27		20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01		22:48	18	20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04		04:27		20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03		22:48	17	20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02		04:27		20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05		22:49	18	20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00		04:27		20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07		22:49	18	20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58		04:27		20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10		22:49	18	20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56		04:27		20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12		22:50	18	20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54		04:27		20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14		22:50	18	20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52		04:27		20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15		22:50	17	20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51		04:28		20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17		22:50	17	20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49		04:28		20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19		22:50	18	20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47		04:29		20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21		22:49	17	20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46		04:30		20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23		22:49	17	20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44		04:30		20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25		22:49	17	20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1)	04:31		20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1)	22:48	17	20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)				05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)				22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						5		469			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April			May			June		
1	09:28	08:46	07:35	07:07			05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56	18:05	20:17			21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43	07:33	07:04			05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59	18:07	20:19			21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41	07:30	07:01			05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01	18:10	20:21			21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39	07:27	06:58			05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04	18:12	20:24			21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37	07:24	06:55			05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06	18:14	20:26			21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34	07:21	06:53			05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09	18:17	20:28			21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32	07:19	06:50			05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11	18:19	20:31			21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	07:16	06:47			05:27			04:32		06:15 (36)
	16:04	17:14	18:21	20:33			21:42			22:40	29	06:44 (36)
9	09:23	08:27	07:13	06:44			05:24			04:31		06:16 (36)
	16:06	17:16	18:24	20:35			21:44			22:42	29	06:45 (36)
10	09:22	08:25	07:10	06:41		07:48 (38)	05:22			04:31		06:15 (36)
	16:07	17:18	18:26	20:37	10	07:58 (38)	21:46			22:43	30	06:45 (36)
11	09:21	08:23	07:07	06:38		07:45 (38)	05:20			04:30		06:16 (36)
	16:09	17:21	18:28	20:40	17	08:02 (38)	21:49			22:44	29	06:45 (36)
12	09:20	08:20	07:04	06:36		07:41 (38)	05:17			04:29		06:15 (36)
	16:11	17:23	18:31	20:42	22	08:03 (38)	21:51			22:45	30	06:45 (36)
13	09:18	08:18	07:02	06:33		07:37 (38)	05:15			04:29		06:16 (36)
	16:13	17:26	18:33	20:44	27	08:04 (38)	21:53			22:46	30	06:46 (36)
14	09:17	08:15	06:59	06:30		07:35 (38)	05:13			04:28		06:16 (36)
	16:15	17:28	18:35	20:47	30	08:05 (38)	21:55			22:46	30	06:46 (36)
15	09:16	08:13	06:56	06:27		07:34 (38)	05:11			04:28		06:15 (36)
	16:17	17:31	18:38	20:49	33	08:07 (38)	21:57			22:47	31	06:46 (36)
16	09:14	08:10	06:53	06:24		07:33 (38)	05:09			04:28		06:16 (36)
	16:19	17:33	18:40	20:51	34	08:07 (38)	22:00			22:48	30	06:46 (36)
17	09:13	08:07	06:50	06:22		07:32 (38)	05:06			04:27		06:16 (36)
	16:21	17:36	18:42	20:54	35	08:07 (38)	22:02			22:48	31	06:47 (36)
18	09:12	08:05	06:47	06:19		07:31 (38)	05:04			04:27		06:16 (36)
	16:24	17:38	18:45	20:56	37	08:08 (38)	22:04			22:49	31	06:47 (36)
19	09:10	08:02	06:44	06:16		07:30 (38)	05:02			04:27		06:16 (36)
	16:26	17:41	18:47	20:58	38	08:08 (38)	22:06			22:49	31	06:47 (36)
20	09:08	08:00	06:42	06:13		07:30 (38)	05:00			04:27		06:16 (36)
	16:28	17:43	18:49	21:00	39	08:09 (38)	22:08			22:50	31	06:47 (36)
21	09:07	07:57	06:39	06:11		07:30 (38)	04:58			04:27		06:16 (36)
	16:30	17:46	18:52	21:03	38	08:08 (38)	22:10			22:50	31	06:47 (36)
22	09:05	07:54	06:36	06:08		07:29 (38)	04:56			04:27		06:17 (36)
	16:32	17:48	18:54	21:05	39	08:08 (38)	22:12			22:50	31	06:48 (36)
23	09:03	07:52	06:33	06:05		07:29 (38)	04:55			04:28		06:17 (36)
	16:35	17:50	18:56	21:07	39	08:08 (38)	22:14			22:50	31	06:48 (36)
24	09:02	07:49	06:30	06:02		07:29 (38)	04:53			04:28		06:17 (36)
	16:37	17:53	18:58	21:10	38	08:07 (38)	22:16			22:50	31	06:48 (36)
25	09:00	07:46	06:27	06:00		07:29 (38)	04:51			04:28		06:18 (36)
	16:39	17:55	19:01	21:12	38	08:07 (38)	22:18			22:50	31	06:49 (36)
26	08:58	07:44	06:24	05:57		07:29 (38)	04:49		06:24 (36)	04:29		06:18 (36)
	16:42	17:58	19:03	21:14	37	08:06 (38)	22:20	8	06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41	06:21	05:54		07:29 (38)	04:48		06:21 (36)	04:29		06:19 (36)
	16:44	18:00	19:05	21:17	37	08:06 (38)	22:22	13	06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38	06:18	05:52		07:29 (38)	04:46		06:20 (36)	04:30		06:18 (36)
	16:47	18:02	19:08	21:19	36	08:05 (38)	22:24	16	06:36 (36)	22:50	31	06:49 (36)
29	08:52		07:16	05:49		07:30 (38)	04:44		06:19 (36)	04:31		06:19 (36)
	16:49		20:10	21:21	34	08:04 (38)	22:25	18	06:37 (36)	22:49	30	06:49 (36)
30	08:50		07:13	05:47		07:30 (38)	04:43		06:19 (36)	04:31		06:19 (36)
	16:51		20:12	21:24	33	08:03 (38)	22:27	20	06:39 (36)	22:49	30	06:49 (36)
31	08:48		07:10				04:41		06:17 (36)			
	16:54		20:14				22:29	22	06:39 (36)			
Potential sun hours	221	260	365	432			521			547		
Total, worst case					691			254			878	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October	November	December
1	04:32		06:20 (36)	05:24		06:33	07:44 (38)	07:39	07:51	09:00
	22:48	30	06:50 (36)	22:01		20:40	17 08:01 (38)	19:13	16:49	15:51
2	04:33		06:20 (36)	05:27		06:35	07:47 (38)	07:42	07:54	09:01
	22:48	30	06:50 (36)	21:58		20:37	10 07:57 (38)	19:10	16:47	15:50
3	04:34		06:20 (36)	05:29		06:38		07:44	07:56	09:03
	22:47	29	06:49 (36)	21:56		20:34		19:07	16:44	15:49
4	04:35		06:20 (36)	05:31		06:40		07:46	07:59	09:05
	22:46	29	06:49 (36)	21:54		20:31		19:05	16:42	15:48
5	04:36		06:21 (36)	05:33		06:42		07:48	08:01	09:07
	22:46	28	06:49 (36)	21:51		20:28		19:02	16:39	15:47
6	04:38		06:21 (36)	05:35	07:49 (38)	06:44		07:51	08:03	09:09
	22:45	28	06:49 (36)	21:49	13 08:02 (38)	20:25		18:59	16:37	15:47
7	04:39		06:23 (36)	05:38	07:46 (38)	06:47		07:53	08:06	09:10
	22:44	27	06:50 (36)	21:47	18 08:04 (38)	20:23		18:56	16:35	15:46
8	04:40		06:23 (36)	05:40	07:44 (38)	06:49		07:55	08:08	09:12
	22:43	26	06:49 (36)	21:44	22 08:06 (38)	20:20		18:53	16:32	15:45
9	04:42		06:23 (36)	05:42	07:43 (38)	06:51		07:57	08:11	09:13
	22:42	26	06:49 (36)	21:42	25 08:08 (38)	20:17		18:50	16:30	15:44
10	04:43		06:24 (36)	05:44	07:41 (38)	06:53		08:00	08:13	09:15
	22:40	24	06:48 (36)	21:39	28 08:09 (38)	20:14		18:48	16:28	15:44
11	04:45		06:25 (36)	05:46	07:40 (38)	06:55		08:02	08:15	09:16
	22:39	23	06:48 (36)	21:37	30 08:10 (38)	20:11		18:45	16:26	15:43
12	04:46		06:25 (36)	05:49	07:39 (38)	06:58		08:04	08:18	09:17
	22:38	23	06:48 (36)	21:34	32 08:11 (38)	20:08		18:42	16:24	15:43
13	04:48		06:26 (36)	05:51	07:38 (38)	07:00		08:07	08:20	09:19
	22:36	21	06:47 (36)	21:32	33 08:11 (38)	20:05		18:39	16:22	15:43
14	04:49		06:28 (36)	05:53	07:37 (38)	07:02		08:09	08:22	09:20
	22:35	18	06:46 (36)	21:29	35 08:12 (38)	20:02		18:36	16:19	15:43
15	04:51		06:28 (36)	05:55	07:36 (38)	07:04		08:11	08:25	09:21
	22:34	17	06:45 (36)	21:26	36 08:12 (38)	19:59		18:34	16:17	15:42
16	04:53		06:30 (36)	05:58	07:36 (38)	07:06		08:14	08:27	09:22
	22:32	14	06:44 (36)	21:24	37 08:13 (38)	19:57		18:31	16:15	15:42
17	04:54		06:31 (36)	06:00	07:35 (38)	07:09		08:16	08:29	09:23
	22:30	11	06:42 (36)	21:21	38 08:13 (38)	19:54		18:28	16:13	15:42
18	04:56		06:35 (36)	06:02	07:36 (38)	07:11		08:18	08:32	09:24
	22:29	5	06:40 (36)	21:18	38 08:14 (38)	19:51		18:25	16:12	15:42
19	04:58			06:04	07:35 (38)	07:13		08:21	08:34	09:25
	22:27			21:16	39 08:14 (38)	19:48		18:23	16:10	15:43
20	05:00			06:07	07:35 (38)	07:15		08:23	08:36	09:25
	22:25			21:13	38 08:13 (38)	19:45		18:20	16:08	15:43
21	05:02			06:09	07:34 (38)	07:17		08:25	08:39	09:26
	22:23			21:10	39 08:13 (38)	19:42		18:17	16:06	15:43
22	05:04			06:11	07:34 (38)	07:20		08:28	08:41	09:27
	22:22			21:08	39 08:13 (38)	19:39		18:15	16:04	15:44
23	05:06			06:13	07:34 (38)	07:22		08:30	08:43	09:27
	22:20			21:05	38 08:12 (38)	19:36		18:12	16:03	15:44
24	05:08			06:15	07:34 (38)	07:24		08:32	08:45	09:28
	22:18			21:02	37 08:11 (38)	19:33		18:09	16:01	15:45
25	05:10			06:18	07:34 (38)	07:26		07:35	08:47	09:28
	22:16			20:59	37 08:11 (38)	19:30		17:07	16:00	15:46
26	05:12			06:20	07:34 (38)	07:28		07:37	08:50	09:28
	22:14			20:57	36 08:10 (38)	19:28		17:04	15:58	15:46
27	05:14			06:22	07:35 (38)	07:31		07:39	08:52	09:28
	22:12			20:54	34 08:09 (38)	19:25		17:02	15:57	15:47
28	05:16			06:24	07:35 (38)	07:33		07:42	08:54	09:28
	22:10			20:51	32 08:07 (38)	19:22		16:59	15:55	15:48
29	05:18			06:27	07:36 (38)	07:35		07:44	08:56	09:28
	22:07			20:48	30 08:06 (38)	19:19		16:56	15:54	15:49
30	05:20			06:29	07:38 (38)	07:37		07:47	08:58	09:28
	22:05			20:45	27 08:05 (38)	19:16		16:54	15:53	15:50
31	05:22			06:31	07:41 (38)			07:49		09:28
	22:03			20:43	22 08:03 (38)			16:51		15:51
Potential sun hours	545			478		386		319	236	200
Total, worst case		409			833		27			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March		April		May			June			July			August		September		October		November		December
1	09:28		08:46		07:35		07:07		05:44			04:40		06:01 (38)	04:32		06:06 (38)	05:24		06:33		07:39		07:51		09:00
	15:53		16:56		18:05		20:17		21:26			22:30	34	06:35 (38)	22:48	37	06:43 (38)	22:01		20:40		19:13		16:49		15:52
2	09:27		08:43		07:33		07:04		05:42			04:39		06:01 (38)	04:33		06:07 (38)	05:27		06:35		07:42		07:54		09:01
	15:54		16:59		18:07		20:19		21:28			22:32	35	06:36 (38)	22:48	36	06:43 (38)	21:58		20:37		19:10		16:47		15:50
3	09:27		08:41		07:30		07:01		05:39			04:38		06:01 (38)	04:34		06:06 (38)	05:29		06:38		07:44		07:56		09:03
	15:56		17:01		18:10		20:21		21:30			22:33	35	06:36 (38)	22:47	37	06:43 (38)	21:56		20:34		19:07		16:44		15:49
4	09:26		08:39		07:27		06:58		05:37			04:36		06:00 (38)	04:35		06:06 (38)	05:31		06:40		07:46		07:59		09:05
	15:57		17:04		18:12		20:24		21:33			22:35	36	06:36 (38)	22:46	37	06:43 (38)	21:54		20:31		19:05		16:42		15:48
5	09:26		08:37		07:24		06:55		05:34			04:35		06:01 (38)	04:37		06:06 (38)	05:33		06:42		07:48		08:01		09:07
	15:59		17:06		18:14		20:26		21:35			22:36	36	06:37 (38)	22:46	37	06:43 (38)	21:51		20:28		19:02		16:39		15:47
6	09:25		08:34		07:21		06:53		05:32			04:34		06:01 (38)	04:38		06:08 (38)	05:35		06:44		07:51		08:03		09:09
	16:00		17:09		18:17		20:28		21:37			22:38	36	06:37 (38)	22:45	36	06:44 (38)	21:49		20:25		18:59		16:37		15:47
7	09:24		08:32		07:19		06:50		05:29			04:33		06:01 (38)	04:39		06:08 (38)	05:38		06:47		07:53		08:06		09:10
	16:02		17:11		18:19		20:31		21:40			22:39	36	06:37 (38)	22:44	36	06:44 (38)	21:47		20:23		18:56		16:35		15:46
8	09:24		08:30		07:16		06:47		05:27			04:32		06:01 (38)	04:40		06:08 (38)	05:40		06:49		07:55		08:08		09:12
	16:04		17:14		18:21		20:33		21:42			22:40	36	06:37 (38)	22:43	36	06:44 (38)	21:44		20:20		18:53		16:32		15:45
9	09:23		08:27		07:13		06:44		05:24			04:31		06:02 (38)	04:42		06:08 (38)	05:42		06:51		07:57		08:11		09:13
	16:06		17:16		18:24		20:35		21:44			22:41	36	06:38 (38)	22:42	36	06:44 (38)	21:42		20:17		18:50		16:30		15:44
10	09:22		08:25		07:10		06:41		05:22			04:31		06:01 (38)	04:43		06:08 (38)	05:44		06:53		08:00		08:13		09:15
	16:07		17:19		18:26		20:37		21:46			22:43	37	06:38 (38)	22:40	35	06:43 (38)	21:39		20:14		18:48		16:28		15:44
11	09:21		08:23		07:07		06:38		05:20			04:30		06:02 (38)	04:45		06:09 (38)	05:46		06:55		08:02		08:15		09:16
	16:09		17:21		18:28		20:40		21:49			22:44	37	06:39 (38)	22:39	35	06:44 (38)	21:37		20:11		18:45		16:26		15:43
12	09:20		08:20		07:04		06:36		05:17			04:29		06:02 (38)	04:46		06:09 (38)	05:49		06:58		08:04		08:18		09:17
	16:11		17:23		18:31		20:42		21:51			22:45	36	06:38 (38)	22:38	35	06:44 (38)	21:34		20:08		18:42		16:24		15:43
13	09:18		08:18		07:02		06:33		05:15			04:29		06:02 (38)	04:48		06:09 (38)	05:51		07:00		08:07		08:20		09:19
	16:13		17:26		18:33		20:44		21:53			22:46	37	06:39 (38)	22:36	34	06:43 (38)	21:31		20:05		18:39		16:22		15:43
14	09:17		08:15		06:59		06:30		05:13			04:28		06:03 (38)	04:49		06:10 (38)	05:53		07:02		08:09		08:22		09:20
	16:15		17:28		18:35		20:47		21:55			22:46	36	06:39 (38)	22:35	33	06:43 (38)	21:29		20:02		18:36		16:19		15:43
15	09:16		08:13		06:56		06:27		05:11			04:28		06:02 (38)	04:51		06:10 (38)	05:55		07:04		08:11		08:25		09:21
	16:17		17:31		18:38		20:49		21:57			22:47	37	06:39 (38)	22:34	33	06:43 (38)	21:26		19:59		18:34		16:17		15:42
16	09:14		08:10		06:53		06:24		05:09			04:28		06:02 (38)	04:53		06:11 (38)	05:58		07:06		08:14		08:27		09:22
	16:19		17:33		18:40		20:51		22:00			22:48	37	06:39 (38)	22:32	32	06:43 (38)	21:24		19:57		18:31		16:15		15:42
17	09:13		08:07		06:50		06:22		05:06		06:12 (38)	04:27		06:03 (38)	04:54		06:11 (38)	06:00		07:09		08:16		08:29		09:23
	16:21		17:36		18:42		20:54		22:02	10	06:22 (38)	22:48	37	06:40 (38)	22:30	31	06:42 (38)	21:21		19:54		18:28		16:14		15:42
18	09:12		08:05		06:47		06:19		05:04		06:11 (38)	04:27		06:03 (38)	04:56		06:12 (38)	06:02		07:11		08:18		08:32		09:24
	16:24		17:38		18:45		20:56		22:04	14	06:25 (38)	22:49	37	06:40 (38)	22:29	30	06:42 (38)	21:18		19:51		18:25		16:12		15:42
19	09:10		08:02		06:44		06:16		05:02		06:09 (38)	04:27		06:03 (38)	04:58		06:13 (38)	06:04		07:13		08:20		08:34		09:25
	16:26		17:41		18:47		20:58		22:06	18	06:27 (38)	22:49	37	06:40 (38)	22:27	29	06:42 (38)	21:16		19:48		18:23		16:10		15:43
20	09:08		08:00		06:42		06:13		05:00		06:08 (38)	04:27		06:03 (38)	05:00		06:13 (38)	06:07		07:15		08:23		08:36		09:25
	16:28		17:43		18:49		21:00		22:08	20	06:28 (38)	22:50	37	06:40 (38)	22:25	28	06:41 (38)	21:13		19:45		18:20		16:08		15:43
21	09:07		07:57		06:39		06:11		04:58		06:06 (38)	04:27		06:03 (38)	05:02		06:14 (38)	06:09		07:17		08:25		08:39		09:26
	16:30		17:46		18:52		21:03		22:10	23	06:29 (38)	22:50	37	06:40 (38)	22:23	27	06:41 (38)	21:10		19:42		18:17		16:06		15:43
22	09:05		07:54		06:36		06:08		04:56		06:05 (38)	04:27		06:04 (38)	05:04		06:16 (38)	06:11		07:20		08:28		08:41		09:27
	16:32		17:48		18:54		21:05		22:12	25	06:30 (38)	22:50	37	06:41 (38)	22:22	24	06:40 (38)	21:08		19:39		18:15		16:04		15:44
23	09:03		07:52		06:33		06:05		04:55		06:03 (38)	04:28		06:04 (38)	05:06		06:17 (38)	06:13		07:22		08:30		08:43		09:27
	16:35		17:50		18:56		21:07		22:14	28	06:31 (38)	22:50	37	06:41 (38)	22:20	21	06:38 (38)	21:05		19:36		18:12		16:03		15:44
24	09:02		07:49		06:30		06:02		04:53		06:03 (38)	04:28		06:04 (38)	05:08		06:18 (38)	06:15		07:24		08:32		08:45		09:28
	16:37		17:53		18:58		21:10		22:16	29	06:32 (38)	22:50	37	06:41 (38)	22:18	19	06:37 (38)	21:02		19:33		18:09		16:01		15:45
25	09:00		07:46		06:27		06:00		04:51		06:02 (38)	04:28		06:05 (38)	05:10		06:20 (38)	06:18		07:26		07:35		08:47		09:28
	16:39		17:55		19:01		21:12		22:18	30	06:32 (38)	22:50	37	06:42 (38)	22:16	16	06:36 (38)	20:59		19:30		17:07		16:00		15:46
26	08:58		07:44		06:24		05:57		04:49		06:02 (38)	04:29		06:05 (38)	05:12		06:22 (38)	06:20		07:28		07:37		08:49		09:28
	16:42		17:58		19:03		21:14		22:20	31	06:33 (38)	22:50	36	06:41 (38)	22:14	12	06:34 (38)	20:57		19:28		17:04		15:58		15:46
27	08:56		07:41		06:21		05:54		04:48		06:01 (38)	04:29		06:05 (38)	05:14		06:25 (38)	06:22		07:31		07:39		08:52		09:28
	16:44		18:00		19:05		21:17		22:22	32	06:33 (38)	22:50	37	06:42 (38)	22:12	6	06:31 (38)	20:54		19:25		17:02		15:57		15:47
28	08:54		07:38		06:18		05:52		04:46		06:01 (38)	04:30		06:05 (38)	05:16			06:24		07:33		07:42		08:54		09:28
	16:47		18:02		19:08		21:19		22:24	33	06:34 (38)	22:50	37	06:42 (38)	22:10			20:51		19:22		16:59		15:55		15:48
29	08:52				07:16		05:49		04:44		06:01 (38)	04:31		06:05 (38)	05:18			06:27		07:35		07:44		08:56		09:28
	16:49				20:10		21:21		22:25	34	06:35 (38)	22:49	37	06:42 (38)	22:07			20:48		19:19		16:56		15:54		15:49
30	08:50				07:13		05:47		04:43		06:01 (38)	04:32		06:06 (38)	05:20			06:29		07:37		07:47		08:58		09:28
	16:51				20:12		21:24		22:27	34	06:35 (38)	22:49	37	06:43 (38)	22:05			20:45		19:16		16:54		15:53		15:50
31	08:48				07:10				04:41		06:01 (38)				05:22			06:31				07:49				09:28
	16:54				20:14				22:29	34	06:35 (38)				22:03			20:43				16:51				15:51
Potential sun hours	221		260		365		432		521			547			545			478		386		319		236		200
Total, worst case										395			1094			808										

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		06:18 (38)	04:32	06:18 (38)	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:46 (38)	22:48	33	06:51 (38)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (38)	04:33		06:19 (38)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	28	06:46 (38)	22:48	33	06:52 (38)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:17 (38)	04:34		06:18 (38)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:46 (38)	22:47	33	06:51 (38)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:16 (38)	04:35		06:18 (38)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:46 (38)	22:46	33	06:51 (38)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:16 (38)	04:37		06:19 (38)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:47 (38)	22:46	33	06:52 (38)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:15 (38)	04:38		06:21 (38)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:47 (38)	22:45	32	06:53 (38)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:14 (38)	04:39		06:22 (38)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:46 (38)	22:44	31	06:53 (38)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:13 (38)	04:40		06:23 (38)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	33	06:46 (38)	22:43	30	06:53 (38)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:14 (38)	04:42		06:24 (38)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	33	06:47 (38)	22:42	29	06:53 (38)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:13 (38)	04:43		06:25 (38)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:46 (38)	22:40	28	06:53 (38)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:14 (38)	04:45		06:26 (38)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:47 (38)	22:39	28	06:54 (38)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (38)	04:46		06:27 (38)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	32	06:46 (38)	22:38	27	06:54 (38)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:14 (38)	04:48		06:28 (38)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	33	06:47 (38)	22:36	26	06:54 (38)	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:15 (38)	04:49		06:30 (38)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	32	06:47 (38)	22:35	24	06:54 (38)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:15 (38)	04:51		06:31 (38)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	32	06:47 (38)	22:34	23	06:54 (38)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:39 (38)	04:28	06:15 (38)	04:53		06:33 (38)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	2	06:41 (38)	22:48	32	06:47 (38)	22:32	22	06:55 (38)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:37 (38)	04:27	06:15 (38)	04:54		06:33 (38)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	4	06:41 (38)	22:48	32	06:47 (38)	22:30	21	06:54 (38)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04		06:36 (38)	04:27	06:16 (38)	04:56		06:35 (38)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	7	06:43 (38)	22:49	31	06:47 (38)	22:29	20	06:55 (38)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:35 (38)	04:27	06:16 (38)	04:58		06:37 (38)	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	8	06:43 (38)	22:49	31	06:47 (38)	22:27	18	06:55 (38)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:33 (38)	04:27	06:16 (38)	05:00		06:38 (38)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	10	06:43 (38)	22:50	31	06:47 (38)	22:25	16	06:54 (38)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:31 (38)	04:27	06:16 (38)	05:02		06:39 (38)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	12	06:43 (38)	22:50	31	06:47 (38)	22:23	15	06:54 (38)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:30 (38)	04:27	06:17 (38)	05:04		06:41 (38)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	14	06:44 (38)	22:50	31	06:48 (38)	22:22	13	06:54 (38)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:29 (38)	04:28	06:17 (38)	05:06		06:42 (38)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	15	06:44 (38)	22:50	31	06:48 (38)	22:20	11	06:53 (38)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:28 (38)	04:28	06:17 (38)	05:08		06:44 (38)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	17	06:45 (38)	22:50	31	06:48 (38)	22:18	9	06:53 (38)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:26 (38)	04:28	06:18 (38)	05:10		06:45 (38)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	19	06:45 (38)	22:50	31	06:49 (38)	22:16	8	06:53 (38)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:25 (38)	04:29	06:17 (38)	05:12		06:47 (38)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	20	06:45 (38)	22:50	32	06:49 (38)	22:14	6	06:53 (38)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:23 (38)	04:29	06:18 (38)	05:14		06:49 (38)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22	06:45 (38)	22:50	32	06:50 (38)	22:12	3	06:52 (38)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:23 (38)	04:30	06:17 (38)	05:16		06:51 (38)	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	22	06:45 (38)	22:50	32	06:49 (38)	22:10	1	06:52 (38)	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:22 (38)	04:31	06:18 (38)	05:18			06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	24	06:46 (38)	22:49	32	06:50 (38)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:21 (38)	04:32	06:18 (38)	05:20			06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	25	06:46 (38)	22:49	33	06:51 (38)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:19 (38)				05:22		06:31		07:49		09:28
	16:54		20:14		22:29	26	06:45 (38)				22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521			547			545		478	386	319	236	200
Total, worst case						247			944			606					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May		June		July		August		September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		07:08 (38)	04:40	06:45 (38)	04:32	06:56 (38)	05:24	06:57 (38)	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	1	07:09 (38)	22:30	32	07:17 (38)	22:48	23	07:19 (38)	22:01	33	07:30 (38)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		07:06 (38)	04:39	06:46 (38)	04:33	06:56 (38)	05:27	06:59 (38)	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	6	07:12 (38)	22:32	31	07:17 (38)	22:48	24	07:20 (38)	21:58	31	07:30 (38)	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		07:04 (38)	04:38	06:46 (38)	04:34	06:55 (38)	05:29	07:01 (38)	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:31	9	07:13 (38)	22:33	31	07:17 (38)	22:47	25	07:20 (38)	21:56	28	07:29 (38)	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		07:02 (38)	04:36	06:47 (38)	04:35	06:55 (38)	05:31	07:03 (38)	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	13	07:15 (38)	22:35	29	07:16 (38)	22:46	25	07:20 (38)	21:54	26	07:29 (38)	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		07:00 (38)	04:35	06:48 (38)	04:37	06:54 (38)	05:33	07:05 (38)	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	16	07:16 (38)	22:36	29	07:17 (38)	22:46	27	07:21 (38)	21:51	23	07:28 (38)	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		06:58 (38)	04:34	06:49 (38)	04:38	06:55 (38)	05:35	07:06 (38)	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37	19	07:17 (38)	22:38	27	07:16 (38)	22:45	28	07:23 (38)	21:49	21	07:27 (38)	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		06:55 (38)	04:33	06:49 (38)	04:39	06:55 (38)	05:38	07:08 (38)	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22	07:17 (38)	22:39	27	07:16 (38)	22:44	28	07:23 (38)	21:47	18	07:26 (38)	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		06:54 (38)	04:32	06:49 (38)	04:40	06:54 (38)	05:40	07:10 (38)	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	24	07:18 (38)	22:40	26	07:15 (38)	22:43	30	07:24 (38)	21:44	15	07:25 (38)	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		06:52 (38)	04:31	06:50 (38)	04:42	06:54 (38)	05:42	07:12 (38)	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	27	07:19 (38)	22:42	26	07:16 (38)	22:42	30	07:24 (38)	21:42	12	07:24 (38)	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		06:50 (38)	04:31	06:51 (38)	04:43	06:53 (38)	05:44	07:13 (38)	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	29	07:19 (38)	22:43	24	07:15 (38)	22:40	31	07:24 (38)	21:39	9	07:22 (38)	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		06:48 (38)	04:30	06:52 (38)	04:45	06:54 (38)	05:46	07:15 (38)	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	32	07:20 (38)	22:44	23	07:15 (38)	22:39	32	07:26 (38)	21:37	5	07:20 (38)	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		06:46 (38)	04:29	06:52 (38)	04:46	06:53 (38)	05:49		06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	34	07:20 (38)	22:45	22	07:14 (38)	22:38	33	07:26 (38)	21:34			20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		06:45 (38)	04:29	06:53 (38)	04:48	06:53 (38)	05:51		07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	35	07:20 (38)	22:46	21	07:14 (38)	22:36	33	07:26 (38)	21:32			20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		06:43 (38)	04:28	06:53 (38)	04:49	06:53 (38)	05:53		07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	37	07:20 (38)	22:46	22	07:15 (38)	22:35	34	07:27 (38)	21:29			20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		06:41 (38)	04:28	06:53 (38)	04:51	06:52 (38)	05:55		07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	39	07:20 (38)	22:47	21	07:14 (38)	22:34	35	07:27 (38)	21:26			19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		06:41 (38)	04:28	06:54 (38)	04:53	06:52 (38)	05:58		07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	39	07:20 (38)	22:48	20	07:14 (38)	22:32	36	07:28 (38)	21:24			19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06		06:40 (38)	04:27	06:54 (38)	04:54	06:52 (38)	06:00		07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	40	07:20 (38)	22:48	20	07:14 (38)	22:30	36	07:28 (38)	21:21			19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04		06:41 (38)	04:27	06:55 (38)	04:56	06:52 (38)	06:02		07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	40	07:21 (38)	22:49	19	07:14 (38)	22:29	37	07:29 (38)	21:18			19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02		06:41 (38)	04:27	06:55 (38)	04:58	06:52 (38)	06:04		07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	40	07:21 (38)	22:49	19	07:14 (38)	22:27	38	07:30 (38)	21:16			19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00		06:41 (38)	04:27	06:55 (38)	05:00	06:51 (38)	06:07		07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	39	07:20 (38)	22:50	19	07:14 (38)	22:25	38	07:29 (38)	21:13			19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58		06:41 (38)	04:27	06:55 (38)	05:02	06:51 (38)	06:09		07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	39	07:20 (38)	22:50	19	07:14 (38)	22:23	39	07:30 (38)	21:10			19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56		06:41 (38)	04:27	06:56 (38)	05:04	06:52 (38)	06:11		07:19	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	39	07:20 (38)	22:50	19	07:15 (38)	22:22	39	07:31 (38)	21:08			19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55		06:41 (38)	04:28	06:56 (38)	05:06	06:51 (38)	06:13		07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	39	07:20 (38)	22:50	19	07:15 (38)	22:20	39	07:30 (38)	21:05			19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53		06:42 (38)	04:28	06:56 (38)	05:08	06:51 (38)	06:15		07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	38	07:20 (38)	22:50	19	07:15 (38)	22:18	40	07:31 (38)	21:02			19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51		06:42 (38)	04:28	06:57 (38)	05:10	06:51 (38)	06:18		07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	37	07:19 (38)	22:50	19	07:16 (38)	22:16	40	07:31 (38)	20:59			19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49		06:43 (38)	04:29	06:56 (38)	05:12	06:51 (38)	06:20		07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	37	07:20 (38)	22:50	20	07:16 (38)	22:14	40	07:31 (38)	20:57			19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48		06:43 (38)	04:29	06:56 (38)	05:14	06:52 (38)	06:22		07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	36	07:19 (38)	22:50	21	07:17 (38)	22:12	39	07:31 (38)	20:54			19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46		06:43 (38)	04:30	06:56 (38)	05:16	06:52 (38)	06:24		07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	36	07:19 (38)	22:50	21	07:17 (38)	22:10	39	07:31 (38)	20:51			19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44		06:44 (38)	04:31	06:56 (38)	05:18	06:52 (38)	06:27		07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	35	07:19 (38)	22:49	21	07:17 (38)	22:07	38	07:30 (38)	20:48			19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43		06:45 (38)	04:32	06:56 (38)	05:20	06:54 (38)	06:29		07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34	07:19 (38)	22:49	22	07:18 (38)	22:05	36	07:30 (38)	20:45			19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		06:44 (38)				05:22		06:55 (38)	06:31				07:49		09:28
	16:54		20:14		22:29	34	07:18 (38)				22:03	35	07:30 (38)	20:43				16:51		15:51
Potential sun hours	221	260	365	432	521			547		545		478		386	319	236	200
Total, worst case						945			688		1047		221				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	04:32	05:24	06:33			07:40			07:52		08:47 (2)	09:00
	22:49	22:01	20:40			19:13			16:49	9	08:56 (2)	15:51
2	04:33	05:26	06:35			07:42		09:06 (22)	07:54			09:02
	22:48	21:59	20:37			19:10	6	09:12 (22)	16:46			15:50
3	04:34	05:29	06:38			07:44		09:02 (22)	07:56			09:04
	22:47	21:56	20:34			19:07	13	09:15 (22)	16:44			15:49
4	04:35	05:31	06:40			07:46		09:00 (22)	07:59			09:05
	22:47	21:54	20:31			19:05	17	09:17 (22)	16:42			15:48
5	04:36	05:33	06:42			07:48		08:58 (22)	08:01			09:07
	22:46	21:52	20:28			19:02	20	09:18 (22)	16:39			15:47
6	04:38	05:35	06:44			07:51		08:57 (22)	08:04			09:09
	22:45	21:49	20:26			18:59	22	09:19 (22)	16:37			15:46
7	04:39	05:37	06:47			07:53		08:57 (22)	08:06			09:10
	22:44	21:47	20:23			18:56	23	09:20 (22)	16:35			15:46
8	04:40	05:40	06:49			07:55		08:55 (22)	08:08			09:12
	22:43	21:44	20:20			18:53	24	09:19 (22)	16:32			15:45
9	04:41	05:42	06:51			07:58		08:55 (22)	08:11			09:14
	22:42	21:42	20:17			18:50	24	09:19 (22)	16:30			15:44
10	04:43	05:44	06:53			08:00		08:55 (22)	08:13			09:15
	22:41	21:39	20:14			18:48	24	09:19 (22)	16:28			15:44
11	04:44	05:46	06:55			08:02		08:54 (22)	08:16			09:16
	22:39	21:37	20:11			18:45	25	09:19 (22)	16:26			15:43
12	04:46	05:49	06:58			08:04		08:55 (22)	08:18			09:18
	22:38	21:34	20:08			18:42	23	09:18 (22)	16:24			15:43
13	04:48	05:51	07:00			08:07		08:55 (22)	08:20			09:19
	22:37	21:32	20:05			18:39	22	09:17 (22)	16:21			15:43
14	04:49	05:53	07:02			08:09		08:55 (22)	08:23			09:20
	22:35	21:29	20:02			18:36	21	09:16 (22)	16:19			15:42
15	04:51	05:55	07:04			08:11		08:57 (22)	08:25			09:21
	22:34	21:26	20:00			18:34	18	09:15 (22)	16:17			15:42
16	04:53	05:58	07:06			08:14		08:58 (22)	08:27			09:22
	22:32	21:24	19:57			18:31	15	09:13 (22)	16:15			15:42
17	04:54	06:00	07:09			08:16		09:01 (22)	08:30			09:23
	22:31	21:21	19:54			18:28	10	09:11 (22)	16:13			15:42
18	04:56	06:02	07:11		08:19 (24)	08:18			08:32			09:24
	22:29	21:19	19:51	9	08:28 (24)	18:25			16:11			15:42
19	04:58	06:04	07:13		08:16 (24)	08:21			08:34			09:25
	22:27	21:16	19:48	13	08:29 (24)	18:23			16:10			15:43
20	05:00	06:06	07:15		08:14 (24)	08:23		09:48 (2)	08:37			09:26
	22:25	21:13	19:45	16	08:30 (24)	18:20	9	09:57 (2)	16:08			15:43
21	05:02	06:09	07:17		08:14 (24)	08:25		09:46 (2)	08:39			09:26
	22:24	21:10	19:42	17	08:31 (24)	18:17	13	09:59 (2)	16:06			15:43
22	05:04	06:11	07:20		08:13 (24)	08:28		09:44 (2)	08:41			09:27
	22:22	21:08	19:39	18	08:31 (24)	18:15	16	10:00 (2)	16:04			15:44
23	05:06	06:13	07:22		08:12 (24)	08:30		09:44 (2)	08:43			09:27
	22:20	21:05	19:36	19	08:31 (24)	18:12	17	10:01 (2)	16:03			15:44
24	05:08	06:15	07:24		08:12 (24)	08:32		09:42 (2)	08:45			09:28
	22:18	21:02	19:33	19	08:31 (24)	18:09	19	10:01 (2)	16:01			15:45
25	05:10	06:18	07:26		08:11 (24)	07:35		08:42 (2)	08:48			09:28
	22:16	20:59	19:31	19	08:30 (24)	17:07	19	09:01 (2)	15:59			15:45
26	05:12	06:20	07:28		08:12 (24)	07:37		08:43 (2)	08:50			09:28
	22:14	20:57	19:28	17	08:29 (24)	17:04	19	09:02 (2)	15:58			15:46
27	05:14	06:22	07:31		08:13 (24)	07:40		08:42 (2)	08:52			09:28
	22:12	20:54	19:25	15	08:28 (24)	17:02	19	09:01 (2)	15:57			15:47
28	05:16	06:24	07:33		08:14 (24)	07:42		08:43 (2)	08:54			09:29
	22:10	20:51	19:22	12	08:26 (24)	16:59	18	09:01 (2)	15:55			15:48
29	05:18	06:27	07:35		08:15 (24)	07:44		08:44 (2)	08:56			09:29
	22:08	20:48	19:19	8	08:23 (24)	16:56	17	09:01 (2)	15:54			15:49
30	05:20	06:29	07:37			07:47		08:44 (2)	08:58			09:28
	22:05	20:45	19:16			16:54	15	08:59 (2)	15:53			15:50
31	05:22	06:31				07:49		08:45 (2)				09:28
	22:03	20:43				16:51	13	08:58 (2)				15:51
Potential sun hours	545	478	386			319			236			200
Total, worst case				182			501			9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
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13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
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14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
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15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June	July	August	September			October			November	December
1	09:28	08:46			07:35		08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33			07:40			07:52	09:00
	15:53	16:56			18:05	23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40			19:13			16:49	15:51
2	09:28	08:44			07:33		08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35			07:42			07:54	09:02
	15:54	16:59			18:07	24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37			19:10			16:46	15:50
3	09:27	08:41			07:30		08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38			07:44			07:56	09:04
	15:56	17:01			18:10	24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34			19:07			16:44	15:49
4	09:27	08:39			07:27		08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40			07:46		09:05 (22)	07:59	09:05
	15:57	17:04			18:12	23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31			19:05	11	09:16 (22)	16:42	15:48
5	09:26	08:37			07:24		08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42			07:48		09:02 (22)	08:01	09:07
	15:59	17:06			18:14	22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28			19:02	16	09:18 (22)	16:39	15:47
6	09:25	08:35			07:22		08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44			07:51		09:00 (22)	08:04	09:09
	16:00	17:09			18:17	22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26			18:59	19	09:19 (22)	16:37	15:46
7	09:25	08:32			07:19		08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47			07:53		09:00 (22)	08:06	09:10
	16:02	17:11			18:19	19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23			18:56	20	09:20 (22)	16:35	15:46
8	09:24	08:30			07:16		08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49			07:55		08:58 (22)	08:08	09:12
	16:04	17:13			18:21	18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20			18:53	23	09:21 (22)	16:32	15:45
9	09:23	08:28			07:13		08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51			07:58		08:57 (22)	08:11	09:14
	16:05	17:16			18:24	13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17			18:50	23	09:20 (22)	16:30	15:44
10	09:22	08:25			07:10		08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53			08:00		08:57 (22)	08:13	09:15
	16:07	17:18			18:26	7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14			18:48	24	09:21 (22)	16:28	15:44
11	09:21	08:23			07:07			06:38	05:20	04:30	04:44	05:46	06:55			08:02		08:57 (22)	08:16	09:16
	16:09	17:21			18:28			20:40	21:49	22:44	22:39	21:37	20:11			18:45	23	09:20 (22)	16:26	15:43
12	09:20	08:20			07:05			06:36	05:17	04:29	04:46	05:49	06:58			08:04		08:57 (22)	08:18	09:18
	16:11	17:23			18:31			20:42	21:51	22:45	22:38	21:34	20:08			18:42	24	09:21 (22)	16:24	15:43
13	09:19	08:18			07:02		07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00			08:07		08:57 (22)	08:20	09:19
	16:13	17:26			18:33	5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05			18:39	23	09:20 (22)	16:21	15:43
14	09:17	08:15			06:59		07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02			08:09		08:57 (22)	08:23	09:20
	16:15	17:28			18:35	11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02			18:36	21	09:18 (22)	16:19	15:42
15	09:16	08:13			06:56		07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04			08:11		08:58 (22)	08:25	09:21
	16:17	17:31			18:38	15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00			18:34	20	09:18 (22)	16:17	15:42
16	09:15	08:10			06:53		07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06			08:14		08:58 (22)	08:27	09:22
	16:19	17:33			18:40	16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57			18:31	18	09:16 (22)	16:15	15:42
17	09:13	08:08			06:50		07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09			08:16		09:00 (22)	08:30	09:23
	16:21	17:36			18:42	18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54			18:28	15	09:15 (22)	16:13	15:42
18	09:12	08:05			06:47		07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11			08:18		09:02 (22)	08:32	09:24
	16:23	17:38			18:45	19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51			18:25	10	09:12 (22)	16:11	15:42
19	09:10	08:02			06:44		07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13		08:22 (24)	08:21			08:34	09:25
	16:26	17:41			18:47	18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48	7	08:29 (24)	18:23			16:10	15:43
20	09:09	08:00			06:42		07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15		08:19 (24)	08:23			08:37	09:26
	16:28	17:43			18:49	19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45	12	08:31 (24)	18:20			16:08	15:43
21	09:07	07:57			06:39		07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17		08:18 (24)	08:25			08:39	09:26
	16:30	17:46			18:52	17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42	15	08:33 (24)	18:17			16:06	15:43
22	09:05	07:54			06:36		07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20		08:16 (24)	08:28			08:41	09:27
	16:32	17:48			18:54	15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39	17	08:33 (24)	18:15			16:04	15:44
23	09:04	07:52			06:33		07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22		08:15 (24)	08:30			08:43	09:27
	16:35	17:50			18:56	13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36	18	08:33 (24)	18:12			16:03	15:44
24	09:02	07:49		08:30 (22)	06:30		07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24		08:14 (24)	08:32			08:45	09:28
	16:37	17:53	12	08:42 (22)	18:59	8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33	19	08:33 (24)	18:09			16:01	15:45
25	09:00	07:46		08:28 (22)	06:27			06:00	04:51	04:28	05:10	06:18	07:26		08:14 (24)	07:35			08:48	09:28
	16:39	17:55	15	08:43 (22)	19:01			21:12	22:18	22:51	22:16	20:59	19:31	18	08:32 (24)	17:07			15:59	15:45
26	08:58	07:44		08:26 (22)	06:24			05:57	04:49	04:29	05:12	06:20	07:28		08:14 (24)	07:37			08:50	09:28
	16:42	17:58	19	08:45 (22)	19:03			21:14	22:20	22:50	22:14	20:57	19:28	19	08:33 (24)	17:04			15:58	15:46
27	08:56	07:41		08:25 (22)	06:21			05:54	04:47	04:29	05:14	06:22	07:31		08:14 (24)	07:40			08:52	09:28
	16:44	18:00	20	08:45 (22)	19:05			21:17	22:22	22:50	22:12	20:54	19:25	18	08:32 (24)	17:02			15:57	15:47
28	08:54	07:38		08:25 (22)	06:18			05:52	04:46	04:30	05:16	06:24	07:33		08:15 (24)	07:42			08:54	09:29
	16:46	18:02	22	08:47 (22)	19:08			21:19	22:24	22:50	22:10	20:51	19:22	15	08:30 (24)	16:59			15:55	15:48
29	08:52				07:16			05:49	04:44	04:31	05:18	06:27	07:35		08:15 (24)	07:44			08:56	09:29
	16:49				20:10			21:21	22:26	22:50	22:08	20:48	19:19	13	08:28 (24)	16:56			15:54	15:49
30	08:50				07:13			05:47	04:43	04:31	05:20	06:29	07:37		08:18 (24)	07:47			08:58	09:28
	16:51				20:12			21:24	22:27	22:49	22:05	20:45	19:16	8	08:26 (24)	16:54			15:53	15:50
31	08:48				07:10				04:41		05:22	06:31				07:49				09:28
	16:54				20:15				22:29		22:03	20:43				16:51				15:51
Potential sun hours	221	260			365			432	521	547	545	478	386			319			236	200
Total, worst case			88			369								179			290			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
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	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
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	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
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	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
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	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
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25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
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	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
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8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
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	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
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21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
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	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
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8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
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	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
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	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February			March			April		May		June		July		August		September		October			November			December
1	09:28		08:46		09:41 (22)	07:35		08:28 (24)	07:07		05:44		04:40		04:32		05:24		06:33		07:39			07:52		09:00 (22)	09:00
	15:53		16:56	3	09:44 (22)	18:05	19	08:47 (24)	20:17		21:26		22:31		22:49		22:01		20:40		19:13			16:49	24	09:24 (22)	15:51
2	09:28		08:44		09:37 (22)	07:33		08:27 (24)	07:04		05:41		04:39		04:33		05:26		06:35		07:42			07:54		09:01 (22)	09:02
	15:54		16:59	10	09:47 (22)	18:07	20	08:47 (24)	20:19		21:28		22:32		22:48		21:59		20:37		19:10			16:46	23	09:24 (22)	15:50
3	09:27		08:41		09:35 (22)	07:30		08:27 (24)	07:01		05:39		04:37		04:34		05:29		06:38		07:44			07:56		09:01 (22)	09:04
	15:56		17:01	15	09:50 (22)	18:10	20	08:47 (24)	20:21		21:31		22:34		22:47		21:56		20:34		19:07			16:44	23	09:24 (22)	15:49
4	09:27		08:39		09:34 (22)	07:27		08:27 (24)	06:58		05:36		04:36		04:35		05:31		06:40		07:46			07:59		09:02 (22)	09:05
	15:57		17:04	17	09:51 (22)	18:12	19	08:46 (24)	20:24		21:33		22:35		22:47		21:54		20:31		19:05			16:42	22	09:24 (22)	15:48
5	09:26		08:37		09:33 (22)	07:24		08:28 (24)	06:55		05:34		04:35		04:36		05:33		06:42		07:48		09:11 (24)	08:01		09:02 (22)	09:07
	15:59		17:06	20	09:53 (22)	18:14	17	08:45 (24)	20:26		21:35		22:37		22:46		21:52		20:28		19:02	3	09:14 (24)	16:39	21	09:23 (22)	15:47
6	09:25		08:35		09:32 (22)	07:22		08:28 (24)	06:53		05:31		04:34		04:37		05:35		06:44		07:51		09:06 (24)	08:04		09:03 (22)	09:09
	16:00		17:08	21	09:53 (22)	18:17	16	08:44 (24)	20:28		21:38		22:38		22:45		21:49		20:26		18:59	11	09:17 (24)	16:37	19	09:22 (22)	15:46
7	09:25		08:32		09:31 (22)	07:19		08:29 (24)	06:50		05:29		04:33		04:39		05:37		06:47		07:53		09:05 (24)	08:06		09:05 (22)	09:10
	16:02		17:11	22	09:53 (22)	18:19	13	08:42 (24)	20:31		21:40		22:39		22:44		21:47		20:23		18:56	15	09:20 (24)	16:35	17	09:22 (22)	15:46
8	09:24		08:30		09:32 (22)	07:16		08:31 (24)	06:47		05:27		04:32		04:40		05:40		06:49		07:55		09:03 (24)	08:08		09:05 (22)	09:12
	16:04		17:13	22	09:54 (22)	18:21	8	08:39 (24)	20:33		21:42		22:41		22:43		21:44		20:20		18:53	17	09:20 (24)	16:32	15	09:20 (22)	15:45
9	09:23		08:28		09:31 (22)	07:13			06:44		05:24		04:31		04:41		05:42		06:51		07:58		09:02 (24)	08:11		09:08 (22)	09:14
	16:05		17:16	23	09:54 (22)	18:24			20:35		21:44		22:42		22:42		21:42		20:17		18:50	18	09:20 (24)	16:30	10	09:18 (22)	15:44
10	09:22		08:25		09:32 (22)	07:10			06:41		05:22		04:30		04:43		05:44		06:53		08:00		09:02 (24)	08:13		09:13 (22)	09:15
	16:07		17:18	23	09:55 (22)	18:26			20:38		21:47		22:43		22:41		21:39		20:14		18:48	19	09:21 (24)	16:28	1	09:14 (22)	15:44
11	09:21		08:23		09:31 (22)	07:07			06:38		05:20		04:30		04:44		05:46		06:55		08:02		09:01 (24)	08:16			09:16
	16:09		17:21	24	09:55 (22)	18:28			20:40		21:49		22:44		22:39		21:37		20:11		18:45	20	09:21 (24)	16:26			15:43
12	09:20		08:20		09:31 (22)	07:05			06:36		05:17		04:29		04:46		05:49		06:58		08:04		09:01 (24)	08:18			09:18
	16:11		17:23	23	09:54 (22)	18:31			20:42		21:51		22:45		22:38		21:34		20:08		18:42	20	09:21 (24)	16:24			15:43
13	09:19		08:18		09:31 (22)	07:02			06:33		05:15		04:28		04:47		05:51		07:00		08:07		09:01 (24)	08:20			09:19
	16:13		17:26	23	09:54 (22)	18:33			20:44		21:53		22:46		22:37		21:32		20:05		18:39	19	09:20 (24)	16:21			15:43
14	09:17		08:15		09:33 (22)	06:59			06:30		05:13		04:28		04:49		05:53		07:02		08:09		09:01 (24)	08:23			09:20
	16:15		17:28	21	09:54 (22)	18:35			20:47		21:55		22:47		22:35		21:29		20:02		18:36	18	09:19 (24)	16:19			15:42
15	09:16		08:13		09:33 (22)	06:56			06:27		05:11		04:28		04:51		05:55		07:04		08:11		09:02 (24)	08:25			09:21
	16:17		17:31	20	09:53 (22)	18:38			20:49		21:58		22:47		22:34		21:26		20:00		18:34	16	09:18 (24)	16:17			15:42
16	09:15		08:10		09:34 (22)	06:53			06:24		05:08		04:27		04:53		05:57		07:06		08:14		09:03 (24)	08:27			09:22
	16:19		17:33	17	09:51 (22)	18:40			20:51		22:00		22:48		22:32		21:24		19:57		18:31	13	09:16 (24)	16:15			15:42
17	09:13		08:08		09:36 (22)	06:50			06:22		05:06		04:27		04:54		06:00		07:09		08:16		09:05 (24)	08:30			09:23
	16:21		17:36	14	09:50 (22)	18:42			20:54		22:02		22:49		22:31		21:21		19:54		18:28	10	09:15 (24)	16:13			15:42
18	09:12		08:05		09:39 (22)	06:47			06:19		05:04		04:27		04:56		06:02		07:11		08:18			08:32			09:24
	16:23		17:38	8	09:47 (22)	18:45			20:56		22:04		22:49		22:29		21:19		19:51		18:25			16:11			15:42
19	09:10		08:02			06:44			06:16		05:02		04:27		04:58		06:04		07:13		08:21			08:34			09:25
	16:26		17:41			18:47			20:58		22:06		22:50		22:27		21:16		19:48		18:23			16:10			15:42
20	09:09		08:00			06:42			06:13		05:00		04:27		05:00		06:06		07:15		08:23			08:37			09:26
	16:28		17:43			18:49			21:01		22:08		22:50		22:25		21:13		19:45		18:20			16:08			15:43
21	09:07		07:57			06:39			06:10		04:58		04:27		05:02		06:09		07:17		08:25			08:39			09:26
	16:30		17:45			18:52			21:03		22:10		22:50		22:24		21:10		19:42		18:17			16:06			15:43
22	09:05		07:54			06:36			06:08		04:56		04:27		05:04		06:11		07:20		08:28			08:41			09:27
	16:32		17:48			18:54			21:05		22:12		22:51		22:22		21:08		19:39		18:15			16:04			15:44
23	09:04		07:52			06:33			06:05		04:54		04:27		05:06		06:13		07:22		08:30			08:43			09:27
	16:35		17:50			18:56			21:08		22:14		22:51		22:20		21:05		19:36		18:12			16:03			15:44
24	09:02		07:49		08:36 (24)	06:30			06:02		04:53		04:28		05:08		06:15		07:24		08:32		10:07 (22)	08:45			09:28
	16:37		17:53	5	08:41 (24)	18:59			21:10		22:16		22:51		22:18		21:02		19:33		18:09	10	10:17 (22)	16:01			15:45
25	09:00		07:46		08:32 (24)	06:27			06:00		04:51		04:28		05:10		06:18		07:26		07:35		09:05 (22)	08:48			09:28
	16:39		17:55	12	08:44 (24)	19:01			21:12		22:18		22:51		22:16		20:59		19:30		17:07	15	09:20 (22)	15:59			15:45
26	08:58		07:44		08:30 (24)	06:24			05:57		04:49		04:29		05:12		06:20		07:28		07:37		09:04 (22)	08:50			09:28
	16:42		17:58	15	08:45 (24)	19:03			21:14		22:20		22:51		22:14		20:57		19:28		17:04	18	09:22 (22)	15:58			15:46
27	08:56		07:41		08:29 (24)	06:21			05:54		04:47		04:29		05:14		06:22		07:31		07:40		09:02 (22)	08:52			09:28
	16:44		18:00	17	08:46 (24)	19:05			21:17		22:22		22:50		22:12		20:54		19:25		17:02	20	09:22 (22)	15:56			15:47
28	08:54		07:38		08:29 (24)	06:18			05:52		04:46		04:30		05:16		06:24		07:33		07:42		09:02 (22)	08:54			09:29
	16:46		18:02	18	08:47 (24)	19:08			21:19		22:24		22:50		22:10		20:51		19:22		16:59	21	09:23 (22)	15:55			15:48
29	08:52					07:16			05:49		04:44		04:30		05:18		06:27		07:35		07:44		09:02 (22)	08:56			09:29
	16:49					20:10			21:21		22:26		22:50		22:08		20:48		19:19		16:56	22	09:24 (22)	15:54			15:49
30	08:50					07:13			05:47		04:43		04:31		05:20		06:29		07:37		07:47		09:01 (22)	08:58			09:28
	16:51					20:12			21:24		22:27		22:49		22:05		20:45		19:16		16:54	23	09:24 (22)	15:53			15:50
31	08:48					07:10					04:41				05:22		06:31				07:49		09:01 (22)				09:28
	16:54					20:15					22:29				22:03		20:43				16:51	23	09:24 (22)				15:51
Potential sun hours	221		260			365			432		521		547		546		478		386		319			236			199
Total, worst case				393			132															351			175		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		09:41 (22)	07:35		08:31 (24)	07:07	05:44	04:40
	15:53			16:56	14	09:55 (22)	18:05	20	08:51 (24)	20:17	21:26	22:31
2	09:28			08:44		09:40 (22)	07:33		08:31 (24)	07:04	05:41	04:39
	15:54			16:59	16	09:56 (22)	18:07	20	08:51 (24)	20:19	21:28	22:32
3	09:27			08:41		09:39 (22)	07:30		08:31 (24)	07:01	05:39	04:37
	15:56			17:01	19	09:58 (22)	18:10	19	08:50 (24)	20:21	21:31	22:34
4	09:27			08:39		09:38 (22)	07:27		08:31 (24)	06:58	05:36	04:36
	15:57			17:04	20	09:58 (22)	18:12	19	08:50 (24)	20:24	21:33	22:35
5	09:26			08:37		09:38 (22)	07:24		08:32 (24)	06:55	05:34	04:35
	15:59			17:06	22	10:00 (22)	18:14	16	08:48 (24)	20:26	21:35	22:37
6	09:25			08:35		09:37 (22)	07:22		08:33 (24)	06:53	05:31	04:34
	16:00			17:08	23	10:00 (22)	18:17	14	08:47 (24)	20:28	21:38	22:38
7	09:25			08:32		09:36 (22)	07:19		08:35 (24)	06:50	05:29	04:33
	16:02			17:11	24	10:00 (22)	18:19	9	08:44 (24)	20:31	21:40	22:39
8	09:24			08:30		09:37 (22)	07:16			06:47	05:27	04:32
	16:04			17:13	24	10:01 (22)	18:21			20:33	21:42	22:41
9	09:23			08:28		09:36 (22)	07:13			06:44	05:24	04:31
	16:05			17:16	24	10:00 (22)	18:24			20:35	21:44	22:42
10	09:22			08:25		09:37 (22)	07:10			06:41	05:22	04:30
	16:07			17:18	24	10:01 (22)	18:26			20:38	21:47	22:43
11	09:21			08:23		09:37 (22)	07:07			06:38	05:20	04:30
	16:09			17:21	23	10:00 (22)	18:28			20:40	21:49	22:44
12	09:20			08:20		09:37 (22)	07:05			06:36	05:17	04:29
	16:11			17:23	23	10:00 (22)	18:31			20:42	21:51	22:45
13	09:19			08:18		09:38 (22)	07:02			06:33	05:15	04:28
	16:13			17:26	21	09:59 (22)	18:33			20:44	21:53	22:46
14	09:17			08:15		09:39 (22)	06:59			06:30	05:13	04:28
	16:15			17:28	20	09:59 (22)	18:35			20:47	21:55	22:47
15	09:16			08:13		09:40 (22)	06:56			06:27	05:11	04:28
	16:17			17:31	17	09:57 (22)	18:38			20:49	21:58	22:47
16	09:15			08:10		09:42 (22)	06:53			06:24	05:08	04:27
	16:19			17:33	13	09:55 (22)	18:40			20:51	22:00	22:48
17	09:13			08:08		09:45 (22)	06:50			06:21	05:06	04:27
	16:21			17:36	8	09:53 (22)	18:42			20:54	22:02	22:49
18	09:12			08:05			06:47			06:19	05:04	04:27
	16:23			17:38			18:45			20:56	22:04	22:49
19	09:10			08:02			06:44			06:16	05:02	04:27
	16:26			17:41			18:47			20:58	22:06	22:50
20	09:09			08:00			06:42			06:13	05:00	04:27
	16:28			17:43			18:49			21:01	22:08	22:50
21	09:07			07:57			06:39			06:10	04:58	04:27
	16:30			17:45			18:52			21:03	22:10	22:50
22	09:05			07:54			06:36			06:08	04:56	04:27
	16:32			17:48			18:54			21:05	22:12	22:51
23	09:04			07:52		08:40 (24)	06:33			06:05	04:54	04:27
	16:35			17:50	5	08:45 (24)	18:56			21:08	22:14	22:51
24	09:02			07:49		08:36 (24)	06:30			06:02	04:53	04:28
	16:37			17:53	12	08:48 (24)	18:59			21:10	22:16	22:51
25	09:00			07:46		08:34 (24)	06:27			06:00	04:51	04:28
	16:39			17:55	15	08:49 (24)	19:01			21:12	22:18	22:51
26	08:58			07:44		08:33 (24)	06:24			05:57	04:49	04:29
	16:42			17:58	17	08:50 (24)	19:03			21:14	22:20	22:51
27	08:56			07:41		08:32 (24)	06:21			05:54	04:47	04:29
	16:44			18:00	18	08:50 (24)	19:05			21:17	22:22	22:50
28	08:54			07:38		08:32 (24)	06:18			05:52	04:46	04:30
	16:46			18:02	19	08:51 (24)	19:08			21:19	22:24	22:50
29	08:52						07:16			05:49	04:44	04:30
	16:49						20:10			21:21	22:26	22:50
30	08:50						07:13			05:47	04:43	04:31
	16:51						20:12			21:24	22:27	22:49
31	08:48		09:43 (22)				07:10				04:41	
	16:54	9	09:52 (22)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		9			421			117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51	09:06 (22)	09:00
	22:49	22:01	20:40	19:13		16:49	24 09:30 (22)	15:51
2	04:33	05:26	06:35	07:42		07:54	09:06 (22)	09:02
	22:48	21:59	20:37	19:10		16:46	24 09:30 (22)	15:50
3	04:34	05:29	06:38	07:44		07:56	09:06 (22)	09:04
	22:47	21:56	20:34	19:07		16:44	24 09:30 (22)	15:49
4	04:35	05:31	06:40	07:46		07:59	09:07 (22)	09:05
	22:47	21:54	20:31	19:05		16:42	23 09:30 (22)	15:48
5	04:36	05:33	06:42	07:48		08:01	09:07 (22)	09:07
	22:46	21:52	20:28	19:02		16:39	22 09:29 (22)	15:47
6	04:37	05:35	06:44	07:51	09:12 (24)	08:04	09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7 09:19 (24)	16:37	21 09:29 (22)	15:46
7	04:39	05:37	06:47	07:53	09:10 (24)	08:06	09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12 09:22 (24)	16:35	20 09:29 (22)	15:46
8	04:40	05:40	06:49	07:55	09:08 (24)	08:08	09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15 09:23 (24)	16:32	18 09:27 (22)	15:45
9	04:41	05:42	06:51	07:58	09:06 (24)	08:11	09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18 09:24 (24)	16:30	17 09:27 (22)	15:44
10	04:43	05:44	06:53	08:00	09:06 (24)	08:13	09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19 09:25 (24)	16:28	13 09:25 (22)	15:44
11	04:44	05:46	06:55	08:02	09:05 (24)	08:16	09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19 09:24 (24)	16:26	9 09:23 (22)	15:43
12	04:46	05:49	06:58	08:04	09:05 (24)	08:18		09:18
	22:38	21:34	20:08	18:42	20 09:25 (24)	16:24		15:43
13	04:47	05:51	07:00	08:07	09:04 (24)	08:20		09:19
	22:37	21:32	20:05	18:39	20 09:24 (24)	16:21		15:43
14	04:49	05:53	07:02	08:09	09:04 (24)	08:23		09:20
	22:35	21:29	20:02	18:36	19 09:23 (24)	16:19		15:42
15	04:51	05:55	07:04	08:11	09:05 (24)	08:25		09:21
	22:34	21:26	20:00	18:34	18 09:23 (24)	16:17		15:42
16	04:53	05:57	07:06	08:14	09:05 (24)	08:27		09:22
	22:32	21:24	19:57	18:31	16 09:21 (24)	16:15		15:42
17	04:54	06:00	07:09	08:16	09:07 (24)	08:30		09:23
	22:31	21:21	19:54	18:28	14 09:21 (24)	16:13		15:42
18	04:56	06:02	07:11	08:18	09:08 (24)	08:32		09:24
	22:29	21:19	19:51	18:25	10 09:18 (24)	16:11		15:42
19	04:58	06:04	07:13	08:21		08:34		09:25
	22:27	21:16	19:48	18:23		16:10		15:42
20	05:00	06:06	07:15	08:23		08:37		09:26
	22:25	21:13	19:45	18:20		16:08		15:43
21	05:02	06:09	07:17	08:25		08:39		09:26
	22:24	21:10	19:42	18:17		16:06		15:43
22	05:04	06:11	07:20	08:28		08:41		09:27
	22:22	21:08	19:39	18:15		16:04		15:44
23	05:06	06:13	07:22	08:30		08:43		09:27
	22:20	21:05	19:36	18:12		16:03		15:44
24	05:08	06:15	07:24	08:32		08:45		09:28
	22:18	21:02	19:33	18:09		16:01		15:45
25	05:10	06:18	07:26	07:35	09:13 (22)	08:48		09:28
	22:16	20:59	19:30	17:07	10 09:23 (22)	15:59		15:45
26	05:12	06:20	07:28	07:37	09:11 (22)	08:50		09:28
	22:14	20:57	19:28	17:04	15 09:26 (22)	15:58		15:46
27	05:14	06:22	07:31	07:40	09:09 (22)	08:52		09:28
	22:12	20:54	19:25	17:01	18 09:27 (22)	15:56		15:47
28	05:16	06:24	07:33	07:42	09:08 (22)	08:54		09:29
	22:10	20:51	19:22	16:59	20 09:28 (22)	15:55		15:48
29	05:18	06:27	07:35	07:44	09:08 (22)	08:56		09:29
	22:08	20:48	19:19	16:56	21 09:29 (22)	15:54		15:49
30	05:20	06:29	07:37	07:47	09:07 (22)	08:58		09:28
	22:05	20:45	19:16	16:54	22 09:29 (22)	15:53		15:50
31	05:22	06:31		07:49	09:07 (22)			09:28
	22:03	20:43		16:51	23 09:30 (22)			15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case				336		215		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February			March		April		May		June		July		August		September		October			November			December
1	09:28		08:46			07:35		07:07		05:44		04:40		04:32		05:24		06:33		07:40			07:52		08:41 (22)		09:00
	15:53		16:56			18:05		20:17		21:26		22:31		22:49		22:01		20:40		19:13			16:49	7	08:48 (22)		15:51
2	09:28		08:44			07:33		07:04		05:41		04:39		04:33		05:26		06:35		07:42			07:54				09:02
	15:54		16:59			18:07		20:19		21:28		22:32		22:48		21:59		20:37		19:10			16:46				15:50
3	09:27		08:41			07:30		07:01		05:39		04:37		04:34		05:29		06:38		07:44			07:56				09:04
	15:56		17:01			18:10		20:21		21:31		22:34		22:47		21:56		20:34		19:07			16:44				15:49
4	09:27		08:39			07:27		06:58		05:36		04:36		04:35		05:31		06:40		07:46			07:59				09:05
	15:57		17:04			18:12		20:24		21:33		22:35		22:47		21:54		20:31		19:05			16:42				15:48
5	09:26		08:37			07:24		06:55		05:34		04:35		04:36		05:33		06:42		07:48			08:01				09:07
	15:59		17:06			18:14		20:26		21:35		22:37		22:46		21:52		20:28		19:02			16:39				15:47
6	09:25		08:35			07:22		06:53		05:31		04:34		04:37		05:35		06:44		07:51			08:04				09:09
	16:00		17:09			18:17		20:28		21:38		22:38		22:45		21:49		20:26		18:59			16:37				15:46
7	09:25		08:32			07:19		06:50		05:29		04:33		04:39		05:37		06:47		07:53			08:06				09:10
	16:02		17:11			18:19		20:31		21:40		22:39		22:44		21:47		20:23		18:56			16:35				15:46
8	09:24		08:30			07:16		06:47		05:27		04:32		04:40		05:40		06:49		07:55			08:08				09:12
	16:04		17:13			18:21		20:33		21:42		22:41		22:43		21:44		20:20		18:53			16:32				15:45
9	09:23		08:28			07:13		06:44		05:24		04:31		04:41		05:42		06:51		07:58			08:11				09:14
	16:05		17:16			18:24		20:35		21:44		22:42		22:42		21:42		20:17		18:50			16:30				15:44
10	09:22		08:25		09:11 (22)	07:10		06:41		05:22		04:30		04:43		05:44		06:53		08:00			08:13				09:15
	16:07		17:18	8	09:19 (22)	18:26		20:38		21:47		22:43		22:41		21:39		20:14		18:48			16:28				15:44
11	09:21		08:23		09:09 (22)	07:07		06:38		05:20		04:30		04:44		05:46		06:55		08:02			08:16				09:16
	16:09		17:21	12	09:21 (22)	18:28		20:40		21:49		22:44		22:39		21:37		20:11		18:45			16:26				15:43
12	09:20		08:20		09:07 (22)	07:05		06:36		05:17		04:29		04:46		05:49		06:58		08:04			08:18				09:18
	16:11		17:23	15	09:22 (22)	18:31		20:42		21:51		22:45		22:38		21:34		20:08		18:42			16:24				15:43
13	09:19		08:18		09:06 (22)	07:02		06:33		05:15		04:28		04:48		05:51		07:00		08:07			08:20				09:19
	16:13		17:26	18	09:24 (22)	18:33		20:44		21:53		22:46		22:37		21:32		20:05		18:39			16:21				15:43
14	09:17		08:15		09:05 (22)	06:59		06:30		05:13		04:28		04:49		05:53		07:02		08:09			08:23				09:20
	16:15		17:28	20	09:25 (22)	18:35		20:47		21:56		22:47		22:35		21:29		20:02		18:36			16:19				15:42
15	09:16		08:13		09:05 (22)	06:56		06:27		05:11		04:28		04:51		05:55		07:04		08:11			08:25				09:21
	16:17		17:31	20	09:25 (22)	18:38		20:49		21:58		22:47		22:34		21:26		20:00		18:34			16:17				15:42
16	09:15		08:10		09:04 (22)	06:53		06:24		05:08		04:27		04:53		05:58		07:06		08:14			08:27				09:22
	16:19		17:33	21	09:25 (22)	18:40		20:51		22:00		22:48		22:32		21:24		19:57		18:31			16:15				15:42
17	09:13		08:08		09:05 (22)	06:50		06:22		05:06		04:27		04:54		06:00		07:09		08:16			08:30				09:23
	16:21		17:36	21	09:26 (22)	18:42		20:54		22:02		22:49		22:31		21:21		19:54		18:28			16:13				15:42
18	09:12		08:05		09:05 (22)	06:47		06:19		05:04		04:27		04:56		06:02		07:11		08:18		09:42 (22)	08:32				09:24
	16:23		17:38	20	09:25 (22)	18:45		20:56		22:04		22:49		22:29		21:19		19:51		18:25	7	09:49 (22)	16:11				15:42
19	09:10		08:02		09:05 (22)	06:44		06:16		05:02		04:27		04:58		06:04		07:13		08:21		09:39 (22)	08:34				09:25
	16:26		17:41	20	09:25 (22)	18:47		20:58		22:06		22:50		22:27		21:16		19:48		18:23	13	09:52 (22)	16:10				15:42
20	09:09		08:00		09:05 (22)	06:42		06:13		05:00		04:27		05:00		06:06		07:15		08:23		09:37 (22)	08:37				09:26
	16:28		17:43	19	09:24 (22)	18:49		21:01		22:08		22:50		22:26		21:13		19:45		18:20	16	09:53 (22)	16:08				15:43
21	09:07		07:57		09:05 (22)	06:39		06:11		04:58		04:27		05:02		06:09		07:17		08:25		09:36 (22)	08:39				09:26
	16:30		17:46	18	09:23 (22)	18:52		21:03		22:10		22:50		22:24		21:10		19:42		18:17	18	09:54 (22)	16:06				15:43
22	09:05		07:54		09:07 (22)	06:36		06:08		04:56		04:27		05:04		06:11		07:20		08:28		09:35 (22)	08:41				09:27
	16:32		17:48	15	09:22 (22)	18:54		21:05		22:12		22:51		22:22		21:08		19:39		18:15	19	09:54 (22)	16:04				15:44
23	09:04		07:52		09:09 (22)	06:33		06:05		04:54		04:27		05:06		06:13		07:22		08:30		09:35 (22)	08:43				09:27
	16:35		17:50	11	09:20 (22)	18:56		21:08		22:14		22:51		22:20		21:05		19:36		18:12	20	09:55 (22)	16:03				15:44
24	09:02		07:49		09:13 (22)	06:30		06:02		04:53		04:28		05:08		06:15		07:24		08:32		09:34 (22)	08:45				09:28
	16:37		17:53	3	09:16 (22)	18:59		21:10		22:16		22:51		22:18		21:02		19:33		18:09	21	09:55 (22)	16:01				15:45
25	09:00		07:46			06:27		06:00		04:51		04:28		05:10		06:18		07:26		07:35		08:34 (22)	08:48				09:28
	16:39		17:55			19:01		21:12		22:18		22:51		22:16		20:59		19:31		17:07	21	08:55 (22)	15:59				15:45
26	08:58		07:44			06:24		05:57		04:49		04:29		05:12		06:20		07:28		07:37		08:34 (22)	08:50				09:28
	16:42		17:58			19:03		21:15		22:20		22:51		22:14		20:57		19:28		17:04	21	08:55 (22)	15:58				15:46
27	08:56		07:41			06:21		05:54		04:47		04:29		05:14		06:22		07:31		07:40		08:34 (22)	08:52				09:29
	16:44		18:00			19:05		21:17		22:22		22:50		22:12		20:54		19:25		17:02	20	08:54 (22)	15:57				15:47
28	08:54		07:38			06:18		05:52		04:46		04:30		05:16		06:24		07:33		07:42		08:35 (22)	08:54				09:29
	16:46		18:02			19:08		21:19		22:24		22:50		22:10		20:51		19:22		16:59	19	08:54 (22)	15:55				15:48
29	08:52					07:16		05:49		04:44		04:30		05:18		06:27		07:35		07:44		08:36 (22)	08:56				09:29
	16:49					20:10		21:21		22:26		22:50		22:08		20:48		19:19		16:56	17	08:53 (22)	15:54				15:49
30	08:50					07:13		05:47		04:43		04:31		05:20		06:29		07:37		07:47		08:36 (22)	08:58				09:28
	16:51					20:12		21:24		22:27		22:49		22:05		20:45		19:16		16:54	16	08:52 (22)	15:53				15:50
31	08:48					07:10				04:41				05:22		06:31				07:49		08:38 (22)					09:28
	16:54					20:15				22:29				22:03		20:43				16:51	12	08:50 (22)					15:51
Potential sun hours	221		260			365		432		521		547		546		478		386		319			236				199
Total, worst case				241																	240			7			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
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27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		12:21 (24)	08:46		10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:36 (28)	09:00	10:51 (23)
	15:53	20	12:41 (24)	16:56	20	10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6	09:42 (28)	15:51	28 12:23 (24)
2	09:28		12:22 (24)	08:44		09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:34 (28)	09:02	10:51 (23)
	15:54	19	12:41 (24)	16:58	21	10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11	09:45 (28)	15:50	30 12:24 (24)
3	09:27		12:22 (24)	08:41		10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:33 (28)	09:04	10:52 (23)
	15:55	19	12:41 (24)	17:01	20	10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14	09:47 (28)	15:49	29 12:25 (24)
4	09:27		11:12 (23)	08:39		10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:31 (28)	09:05	10:53 (23)
	15:57	22	12:41 (24)	17:03	20	10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	09:48 (28)	15:48	30 12:26 (24)
5	09:26		11:11 (23)	08:37		10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:31 (28)	09:07	10:54 (23)
	15:58	26	12:42 (24)	17:06	19	10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18	09:49 (28)	15:47	29 12:27 (24)
6	09:25		11:10 (23)	08:35		10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:30 (28)	09:09	10:56 (23)
	16:00	28	12:42 (24)	17:08	18	10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20	09:50 (28)	15:46	28 12:28 (24)
7	09:25		11:09 (23)	08:32		10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:30 (28)	09:10	10:58 (23)
	16:02	29	12:42 (24)	17:11	17	10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20	09:50 (28)	15:45	26 12:29 (24)
8	09:24		11:09 (23)	08:30		10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:30 (28)	09:12	11:00 (23)
	16:03	30	12:42 (24)	17:13	15	10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20	09:50 (28)	15:45	23 12:30 (24)
9	09:23		11:09 (23)	08:27		10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:30 (28)	09:13	12:11 (24)
	16:05	30	12:42 (24)	17:16	12	10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20	09:50 (28)	15:44	19 12:30 (24)
10	09:22		11:08 (23)	08:25		10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:31 (28)	09:15	12:11 (24)
	16:07	30	12:41 (24)	17:18	5	10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20	09:51 (28)	15:44	19 12:30 (24)
11	09:21		11:09 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:30 (28)	09:16	12:11 (24)
	16:09	28	12:41 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20	09:50 (28)	15:43	20 12:31 (24)
12	09:20		11:08 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:31 (28)	09:18	12:11 (24)
	16:11	27	12:40 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27	10:58 (23)	15:43	20 12:31 (24)
13	09:19		11:08 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:32 (28)	09:19	12:12 (24)
	16:13	25	12:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31	11:01 (23)	15:42	21 12:33 (24)
14	09:17		11:08 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:33 (28)	09:20	12:12 (24)
	16:15	20	11:28 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32	11:03 (23)	15:42	21 12:33 (24)
15	09:16		11:08 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:34 (28)	09:21	12:12 (24)
	16:17	21	11:29 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31	11:03 (23)	15:42	21 12:33 (24)
16	09:15		11:08 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:36 (28)	09:22	12:13 (24)
	16:19	21	11:29 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31	11:05 (23)	15:42	20 12:33 (24)
17	09:13		11:09 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:38 (28)	09:23	12:14 (24)
	16:21	22	11:31 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28	11:06 (23)	15:42	21 12:35 (24)
18	09:12		11:09 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:44 (23)	09:24	12:14 (24)
	16:23	22	11:31 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22	11:06 (23)	15:42	21 12:35 (24)
19	09:10		11:09 (23)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		10:45 (23)	09:25	12:14 (24)
	16:25	22	11:31 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22	11:07 (23)	15:42	21 12:35 (24)
20	09:09		11:09 (23)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:45 (23)	09:26	12:15 (24)
	16:28	23	11:32 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22	11:07 (23)	15:43	21 12:36 (24)
21	09:07		11:09 (23)	07:57			06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39		10:45 (23)	09:26	12:16 (24)
	16:30	23	11:32 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	11:07 (23)	15:43	21 12:37 (24)
22	09:05		11:10 (23)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		10:45 (23)	09:27	12:16 (24)
	16:32	22	11:32 (23)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	11:08 (23)	15:43	21 12:37 (24)
23	09:03		11:10 (23)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:45 (23)	09:27	12:16 (24)
	16:34	22	11:32 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	11:08 (23)	15:44	21 12:37 (24)
24	09:02		11:10 (23)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:46 (23)	09:28	12:17 (24)
	16:37	22	11:32 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22	11:08 (23)	15:45	21 12:38 (24)
25	09:00		10:04 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:46 (23)	09:28	12:17 (24)
	16:39	28	11:32 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22	11:08 (23)	15:45	21 12:38 (24)
26	08:58		10:03 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:47 (23)	09:28	12:18 (24)
	16:42	31	11:32 (23)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21	11:08 (23)	15:46	21 12:39 (24)
27	08:56		10:02 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:47 (23)	09:28	12:18 (24)
	16:44	31	11:31 (23)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21	11:08 (23)	15:47	21 12:39 (24)
28	08:54		10:00 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:48 (23)	09:29	12:19 (24)
	16:46	32	11:30 (23)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21	11:09 (23)	15:48	21 12:40 (24)
29	08:52		10:00 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:49 (23)	09:29	12:19 (24)
	16:49	31	11:29 (23)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	12:18 (24)	15:49	21 12:40 (24)
30	08:50		09:59 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:49 (23)	09:28	12:20 (24)
	16:51	27	11:26 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28	12:21 (24)	15:50	20 12:40 (24)
31	08:48		09:59 (28)				07:10		04:41		05:22	06:31		07:49				09:28	12:21 (24)
	16:54	20	10:19 (28)				20:14		22:29		22:03	20:43		16:51				15:51	20 12:41 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199	
Total, worst case		773			167											657			697

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
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	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
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	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
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16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
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17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
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25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
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Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
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	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
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	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
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10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
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	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
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19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
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20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
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	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
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Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

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Vedlegg 5.2

Grafisk Moifjellet vindkraftverk

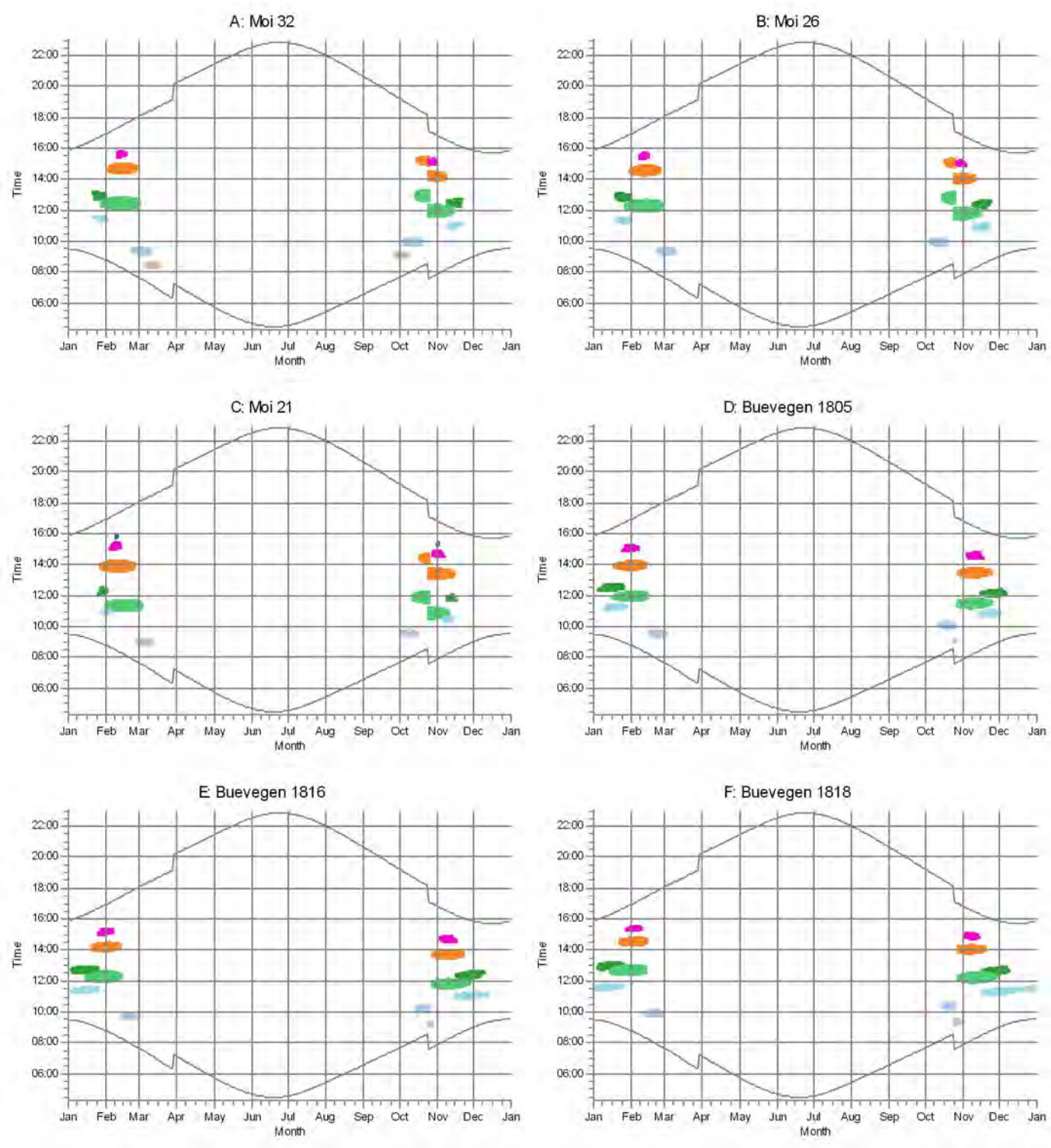
Worst case

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

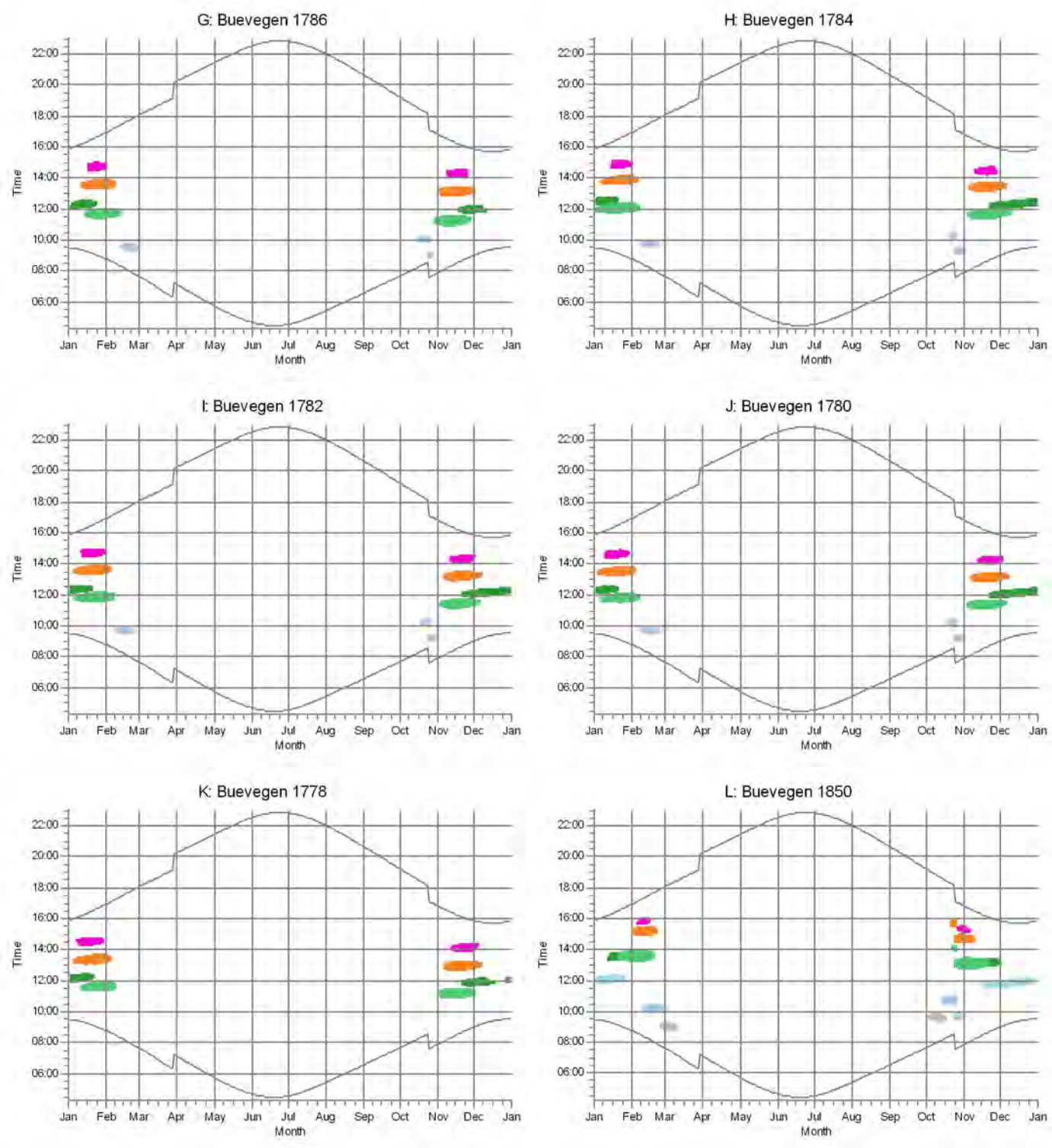
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
22: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2565
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

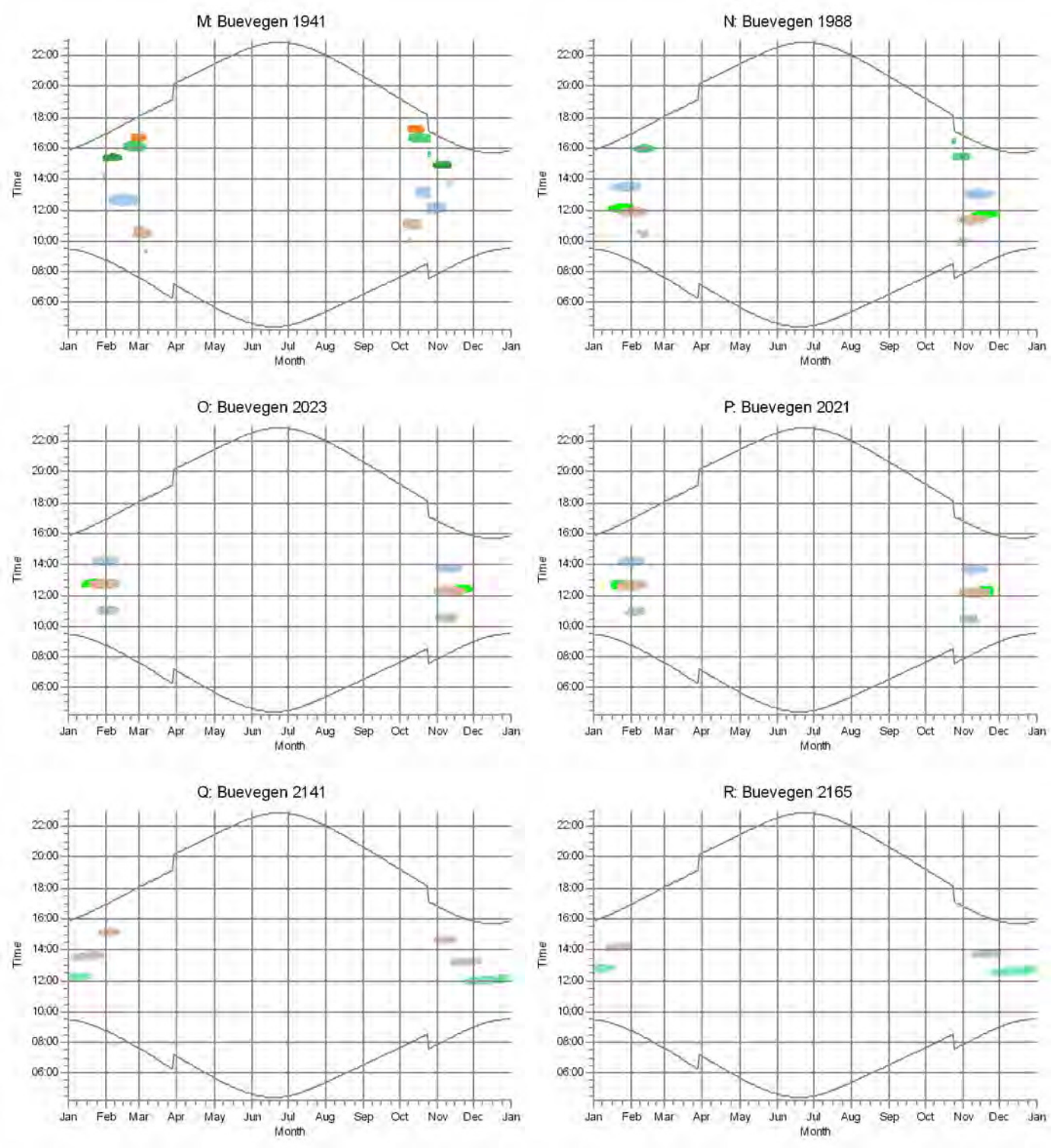
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

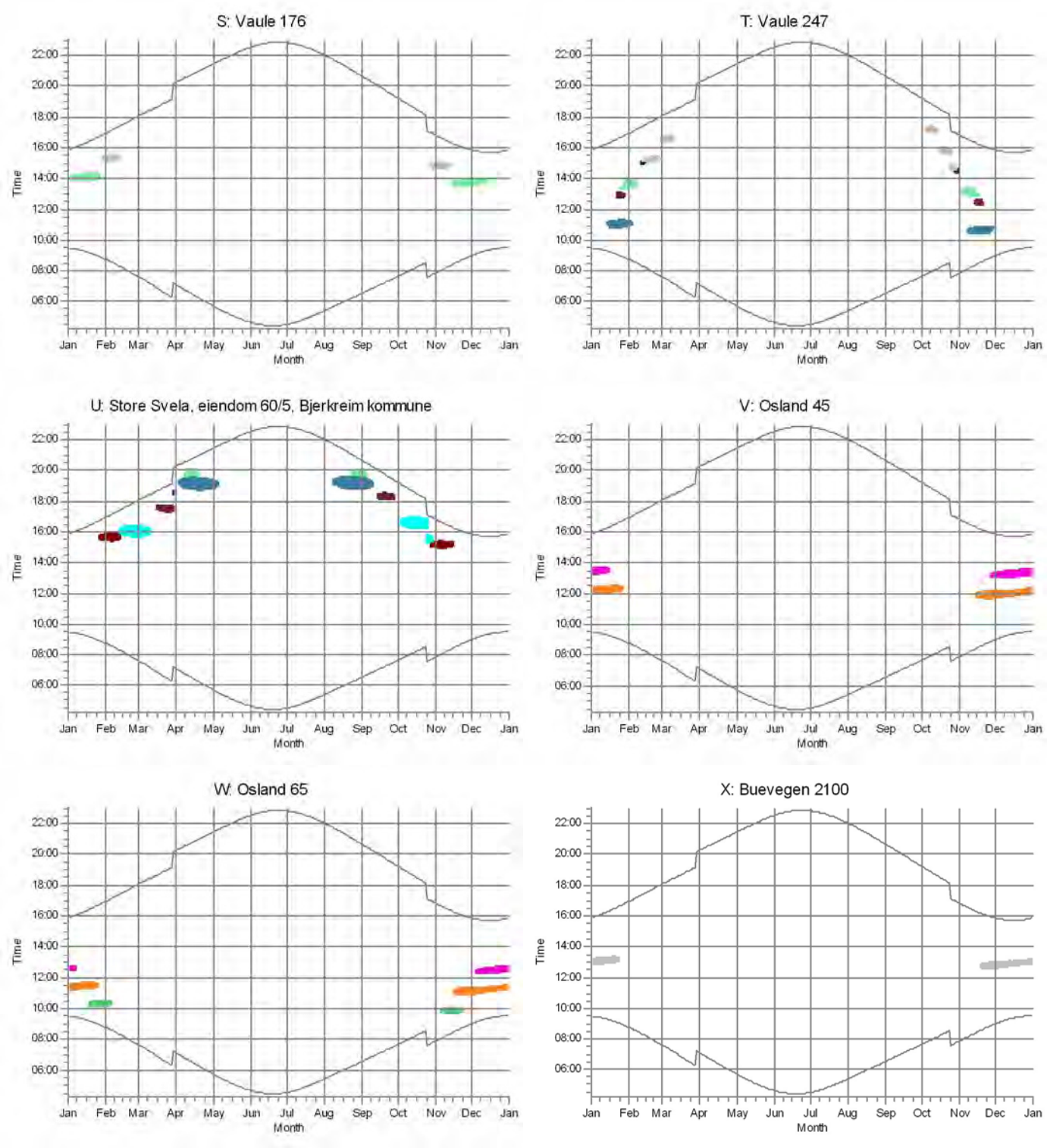
9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

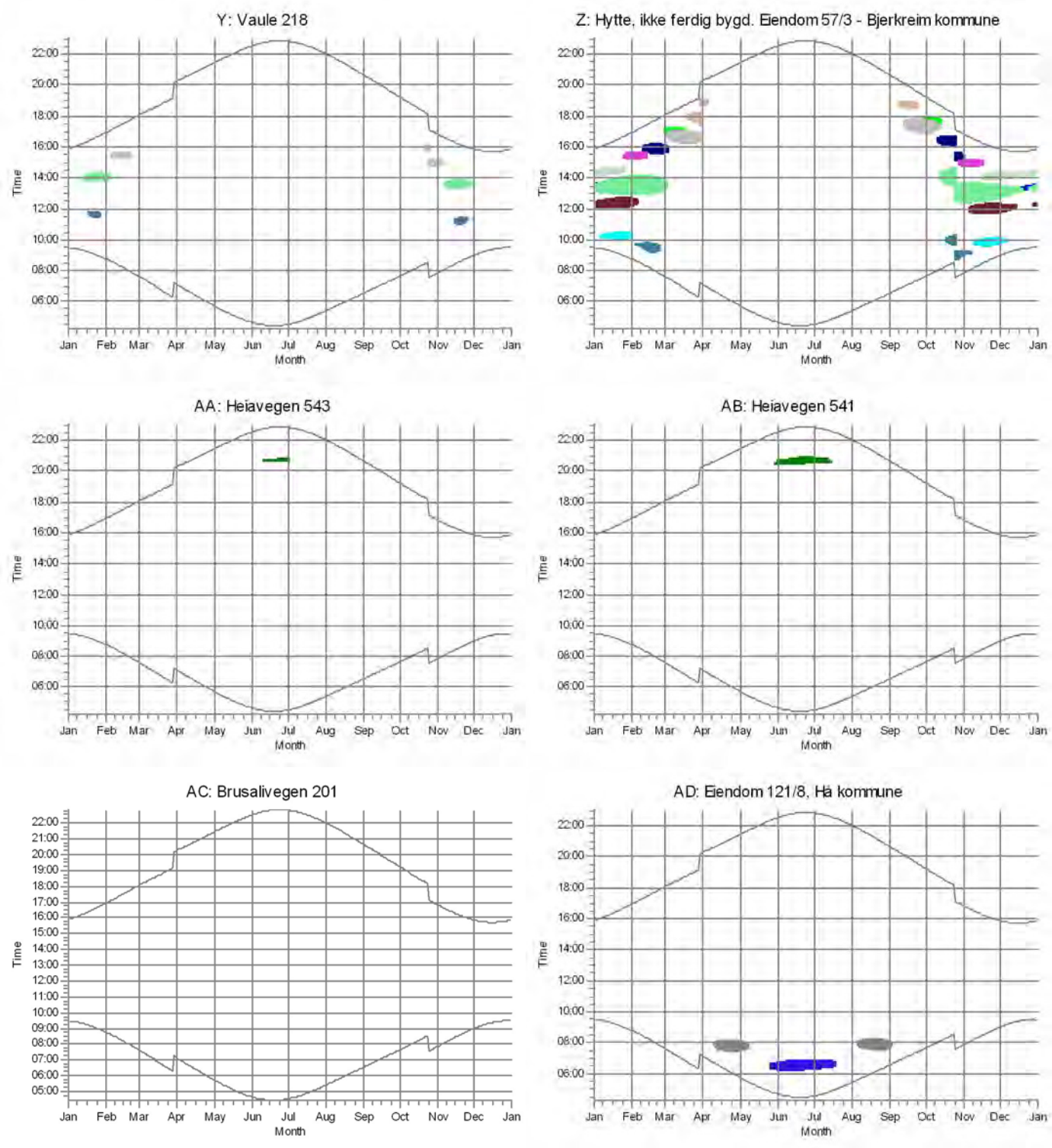
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
8: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2551
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580

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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere



WTGs

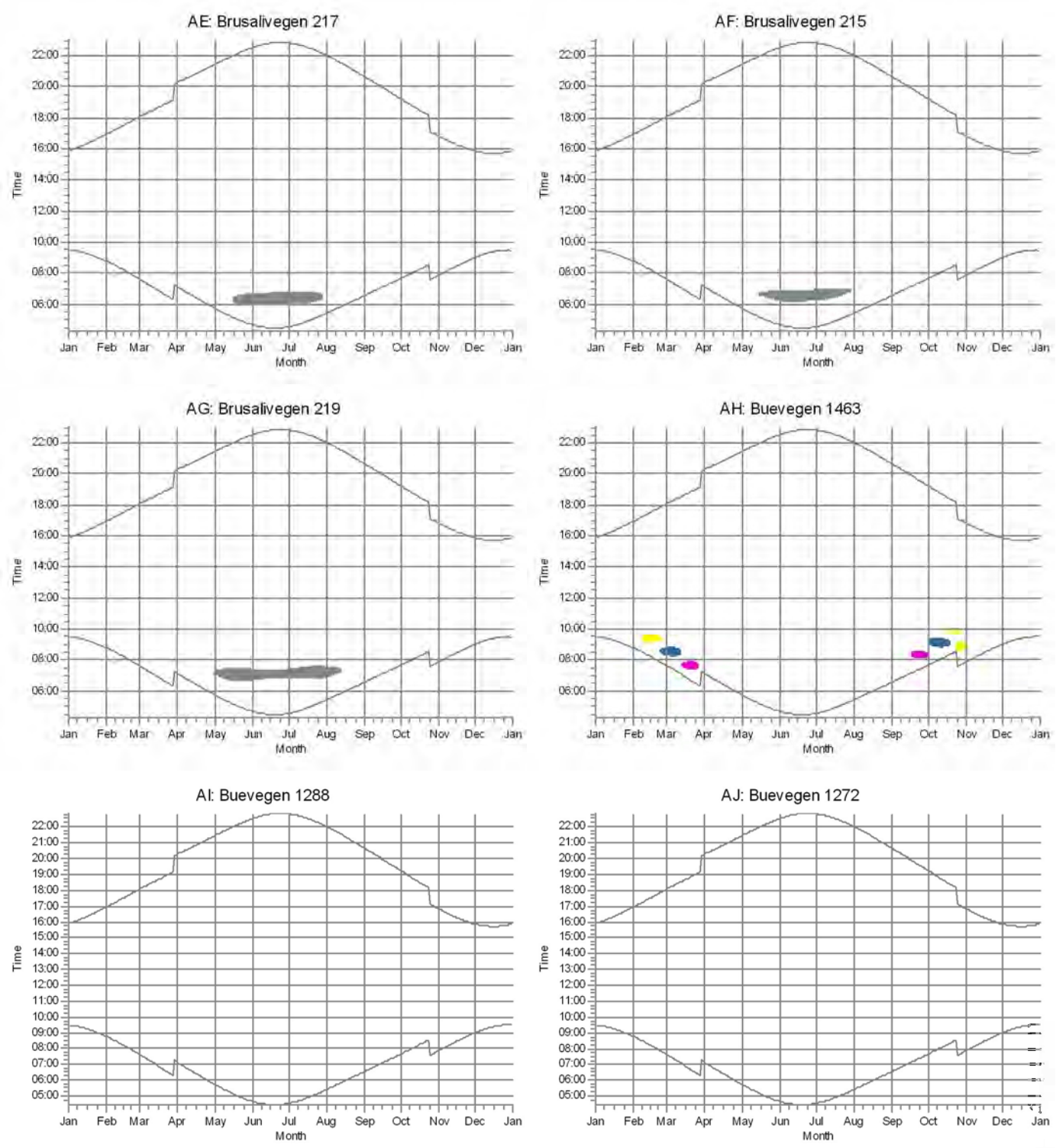
1: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2544	13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556	35: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
3: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546	14: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557	36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550	17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560	37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552	26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569	38: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543
12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555	32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575	

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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere

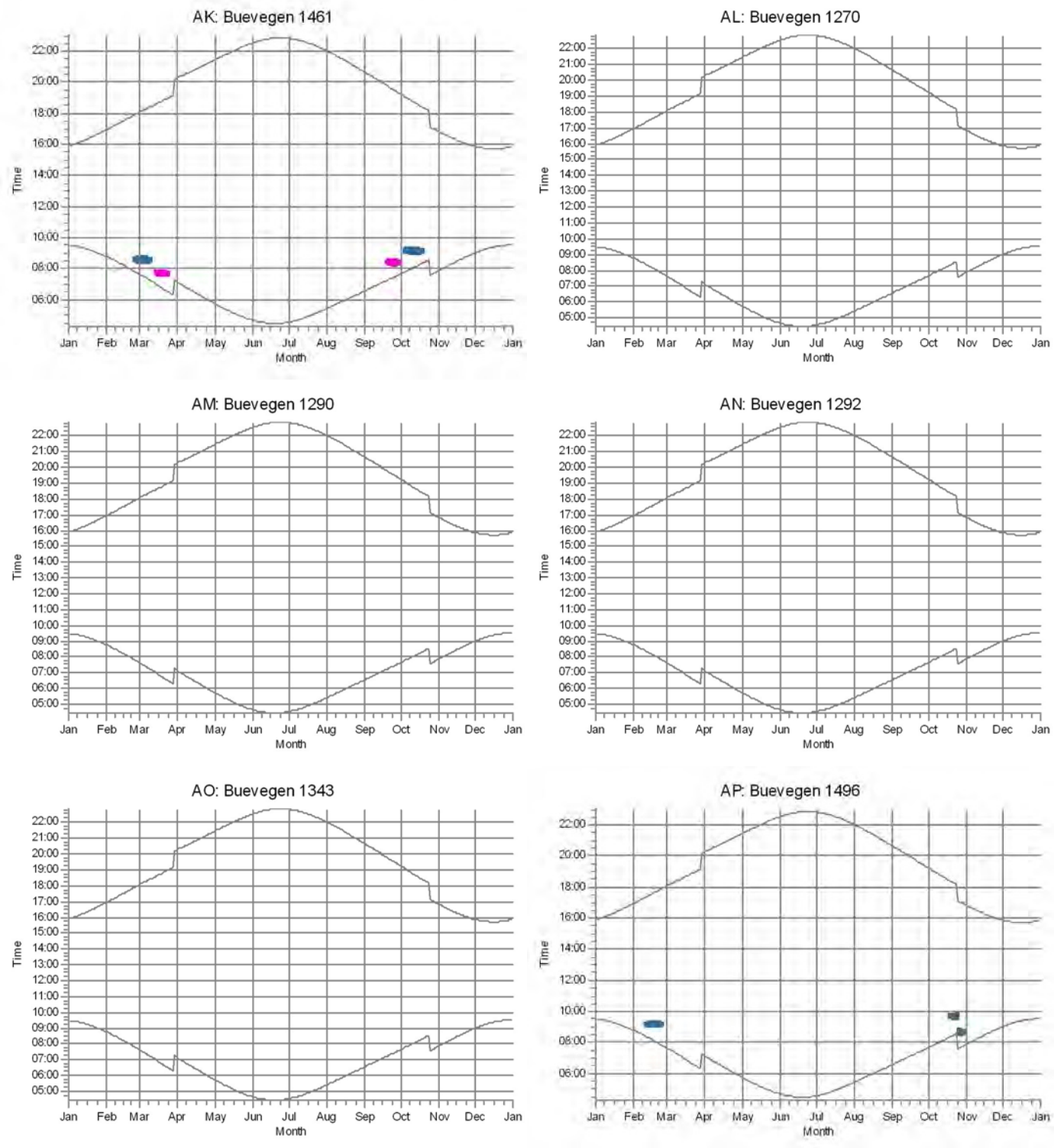


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere

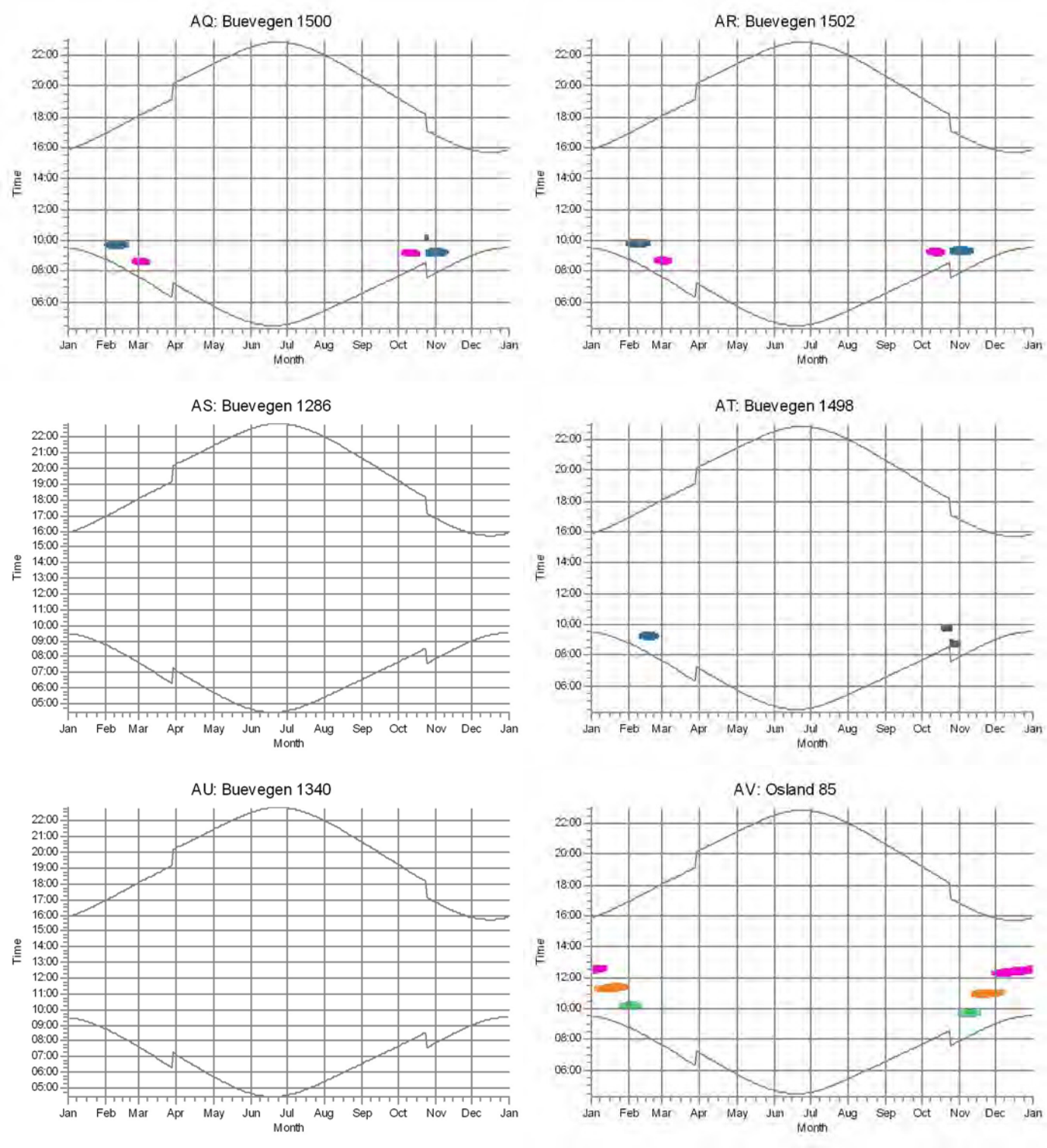


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Calculated:
19.11.2025 15:03/4.2.271

SHADOW - Calendar, graphical

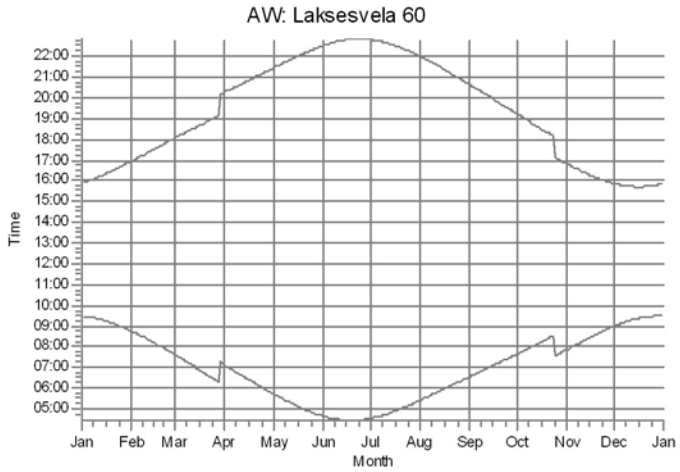
Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere

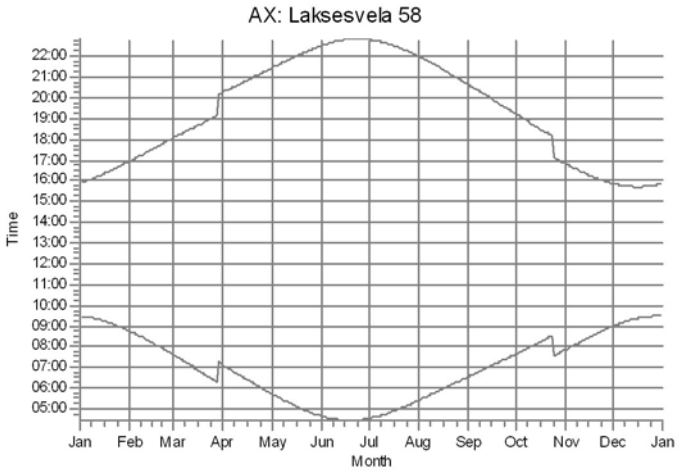


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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - worst case - mottakere





WTGs

Vedlegg 6.1

Tabell Moifjellet vindkraftverk

Realistic case

Project:

Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17	21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19	21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21	21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24	21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26	21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28	21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30	21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33	21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35	21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37	21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40	21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42	21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44	21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47	21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49	21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51	22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53	22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00	22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03	22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05	22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07	22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10	22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12	22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14	22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17	22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19	22:24	22:50
29	08:52		11:15 (33)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21	22:25	22:50
30	08:50		11:15 (33)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24	22:27	22:49
31	08:48		11:17 (33)				07:10				04:41	
	16:54	57	13:05 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33		05:26		06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34		05:28		06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35		05:31		06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36		05:33		06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37		05:35		06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39		05:37		06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40		05:39		06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41		05:42		06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43		05:44		06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44		05:46		06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46		05:48		06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47		05:51		07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49		05:53		07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51		05:55		07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52		05:57		07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54		06:00		07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56		06:02		07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58		06:04		07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00		06:06		07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01		06:08		07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03		06:11		07:19			08:27		12:35 (28)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (28)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (28)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (28)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (28)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13		06:22		07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16		06:24		07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18		06:26		07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20		06:29		07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22		06:31					07:49		11:34 (28)				09:28
	22:03		20:42					16:51	90	15:09 (24)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17	21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19	21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21	21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24	21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26	21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28	21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30	21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33	21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35	21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37	21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40	21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12	22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14	22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17	22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19	22:24	22:50
29	08:52		10:56 (33)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21	22:25	22:50
30	08:50		10:50 (33)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24	22:27	22:49
31	08:48		10:44 (33)				07:10				04:41	
	16:54	62	14:05 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		10:30 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	107	15:21 (22)	15:51
2	04:33	05:26	06:35	07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48	21:58	20:37	19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34	05:28	06:37	07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47	21:56	20:34	19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35	05:31	06:40	07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47	21:54	20:31	19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36	05:33	06:42	07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46	21:51	20:28	19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37	05:35	06:44	07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45	21:49	20:25	18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39	05:37	06:46	07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44	21:47	20:22	18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40	05:39	06:49	07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43	21:44	20:20	18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41	05:42	06:51	07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42	21:42	20:17	18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43	05:44	06:53	08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40	21:39	20:14	18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44	05:46	06:55	08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39	21:37	20:11	18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46	05:48	06:57	08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38	21:34	20:08	18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47	05:51	07:00	08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37	21:31	20:05	18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49	05:53	07:02	08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35	21:29	20:02	18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51	05:55	07:04	08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34	21:26	19:59	18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52	05:57	07:06	08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32	21:24	19:56	18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54	06:00	07:08	08:16		11:34 (28)	08:29			09:23
	22:30	21:21	19:54	18:28	36	12:10 (28)	16:13			15:42
18	04:56	06:02	07:11	08:18		11:32 (28)	08:32			09:24
	22:29	21:18	19:51	18:25	55	14:33 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		11:32 (28)	08:34			09:25
	22:27	21:16	19:48	18:22	62	14:36 (23)	16:09			15:42
20	05:00	06:06	07:15	08:23		11:31 (28)	08:36			09:26
	22:25	21:13	19:45	18:20	67	14:37 (23)	16:08			15:43
21	05:01	06:09	07:17	08:25		11:30 (28)	08:39			09:26
	22:24	21:10	19:42	18:17	72	14:39 (23)	16:06			15:43
22	05:03	06:11	07:19	08:27		11:29 (28)	08:41			09:27
	22:22	21:08	19:39	18:14	75	14:40 (23)	16:04			15:43
23	05:05	06:13	07:22	08:30		11:29 (28)	08:43			09:27
	22:20	21:05	19:36	18:12	78	14:41 (23)	16:02			15:44
24	05:07	06:15	07:24	08:32		11:29 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	79	14:41 (23)	16:01			15:45
25	05:09	06:17	07:26	07:35		10:29 (28)	08:47			09:28
	22:16	20:59	19:30	17:07	81	13:42 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		10:29 (28)	08:50			09:28
	22:14	20:57	19:27	17:04	82	13:43 (23)	15:58			15:46
27	05:13	06:22	07:30	07:39		10:29 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	81	13:42 (23)	15:56			15:47
28	05:16	06:24	07:33	07:42		10:29 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	87	14:45 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		10:29 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	95	14:48 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		10:30 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	14:51 (24)	15:52			15:50
31	05:22	06:31		07:49		10:31 (28)				09:28
	22:03	20:42		16:51	99	14:52 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1521			1074		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,65			0,62		
Total reduction					0,26			0,25		
Total, real					396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46		11:39 (28)	07:35	09:25 (15)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (24)	18:05	9 09:34 (15)	20:17	21:26	22:31
2	09:27		08:43		11:39 (28)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (24)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (28)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (24)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (28)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (24)	18:12		20:24	21:33	22:35
5	09:26	12:20 (20)	08:37		11:39 (28)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (20)	17:06	80	15:09 (24)	18:14		20:26	21:35	22:37
6	09:25	12:19 (20)	08:34		11:40 (28)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (20)	17:08	74	15:08 (24)	18:17		20:28	21:37	22:38
7	09:24	12:17 (20)	08:32		11:40 (28)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (20)	17:11	62	14:11 (23)	18:19		20:30	21:40	22:39
8	09:24	12:17 (20)	08:30		11:41 (28)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (20)	17:13	61	14:11 (23)	18:21		20:33	21:42	22:40
9	09:23	12:18 (20)	08:27		11:42 (28)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (20)	17:16	57	14:10 (23)	18:24		20:35	21:44	22:42
10	09:22	11:06 (33)	08:25		11:42 (28)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (20)	17:18	54	14:09 (23)	18:26		20:37	21:46	22:43
11	09:21	11:02 (33)	08:23		11:44 (28)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (20)	17:21	48	14:08 (23)	18:28		20:40	21:49	22:44
12	09:20	11:01 (33)	08:20		11:45 (28)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (20)	17:23	42	14:06 (23)	18:31		20:42	21:51	22:45
13	09:18	11:02 (33)	08:18		11:46 (28)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (20)	17:26	32	14:02 (23)	18:33		20:44	21:53	22:46
14	09:17	11:02 (33)	08:15		11:49 (28)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (20)	17:28	18	12:07 (28)	18:35		20:47	21:55	22:47
15	09:16	11:02 (33)	08:13		11:52 (28)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (20)	17:31	12	12:04 (28)	18:38		20:49	21:58	22:47
16	09:15	11:02 (33)	08:10		09:29 (15)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (20)	17:33	5	09:34 (15)	18:40		20:51	22:00	22:48
17	09:13	11:02 (33)	08:07		09:25 (15)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (20)	17:36	12	09:37 (15)	18:42		20:53	22:02	22:49
18	09:12	11:03 (33)	08:05		09:24 (15)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (23)	17:38	16	09:40 (15)	18:45		20:56	22:04	22:49
19	09:10	11:03 (33)	08:02		09:23 (15)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (23)	17:40	17	09:40 (15)	18:47		20:58	22:06	22:50
20	09:08	11:04 (33)	08:00		09:22 (15)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (23)	17:43	19	09:41 (15)	18:49		21:00	22:08	22:50
21	09:07	11:04 (33)	07:57		09:21 (15)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (23)	17:45	20	09:41 (15)	18:51		21:03	22:10	22:50
22	09:05	11:05 (33)	07:54		09:20 (15)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (23)	17:48	21	09:41 (15)	18:54		21:05	22:12	22:50
23	09:03	11:05 (33)	07:52		09:21 (15)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (23)	17:50	21	09:42 (15)	18:56		21:07	22:14	22:51
24	09:02	11:06 (33)	07:49		09:21 (15)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (23)	17:53	20	09:41 (15)	18:58		21:10	22:16	22:51
25	09:00	11:07 (33)	07:46		09:21 (15)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (24)	17:55	20	09:41 (15)	19:01		21:12	22:18	22:51
26	08:58	11:09 (33)	07:44		09:21 (15)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (24)	17:57	19	09:40 (15)	19:03		21:14	22:20	22:50
27	08:56	11:10 (33)	07:41		09:22 (15)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (24)	18:00	16	09:38 (15)	19:05		21:17	22:22	22:50
28	08:54	11:13 (33)	07:38		09:23 (15)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (24)	18:02	14	09:37 (15)	19:08		21:19	22:24	22:50
29	08:52	11:40 (28)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (24)				20:10		21:21	22:25	22:50
30	08:50	11:39 (28)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (24)				20:12		21:24	22:27	22:49
31	08:48	11:39 (28)				07:10			04:41	
	16:54	88 15:13 (24)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				
Sun reduction		0,50		0,50		0,50				
Oper. time red.		0,80		0,80		0,80				
Wind dir. red.		0,62		0,63		0,73				
Total reduction		0,25		0,25		0,29				
Total, real		371		276		3				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49		22:01		20:40		19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33		05:26		06:35		07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48		21:58		20:37		19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34		05:28		06:37		07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47		21:56		20:34		19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35		05:31		06:40		07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47		21:54		20:31		19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36		05:33		06:42		07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46		21:51		20:28		19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37		05:35		06:44		07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45		21:49		20:25		18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39		05:37		06:46		07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44		21:47		20:22		18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40		05:39		06:49		07:55			08:08		11:09 (28)	09:12		
	22:43		21:44		20:20		18:53			16:32	87	14:42 (24)	15:45		
9	04:41		05:42		06:51		07:57			08:11		11:10 (28)	09:13		
	22:42		21:42		20:17		18:50			16:30	87	14:43 (24)	15:44		
10	04:43		05:44		06:53		08:00			08:13		11:10 (28)	09:15		
	22:41		21:39		20:14		18:47			16:28	88	14:44 (24)	15:43		
11	04:44		05:46		06:55		08:02			08:15		11:10 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	88	14:44 (24)	15:43		
12	04:46		05:48		06:57		08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38		21:34		20:08		18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47		05:51		07:00		08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37		21:32		20:05		18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49		05:53		07:02		08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35		21:29		20:02		18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51		05:55		07:04		08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34		21:26		19:59		18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32		21:24		19:56		18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30		21:21		19:54		18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29		21:18		19:51		18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58		06:04		07:13		08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00		06:06		07:15		08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25		21:13		19:45		18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01		06:08		07:17		08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24		21:10		19:42		18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22		21:08		19:39		18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20		21:05		19:36		18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07		06:15		07:24		08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18		21:02		19:33		18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09		06:17		07:26		07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16		20:59		19:30		17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14		20:57		19:27		17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13		06:22		07:30		07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12		20:54		19:25		17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16		06:24		07:33		07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10		20:51		19:22		16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07		20:48		19:19		16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05		20:45		19:16		16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22		06:31				07:49		11:13 (28)				09:28		
	22:03		20:42				16:51	50	13:38 (23)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								389			2122			106	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,64	
Total reduction								0,27			0,25			0,25	
Total, real								107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46	11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43	11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41	12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39	11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34	12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32	12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30	12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27	12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25	12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23	12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20	12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18	12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15	09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13	09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10	09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07	09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05	09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02	09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00	09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57	09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54	09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52	09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49	09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46	09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44	09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41	09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38	09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)			07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)			20:10	21:21	22:25	22:50
30	08:50		11:58 (28)			07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)			20:12	21:24	22:27	22:49
31	08:48		11:58 (28)			07:10		04:41	
	16:54	88	15:22 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1646		1063					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,63		0,63					
Total reduction		0,25		0,25					
Total, real		411		265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33		05:26		06:35		07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34		05:28		06:37		07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35		05:31		06:40		07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36		05:33		06:42		07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37		05:35		06:44		07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39		05:37		06:46		07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40		05:39		06:49		07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41		05:42		06:51		07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43		05:44		06:53		08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44		05:46		06:55		08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46		05:48		06:57		08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47		05:51		07:00		08:07			08:20		11:30 (28)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (24)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22		06:31				07:49		11:35 (28)				09:28		11:11 (33)
	22:03		20:42				16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02		19:07	21:19	22:24	22:50
29	08:52		12:24 (28)			07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)			20:10	21:21	22:25	22:50
30	08:50		12:23 (28)			07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)			20:12	21:24	22:27	22:49
31	08:48		12:24 (28)			07:10		04:41	
	16:53	77	15:26 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1549		1149					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,62		0,62					
Total reduction		0,25		0,25					
Total, real		386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28			08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53			16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27		12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1	12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27		12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4	12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27		12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7	12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26		12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17	12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25		12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16	12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24		12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19	12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24		12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22	12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23		12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22	12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22		12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22	12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21		12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22	12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20		12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28	13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18		12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33	13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17		12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36	13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16		11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47	13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54	13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13		11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57	13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12		11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72	14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85	14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09		11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88	14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07		11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88	14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05		11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89	14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03		11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87	14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02		11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81	14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00		11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82	14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58		11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83	14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56		11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83	14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54		11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82	14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80	14:54 (24)				20:10	21:21	22:25	22:50
30	08:50		11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79	14:53 (24)				20:12	21:24	22:27	22:49
31	08:48		11:26 (28)				07:10		04:41	
	16:54	76	14:52 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1562			681					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,61			0,66					
Total reduction		0,24			0,26					
Total, real		382			180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33		05:26		06:35		07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34		05:28		06:37		07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35		05:31		06:40		07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36		05:33		06:42		07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37		05:35		06:44		07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39		05:37		06:46		07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40		05:39		06:49		07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41		05:42		06:51		07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43		05:44		06:53		08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44		05:46		06:55		08:02			08:15		10:57 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (24)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (28)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (24)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (28)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (24)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (28)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (20)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (23)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (20)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (23)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22		06:31				07:49		11:06 (28)				09:28		
	22:03		20:42				16:51	15	11:21 (28)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46	11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43	11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41	11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39	11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34	12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27	09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25	09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23	09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20	09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18	09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15	09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13	09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10	09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07	09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05	09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02	09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00	09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57	09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54	09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (28)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)			20:10	21:21	22:25	22:50
30	08:50		11:51 (28)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)			20:12	21:24	22:27	22:49
31	08:48		11:52 (28)			07:10		04:41	
	16:54	55	14:55 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:08 (20)	08:46	11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:29 (20)	16:56	49 13:50 (23)	18:05	20:17	21:26	22:31
2	09:27	12:08 (20)	08:43	11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21 12:29 (20)	16:58	44 13:48 (23)	18:07	20:19	21:28	22:32
3	09:27	12:09 (20)	08:41	11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:29 (20)	17:01	39 13:47 (23)	18:09	20:21	21:31	22:34
4	09:27	12:09 (20)	08:39	11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:30 (20)	17:03	32 13:45 (23)	18:12	20:24	21:33	22:35
5	09:26	12:09 (20)	08:37	11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21 12:30 (20)	17:06	19 12:02 (28)	18:14	20:26	21:35	22:37
6	09:25	12:10 (20)	08:34	11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25 13:32 (23)	17:08	14 12:00 (28)	18:17	20:28	21:37	22:38
7	09:24	11:43 (28)	08:32	11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33 13:35 (23)	17:11	6 11:56 (28)	18:19	20:30	21:40	22:39
8	09:24	11:41 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	41 13:37 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:40 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	47 13:39 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:38 (28)	08:25	09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51 13:40 (23)	17:18	3 09:42 (15)	18:26	20:37	21:46	22:43
11	09:21	11:38 (28)	08:23	09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55 13:42 (23)	17:21	10 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:37 (28)	08:20	09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60 14:46 (24)	17:23	14 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:37 (28)	08:18	09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72 14:49 (24)	17:26	16 09:49 (15)	18:33	20:44	21:53	22:46
14	09:17	11:36 (28)	08:15	09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83 14:49 (24)	17:28	17 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:36 (28)	08:13	09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87 14:50 (24)	17:31	18 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:35 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86 14:50 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:36 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:51 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:36 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89 14:52 (24)	17:38	19 09:51 (15)	18:45	20:56	22:04	22:49
19	09:10	11:36 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87 14:52 (24)	17:40	18 09:50 (15)	18:47	20:58	22:06	22:50
20	09:09	11:35 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85 14:53 (24)	17:43	17 09:49 (15)	18:49	21:00	22:08	22:50
21	09:07	11:35 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79 14:53 (24)	17:45	15 09:48 (15)	18:51	21:03	22:10	22:50
22	09:05	11:36 (28)	07:54	09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:53 (24)	17:48	12 09:46 (15)	18:54	21:05	22:12	22:50
23	09:03	11:35 (28)	07:52	09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79 14:52 (24)	17:50	6 09:44 (15)	18:56	21:07	22:14	22:51
24	09:02	11:35 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	79 14:52 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:35 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	78 14:52 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:36 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	77 14:52 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:36 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	74 14:51 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:36 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	71 14:50 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:37 (28)			07:15	05:49	04:44	04:30
	16:49	66 14:49 (24)			20:10	21:21	22:25	22:50
30	08:50	11:37 (28)			07:13	05:46	04:42	04:31
	16:51	56 14:45 (24)			20:12	21:24	22:27	22:49
31	08:48	11:38 (28)			07:10		04:41	
	16:54	51 13:50 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1881		406				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,68				
Total reduction		0,24		0,27				
Total, real		457		110				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:26 (20)	16:56	45	13:44 (23)	18:05	20:17	21:26	22:31
2	09:27		12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20	12:26 (20)	16:58	40	13:42 (23)	18:07	20:19	21:28	22:32
3	09:27		12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:26 (20)	17:01	34	13:40 (23)	18:09	20:21	21:31	22:34
4	09:27		12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:27 (20)	17:03	20	11:59 (28)	18:12	20:24	21:33	22:35
5	09:26		12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28	13:28 (23)	17:06	16	11:57 (28)	18:14	20:26	21:35	22:37
6	09:25		12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32	13:31 (23)	17:08	11	11:55 (28)	18:17	20:28	21:37	22:38
7	09:24		11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38	13:32 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46	13:34 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50	13:36 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:35 (28)	08:25		09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58	14:41 (24)	17:18	6	09:43 (15)	18:26	20:37	21:46	22:43
11	09:21		11:34 (28)	08:23		09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71	14:43 (24)	17:21	11	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:33 (28)	08:20		09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79	14:44 (24)	17:23	15	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:34 (28)	08:18		09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81	14:45 (24)	17:26	16	09:48 (15)	18:33	20:44	21:53	22:46
14	09:17		11:33 (28)	08:15		09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84	14:45 (24)	17:28	18	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:32 (28)	08:13		09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86	14:46 (24)	17:31	19	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87	14:46 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:32 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:47 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:32 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88	14:48 (24)	17:38	18	09:50 (15)	18:45	20:56	22:04	22:49
19	09:10		11:32 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86	14:48 (24)	17:40	17	09:49 (15)	18:47	20:58	22:06	22:50
20	09:09		11:32 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79	14:48 (24)	17:43	16	09:48 (15)	18:49	21:00	22:08	22:50
21	09:07		11:32 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77	14:48 (24)	17:45	14	09:47 (15)	18:51	21:03	22:10	22:50
22	09:05		11:32 (28)	07:54		09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:49 (24)	17:48	10	09:45 (15)	18:54	21:05	22:12	22:50
23	09:03		11:31 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	78	14:48 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:32 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	77	14:48 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:32 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	75	14:47 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:33 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	73	14:47 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:32 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	70	14:45 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:33 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	66	14:44 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:34 (28)				07:15	05:49	04:44	04:30
	16:49	57	14:41 (24)				20:10	21:21	22:25	22:50
30	08:50		11:34 (28)				07:13	05:46	04:42	04:31
	16:51	52	13:45 (23)				20:12	21:24	22:27	22:49
31	08:48		11:35 (28)				07:10		04:41	
	16:54	48	13:44 (23)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1914			364				
Sun reduction		0,50			0,50				
Oper. time red.		0,80			0,80				
Wind dir. red.		0,61			0,69				
Total reduction		0,24			0,27				
Total, real		467			100				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49	22:01	20:40	19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:18 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	58	14:24 (24)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:19 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	51	13:19 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:21 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	46	13:18 (23)
5	04:36	05:33	06:42	07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46	21:51	20:28	19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37	05:35	06:44	07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45	21:49	20:25	18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38	05:37	06:46	07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44	21:47	20:23	18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40	05:39	06:49	07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43	21:44	20:20	18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41	05:42	06:51	07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42	21:42	20:17	18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43	05:44	06:53	08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41	21:39	20:14	18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44	05:46	06:55	08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39	21:37	20:11	18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46	05:48	06:57	08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38	21:34	20:08	18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47	05:51	07:00	08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37	21:32	20:05	18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49	05:53	07:02	08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35	21:29	20:02	18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51	05:55	07:04	08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34	21:26	19:59	18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52	05:57	07:06	08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32	21:24	19:56	18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54	06:00	07:08	08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31	21:21	19:54	18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56	06:02	07:11	08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29	21:18	19:51	18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58	06:04	07:13	08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27	21:16	19:48	18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25	21:13	19:45	18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24	21:10	19:42	18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18	21:02	19:33	18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14	20:57	19:27	17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12	20:54	19:25	17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20	06:29	07:37	07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05	20:45	19:16	16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22	06:31		07:49		09:05 (15)				09:28		12:04 (20)
	22:03	20:42		16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					197			1686			799	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28		11:58 (20)	08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56	49 13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43	11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58	47 13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41	11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01	42 13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39	11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03	35 13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37	11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06	23 11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34	11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08	20 11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32	11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11	16 11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30	11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13	11 11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18		18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18		07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45		18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46		06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)			20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)			07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)			07:10		04:41		05:22	06:31		07:49				09:28		11:57 (20)
	16:54	53	13:36 (23)			20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236				199		
Total, worst case		1841		243										1761				403	
Sun reduction		0,50		0,50										0,50				0,50	
Oper. time red.		0,80		0,80										0,80				0,80	
Wind dir. red.		0,62		0,65										0,62				0,62	
Total reduction		0,25		0,26										0,25				0,25	
Total, real		452		63										435				100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35		08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13			16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42			07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10			16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44			07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07			16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46		09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7	09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48		09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12	09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51		09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15	09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53		09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18	09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55		09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19	09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57		09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20	09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00		09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20	09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02		09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20	09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04		09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19	09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06		09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18	09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09		09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26	10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11		09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29	10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13		09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28	10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16		10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21	10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18		10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23	10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20		10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24	10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23		10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25	10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25		10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37	15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27		10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42	15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30		10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50	15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32		10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63	15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35		09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69	14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37		09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74	14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39		09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82	15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42		09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89	15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44		09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90	15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47		09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90	15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49		12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81	15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					1111			1317			529	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,64			0,59			0,64	
Total reduction					0,26			0,23			0,26	
Total, real					286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17	21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19	21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21	21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23	21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26	21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28	21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30	21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33	21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35	21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (33)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23	22:27	22:49
31	08:48		14:08 (33)				07:10				04:41	
	16:53	21	15:27 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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NO-0276 Oslo
+47 21 58 60 15
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

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NO-0276 Oslo
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Calculated:

19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	16:24 (28)	08:45		11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:32 (28)	16:01	30	13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47		11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20	13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49		11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11	11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52		11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10	11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54		11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8	11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56			09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53			15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58			09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52			15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49	09:46 (12)				09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55 15:38 (28)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		793		765									221		1347			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,62		0,61									0,60		0,62			
Total reduction		0,25		0,24									0,24		0,25			
Total, real		197		187									53		334			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56	74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (15)	15:51
2	09:27		08:43		10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58	73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (15)	15:50
3	09:27		08:41		10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01	74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (15)	15:49
4	09:26		08:39		10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03	71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (15)	15:48
5	09:26		08:37		10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06	68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (15)	15:47
6	09:25		08:34		10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08	64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (15)	15:46
7	09:24		08:32		10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11	59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (15)	15:45
8	09:24		08:30		10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13	52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (15)	15:45
9	09:23		08:27		10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16	43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (15)	15:44
10	09:22		08:25		10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18	26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (15)	15:43
11	09:21		08:22		12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21	5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (15)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (15)	15:42
13	09:18	12:39 (9)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13	5 12:44 (9)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (15)	15:42
14	09:17	12:39 (9)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15	7 12:46 (9)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (15)	15:42
15	09:16	12:39 (9)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17	15 12:54 (9)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (15)	15:42
16	09:14	12:38 (9)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19	17 12:55 (9)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (15)	15:42
17	09:13	12:38 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21	18 12:56 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (15)	15:42
18	09:12	12:37 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23	19 12:56 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (15)	15:42
19	09:10	12:38 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25	20 12:58 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (15)	15:42
20	09:08	12:37 (17)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27	22 12:59 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (15)	15:42
21	09:07	12:35 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30	23 12:58 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (9)	15:43
22	09:05	12:34 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32	33 14:16 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (9)	15:43
23	09:03	12:33 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34	39 14:19 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (9)	15:44
24	09:01	12:33 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37	42 14:21 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (9)	15:44
25	09:00	12:32 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39	45 14:22 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (9)	15:45
26	08:58	10:57 (12)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41	50 14:24 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (9)	15:46
27	08:56	10:51 (12)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44	64 14:24 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (9)	15:47
28	08:54	10:51 (12)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46	69 14:25 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (9)	15:48
29	08:52	10:51 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49	70 14:26 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (9)	15:49
30	08:50	10:50 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)				07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53	74 14:27 (15)				20:14		22:29		22:03	20:42		16:51	7 12:20 (17)			15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319		236		199
Total, worst case		704		609										7		1322	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,63										0,63		0,62	
Total reduction		0,25		0,25										0,25		0,25	
Total, real		174		153										2		328	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (12)	09:00
	15:53		16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (15)	15:51
2	09:27		08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (12)	09:01
	15:54		16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (15)	15:50
3	09:27		08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (12)	09:03
	15:55		17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (15)	15:49
4	09:26		08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (12)	09:05
	15:57		17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (15)	15:48
5	09:26		08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (12)	09:07
	15:58		17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (15)	15:47
6	09:25		08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (12)	09:09
	16:00		17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (15)	15:46
7	09:24		08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (12)	09:10
	16:02		17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (15)	15:45
8	09:24		08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (12)	09:12
	16:03		17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (15)	15:45
9	09:23		08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (12)	09:13
	16:05		17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (15)	15:44
10	09:22		08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (12)	09:15
	16:07		17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (15)	15:43
11	09:21		08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (12)	09:16
	16:09		17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (15)	15:43
12	09:20		08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (12)	09:17
	16:11		17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (15)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (12)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (15)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (17)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (15)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (17)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (15)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (17)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (15)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (17)	15:52			15:50
31	08:48		10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)				09:28
	16:53	69	14:22 (15)			20:14		22:29		22:03	20:42		16:51	25 12:17 (17)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (26)	08:45	14:59 (17)	07:35	07:07	05:44	04:39
	15:52 20	12:23 (26)	16:56 18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27	12:03 (26)	08:43	14:59 (17)	07:32	07:04	05:41	04:38
	15:54 20	12:23 (26)	16:58 19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27	12:03 (26)	08:41	14:58 (17)	07:30	07:01	05:38	04:37
	15:55 20	12:23 (26)	17:01 19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26	12:03 (26)	08:39	14:59 (17)	07:27	06:58	05:36	04:36
	15:57 21	12:24 (26)	17:03 19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26	12:04 (26)	08:37	14:59 (17)	07:24	06:55	05:33	04:34
	15:58 26	13:33 (12)	17:06 19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25	12:04 (26)	08:34	15:00 (17)	07:21	06:52	05:31	04:33
	16:00 29	13:35 (12)	17:08 18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24	12:05 (26)	08:32	15:00 (17)	07:18	06:49	05:29	04:32
	16:01 31	13:37 (12)	17:11 17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23	12:06 (26)	08:30	15:00 (17)	07:16	06:46	05:26	04:31
	16:03 33	13:39 (12)	17:13 16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23	12:06 (26)	08:27	15:02 (17)	07:13	06:44	05:24	04:31
	16:05 33	13:39 (12)	17:15 14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22	12:07 (26)	08:25	15:03 (17)	07:10	06:41	05:21	04:30
	16:07 35	13:41 (12)	17:18 11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21	12:07 (26)	08:22	15:07 (17)	07:07	06:38	05:19	04:29
	16:09 35	13:41 (12)	17:20 5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19	12:08 (26)	08:20		07:04	06:35	05:17	04:29
	16:11 35	13:42 (12)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (26)	08:17		07:01	06:32	05:15	04:28
	16:12 35	13:43 (12)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (26)	08:15		06:58	06:29	05:12	04:28
	16:14 35	13:44 (12)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (26)	08:12		06:56	06:27	05:10	04:27
	16:17 34	13:45 (12)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (26)	08:10		06:53	06:24	05:08	04:27
	16:19 32	13:45 (12)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (26)	08:07		06:50	06:21	05:06	04:27
	16:21 29	13:45 (12)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (26)	08:05		06:47	06:18	05:04	04:26
	16:23 26	13:46 (12)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (12)	08:02		06:44	06:16	05:02	04:26
	16:25 21	13:46 (12)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (12)	07:59		06:41	06:13	05:00	04:26
	16:27 22	13:47 (12)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (12)	07:57		06:38	06:10	04:58	04:26
	16:30 21	13:47 (12)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (12)	07:54		06:35	06:07	04:56	04:27
	16:32 21	13:47 (12)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (12)	07:51		06:33	06:05	04:54	04:27
	16:34 20	13:47 (12)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (12)	07:49		06:30	06:02	04:52	04:27
	16:37 19	13:47 (12)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (12)	07:46		06:27	05:59	04:50	04:28
	16:39 18	13:47 (12)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (12)	07:43		06:24	05:57	04:49	04:28
	16:41 17	13:47 (12)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (12)	07:41		06:21	05:54	04:47	04:29
	16:44 20	15:09 (17)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (12)	07:38		06:18	05:51	04:45	04:29
	16:46 23	15:12 (17)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (12)			07:15	05:49	04:44	04:30
	16:48 21	15:14 (17)			20:10	21:21	22:25	22:49
30	08:50	15:00 (17)			07:12	05:46	04:42	04:31
	16:51 15	15:15 (17)			20:12	21:23	22:27	22:49
31	08:48	15:00 (17)			07:09		04:41	
	16:53 16	15:16 (17)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15		12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43	21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16		12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43	21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17		12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42	20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19		12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42	20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20		12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42	21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21		12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42	21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22		12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42	20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23		12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42	20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24		12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42	20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25		12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42	20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25		12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42	20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26		12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43	20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27		12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43	20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27		12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44	20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27		12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44	21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28		12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45	20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28		12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46	20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28		12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47	20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28		12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47	21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28		12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49	20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28		12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50	20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,55			0,55	
Total reduction					0,22			0,22			0,22	
Total, real					7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:45	10:57 (37)	07:35	16:28 (17)	07:06	05:44	04:39
	15:52		16:56 40	13:50 (26)	18:04 11	16:39 (17)	20:16	21:26	22:30
2	09:27		08:43	10:59 (37)	07:32	16:27 (17)	07:04	05:41	04:38
	15:54		16:58 37	13:51 (26)	18:07 13	16:40 (17)	20:19	21:28	22:32
3	09:27		08:41	11:02 (37)	07:30	16:27 (17)	07:01	05:38	04:37
	15:55		17:01 28	13:49 (26)	18:09 14	16:41 (17)	20:21	21:30	22:33
4	09:26		08:39	13:29 (26)	07:27	16:27 (17)	06:58	05:36	04:36
	15:57		17:03 20	13:49 (26)	18:12 17	16:44 (17)	20:23	21:33	22:35
5	09:26		08:37	13:30 (26)	07:24	16:27 (17)	06:55	05:33	04:34
	15:58		17:06 17	13:47 (26)	18:14 19	16:46 (17)	20:26	21:35	22:36
6	09:25		08:34	13:33 (26)	07:21	16:28 (17)	06:52	05:31	04:33
	16:00		17:08 12	13:45 (26)	18:16 17	16:45 (17)	20:28	21:37	22:38
7	09:24		08:32		07:18	16:29 (17)	06:49	05:29	04:32
	16:01		17:11		18:19 15	16:44 (17)	20:30	21:39	22:39
8	09:23		08:30		07:15	16:30 (17)	06:46	05:26	04:32
	16:03		17:13		18:21 12	16:42 (17)	20:32	21:42	22:40
9	09:23		08:27		07:13	16:33 (17)	06:44	05:24	04:31
	16:05		17:15		18:23 6	16:39 (17)	20:35	21:44	22:41
10	09:22		08:25		07:10		06:41	05:21	04:30
	16:07		17:18		18:26		20:37	21:46	22:43
11	09:20		08:22		07:07		06:38	05:19	04:29
	16:09		17:20		18:28		20:39	21:48	22:44
12	09:19		08:20	14:57 (7)	07:04		06:35	05:17	04:29
	16:11		17:23 8	15:05 (7)	18:30		20:42	21:51	22:45
13	09:18		08:17	14:59 (7)	07:01		06:32	05:15	04:28
	16:12		17:25 11	15:10 (7)	18:33		20:44	21:53	22:45
14	09:17	11:05 (37)	08:15	15:02 (7)	06:58		06:29	05:12	04:28
	16:14 3	11:08 (37)	17:28 12	15:14 (12)	18:35		20:46	21:55	22:46
15	09:16	10:59 (37)	08:12	15:06 (12)	06:56		06:27	05:10	04:27
	16:17 10	11:09 (37)	17:30 12	15:18 (12)	18:37		20:49	21:57	22:47
16	09:14	10:52 (37)	08:10	15:06 (12)	06:53		06:24	05:08	04:27
	16:19 18	11:10 (37)	17:33 15	15:21 (12)	18:40		20:51	21:59	22:48
17	09:13	10:51 (37)	08:07	15:05 (12)	06:50		06:21	05:06	04:27
	16:21 19	11:10 (37)	17:35 16	15:21 (12)	18:42		20:53	22:02	22:48
18	09:11	10:51 (37)	08:05	15:05 (12)	06:47		06:18	05:04	04:26
	16:23 20	11:11 (37)	17:38 15	15:20 (12)	18:44		20:56	22:04	22:49
19	09:10	10:51 (37)	08:02	15:06 (12)	06:44		06:16	05:02	04:26
	16:25 21	11:12 (37)	17:40 16	15:22 (12)	18:47		20:58	22:06	22:49
20	09:08	10:51 (37)	07:59	15:07 (12)	06:41		06:13	05:00	04:26
	16:27 22	11:13 (37)	17:43 17	15:24 (12)	18:49		21:00	22:08	22:50
21	09:07	10:51 (37)	07:57	15:07 (12)	06:38		06:10	04:58	04:26
	16:30 22	11:13 (37)	17:45 20	15:27 (12)	18:51		21:02	22:10	22:50
22	09:05	10:51 (37)	07:54	15:08 (12)	06:35		06:07	04:56	04:27
	16:32 27	12:49 (32)	17:47 20	15:28 (12)	18:53		21:05	22:12	22:50
23	09:03	10:51 (37)	07:51	15:09 (12)	06:32		06:05	04:54	04:27
	16:34 39	13:02 (32)	17:50 18	15:27 (12)	18:56		21:07	22:14	22:50
24	09:01	10:52 (37)	07:49	15:12 (12)	06:30		06:02	04:52	04:27
	16:37 40	13:04 (32)	17:52 13	15:25 (12)	18:58		21:09	22:16	22:50
25	08:59	10:52 (37)	07:46	15:16 (12)	06:27		05:59	04:50	04:28
	16:39 39	13:04 (32)	17:55 5	15:21 (12)	19:00		21:12	22:18	22:50
26	08:58	10:52 (37)	07:43		06:24		05:57	04:49	04:28
	16:41 39	13:24 (26)	17:57		19:03		21:14	22:20	22:50
27	08:56	10:53 (37)	07:41		06:21		05:54	04:47	04:29
	16:44 39	13:28 (26)	18:00		19:05		21:16	22:22	22:50
28	08:54	10:53 (37)	07:38	16:32 (17)	06:18		05:51	04:45	04:29
	16:46 41	13:35 (26)	18:02 4	16:36 (17)	19:07		21:19	22:23	22:50
29	08:52	10:54 (37)			07:15		05:49	04:44	04:30
	16:48 41	13:44 (26)			20:10		21:21	22:25	22:49
30	08:50	10:55 (37)			07:12		05:46	04:42	04:31
	16:51 42	13:47 (26)			20:12		21:23	22:27	22:49
31	08:48	10:56 (37)			07:09			04:41	
	16:53 42	13:49 (26)			20:14			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case	524		356		124				
Sun reduction	0,50		0,50		0,50				
Oper. time red.	0,80		0,80		0,80				
Wind dir. red.	0,67		0,57		0,57				
Total reduction	0,27		0,23		0,23				
Total, real	139		81		28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (26)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (26)	15:48
5	04:36	05:33	06:42	07:48		17:09 (17)	08:01		13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (17)	16:39	13	13:15 (26)	15:47
6	04:37	05:35	06:44	07:50		17:06 (17)	08:03		13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (17)	16:36	17	13:18 (26)	15:46
7	04:38	05:37	06:46	07:53		17:04 (17)	08:06		12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (17)	16:34	21	13:19 (26)	15:45
8	04:40	05:39	06:48	07:55		17:03 (17)	08:08		10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (17)	16:32	29	13:20 (26)	15:44
9	04:41	05:41	06:50	07:57		17:02 (17)	08:10		10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (17)	16:30	37	13:22 (26)	15:44
10	04:42	05:44	06:53	07:59		17:01 (17)	08:13		10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (17)	16:27	40	13:21 (26)	15:43
11	04:44	05:46	06:55	08:02		17:01 (17)	08:15		10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (17)	16:25	41	13:19 (26)	15:43
12	04:45	05:48	06:57	08:04		17:01 (17)	08:18		10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (17)	16:23	42	13:19 (26)	15:42
13	04:47	05:50	06:59	08:06		17:02 (17)	08:20		10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (17)	16:21	41	13:15 (26)	15:42
14	04:49	05:53	07:01	08:09		17:06 (17)	08:22		10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (17)	16:19	41	13:07 (26)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (37)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (26)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (37)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (26)	15:42
17	04:54	05:59	07:08	08:16		15:45 (12)	08:29		10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (12)	16:13	39	12:37 (32)	15:42
18	04:56	06:02	07:10	08:18		15:42 (12)	08:32		10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (12)	16:11	40	12:38 (32)	15:42
19	04:57	06:04	07:12	08:20		15:40 (12)	08:34		10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (12)	16:09	39	12:37 (32)	15:42
20	04:59	06:06	07:15	08:23		15:39 (12)	08:36		10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (12)	16:07	28	12:25 (32)	15:42
21	05:01	06:08	07:17	08:25		15:37 (12)	08:38		10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (12)	16:06	22	10:49 (37)	15:43
22	05:03	06:10	07:19	08:27		15:37 (12)	08:41		10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (12)	16:04	22	10:49 (37)	15:43
23	05:05	06:13	07:21	08:30		15:36 (12)	08:43		10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (12)	16:02	21	10:49 (37)	15:44
24	05:07	06:15	07:24	08:32		15:35 (12)	08:45		10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (12)	16:01	20	10:49 (37)	15:44
25	05:09	06:17	07:26	07:34		14:36 (12)	08:47		10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (12)	15:59	19	10:48 (37)	15:45
26	05:11	06:19	07:28	07:37		14:35 (12)	08:49		10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (12)	15:57	18	10:49 (37)	15:46
27	05:13	06:22	07:30	07:39		14:35 (12)	08:51		10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (12)	15:56	10	10:48 (37)	15:47
28	05:15	06:24	07:32	07:41		14:30 (7)	08:53		10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (12)	15:55	3	10:47 (37)	15:48
29	05:17	06:26	07:35	07:44		14:27 (7)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (7)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (7)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (7)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39		
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30		
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38		
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32		
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37		
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33		
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36		
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35		
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35		
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36		
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33		
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37		
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32		
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39		
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32		
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40		
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31		
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41		
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30		
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42		
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29		
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43		
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29		
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44		
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28		
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45		
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28		
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46		
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27		
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47		
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27		
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47		
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27		
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48		
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26		
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49		
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26		
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49		
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26		
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49		
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26		
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50		
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27		
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50		
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27		
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50		
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27		
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50		
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28		
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50		
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28		
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50		
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29		
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50		
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29		
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49		
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30		
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49		
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31		
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49		
31	08:47		15:29 (8)				07:09						04:41					
	16:53	20	15:49 (8)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				
Sun reduction		0,50			0,50			0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80			0,80			0,80				
Wind dir. red.		0,53			0,54			0,58			0,68			0,68				
Total reduction		0,21			0,22			0,23			0,27			0,27				
Total, real		16			169			118			331			18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24		19:10 (37)	06:33		18:48 (37)	07:39		16:33 (13)	07:51		15:00 (8)	08:59
	22:48	22:00		19:20 (37)	20:39	60	19:58 (26)	19:13		16:44 (13)	16:48	21	15:21 (8)	15:51
2	04:33	05:26		19:07 (37)	06:35		18:49 (37)	07:41		16:29 (13)	07:53		15:00 (8)	09:01
	22:47	21:58		19:24 (37)	20:36	57	19:57 (26)	19:10		16:47 (13)	16:46	22	15:22 (8)	15:50
3	04:34	05:28		19:04 (37)	06:37		18:49 (37)	07:43		16:26 (13)	07:56		14:59 (8)	09:03
	22:47	21:56		19:26 (37)	20:34	54	19:56 (26)	19:07		16:50 (13)	16:44	23	15:22 (8)	15:49
4	04:35	05:30		19:02 (37)	06:39		18:51 (37)	07:46		16:24 (13)	07:58		14:59 (8)	09:05
	22:46	21:53		19:28 (37)	20:31	35	19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33		19:00 (37)	06:42		18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51		19:30 (37)	20:28	31	19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35		19:00 (37)	06:44		18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49		19:32 (37)	20:25	28	19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37		19:02 (37)	06:46		18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46		19:34 (37)	20:22	25	19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39		19:04 (37)	06:48		18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44		19:36 (37)	20:19	18	19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:07 (37)	06:50		19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11	19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53			07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13			18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55			08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11			18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57			08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08			18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59			08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05			18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01		18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7	18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04		18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13	18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06		18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16	18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08		18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19	18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10		18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20	18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12		18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21	18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15		18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22	18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17		18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22	18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19		18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22	18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21		18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21	18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23		18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19	18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26		18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18	18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28		18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15	18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30		18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11	18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32			07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21			16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34			07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18			16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37			07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16			16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)				07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)				16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (23)	08:46	10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53 31	12:43 (24)	16:56 18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28	11:14 (23)	08:44	10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54 30	12:43 (24)	16:58 17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27	11:13 (23)	08:41	10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55 31	12:43 (24)	17:01 14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27	11:13 (23)	08:39	10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57 30	12:43 (24)	17:03 11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26	11:14 (23)	08:37	10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58 28	12:42 (24)	17:06 7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25	11:14 (23)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (28)	09:09		11:00 (23)
	16:00 28	12:42 (24)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (28)	15:46	28	12:28 (24)
7	09:25	11:14 (23)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (28)	09:10		11:01 (23)
	16:02 26	12:41 (24)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (28)	15:45	29	12:30 (24)
8	09:24	11:14 (23)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (28)	09:12		11:02 (23)
	16:03 21	11:35 (23)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (28)	15:45	30	12:31 (24)
9	09:23	11:15 (23)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (28)	09:14		11:03 (23)
	16:05 21	11:36 (23)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (28)	15:44	30	12:32 (24)
10	09:22	11:15 (23)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (28)	09:15		11:03 (23)
	16:07 21	11:36 (23)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (28)	15:44	30	12:32 (24)
11	09:21	11:15 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (28)	09:16		11:04 (23)
	16:09 22	11:37 (23)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (28)	15:43	30	12:33 (24)
12	09:20	11:15 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (28)	09:18		11:04 (23)
	16:11 22	11:37 (23)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (28)	15:43	31	12:34 (24)
13	09:19	11:16 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (28)	09:19		11:05 (23)
	16:13 22	11:38 (23)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (28)	15:42	31	12:35 (24)
14	09:17	11:16 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (28)	09:20		11:06 (23)
	16:15 22	11:38 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (28)	15:42	30	12:35 (24)
15	09:16	11:16 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (28)	09:21		11:06 (23)
	16:17 22	11:38 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (28)	15:42	31	12:36 (24)
16	09:15	11:16 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (28)	09:22		11:08 (23)
	16:19 22	11:38 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (28)	15:42	30	12:37 (24)
17	09:13	11:18 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (28)	09:23		11:09 (23)
	16:21 21	11:39 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (23)	15:42	30	12:38 (24)
18	09:12	11:18 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (28)	09:24		11:08 (23)
	16:23 21	11:39 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (23)	15:42	30	12:37 (24)
19	09:10	10:13 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (28)	09:25		11:09 (23)
	16:25 27	11:39 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (23)	15:42	29	12:38 (24)
20	09:09	10:12 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (28)	09:26		11:10 (23)
	16:28 30	11:39 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (23)	15:43	30	12:39 (24)
21	09:07	10:11 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (28)	09:26		11:11 (23)
	16:30 32	11:39 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (23)	15:43	29	12:40 (24)
22	09:05	10:10 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (28)	09:27		11:11 (23)
	16:32 32	11:38 (23)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (23)	15:43	29	12:40 (24)
23	09:03	10:09 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (28)	09:27		11:11 (23)
	16:34 31	11:37 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (23)	15:44	30	12:40 (24)
24	09:02	10:09 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (23)	09:28		11:12 (23)
	16:37 29	11:36 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (23)	15:45	30	12:41 (24)
25	09:00	10:09 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (23)	09:28		11:12 (23)
	16:39 26	11:34 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (23)	15:45	29	12:41 (24)
26	08:58	10:09 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (23)	09:28		11:13 (23)
	16:41 19	10:28 (28)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (23)	15:46	30	12:42 (24)
27	08:56	10:09 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (23)	09:28		11:13 (23)
	16:44 20	10:29 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (23)	15:47	30	12:42 (24)
28	08:54	10:09 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (23)	09:29		11:13 (23)
	16:46 19	10:28 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (23)	15:48	31	12:43 (24)
29	08:52	10:09 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (23)	09:29		11:13 (23)
	16:49 20	10:29 (28)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (23)	15:49	30	12:42 (24)
30	08:50	10:09 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (23)	09:28		11:13 (23)
	16:51 19	10:28 (28)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (23)	15:50	31	12:43 (24)
31	08:48	10:10 (28)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (23)
	16:54 19	10:29 (28)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (12)
	15:52	16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (12)
2	09:27		12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (12)
	15:54	16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (12)
3	09:27		12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (12)
	15:55	17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (12)
4	09:26		12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (12)
	15:57	17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (12)
5	09:26		12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (12)
	15:58	18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (12)
6	09:25		12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (12)
	16:00	19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (12)
7	09:24		12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (12)
	16:01	20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (12)
8	09:24		12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (12)
	16:03	19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (12)
9	09:23		12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (12)
	16:05	20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (12)
10	09:22		12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (12)
	16:07	20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (12)
11	09:21		12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (12)
	16:09	20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (12)
12	09:19		12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (12)
	16:11	20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (12)
13	09:18		12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (12)
	16:12	20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (12)
14	09:17		12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (12)
	16:14	20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (12)
15	09:16		12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (12)
	16:17	20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (12)
16	09:14		12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (12)
	16:19	20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (12)
17	09:13		12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (12)
	16:21	19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (12)
18	09:11		12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (12)
	16:23	19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (12)
19	09:10		13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (12)	09:25		12:50 (12)
	16:25	18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (12)	15:42	13	13:03 (12)
20	09:08		13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (12)	09:25		12:51 (12)
	16:27	16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (12)	15:42	12	13:03 (12)
21	09:07		13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (12)	09:26		12:51 (12)
	16:30	15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (12)	15:43	12	13:03 (12)
22	09:05		13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (12)	09:27		12:52 (12)
	16:32	12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (12)	15:43	12	13:04 (12)
23	09:03		13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (12)	09:27		12:52 (12)
	16:34	9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (12)	15:44	12	13:04 (12)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (12)	09:28		12:52 (12)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (12)	15:44	12	13:04 (12)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (12)	09:28		12:53 (12)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (12)	15:45	13	13:06 (12)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (12)	09:28		12:53 (12)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (12)	15:46	13	13:06 (12)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (12)	09:28		12:54 (12)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (12)	15:47	13	13:07 (12)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (12)	09:28		12:53 (12)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (12)	15:48	14	13:07 (12)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (12)	09:28		12:53 (12)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (12)	15:49	15	13:08 (12)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (12)	09:28		12:54 (12)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (12)	15:50	15	13:09 (12)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (12)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (12)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (12)	08:59
	15:52		16:56 19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (12)	15:51
2	09:27		08:43	13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (12)	09:01
	15:54		16:58 16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (12)	15:50
3	09:27		08:41	13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (12)	09:03
	15:55		17:01 12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (12)	15:49
4	09:26		08:39	14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (12)	09:05
	15:57		17:03 5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (12)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (12)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (12)	15:47
6	09:25		08:34	15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (26)	09:10
	16:01		17:11 11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (26)	15:45
8	09:23		08:30	15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (26)	09:12
	16:03		17:13 15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (26)	15:44
9	09:23		08:27	15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (26)	09:13
	16:05		17:15 18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (26)	15:44
10	09:22		08:25	15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (26)	09:15
	16:07		17:18 19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (26)	15:43
11	09:20		08:22	15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (26)	09:16
	16:09		17:20 21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (26)	15:43
12	09:19		08:20	15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (26)	09:17
	16:10		17:23 22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17	15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (26)	09:19
	16:12 5	13:58 (26)	17:25 22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15	15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (26)	09:20
	16:14 9	14:00 (26)	17:28 23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12	15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (37)	09:21
	16:17 11	14:01 (26)	17:30 22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10	15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (37)	09:22
	16:19 17	14:07 (26)	17:33 22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07	15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (37)	09:23
	16:21 21	14:10 (26)	17:35 21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05	15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (37)	09:24
	16:23 27	14:11 (26)	17:38 19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02	15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (37)	09:25
	16:25 32	14:12 (26)	17:40 17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59	15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (37)	09:25
	16:27 36	14:12 (26)	17:43 14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57	15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (12)	08:38	11:05 (37)	09:26
	16:30 42	14:13 (26)	17:45 8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (12)	16:06 42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (12)	08:41	11:08 (37)	09:27
	16:32 45	14:14 (26)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (12)	16:04 36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (12)	08:43	11:12 (37)	09:27
	16:34 44	14:14 (26)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (12)	16:02 32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (12)	08:45	11:16 (37)	09:27
	16:36 42	14:15 (26)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (12)	16:01 28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (12)	08:47	13:27 (26)	09:28
	16:39 40	14:15 (26)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (12)	15:59 21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (12)	08:49	13:29 (26)	09:28
	16:41 37	14:15 (26)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (12)	15:57 17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (12)	08:51	13:29 (26)	09:28
	16:44 33	14:15 (26)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (12)	15:56 12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (12)	08:53	13:30 (26)	09:28
	16:46 24	14:15 (26)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (12)	15:55 9	13:39 (26)	15:47
29	08:52	13:51 (26)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (12)	08:55	13:35 (26)	09:28
	16:48 23	14:14 (26)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (12)	15:53 5	13:40 (26)	15:49
30	08:50	13:52 (26)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (12)	08:57		09:28
	16:51 22	14:14 (26)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (12)	15:52		15:50
31	08:48	13:54 (26)			07:09		04:41		05:22	06:31		07:49	14:47 (12)			09:28
	16:53 20	14:14 (26)			20:14		22:29		22:03	20:42		16:51 20	15:07 (12)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (32) | 08:45		10:15 (13) | 07:35		13:26 (26) | 07:07		18:42 (17) | 05:44	| 04:39
	15:52	47	14:26 (14) | 16:56	119	15:37 (35) | 18:04	35	17:05 (9) | 20:16	19	19:01 (17) | 21:26	| 22:30
2	09:27		12:11 (32) | 08:43		12:16 (32) | 07:32		15:45 (7) | 07:04		18:43 (17) | 05:41	| 04:38
	15:54	53	14:28 (14) | 16:58	114	15:38 (35) | 18:07	27	17:09 (9) | 20:19	16	18:59 (17) | 21:28	| 22:32
3	09:27		12:10 (32) | 08:41		12:17 (32) | 07:30		16:34 (12) | 07:01		18:46 (17) | 05:38	| 04:37
	15:55	58	14:29 (14) | 17:01	113	15:38 (35) | 18:09	33	17:12 (9) | 20:21	11	18:57 (17) | 21:30	| 22:33
4	09:26		12:10 (32) | 08:39		09:39 (37) | 07:27		16:31 (12) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (14) | 17:03	109	15:39 (35) | 18:12	43	17:15 (9) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (32) | 08:36		09:39 (37) | 07:24		16:29 (12) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (14) | 17:06	105	15:39 (35) | 18:14	46	17:15 (9) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (32) | 08:34		09:40 (37) | 07:21		16:26 (12) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (14) | 17:08	95	15:39 (35) | 18:16	49	17:15 (9) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (13) | 08:32		09:40 (37) | 07:18		16:25 (12) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (14) | 17:11	96	15:39 (35) | 18:19	50	17:15 (9) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (13) | 08:30		09:38 (37) | 07:15		16:23 (12) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (14) | 17:13	96	15:38 (35) | 18:21	52	17:15 (9) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (13) | 08:27		09:36 (37) | 07:13		16:22 (12) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (14) | 17:16	98	15:38 (35) | 18:23	53	17:15 (9) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (13) | 08:25		09:33 (37) | 07:10		16:20 (12) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (14) | 17:18	107	15:57 (7) | 18:26	54	17:14 (9) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (13) | 08:22		09:29 (37) | 07:07		16:19 (12) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (14) | 17:20	114	16:00 (7) | 18:28	54	17:13 (9) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (13) | 08:20		09:27 (37) | 07:04		16:18 (12) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (14) | 17:23	118	16:03 (7) | 18:30	54	17:12 (9) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (13) | 08:17		09:24 (37) | 07:01		16:18 (12) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (14) | 17:25	118	16:04 (7) | 18:33	52	17:10 (9) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (13) | 08:15		09:21 (37) | 06:58		16:17 (12) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (14) | 17:28	114	16:05 (7) | 18:35	51	17:08 (9) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (13) | 08:12		09:18 (37) | 06:56		16:17 (12) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (14) | 17:30	120	16:07 (7) | 18:37	47	17:04 (9) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (13) | 08:10		09:13 (37) | 06:53		16:17 (12) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (14) | 17:33	125	16:08 (7) | 18:40	46	17:03 (12) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (13) | 08:07		09:13 (37) | 06:50		16:17 (12) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (14) | 17:35	123	16:08 (7) | 18:42	46	17:03 (12) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (13) | 08:05		09:13 (37) | 06:47		16:16 (12) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (14) | 17:38	121	16:08 (7) | 18:44	46	17:02 (12) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (13) | 08:02		09:15 (37) | 06:44		16:16 (12) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (14) | 17:40	118	16:09 (7) | 18:47	56	18:01 (17) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (13) | 07:59		09:16 (37) | 06:41		16:16 (12) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (14) | 17:43	114	16:09 (7) | 18:49	60	18:03 (17) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (13) | 07:57		09:17 (37) | 06:38		16:16 (12) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (14) | 17:45	110	16:09 (7) | 18:51	64	18:05 (17) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (13) | 07:54		09:18 (37) | 06:35		16:17 (12) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (14) | 17:48	104	16:08 (7) | 18:54	63	18:05 (17) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (13) | 07:51		09:20 (37) | 06:32		16:17 (12) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (14) | 17:50	95	16:08 (7) | 18:56	64	18:06 (17) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (13) | 07:49		13:09 (26) | 06:30		16:18 (12) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (14) | 17:52	77	16:08 (7) | 18:58	64	18:06 (17) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (13) | 07:46		13:11 (26) | 06:27		16:18 (12) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (14) | 17:55	71	16:07 (7) | 19:00	62	18:06 (17) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (13) | 07:43		13:13 (26) | 06:24		16:20 (12) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (35) | 17:57	66	16:06 (7) | 19:03	61	18:07 (17) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (13) | 07:41		13:16 (26) | 06:21		16:22 (12) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (35) | 18:00	58	16:05 (7) | 19:05	57	18:07 (17) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (13) | 07:38		13:19 (26) | 06:18		16:23 (12) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (35) | 18:02	49	16:04 (7) | 19:07	54	18:06 (17) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (13) |		| 07:15		17:26 (12) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (35) |		| 20:10	47	19:05 (17) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (13) |		| 07:12		17:29 (12) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (35) |		| 20:12	38	19:04 (17) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (13) |		| 07:09		18:41 (17) |			| 04:41	|
	16:53	126	15:37 (35) |		| 20:14	22	19:03 (17) |			| 22:29	|
Potential sun hours	221		| 260		| 365		| 432		| 521	| 547
Total, worst case	| 3257		| 2867		| 1550		| 46		|	|
Sun reduction	| 0,50		| 0,50		| 0,50		| 0,50		|	|
Oper. time red.	| 0,80		| 0,80		| 0,80		| 0,80		|	|
Wind dir. red.	| 0,60		| 0,59		| 0,58		| 0,62		|	|
Total reduction	| 0,24		| 0,24		| 0,23		| 0,25		|	|
Total, real	| 786		| 675		| 361		| 11		|	|

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December	
1	04:32	05:24	06:33		07:39		16:57 (12)	07:51	09:03 (37)	08:59	09:52 (13)
	22:48	22:01	20:39		19:13	53	17:50 (9)	16:49 107	15:26 (7)	15:51 96	14:16 (14)
2	04:33	05:26	06:35		07:41		16:58 (12)	07:53	09:06 (37)	09:01	09:53 (13)
	22:48	21:58	20:37		19:10	54	17:52 (9)	16:46 98	15:08 (35)	15:50 91	14:16 (14)
3	04:34	05:28	06:37		07:44		16:58 (12)	07:56	09:08 (37)	09:03	09:54 (13)
	22:47	21:56	20:34		19:07	54	17:52 (9)	16:44 96	15:08 (35)	15:49 88	14:17 (14)
4	04:35	05:30	06:39		07:46		16:58 (12)	07:58	09:10 (37)	09:05	09:54 (13)
	22:46	21:54	20:31		19:04	54	17:52 (9)	16:41 94	15:08 (35)	15:48 83	14:17 (14)
5	04:36	05:33	06:42		07:48		17:00 (12)	08:01	09:10 (37)	09:07	09:55 (13)
	22:45	21:51	20:28		19:01	52	17:52 (9)	16:39 95	15:09 (35)	15:47 77	14:17 (14)
6	04:37	05:35	06:44		07:50		17:00 (12)	08:03	09:10 (37)	09:08	09:57 (13)
	22:45	21:49	20:25		18:58	52	17:52 (9)	16:37 105	15:09 (35)	15:46 71	14:17 (14)
7	04:38	05:37	06:46		07:53		17:01 (12)	08:06	09:08 (37)	09:10	11:57 (32)
	22:44	21:46	20:22		18:56	50	17:51 (9)	16:34 111	15:09 (35)	15:45 64	14:17 (14)
8	04:40	05:39	06:48		07:55		17:03 (12)	08:08	11:48 (32)	09:12	11:57 (32)
	22:43	21:44	20:19		18:53	48	17:51 (9)	16:32 112	15:09 (35)	15:44 62	14:17 (14)
9	04:41	05:41	06:51	18:40 (17)	07:57		17:04 (12)	08:10	11:47 (32)	09:13	11:59 (32)
	22:41	21:41	20:16	10 18:50 (17)	18:50	46	17:50 (9)	16:30 113	15:09 (35)	15:44 57	14:17 (14)
10	04:42	05:44	06:53	18:37 (17)	07:59		17:06 (12)	08:13	09:45 (13)	09:15	12:00 (32)
	22:40	21:39	20:14	15 18:52 (17)	18:47	40	17:48 (9)	16:27 121	15:08 (35)	15:43 53	14:17 (14)
11	04:44	05:46	06:55	18:35 (17)	08:02		16:22 (7)	08:15	09:42 (13)	09:16	12:01 (32)
	22:39	21:36	20:11	19 18:54 (17)	18:44	36	17:45 (9)	16:25 127	15:08 (35)	15:43 47	14:16 (14)
12	04:45	05:48	06:57	18:34 (17)	08:04		16:18 (7)	08:17	09:41 (13)	09:17	12:03 (32)
	22:38	21:34	20:08	21 18:55 (17)	18:42	25	17:41 (9)	16:23 130	15:08 (35)	15:42 44	14:17 (14)
13	04:47	05:50	06:59	17:21 (12)	08:06		13:56 (26)	08:20	09:39 (13)	09:19	12:04 (32)
	22:36	21:31	20:05	37 18:55 (17)	18:39	42	17:38 (9)	16:21 131	15:06 (35)	15:42 39	14:17 (14)
14	04:49	05:53	07:02	17:17 (12)	08:09		13:50 (26)	08:22	09:39 (13)	09:20	12:07 (32)
	22:35	21:29	20:02	45 18:55 (17)	18:36	53	16:37 (7)	16:19 131	15:05 (35)	15:42 34	14:17 (14)
15	04:50	05:55	07:04	17:13 (12)	08:11		13:46 (26)	08:25	09:39 (13)	09:21	13:06 (26)
	22:33	21:26	19:59	52 18:55 (17)	18:33	62	16:37 (7)	16:17 128	15:03 (35)	15:42 26	14:16 (14)
16	04:52	05:57	07:06	17:11 (12)	08:13		13:44 (26)	08:27	09:39 (13)	09:22	13:08 (26)
	22:32	21:23	19:56	56 18:55 (17)	18:30	69	16:39 (7)	16:15 124	15:02 (35)	15:42 22	14:15 (14)
17	04:54	05:59	07:08	17:08 (12)	08:16		13:41 (26)	08:29	09:38 (13)	09:23	13:10 (26)
	22:30	21:21	19:53	59 18:54 (17)	18:28	75	16:39 (7)	16:13 125	14:07 (14)	15:42 18	14:15 (14)
18	04:56	06:02	07:10	17:07 (12)	08:18		09:55 (37)	08:32	09:38 (13)	09:24	13:12 (26)
	22:29	21:18	19:50	63 18:55 (17)	18:25	86	16:39 (7)	16:11 129	14:09 (14)	15:42 16	14:15 (14)
19	04:58	06:04	07:12	17:06 (12)	08:20		09:51 (37)	08:34	09:39 (13)	09:25	13:16 (3)
	22:27	21:15	19:47	63 18:54 (17)	18:22	98	16:39 (7)	16:09 131	14:11 (14)	15:42 11	14:15 (14)
20	04:59	06:06	07:15	17:04 (12)	08:23		09:49 (37)	08:36	09:38 (13)	09:25	13:16 (3)
	22:25	21:13	19:45	65 18:53 (17)	18:20	106	16:40 (7)	16:07 129	14:11 (14)	15:42 9	14:14 (14)
21	05:01	06:08	07:17	17:03 (12)	08:25		09:46 (37)	08:38	09:39 (13)	09:26	13:17 (3)
	22:23	21:10	19:42	64 18:51 (17)	18:17	113	16:39 (7)	16:06 131	14:13 (14)	15:43 9	14:15 (14)
22	05:03	06:11	07:19	17:01 (12)	08:27		09:45 (37)	08:41	09:38 (13)	09:26	13:18 (3)
	22:21	21:07	19:39	64 18:50 (17)	18:14	116	16:39 (7)	16:04 131	14:13 (14)	15:43 9	14:16 (14)
23	05:05	06:13	07:21	17:00 (12)	08:30		09:44 (37)	08:43	09:39 (13)	09:27	13:18 (3)
	22:19	21:05	19:36	62 18:48 (17)	18:12	119	16:38 (7)	16:02 128	14:14 (14)	15:44 9	14:16 (14)
24	05:07	06:15	07:24	17:00 (12)	08:32		09:43 (37)	08:45	09:39 (13)	09:27	13:18 (3)
	22:18	21:02	19:33	58 18:46 (17)	18:09	122	16:38 (7)	16:01 127	14:14 (14)	15:44 11	14:17 (14)
25	05:09	06:17	07:26	16:59 (12)	07:34		08:43 (37)	08:47	09:40 (13)	09:28	13:15 (26)
	22:16	20:59	19:30	46 17:45 (12)	17:06	123	15:38 (7)	15:59 124	14:15 (14)	15:45 14	14:17 (14)
26	05:11	06:19	07:28	16:58 (12)	07:37		08:44 (37)	08:49	09:40 (13)	09:28	13:14 (26)
	22:14	20:56	19:27	47 17:45 (12)	17:04	122	15:37 (7)	15:58 119	14:15 (14)	15:46 17	14:18 (14)
27	05:13	06:22	07:30	16:58 (12)	07:39		08:48 (37)	08:51	09:49 (13)	09:28	13:13 (26)
	22:11	20:53	19:24	46 17:44 (12)	17:01	118	15:36 (7)	15:56 112	14:16 (14)	15:47 20	14:19 (14)
28	05:15	06:24	07:32	16:58 (12)	07:41		08:51 (37)	08:53	09:49 (13)	09:28	13:12 (26)
	22:09	20:51	19:21	46 17:44 (12)	16:59	115	15:35 (7)	15:55 109	14:16 (14)	15:48 24	14:21 (14)
29	05:17	06:26	07:35	16:58 (12)	07:44		08:54 (37)	08:55	09:50 (13)	09:28	12:14 (32)
	22:07	20:48	19:19	50 17:48 (9)	16:56	119	15:34 (7)	15:53 106	14:16 (14)	15:49 31	14:23 (14)
30	05:20	06:28	07:37	16:57 (12)	07:46		08:57 (37)	08:57	09:50 (13)	09:28	12:13 (32)
	22:05	20:45	19:16	52 17:49 (9)	16:53	117	15:32 (7)	15:52 103	14:16 (14)	15:50 37	14:25 (14)
31	05:22	06:31			07:49		08:59 (37)			09:28	12:12 (32)
	22:03	20:42			16:51	115	15:29 (7)			15:51 41	14:25 (14)
Potential sun hours	546	478	386		319			236		199	
Total, worst case				1040		2454		3527		1230	
Sun reduction				0,50		0,50		0,50		0,50	
Oper. time red.				0,80		0,80		0,80		0,80	
Wind dir. red.				0,59		0,59		0,60		0,59	
Total reduction				0,24		0,24		0,24		0,24	
Total, real				245		577		846		289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1)	04:31	20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1)	22:48	17 20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)			05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521		547		545		478	386	319	236	200
Total, worst case						5		469		150					
Sun reduction						0,50		0,50		0,50					
Oper. time red.						0,80		0,80		0,80					
Wind dir. red.						0,73		0,73		0,73					
Total reduction						0,29		0,29		0,29					
Total, real						1		138		44					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42	04:39	04:33	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:46	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34	04:35	04:37	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:03	09:08
	16:00	17:09	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:23	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44	22:41	22:41	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:19	08:20	07:04	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55	22:46	22:35	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57	22:47	22:33	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:13	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	04:27	04:54	06:00	07:08	08:16	08:29	09:23
	16:21	17:36	18:42	20:53	22:02	22:48	22:30	21:21	19:54	18:28	16:13	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	04:27	05:04	06:11	07:19	08:27	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:03	15:44
24	09:01	07:49	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	08:45	09:27
	16:37	17:53	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	22:50	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	04:29	05:14	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:23	22:50	22:09	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:14		22:29		22:03	20:43		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April			May			June		
1	09:28	08:46	07:35	07:07			05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56	18:05	20:17			21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43	07:33	07:04			05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59	18:07	20:19			21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41	07:30	07:01			05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01	18:10	20:21			21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39	07:27	06:58			05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04	18:12	20:24			21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37	07:24	06:55			05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06	18:14	20:26			21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34	07:21	06:53			05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09	18:17	20:28			21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32	07:19	06:50			05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11	18:19	20:31			21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	07:16	06:47			05:27			04:32		06:15 (36)
	16:04	17:14	18:21	20:33			21:42			22:40	29	06:44 (36)
9	09:23	08:27	07:13	06:44			05:24			04:31		06:16 (36)
	16:06	17:16	18:24	20:35			21:44			22:42	29	06:45 (36)
10	09:22	08:25	07:10	06:41		07:48 (38)	05:22			04:31		06:15 (36)
	16:07	17:18	18:26	20:37	10	07:58 (38)	21:46			22:43	30	06:45 (36)
11	09:21	08:23	07:07	06:38		07:45 (38)	05:20			04:30		06:16 (36)
	16:09	17:21	18:28	20:40	17	08:02 (38)	21:49			22:44	29	06:45 (36)
12	09:20	08:20	07:04	06:36		07:41 (38)	05:17			04:29		06:15 (36)
	16:11	17:23	18:31	20:42	22	08:03 (38)	21:51			22:45	30	06:45 (36)
13	09:18	08:18	07:02	06:33		07:37 (38)	05:15			04:29		06:16 (36)
	16:13	17:26	18:33	20:44	27	08:04 (38)	21:53			22:46	30	06:46 (36)
14	09:17	08:15	06:59	06:30		07:35 (38)	05:13			04:28		06:16 (36)
	16:15	17:28	18:35	20:47	30	08:05 (38)	21:55			22:46	30	06:46 (36)
15	09:16	08:13	06:56	06:27		07:34 (38)	05:11			04:28		06:15 (36)
	16:17	17:31	18:38	20:49	33	08:07 (38)	21:57			22:47	31	06:46 (36)
16	09:14	08:10	06:53	06:24		07:33 (38)	05:09			04:28		06:16 (36)
	16:19	17:33	18:40	20:51	34	08:07 (38)	22:00			22:48	30	06:46 (36)
17	09:13	08:07	06:50	06:22		07:32 (38)	05:06			04:27		06:16 (36)
	16:21	17:36	18:42	20:54	35	08:07 (38)	22:02			22:48	31	06:47 (36)
18	09:12	08:05	06:47	06:19		07:31 (38)	05:04			04:27		06:16 (36)
	16:24	17:38	18:45	20:56	37	08:08 (38)	22:04			22:49	31	06:47 (36)
19	09:10	08:02	06:44	06:16		07:30 (38)	05:02			04:27		06:16 (36)
	16:26	17:41	18:47	20:58	38	08:08 (38)	22:06			22:49	31	06:47 (36)
20	09:08	08:00	06:42	06:13		07:30 (38)	05:00			04:27		06:16 (36)
	16:28	17:43	18:49	21:00	39	08:09 (38)	22:08			22:50	31	06:47 (36)
21	09:07	07:57	06:39	06:11		07:30 (38)	04:58			04:27		06:16 (36)
	16:30	17:46	18:52	21:03	38	08:08 (38)	22:10			22:50	31	06:47 (36)
22	09:05	07:54	06:36	06:08		07:29 (38)	04:56			04:27		06:17 (36)
	16:32	17:48	18:54	21:05	39	08:08 (38)	22:12			22:50	31	06:48 (36)
23	09:03	07:52	06:33	06:05		07:29 (38)	04:55			04:28		06:17 (36)
	16:35	17:50	18:56	21:07	39	08:08 (38)	22:14			22:50	31	06:48 (36)
24	09:02	07:49	06:30	06:02		07:29 (38)	04:53			04:28		06:17 (36)
	16:37	17:53	18:58	21:10	38	08:07 (38)	22:16			22:50	31	06:48 (36)
25	09:00	07:46	06:27	06:00		07:29 (38)	04:51			04:28		06:18 (36)
	16:39	17:55	19:01	21:12	38	08:07 (38)	22:18			22:50	31	06:49 (36)
26	08:58	07:44	06:24	05:57		07:29 (38)	04:49		06:24 (36)	04:29		06:18 (36)
	16:42	17:58	19:03	21:14	37	08:06 (38)	22:20	8	06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41	06:21	05:54		07:29 (38)	04:48		06:21 (36)	04:29		06:19 (36)
	16:44	18:00	19:05	21:17	37	08:06 (38)	22:22	13	06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38	06:18	05:52		07:29 (38)	04:46		06:20 (36)	04:30		06:18 (36)
	16:47	18:02	19:08	21:19	36	08:05 (38)	22:24	16	06:36 (36)	22:50	31	06:49 (36)
29	08:52		07:16	05:49		07:30 (38)	04:44		06:19 (36)	04:31		06:19 (36)
	16:49		20:10	21:21	34	08:04 (38)	22:25	18	06:37 (36)	22:49	30	06:49 (36)
30	08:50		07:13	05:47		07:30 (38)	04:43		06:19 (36)	04:31		06:19 (36)
	16:51		20:12	21:24	33	08:03 (38)	22:27	20	06:39 (36)	22:49	30	06:49 (36)
31	08:48		07:10				04:41		06:17 (36)			
	16:54		20:14				22:29	22	06:39 (36)			
Potential sun hours	221	260	365	432			521			547		
Total, worst case					691			254			878	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,65			0,62			0,58	
Total reduction					0,26			0,25			0,23	
Total, real					178			63			204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August			September			October	November	December
1	04:32		06:20 (36)	05:24			06:33		07:44 (38)	07:39	07:51	09:00
	22:48	30	06:50 (36)	22:01			20:40	17	08:01 (38)	19:13	16:49	15:51
2	04:33		06:20 (36)	05:27			06:35		07:47 (38)	07:42	07:54	09:01
	22:48	30	06:50 (36)	21:58			20:37	10	07:57 (38)	19:10	16:47	15:50
3	04:34		06:20 (36)	05:29			06:38			07:44	07:56	09:03
	22:47	29	06:49 (36)	21:56			20:34			19:07	16:44	15:49
4	04:35		06:20 (36)	05:31			06:40			07:46	07:59	09:05
	22:46	29	06:49 (36)	21:54			20:31			19:05	16:42	15:48
5	04:36		06:21 (36)	05:33			06:42			07:48	08:01	09:07
	22:46	28	06:49 (36)	21:51			20:28			19:02	16:39	15:47
6	04:38		06:21 (36)	05:35		07:49 (38)	06:44			07:51	08:03	09:09
	22:45	28	06:49 (36)	21:49	13	08:02 (38)	20:25			18:59	16:37	15:47
7	04:39		06:23 (36)	05:38		07:46 (38)	06:47			07:53	08:06	09:10
	22:44	27	06:50 (36)	21:47	18	08:04 (38)	20:23			18:56	16:35	15:46
8	04:40		06:23 (36)	05:40		07:44 (38)	06:49			07:55	08:08	09:12
	22:43	26	06:49 (36)	21:44	22	08:06 (38)	20:20			18:53	16:32	15:45
9	04:42		06:23 (36)	05:42		07:43 (38)	06:51			07:57	08:11	09:13
	22:42	26	06:49 (36)	21:42	25	08:08 (38)	20:17			18:50	16:30	15:44
10	04:43		06:24 (36)	05:44		07:41 (38)	06:53			08:00	08:13	09:15
	22:40	24	06:48 (36)	21:39	28	08:09 (38)	20:14			18:48	16:28	15:44
11	04:45		06:25 (36)	05:46		07:40 (38)	06:55			08:02	08:15	09:16
	22:39	23	06:48 (36)	21:37	30	08:10 (38)	20:11			18:45	16:26	15:43
12	04:46		06:25 (36)	05:49		07:39 (38)	06:58			08:04	08:18	09:17
	22:38	23	06:48 (36)	21:34	32	08:11 (38)	20:08			18:42	16:24	15:43
13	04:48		06:26 (36)	05:51		07:38 (38)	07:00			08:07	08:20	09:19
	22:36	21	06:47 (36)	21:32	33	08:11 (38)	20:05			18:39	16:22	15:43
14	04:49		06:28 (36)	05:53		07:37 (38)	07:02			08:09	08:22	09:20
	22:35	18	06:46 (36)	21:29	35	08:12 (38)	20:02			18:36	16:19	15:43
15	04:51		06:28 (36)	05:55		07:36 (38)	07:04			08:11	08:25	09:21
	22:34	17	06:45 (36)	21:26	36	08:12 (38)	19:59			18:34	16:17	15:42
16	04:53		06:30 (36)	05:58		07:36 (38)	07:06			08:14	08:27	09:22
	22:32	14	06:44 (36)	21:24	37	08:13 (38)	19:57			18:31	16:15	15:42
17	04:54		06:31 (36)	06:00		07:35 (38)	07:09			08:16	08:29	09:23
	22:30	11	06:42 (36)	21:21	38	08:13 (38)	19:54			18:28	16:13	15:42
18	04:56		06:35 (36)	06:02		07:36 (38)	07:11			08:18	08:32	09:24
	22:29	5	06:40 (36)	21:18	38	08:14 (38)	19:51			18:25	16:12	15:42
19	04:58			06:04		07:35 (38)	07:13			08:21	08:34	09:25
	22:27			21:16	39	08:14 (38)	19:48			18:23	16:10	15:43
20	05:00			06:07		07:35 (38)	07:15			08:23	08:36	09:25
	22:25			21:13	38	08:13 (38)	19:45			18:20	16:08	15:43
21	05:02			06:09		07:34 (38)	07:17			08:25	08:39	09:26
	22:23			21:10	39	08:13 (38)	19:42			18:17	16:06	15:43
22	05:04			06:11		07:34 (38)	07:20			08:28	08:41	09:27
	22:22			21:08	39	08:13 (38)	19:39			18:15	16:04	15:44
23	05:06			06:13		07:34 (38)	07:22			08:30	08:43	09:27
	22:20			21:05	38	08:12 (38)	19:36			18:12	16:03	15:44
24	05:08			06:15		07:34 (38)	07:24			08:32	08:45	09:28
	22:18			21:02	37	08:11 (38)	19:33			18:09	16:01	15:45
25	05:10			06:18		07:34 (38)	07:26			07:35	08:47	09:28
	22:16			20:59	37	08:11 (38)	19:30			17:07	16:00	15:46
26	05:12			06:20		07:34 (38)	07:28			07:37	08:50	09:28
	22:14			20:57	36	08:10 (38)	19:28			17:04	15:58	15:46
27	05:14			06:22		07:35 (38)	07:31			07:39	08:52	09:28
	22:12			20:54	34	08:09 (38)	19:25			17:02	15:57	15:47
28	05:16			06:24		07:35 (38)	07:33			07:42	08:54	09:28
	22:10			20:51	32	08:07 (38)	19:22			16:59	15:55	15:48
29	05:18			06:27		07:36 (38)	07:35			07:44	08:56	09:28
	22:07			20:48	30	08:06 (38)	19:19			16:56	15:54	15:49
30	05:20			06:29		07:38 (38)	07:37			07:47	08:58	09:28
	22:05			20:45	27	08:05 (38)	19:16			16:54	15:53	15:50
31	05:22			06:31		07:41 (38)				07:49		09:28
	22:03			20:43	22	08:03 (38)				16:51		15:51
Potential sun hours	545			478			386			319	236	200
Total, worst case		409			833			27				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,58			0,65			0,65				
Total reduction		0,23			0,26			0,26				
Total, real		95			215			7				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		06:01 (38)	04:32	06:06 (38)	05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	34	06:35 (38)	22:48	37 06:43 (38)	22:01	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:01 (38)	04:33	06:07 (38)	05:27	06:35	07:42	07:54	09:01
	15:54	16:59	18:07	20:19	21:28		22:32	35	06:36 (38)	22:48	36 06:43 (38)	21:58	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39		04:38		06:01 (38)	04:34	06:06 (38)	05:29	06:38	07:44	07:56	09:03
	15:56	17:01	18:10	20:21	21:30		22:33	35	06:36 (38)	22:47	37 06:43 (38)	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:37		04:36		06:00 (38)	04:35	06:06 (38)	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33		22:35	36	06:36 (38)	22:46	37 06:43 (38)	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:55	05:34		04:35		06:01 (38)	04:37	06:06 (38)	05:33	06:42	07:48	08:01	09:07
	15:59	17:06	18:14	20:26	21:35		22:36	36	06:37 (38)	22:46	37 06:43 (38)	21:51	20:28	19:02	16:39	15:47
6	09:25	08:34	07:21	06:53	05:32		04:34		06:01 (38)	04:38	06:08 (38)	05:35	06:44	07:51	08:03	09:09
	16:00	17:09	18:17	20:28	21:37		22:38	36	06:37 (38)	22:45	36 06:44 (38)	21:49	20:25	18:59	16:37	15:47
7	09:24	08:32	07:19	06:50	05:29		04:33		06:01 (38)	04:39	06:08 (38)	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40		22:39	36	06:37 (38)	22:44	36 06:44 (38)	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27		04:32		06:01 (38)	04:40	06:08 (38)	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:21	20:33	21:42		22:40	36	06:37 (38)	22:43	36 06:44 (38)	21:44	20:20	18:53	16:32	15:45
9	09:23	08:27	07:13	06:44	05:24		04:31		06:02 (38)	04:42	06:08 (38)	05:42	06:51	07:57	08:11	09:13
	16:06	17:16	18:24	20:35	21:44		22:41	36	06:38 (38)	22:42	36 06:44 (38)	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22		04:31		06:01 (38)	04:43	06:08 (38)	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:37	21:46		22:43	37	06:38 (38)	22:40	35 06:43 (38)	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20		04:30		06:02 (38)	04:45	06:09 (38)	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:40	21:49		22:44	37	06:39 (38)	22:39	35 06:44 (38)	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:04	06:36	05:17		04:29		06:02 (38)	04:46	06:09 (38)	05:49	06:58	08:04	08:18	09:17
	16:11	17:23	18:31	20:42	21:51		22:45	36	06:38 (38)	22:38	35 06:44 (38)	21:34	20:08	18:42	16:24	15:43
13	09:18	08:18	07:02	06:33	05:15		04:29		06:02 (38)	04:48	06:09 (38)	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53		22:46	37	06:39 (38)	22:36	34 06:43 (38)	21:31	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13		04:28		06:03 (38)	04:49	06:10 (38)	05:53	07:02	08:09	08:22	09:20
	16:15	17:28	18:35	20:47	21:55		22:46	36	06:39 (38)	22:35	33 06:43 (38)	21:29	20:02	18:36	16:19	15:43
15	09:16	08:13	06:56	06:27	05:11		04:28		06:02 (38)	04:51	06:10 (38)	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:57		22:47	37	06:39 (38)	22:34	33 06:43 (38)	21:26	19:59	18:34	16:17	15:42
16	09:14	08:10	06:53	06:24	05:09		04:28		06:02 (38)	04:53	06:11 (38)	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00		22:48	37	06:39 (38)	22:32	32 06:43 (38)	21:24	19:57	18:31	16:15	15:42
17	09:13	08:07	06:50	06:22	05:06	06:12 (38)	04:27		06:03 (38)	04:54	06:11 (38)	06:00	07:09	08:16	08:29	09:23
	16:21	17:36	18:42	20:54	22:02	10 06:22 (38)	22:48	37	06:40 (38)	22:30	31 06:42 (38)	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	06:11 (38)	04:27		06:03 (38)	04:56	06:12 (38)	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	14 06:25 (38)	22:49	37	06:40 (38)	22:29	30 06:42 (38)	21:18	19:51	18:25	16:12	15:42
19	09:10	08:02	06:44	06:16	05:02	06:09 (38)	04:27		06:03 (38)	04:58	06:13 (38)	06:04	07:13	08:20	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	18 06:27 (38)	22:49	37	06:40 (38)	22:27	29 06:42 (38)	21:16	19:48	18:23	16:10	15:43
20	09:08	08:00	06:42	06:13	05:00	06:08 (38)	04:27		06:03 (38)	05:00	06:13 (38)	06:07	07:15	08:23	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	20 06:28 (38)	22:50	37	06:40 (38)	22:25	28 06:41 (38)	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	06:06 (38)	04:27		06:03 (38)	05:02	06:14 (38)	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	23 06:29 (38)	22:50	37	06:40 (38)	22:23	27 06:41 (38)	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:36	06:08	04:56	06:05 (38)	04:27		06:04 (38)	05:04	06:16 (38)	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	25 06:30 (38)	22:50	37	06:41 (38)	22:22	24 06:40 (38)	21:08	19:39	18:15	16:04	15:44
23	09:03	07:52	06:33	06:05	04:55	06:03 (38)	04:28		06:04 (38)	05:06	06:17 (38)	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:07	22:14	28 06:31 (38)	22:50	37	06:41 (38)	22:20	21 06:38 (38)	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	06:03 (38)	04:28		06:04 (38)	05:08	06:18 (38)	06:15	07:24	08:32	08:45	09:28
	16:37	17:53	18:58	21:10	22:16	29 06:32 (38)	22:50	37	06:41 (38)	22:18	19 06:37 (38)	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	06:02 (38)	04:28		06:05 (38)	05:10	06:20 (38)	06:18	07:26	07:35	08:47	09:28
	16:39	17:55	19:01	21:12	22:18	30 06:32 (38)	22:50	37	06:42 (38)	22:16	16 06:36 (38)	20:59	19:30	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	06:02 (38)	04:29		06:05 (38)	05:12	06:22 (38)	06:20	07:28	07:37	08:49	09:28
	16:42	17:58	19:03	21:14	22:20	31 06:33 (38)	22:50	36	06:41 (38)	22:14	12 06:34 (38)	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:54	04:48	06:01 (38)	04:29		06:05 (38)	05:14	06:25 (38)	06:22	07:31	07:39	08:52	09:28
	16:44	18:00	19:05	21:17	22:22	32 06:33 (38)	22:50	37	06:42 (38)	22:12	6 06:31 (38)	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:18	05:52	04:46	06:01 (38)	04:30		06:05 (38)	05:16		06:24	07:33	07:42	08:54	09:28
	16:47	18:02	19:08	21:19	22:24	33 06:34 (38)	22:50	37	06:42 (38)	22:10		20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	06:01 (38)	04:31		06:05 (38)	05:18		06:27	07:35	07:44	08:56	09:28
	16:49		20:10	21:21	22:25	34 06:35 (38)	22:49	37	06:42 (38)	22:07		20:48	19:19	16:56	15:54	15:49
30	08:50		07:13	05:47	04:43	06:01 (38)	04:32		06:06 (38)	05:20		06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	34 06:35 (38)	22:49	37	06:43 (38)	22:05		20:45	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41	06:01 (38)				05:22		06:31		07:49		09:28
	16:54		20:14		22:29	34 06:35 (38)				22:03		20:43		16:51		15:51
Potential sun hours	221	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						395		1094		808						
Sun reduction						0,50		0,50		0,50						
Oper. time red.						0,80		0,80		0,80						
Wind dir. red.						0,58		0,58		0,58						
Total reduction						0,23		0,23		0,23						
Total, real						91		252		186						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:28	08:46	07:35	07:07	05:44		04:40		04:32		05:24	06:33	07:39	07:51	09:00
	15:53	16:56	18:05	20:17	21:26		22:30	28	06:18 (38)	33	06:51 (38)	20:40	19:13	16:49	15:52
2	09:27	08:43	07:33	07:04	05:42		04:39		06:18 (38)		06:19 (38)	22:01	20:40	19:13	16:49
	15:54	16:59	18:07	20:19	21:28		22:32	28	04:33	33	06:52 (38)	05:27	06:35	07:42	07:54
3	09:27	08:41	07:30	07:01	05:39		04:38		06:46 (38)		06:18 (38)	21:58	20:37	19:10	16:47
	15:56	17:01	18:10	20:21	21:31		22:33	29	06:17 (38)	33	06:51 (38)	05:29	06:38	07:44	07:56
4	09:26	08:39	07:27	06:58	05:37		04:36		06:46 (38)		06:18 (38)	21:56	20:34	19:07	16:44
	15:57	17:04	18:12	20:24	21:33		22:35	30	06:16 (38)	33	06:51 (38)	05:31	06:40	07:46	07:59
5	09:26	08:37	07:24	06:55	05:34		04:35		06:46 (38)		06:51 (38)	21:54	20:31	19:05	16:42
	15:59	17:06	18:14	20:26	21:35		22:36	31	06:16 (38)	33	06:19 (38)	05:33	06:42	07:48	08:01
6	09:25	08:34	07:21	06:53	05:32		04:34		06:47 (38)		06:52 (38)	21:51	20:28	19:02	16:39
	16:00	17:09	18:17	20:28	21:37		22:38	32	06:15 (38)	32	06:21 (38)	05:35	06:44	07:51	08:03
7	09:24	08:32	07:19	06:50	05:29		04:33		06:47 (38)		06:53 (38)	21:49	20:25	18:59	16:37
	16:02	17:11	18:19	20:31	21:40		22:39	32	06:14 (38)	32	06:22 (38)	05:38	06:47	07:53	08:06
8	09:24	08:30	07:16	06:47	05:27		04:32		06:46 (38)		06:53 (38)	21:47	20:23	18:56	16:35
	16:04	17:14	18:21	20:33	21:42		22:40	33	04:40	31	06:23 (38)	05:40	06:49	07:55	08:08
9	09:23	08:27	07:13	06:44	05:24		04:31		06:46 (38)		06:53 (38)	21:44	20:20	18:53	16:32
	16:06	17:16	18:24	20:35	21:44		22:41	33	04:43	30	06:24 (38)	05:42	06:51	07:57	08:11
10	09:22	08:25	07:10	06:41	05:22		04:31		06:47 (38)		06:53 (38)	21:42	20:17	18:50	16:30
	16:07	17:19	18:26	20:37	21:46		22:43	33	06:13 (38)	29	06:25 (38)	05:44	06:53	08:00	08:13
11	09:21	08:23	07:07	06:38	05:20		04:30		04:40		06:53 (38)	21:39	20:14	18:48	16:28
	16:09	17:21	18:28	20:40	21:49		22:44	33	06:46 (38)	28	06:26 (38)	05:46	06:55	08:02	08:15
12	09:20	08:20	07:04	06:36	05:17		04:29		06:14 (38)		06:54 (38)	21:37	20:11	18:45	16:26
	16:11	17:23	18:31	20:42	21:51		22:45	32	04:46	28	06:27 (38)	05:49	06:58	08:04	08:18
13	09:18	08:18	07:02	06:33	05:15		04:29		06:46 (38)		06:54 (38)	21:34	20:08	18:42	16:24
	16:13	17:26	18:33	20:44	21:53		22:46	33	04:48	27	06:28 (38)	05:51	07:00	08:07	08:20
14	09:17	08:15	06:59	06:30	05:13		04:28		06:47 (38)		06:54 (38)	21:32	20:05	18:39	16:22
	16:15	17:28	18:35	20:47	21:55		22:46	32	04:49	26	06:30 (38)	05:53	07:02	08:09	08:22
15	09:16	08:13	06:56	06:27	05:11		04:28		06:47 (38)		06:54 (38)	21:29	20:02	18:36	16:19
	16:17	17:31	18:38	20:49	21:57		22:47	32	04:51	24	06:31 (38)	05:55	07:04	08:11	08:25
16	09:14	08:10	06:53	06:24	05:09		04:28		06:47 (38)		06:54 (38)	21:26	19:59	18:34	16:17
	16:19	17:33	18:40	20:51	22:00	2	06:39 (38)	32	06:15 (38)	23	06:33 (38)	05:58	07:06	08:14	08:27
17	09:13	08:07	06:50	06:22	05:06		04:28		04:53		06:55 (38)	21:24	19:57	18:31	16:15
	16:21	17:36	18:42	20:54	22:02	4	06:41 (38)	32	06:47 (38)	22	06:33 (38)	06:00	07:09	08:16	08:29
18	09:12	08:05	06:47	06:19	05:04		04:27		06:15 (38)		06:54 (38)	21:21	19:54	18:28	16:14
	16:24	17:38	18:45	20:56	22:04	7	06:36 (38)	32	06:47 (38)	21	06:35 (38)	06:02	07:11	08:18	08:32
19	09:10	08:02	06:44	06:16	05:02		04:27		04:54		06:55 (38)	21:18	19:51	18:25	16:12
	16:26	17:41	18:47	20:58	22:06	8	06:43 (38)	31	06:16 (38)	20	06:37 (38)	06:04	07:13	08:21	08:34
20	09:08	08:00	06:42	06:13	05:00		04:27		04:58		06:55 (38)	21:16	19:48	18:23	16:10
	16:28	17:43	18:49	21:00	22:08	10	06:33 (38)	31	06:47 (38)	18	06:38 (38)	06:07	07:15	08:23	08:36
21	09:07	07:57	06:39	06:11	04:58		04:27		06:16 (38)		06:54 (38)	21:13	19:45	18:20	16:08
	16:30	17:46	18:52	21:03	22:10	12	06:31 (38)	31	06:47 (38)	16	06:39 (38)	06:09	07:17	08:25	08:39
22	09:05	07:54	06:36	06:08	04:56		04:27		05:02		06:54 (38)	21:10	19:42	18:17	16:06
	16:32	17:48	18:54	21:05	22:12	14	06:43 (38)	31	06:47 (38)	15	06:41 (38)	06:11	07:20	08:28	08:41
23	09:03	07:52	06:33	06:05	04:55		04:27		06:16 (38)		06:54 (38)	21:08	19:39	18:15	16:04
	16:35	17:50	18:56	21:07	22:14	15	06:44 (38)	31	06:47 (38)	13	06:42 (38)	06:13	07:22	08:30	08:43
24	09:02	07:49	06:30	06:02	04:53		04:28		06:17 (38)		06:53 (38)	21:05	19:36	18:12	16:03
	16:37	17:53	18:58	21:10	22:16	17	06:45 (38)	31	06:48 (38)	11	06:44 (38)	06:15	07:24	08:32	08:45
25	09:00	07:46	06:27	06:00	04:51		04:28		06:17 (38)		06:53 (38)	21:02	19:33	18:09	16:01
	16:39	17:55	19:01	21:12	22:18	19	06:26 (38)	31	06:48 (38)	9	06:45 (38)	06:18	07:26	07:35	08:47
26	08:58	07:44	06:24	05:57	04:49		04:28		06:18 (38)		06:53 (38)	20:59	19:30	17:07	16:00
	16:42	17:58	19:03	21:14	22:20	20	06:45 (38)	31	06:49 (38)	8	06:47 (38)	06:20	07:28	07:37	08:49
27	08:56	07:41	06:21	05:54	04:48		04:29		05:10		06:53 (38)	20:57	19:28	17:04	15:58
	16:44	18:00	19:05	21:17	22:22	22	06:23 (38)	32	06:49 (38)	6	06:49 (38)	06:22	07:31	07:39	08:52
28	08:54	07:38	06:18	05:52	04:46		04:29		06:18 (38)		06:52 (38)	20:54	19:25	17:02	15:57
	16:47	18:02	19:08	21:19	22:24	22	06:45 (38)	32	06:50 (38)	3	06:51 (38)	06:24	07:33	07:42	08:54
29	08:52		07:16	05:49	04:44		06:22 (38)	32	06:17 (38)	32	06:52 (38)	20:51	19:22	16:59	15:55
	16:49		20:10	21:21	22:25	24	04:31		06:49 (38)	1		06:27	07:35	07:44	08:56
30	08:50		07:13	05:47	04:43		06:46 (38)	32	06:18 (38)			20:48	19:19	16:56	15:54
	16:51		20:12	21:24	22:27	25	06:21 (38)	32	05:14			06:29	07:37	07:47	08:58
31	08:48		07:10		04:41		04:32		06:18 (38)			20:45	19:16	16:54	15:53
	16:54		20:14		22:29	26	06:19 (38)	33	05:20			06:31		07:49	
Potential sun hours	221	260	365	432	521		06:45 (38)		05:22			20:43		16:51	
Total, worst case						247		547		545			478	386	319	236	200
Sun reduction								944		606							
Oper. time red.						0,50		0,50		0,50							
Wind dir. red.						0,80		0,80		0,80							
Total reduction						0,58		0,58		0,58							
Total, real						0,23		0,23		0,23							
						58		220		141							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28 15:53	08:46 16:56	07:35 18:05	07:07 20:17	05:44 21:26 1	07:08 (38) | 04:40 07:09 (38) | 22:30 32	06:45 (38) | 04:32 07:17 (38) | 22:48 23	06:56 (38) | 05:24 07:19 (38) | 22:01 33	06:57 (38) | 06:33 07:30 (38) | 20:40	07:39 19:13	07:51 16:49	09:00 15:52
2	09:27 15:54	08:43 16:59	07:33 18:07	07:04 20:19	05:42 21:28 6	07:06 (38) | 04:39 07:12 (38) | 22:32 31	06:46 (38) | 04:33 07:17 (38) | 22:48 24	06:56 (38) | 05:27 07:20 (38) | 21:58 31	06:59 (38) | 06:35 07:30 (38) | 20:37	07:42 19:10	07:54 16:47	09:01 15:50
3	09:27 15:56	08:41 17:01	07:30 18:10	07:01 20:21	05:39 21:31 9	07:04 (38) | 04:38 07:13 (38) | 22:33 31	06:46 (38) | 04:34 07:17 (38) | 22:47 25	06:55 (38) | 05:29 07:20 (38) | 21:56 28	07:01 (38) | 06:38 07:29 (38) | 20:34	07:44 19:07	07:56 16:44	09:03 15:49
4	09:26 15:57	08:39 17:04	07:27 18:12	06:58 20:24	05:37 21:33 13	07:02 (38) | 04:36 07:15 (38) | 22:35 29	06:47 (38) | 04:35 07:16 (38) | 22:46 25	06:55 (38) | 05:31 07:20 (38) | 21:54 26	07:03 (38) | 06:40 07:29 (38) | 20:31	07:46 19:05	07:59 16:42	09:05 15:48
5	09:26 15:59	08:37 17:06	07:24 18:14	06:55 20:26	05:34 21:35 16	07:00 (38) | 04:35 07:16 (38) | 22:36 29	06:48 (38) | 04:37 07:17 (38) | 22:46 27	06:54 (38) | 05:33 07:21 (38) | 21:51 23	07:05 (38) | 06:42 07:28 (38) | 20:28	07:48 19:02	08:01 16:39	09:07 15:47
6	09:25 16:00	08:34 17:09	07:21 18:17	06:53 20:28	05:32 21:37 19	06:58 (38) | 04:34 07:17 (38) | 22:38 27	06:49 (38) | 04:38 07:16 (38) | 22:45 28	06:55 (38) | 05:35 07:23 (38) | 21:49 21	07:06 (38) | 06:44 07:27 (38) | 20:25	07:51 18:59	08:03 16:37	09:09 15:47
7	09:24 16:02	08:32 17:11	07:19 18:19	06:50 20:31	05:29 21:40 22	06:55 (38) | 04:33 07:17 (38) | 22:39 27	06:49 (38) | 04:39 07:16 (38) | 22:44 28	06:55 (38) | 05:38 07:23 (38) | 21:47 18	07:08 (38) | 06:47 07:26 (38) | 20:23	07:53 18:56	08:06 16:35	09:10 15:46
8	09:24 16:04	08:30 17:14	07:16 18:21	06:47 20:33	05:27 21:42 24	06:54 (38) | 04:32 07:18 (38) | 22:40 26	06:49 (38) | 04:40 07:15 (38) | 22:43 30	06:54 (38) | 05:40 07:24 (38) | 21:44 15	07:10 (38) | 06:49 07:25 (38) | 20:20	07:55 18:53	08:08 16:32	09:12 15:45
9	09:23 16:06	08:27 17:16	07:13 18:24	06:44 20:35	05:24 21:44 27	06:52 (38) | 04:31 07:19 (38) | 22:42 26	06:50 (38) | 04:42 07:16 (38) | 22:42 30	06:54 (38) | 05:42 07:24 (38) | 21:42 12	07:12 (38) | 06:51 07:24 (38) | 20:17	07:57 18:50	08:11 16:30	09:13 15:44
10	09:22 16:07	08:25 17:18	07:10 18:26	06:41 20:37	05:22 21:46 29	06:50 (38) | 04:31 07:19 (38) | 22:43 24	06:51 (38) | 04:43 07:15 (38) | 22:40 31	06:53 (38) | 05:44 07:24 (38) | 21:39 9	07:13 (38) | 06:53 07:22 (38) | 20:14	08:00 18:48	08:13 16:28	09:15 15:44
11	09:21 16:09	08:23 17:21	07:07 18:28	06:38 20:40	05:20 21:49 32	06:48 (38) | 04:30 07:20 (38) | 22:44 23	06:52 (38) | 04:45 07:15 (38) | 22:39 32	06:54 (38) | 05:46 07:26 (38) | 21:37 5	07:15 (38) | 06:55 07:20 (38) | 20:11	08:02 18:45	08:15 16:26	09:16 15:43
12	09:20 16:11	08:20 17:23	07:04 18:31	06:36 20:42	05:17 21:51 34	06:46 (38) | 04:29 07:20 (38) | 22:45 22	06:52 (38) | 04:46 07:14 (38) | 22:38 33	06:53 (38) | 05:49 07:26 (38) | 21:34	06:58 20:08	08:04 18:42	08:18 16:24	09:17 15:43
13	09:18 16:13	08:18 17:26	07:02 18:33	06:33 20:44	05:15 21:53 35	06:45 (38) | 04:29 07:20 (38) | 22:46 21	06:53 (38) | 04:48 07:14 (38) | 22:36 33	06:53 (38) | 05:51 07:26 (38) | 21:32	07:00 20:05	08:07 18:39	08:20 16:22	09:19 15:43
14	09:17 16:15	08:15 17:28	06:59 18:35	06:30 20:47	05:13 21:55 37	06:43 (38) | 04:28 07:20 (38) | 22:46 22	06:53 (38) | 04:49 07:15 (38) | 22:35 34	06:53 (38) | 05:53 07:27 (38) | 21:29	07:02 20:02	08:09 18:36	08:22 16:19	09:20 15:43
15	09:16 16:17	08:13 17:31	06:56 18:38	06:27 20:49	05:11 21:57 39	06:41 (38) | 04:28 07:20 (38) | 22:47 21	06:53 (38) | 04:51 07:14 (38) | 22:34 35	06:52 (38) | 05:55 07:27 (38) | 21:26	07:04 19:59	08:11 18:34	08:25 16:17	09:21 15:42
16	09:14 16:19	08:10 17:33	06:53 18:40	06:24 20:51	05:09 22:00 39	06:41 (38) | 04:28 07:20 (38) | 22:48 20	06:54 (38) | 04:53 07:14 (38) | 22:32 36	06:52 (38) | 05:58 07:28 (38) | 21:24	07:06 19:57	08:14 18:31	08:27 16:15	09:22 15:42
17	09:13 16:21	08:07 17:36	06:50 18:42	06:22 20:54	05:06 22:02 40	06:40 (38) | 04:27 07:20 (38) | 22:48 20	06:54 (38) | 04:54 07:14 (38) | 22:30 36	06:52 (38) | 06:00 07:28 (38) | 21:21	07:09 19:54	08:16 18:28	08:29 16:13	09:23 15:42
18	09:12 16:24	08:05 17:38	06:47 18:45	06:19 20:56	05:04 22:04 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:56 07:14 (38) | 22:29 37	06:52 (38) | 06:02 07:29 (38) | 21:18	07:11 19:51	08:18 18:25	08:32 16:12	09:24 15:42
19	09:10 16:26	08:02 17:41	06:44 18:47	06:16 20:58	05:02 22:06 40	06:41 (38) | 04:27 07:21 (38) | 22:49 19	06:55 (38) | 04:58 07:14 (38) | 22:27 38	06:52 (38) | 06:04 07:30 (38) | 21:16	07:13 19:48	08:21 18:23	08:34 16:10	09:25 15:43
20	09:08 16:28	08:00 17:43	06:42 18:49	06:13 21:00	05:00 22:08 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:00 07:14 (38) | 22:25 38	06:51 (38) | 06:07 07:29 (38) | 21:13	07:15 19:45	08:23 18:20	08:36 16:08	09:25 15:43
21	09:07 16:30	07:57 17:46	06:39 18:52	06:11 21:03	04:58 22:10 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:55 (38) | 05:02 07:14 (38) | 22:23 39	06:51 (38) | 06:09 07:30 (38) | 21:10	07:17 19:42	08:25 18:17	08:39 16:06	09:26 15:43
22	09:05 16:32	07:54 17:48	06:36 18:54	06:08 21:05	04:56 22:12 39	06:41 (38) | 04:27 07:20 (38) | 22:50 19	06:56 (38) | 05:04 07:15 (38) | 22:22 39	06:52 (38) | 06:11 07:31 (38) | 21:08	07:19 19:39	08:28 18:15	08:41 16:04	09:27 15:44
23	09:03 16:35	07:52 17:50	06:33 18:56	06:05 21:07	04:55 22:14 39	06:41 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:06 07:15 (38) | 22:20 39	06:51 (38) | 06:13 07:30 (38) | 21:05	07:22 19:36	08:30 18:12	08:43 16:03	09:27 15:44
24	09:02 16:37	07:49 17:53	06:30 18:58	06:02 21:10	04:53 22:16 38	06:42 (38) | 04:28 07:20 (38) | 22:50 19	06:56 (38) | 05:08 07:15 (38) | 22:18 40	06:51 (38) | 06:15 07:31 (38) | 21:02	07:24 19:33	08:32 18:09	08:45 16:01	09:28 15:45
25	09:00 16:39	07:46 17:55	06:27 19:01	06:00 21:12	04:51 22:18 37	06:42 (38) | 04:28 07:19 (38) | 22:50 19	06:57 (38) | 05:10 07:16 (38) | 22:16 40	06:51 (38) | 06:18 07:31 (38) | 20:59	07:26 19:30	08:35 17:07	08:47 16:00	09:28 15:46
26	08:58 16:42	07:44 17:58	06:24 19:03	05:57 21:14	04:49 22:20 37	06:43 (38) | 04:29 07:20 (38) | 22:50 20	06:56 (38) | 05:12 07:16 (38) | 22:14 40	06:51 (38) | 06:20 07:31 (38) | 20:57	07:28 19:28	08:37 17:04	08:49 15:58	09:28 15:46
27	08:56 16:44	07:41 18:00	06:21 19:05	05:54 21:17	04:48 22:22 36	06:43 (38) | 04:29 07:19 (38) | 22:50 21	06:56 (38) | 05:14 07:17 (38) | 22:12 39	06:52 (38) | 06:22 07:31 (38) | 20:54	07:31 19:25	07:39 17:02	08:52 15:57	09:28 15:47
28	08:54 16:47	07:38 18:02	06:18 19:08	05:52 21:19	04:46 22:24 36	06:43 (38) | 04:30 07:19 (38) | 22:50 21	06:56 (38) | 05:16 07:17 (38) | 22:10 39	06:52 (38) | 06:24 07:31 (38) | 20:51	07:33 19:22	07:42 16:59	08:54 15:55	09:28 15:48
29	08:52 16:49		07:16 20:10	05:49 21:21	04:44 22:25 35	06:44 (38) | 04:31 07:19 (38) | 22:49 21	06:56 (38) | 05:18 07:17 (38) | 22:07 38	06:52 (38) | 06:27 07:30 (38) | 20:48	07:35 19:19	07:44 16:56	08:56 15:54	09:28 15:49
30	08:50 16:51		07:13 20:12	05:47 21:24	04:43 22:27 34	06:45 (38) | 04:32 07:19 (38) | 22:49 22	06:56 (38) | 05:20 07:18 (38) | 22:05 36	06:54 (38) | 06:29 07:30 (38) | 20:45	07:37 19:16	07:47 16:54	08:58 15:53	09:28 15:50
31	08:48 16:54		07:10 20:14		04:41 22:29 34	06:44 (38) | 07:18 (38) |	05:22 22:03 35	06:55 (38) | 06:31 07:30 (38) | 20:43		07:49 16:51		09:28 15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case					945	688	1047	221				
Sun reduction					0,50	0,50	0,50	0,50				
Oper. time red.					0,80	0,80	0,80	0,80				
Wind dir. red.					0,59	0,59	0,59	0,59				
Total reduction					0,24	0,24	0,24	0,24				
Total, real					224	163	248	52				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				
Sun reduction			0,50		0,50				
Oper. time red.			0,80		0,80				
Wind dir. red.			0,73		0,71				
Total reduction			0,29		0,28				
Total, real			80		117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December
1	04:32	05:24	06:33		07:40		07:52	08:47 (2)	09:00
	22:49	22:01	20:40		19:13		16:49	9 08:56 (2)	15:51
2	04:33	05:26	06:35		07:42	09:06 (22)	07:54		09:02
	22:48	21:59	20:37		19:10	6 09:12 (22)	16:46		15:50
3	04:34	05:29	06:38		07:44	09:02 (22)	07:56		09:04
	22:47	21:56	20:34		19:07	13 09:15 (22)	16:44		15:49
4	04:35	05:31	06:40		07:46	09:00 (22)	07:59		09:05
	22:47	21:54	20:31		19:05	17 09:17 (22)	16:42		15:48
5	04:36	05:33	06:42		07:48	08:58 (22)	08:01		09:07
	22:46	21:52	20:28		19:02	20 09:18 (22)	16:39		15:47
6	04:38	05:35	06:44		07:51	08:57 (22)	08:04		09:09
	22:45	21:49	20:26		18:59	22 09:19 (22)	16:37		15:46
7	04:39	05:37	06:47		07:53	08:57 (22)	08:06		09:10
	22:44	21:47	20:23		18:56	23 09:20 (22)	16:35		15:46
8	04:40	05:40	06:49		07:55	08:55 (22)	08:08		09:12
	22:43	21:44	20:20		18:53	24 09:19 (22)	16:32		15:45
9	04:41	05:42	06:51		07:58	08:55 (22)	08:11		09:14
	22:42	21:42	20:17		18:50	24 09:19 (22)	16:30		15:44
10	04:43	05:44	06:53		08:00	08:55 (22)	08:13		09:15
	22:41	21:39	20:14		18:48	24 09:19 (22)	16:28		15:44
11	04:44	05:46	06:55		08:02	08:54 (22)	08:16		09:16
	22:39	21:37	20:11		18:45	25 09:19 (22)	16:26		15:43
12	04:46	05:49	06:58		08:04	08:55 (22)	08:18		09:18
	22:38	21:34	20:08		18:42	23 09:18 (22)	16:24		15:43
13	04:48	05:51	07:00		08:07	08:55 (22)	08:20		09:19
	22:37	21:32	20:05		18:39	22 09:17 (22)	16:21		15:43
14	04:49	05:53	07:02		08:09	08:55 (22)	08:23		09:20
	22:35	21:29	20:02		18:36	21 09:16 (22)	16:19		15:42
15	04:51	05:55	07:04		08:11	08:57 (22)	08:25		09:21
	22:34	21:26	20:00		18:34	18 09:15 (22)	16:17		15:42
16	04:53	05:58	07:06		08:14	08:58 (22)	08:27		09:22
	22:32	21:24	19:57		18:31	15 09:13 (22)	16:15		15:42
17	04:54	06:00	07:09		08:16	09:01 (22)	08:30		09:23
	22:31	21:21	19:54		18:28	10 09:11 (22)	16:13		15:42
18	04:56	06:02	07:11	08:19 (24)	08:18		08:32		09:24
	22:29	21:19	19:51	9 08:28 (24)	18:25		16:11		15:42
19	04:58	06:04	07:13	08:16 (24)	08:21		08:34		09:25
	22:27	21:16	19:48	13 08:29 (24)	18:23		16:10		15:43
20	05:00	06:06	07:15	08:14 (24)	08:23	09:48 (2)	08:37		09:26
	22:25	21:13	19:45	16 08:30 (24)	18:20	9 09:57 (2)	16:08		15:43
21	05:02	06:09	07:17	08:14 (24)	08:25	09:46 (2)	08:39		09:26
	22:24	21:10	19:42	17 08:31 (24)	18:17	13 09:59 (2)	16:06		15:43
22	05:04	06:11	07:20	08:13 (24)	08:28	09:44 (2)	08:41		09:27
	22:22	21:08	19:39	18 08:31 (24)	18:15	16 10:00 (2)	16:04		15:44
23	05:06	06:13	07:22	08:12 (24)	08:30	09:44 (2)	08:43		09:27
	22:20	21:05	19:36	19 08:31 (24)	18:12	17 10:01 (2)	16:03		15:44
24	05:08	06:15	07:24	08:12 (24)	08:32	09:42 (2)	08:45		09:28
	22:18	21:02	19:33	19 08:31 (24)	18:09	19 10:01 (2)	16:01		15:45
25	05:10	06:18	07:26	08:11 (24)	07:35	08:42 (2)	08:48		09:28
	22:16	20:59	19:31	19 08:30 (24)	17:07	19 09:01 (2)	15:59		15:45
26	05:12	06:20	07:28	08:12 (24)	07:37	08:43 (2)	08:50		09:28
	22:14	20:57	19:28	17 08:29 (24)	17:04	19 09:02 (2)	15:58		15:46
27	05:14	06:22	07:31	08:13 (24)	07:40	08:42 (2)	08:52		09:28
	22:12	20:54	19:25	15 08:28 (24)	17:02	19 09:01 (2)	15:57		15:47
28	05:16	06:24	07:33	08:14 (24)	07:42	08:43 (2)	08:54		09:29
	22:10	20:51	19:22	12 08:26 (24)	16:59	18 09:01 (2)	15:55		15:48
29	05:18	06:27	07:35	08:15 (24)	07:44	08:44 (2)	08:56		09:29
	22:08	20:48	19:19	8 08:23 (24)	16:56	17 09:01 (2)	15:54		15:49
30	05:20	06:29	07:37		07:47	08:44 (2)	08:58		09:28
	22:05	20:45	19:16		16:54	15 08:59 (2)	15:53		15:50
31	05:22	06:31			07:49	08:45 (2)			09:28
	22:03	20:43			16:51	13 08:58 (2)			15:51
Potential sun hours	545	478	386		319		236		200
Total, worst case			182		501		9		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,70		0,73		0,74		
Total reduction			0,28		0,29		0,29		
Total, real			51		146		3		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
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13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56		18:05 23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40		19:13		16:49	15:51
2	09:28	08:44		07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35		07:42		07:54	09:02
	15:54	16:59		18:07 24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:46	15:50
3	09:27	08:41		07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01		18:10 24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34		19:07		16:44	15:49
4	09:27	08:39		07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	09:05 (22)	07:59	09:05
	15:57	17:04		18:12 23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31		19:05 11	09:16 (22)	16:42	15:48
5	09:26	08:37		07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42		07:48	09:02 (22)	08:01	09:07
	15:59	17:06		18:14 22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28		19:02 16	09:18 (22)	16:39	15:47
6	09:25	08:35		07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44		07:51	09:00 (22)	08:04	09:09
	16:00	17:09		18:17 22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26		18:59 19	09:19 (22)	16:37	15:46
7	09:25	08:32		07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47		07:53	09:00 (22)	08:06	09:10
	16:02	17:11		18:19 19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23		18:56 20	09:20 (22)	16:35	15:46
8	09:24	08:30		07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:58 (22)	08:08	09:12
	16:04	17:13		18:21 18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20		18:53 23	09:21 (22)	16:32	15:45
9	09:23	08:28		07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51		07:58	08:57 (22)	08:11	09:14
	16:05	17:16		18:24 13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17		18:50 23	09:20 (22)	16:30	15:44
10	09:22	08:25		07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53		08:00	08:57 (22)	08:13	09:15
	16:07	17:18		18:26 7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14		18:48 24	09:21 (22)	16:28	15:44
11	09:21	08:23		07:07		06:38	05:20	04:30	04:44	05:46	06:55		08:02	08:57 (22)	08:16	09:16
	16:09	17:21		18:28		20:40	21:49	22:44	22:39	21:37	20:11		18:45 23	09:20 (22)	16:26	15:43
12	09:20	08:20		07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:04	08:57 (22)	08:18	09:18
	16:11	17:23		18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42 24	09:21 (22)	16:24	15:43
13	09:19	08:18		07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:57 (22)	08:20	09:19
	16:13	17:26		18:33 5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05		18:39 23	09:20 (22)	16:21	15:43
14	09:17	08:15		06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:57 (22)	08:23	09:20
	16:15	17:28		18:35 11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02		18:36 21	09:18 (22)	16:19	15:42
15	09:16	08:13		06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:58 (22)	08:25	09:21
	16:17	17:31		18:38 15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00		18:34 20	09:18 (22)	16:17	15:42
16	09:15	08:10		06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06		08:14	08:58 (22)	08:27	09:22
	16:19	17:33		18:40 16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57		18:31 18	09:16 (22)	16:15	15:42
17	09:13	08:08		06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	09:00 (22)	08:30	09:23
	16:21	17:36		18:42 18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54		18:28 15	09:15 (22)	16:13	15:42
18	09:12	08:05		06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11		08:18	09:02 (22)	08:32	09:24
	16:23	17:38		18:45 19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51		18:25 10	09:12 (22)	16:11	15:42
19	09:10	08:02		06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13	08:22 (24)	08:21		08:34	09:25
	16:26	17:41		18:47 18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48 7	08:29 (24)	18:23		16:10	15:43
20	09:09	08:00		06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15	08:19 (24)	08:23		08:37	09:26
	16:28	17:43		18:49 19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45 12	08:31 (24)	18:20		16:08	15:43
21	09:07	07:57		06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17	08:18 (24)	08:25		08:39	09:26
	16:30	17:46		18:52 17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42 15	08:33 (24)	18:17		16:06	15:43
22	09:05	07:54		06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20	08:16 (24)	08:28		08:41	09:27
	16:32	17:48		18:54 15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39 17	08:33 (24)	18:15		16:04	15:44
23	09:04	07:52		06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22	08:15 (24)	08:30		08:43	09:27
	16:35	17:50		18:56 13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36 18	08:33 (24)	18:12		16:03	15:44
24	09:02	07:49	08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24	08:14 (24)	08:32		08:45	09:28
	16:37	17:53 12	08:42 (22)	18:59 8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33 19	08:33 (24)	18:09		16:01	15:45
25	09:00	07:46	08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	08:14 (24)	07:35		08:48	09:28
	16:39	17:55 15	08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31 18	08:32 (24)	17:07		15:59	15:45
26	08:58	07:44	08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:14 (24)	07:37		08:50	09:28
	16:42	17:58 19	08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28 19	08:33 (24)	17:04		15:58	15:46
27	08:56	07:41	08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	08:14 (24)	07:40		08:52	09:28
	16:44	18:00 20	08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25 18	08:32 (24)	17:02		15:57	15:47
28	08:54	07:38	08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	08:15 (24)	07:42		08:54	09:29
	16:46	18:02 22	08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 15	08:30 (24)	16:59		15:55	15:48
29	08:52			07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:15 (24)	07:44		08:56	09:29
	16:49			20:10		21:21	22:26	22:50	22:08	20:48	19:19 13	08:28 (24)	16:56		15:54	15:49
30	08:50			07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:18 (24)	07:47		08:58	09:28
	16:51			20:12		21:24	22:27	22:49	22:05	20:45	19:16 8	08:26 (24)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:15			22:29		22:03	20:43			16:51			15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			88		369							179		290		
Sun reduction			0,50		0,50							0,50		0,50		
Oper. time red.			0,80		0,80							0,80		0,80		
Wind dir. red.			0,73		0,71							0,70		0,73		
Total reduction			0,29		0,29							0,28		0,29		
Total, real			26		105							50		84		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
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	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
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	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
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	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
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24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
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31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
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	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
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11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
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	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
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19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
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	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
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9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
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16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
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	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		
Sun reduction			0,50									0,50		
Oper. time red.			0,80									0,80		
Wind dir. red.			0,74									0,74		
Total reduction			0,29									0,29		
Total, real			66									67		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September	October		November		December
1	09:28	08:46		09:41 (22)		08:28 (24)	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:52		09:00 (22)	09:00
	15:53	16:56	3	09:44 (22)	19	08:47 (24)	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	24	09:24 (22)	15:51
2	09:28	08:44		09:37 (22)		08:27 (24)	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:01 (22)	09:02
	15:54	16:59	10	09:47 (22)	20	08:47 (24)	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	23	09:24 (22)	15:50
3	09:27	08:41		09:35 (22)		08:27 (24)	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:01 (22)	09:04
	15:56	17:01	15	09:50 (22)	20	08:47 (24)	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	23	09:24 (22)	15:49
4	09:27	08:39		09:34 (22)		08:27 (24)	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:02 (22)	09:05
	15:57	17:04	17	09:51 (22)	19	08:46 (24)	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	22	09:24 (22)	15:48
5	09:26	08:37		09:33 (22)		08:28 (24)	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:02 (22)	09:07
	15:59	17:06	20	09:53 (22)	17	08:45 (24)	20:26	21:35	22:37	22:46	21:52	20:28	19:02	3	09:14 (24)	21	09:23 (22)	15:47
6	09:25	08:35		09:32 (22)		08:28 (24)	06:53	05:31	04:34	04:37	05:35	06:44	07:51		09:06 (24)		09:03 (22)	09:09
	16:00	17:08	21	09:53 (22)	16	08:44 (24)	20:28	21:38	22:38	22:45	21:49	20:26	18:59	11	09:17 (24)	19	09:22 (22)	15:46
7	09:25	08:32		09:31 (22)		08:29 (24)	06:50	05:29	04:33	04:39	05:37	06:47	07:53		09:05 (24)		09:05 (22)	09:10
	16:02	17:11	22	09:53 (22)	13	08:42 (24)	20:31	21:40	22:39	22:44	21:47	20:23	18:56	15	09:20 (24)	17	09:22 (22)	15:46
8	09:24	08:30		09:32 (22)		08:31 (24)	06:47	05:27	04:32	04:40	05:40	06:49	07:55		09:03 (24)		09:05 (22)	09:12
	16:04	17:13	22	09:54 (22)	8	08:39 (24)	20:33	21:42	22:41	22:43	21:44	20:20	18:53	17	09:20 (24)	15	09:20 (22)	15:45
9	09:23	08:28		09:31 (22)			06:44	05:24	04:31	04:41	05:42	06:51	07:58		09:02 (24)		09:08 (22)	09:14
	16:05	17:16	23	09:54 (22)			20:35	21:44	22:42	22:42	21:42	20:17	18:50	18	09:20 (24)	10	09:18 (22)	15:44
10	09:22	08:25		09:32 (22)			06:41	05:22	04:30	04:43	05:44	06:53	08:00		09:02 (24)		09:13 (22)	09:15
	16:07	17:18	23	09:55 (22)			20:38	21:47	22:43	22:41	21:39	20:14	18:48	19	09:21 (24)	1	09:14 (22)	15:44
11	09:21	08:23		09:31 (22)			06:38	05:20	04:30	04:44	05:46	06:55	08:02		09:01 (24)			09:16
	16:09	17:21	24	09:55 (22)			20:40	21:49	22:44	22:39	21:37	20:11	18:45	20	09:21 (24)			15:43
12	09:20	08:20		09:31 (22)			06:36	05:17	04:29	04:46	05:49	06:58	08:04		09:01 (24)			09:18
	16:11	17:23	23	09:54 (22)			20:42	21:51	22:45	22:38	21:34	20:08	18:42	20	09:21 (24)			15:43
13	09:19	08:18		09:31 (22)			06:33	05:15	04:28	04:47	05:51	07:00	08:07		09:01 (24)			09:19
	16:13	17:26	23	09:54 (22)			20:44	21:53	22:46	22:37	21:32	20:05	18:39	19	09:20 (24)			15:43
14	09:17	08:15		09:33 (22)			06:30	05:13	04:28	04:49	05:53	07:02	08:09		09:01 (24)			09:20
	16:15	17:28	21	09:54 (22)			20:47	21:55	22:47	22:35	21:29	20:02	18:36	18	09:19 (24)			15:42
15	09:16	08:13		09:33 (22)			06:27	05:11	04:28	04:51	05:55	07:04	08:11		09:02 (24)			09:21
	16:17	17:31	20	09:53 (22)			20:49	21:58	22:47	22:34	21:26	20:00	18:34	16	09:18 (24)			15:42
16	09:15	08:10		09:34 (22)			06:24	05:08	04:27	04:53	05:57	07:06	08:14		09:03 (24)			09:22
	16:19	17:33	17	09:51 (22)			20:51	22:00	22:48	22:32	21:24	19:57	18:31	13	09:16 (24)			15:42
17	09:13	08:08		09:36 (22)			06:22	05:06	04:27	04:54	06:00	07:09	08:16		09:05 (24)			09:23
	16:21	17:36	14	09:50 (22)			20:54	22:02	22:49	22:31	21:21	19:54	18:28	10	09:15 (24)			15:42
18	09:12	08:05		09:39 (22)			06:19	05:04	04:27	04:56	06:02	07:11	08:18					09:24
	16:23	17:38	8	09:47 (22)			20:56	22:04	22:49	22:29	21:19	19:51	18:25					15:42
19	09:10	08:02			06:44		06:16	05:02	04:27	04:58	06:04	07:13	08:21					09:25
	16:26	17:41			18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23					15:42
20	09:09	08:00			06:42		06:13	05:00	04:27	05:00	06:06	07:15	08:23					09:26
	16:28	17:43			18:49		21:01	22:08	22:50	22:25	21:13	19:45	18:20					15:43
21	09:07	07:57			06:39		06:10	04:58	04:27	05:02	06:09	07:17	08:25					09:26
	16:30	17:45			18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17					15:43
22	09:05	07:54			06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28					09:27
	16:32	17:48			18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15					15:44
23	09:04	07:52			06:33		06:05	04:54	04:27	05:06	06:13	07:22	08:30					09:27
	16:35	17:50			18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12					15:44
24	09:02	07:49		08:36 (24)	06:30		06:02	04:53	04:28	05:08	06:15	07:24	08:32		10:07 (22)		08:45	09:28
	16:37	17:53	5	08:41 (24)	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09	10	10:17 (22)		16:01	15:45
25	09:00	07:46		08:32 (24)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		09:05 (22)		08:48	09:28
	16:39	17:55	12	08:44 (24)	19:01		21:12	22:18	22:51	22:16	20:59	19:30	17:07	15	09:20 (22)		15:59	15:45
26	08:58	07:44		08:30 (24)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	07:37		09:04 (22)		08:50	09:28
	16:42	17:58	15	08:45 (24)	19:03		21:14	22:20	22:51	22:14	20:57	19:28	17:04	18	09:22 (22)		15:58	15:46
27	08:56	07:41		08:29 (24)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	07:40		09:02 (22)		08:52	09:28
	16:44	18:00	17	08:46 (24)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	17:02	20	09:22 (22)		15:56	15:47
28	08:54	07:38		08:29 (24)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	07:42		09:02 (22)		08:54	09:29
	16:46	18:02	18	08:47 (24)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	16:59	21	09:23 (22)		15:55	15:48
29	08:52				07:16		05:49	04:44	04:30	05:18	06:27	07:35	07:44		09:02 (22)		08:56	09:29
	16:49				20:10		21:21	22:26	22:50	22:08	20:48	19:19	16:56	22	09:24 (22)		15:54	15:49
30	08:50				07:13		05:47	04:43	04:31	05:20	06:29	07:37	07:47		09:01 (22)		08:58	09:28
	16:51				20:12		21:24	22:27	22:49	22:05	20:45	19:16	16:54	23	09:24 (22)		15:53	15:50
31	08:48				07:10			04:41		05:22	06:31		07:49		09:01 (22)			09:28
	16:54				20:15			22:29		22:03	20:43		16:51	23	09:24 (22)			15:51
Potential sun hours	221	260			365		432	521	547	546	478	386	319			236		199
Total, worst case			393		132									351		175		
Sun reduction			0,50		0,50									0,50		0,50		
Oper. time red.			0,80		0,80									0,80		0,80		
Wind dir. red.			0,73		0,73									0,73		0,73		
Total reduction			0,29		0,29									0,29		0,29		
Total, real			114		38									102		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		09:41 (22)	07:35		08:31 (24)	07:07	05:44	04:40
	15:53			16:56	14	09:55 (22)	18:05	20	08:51 (24)	20:17	21:26	22:31
2	09:28			08:44		09:40 (22)	07:33		08:31 (24)	07:04	05:41	04:39
	15:54			16:59	16	09:56 (22)	18:07	20	08:51 (24)	20:19	21:28	22:32
3	09:27			08:41		09:39 (22)	07:30		08:31 (24)	07:01	05:39	04:37
	15:56			17:01	19	09:58 (22)	18:10	19	08:50 (24)	20:21	21:31	22:34
4	09:27			08:39		09:38 (22)	07:27		08:31 (24)	06:58	05:36	04:36
	15:57			17:04	20	09:58 (22)	18:12	19	08:50 (24)	20:24	21:33	22:35
5	09:26			08:37		09:38 (22)	07:24		08:32 (24)	06:55	05:34	04:35
	15:59			17:06	22	10:00 (22)	18:14	16	08:48 (24)	20:26	21:35	22:37
6	09:25			08:35		09:37 (22)	07:22		08:33 (24)	06:53	05:31	04:34
	16:00			17:08	23	10:00 (22)	18:17	14	08:47 (24)	20:28	21:38	22:38
7	09:25			08:32		09:36 (22)	07:19		08:35 (24)	06:50	05:29	04:33
	16:02			17:11	24	10:00 (22)	18:19	9	08:44 (24)	20:31	21:40	22:39
8	09:24			08:30		09:37 (22)	07:16			06:47	05:27	04:32
	16:04			17:13	24	10:01 (22)	18:21			20:33	21:42	22:41
9	09:23			08:28		09:36 (22)	07:13			06:44	05:24	04:31
	16:05			17:16	24	10:00 (22)	18:24			20:35	21:44	22:42
10	09:22			08:25		09:37 (22)	07:10			06:41	05:22	04:30
	16:07			17:18	24	10:01 (22)	18:26			20:38	21:47	22:43
11	09:21			08:23		09:37 (22)	07:07			06:38	05:20	04:30
	16:09			17:21	23	10:00 (22)	18:28			20:40	21:49	22:44
12	09:20			08:20		09:37 (22)	07:05			06:36	05:17	04:29
	16:11			17:23	23	10:00 (22)	18:31			20:42	21:51	22:45
13	09:19			08:18		09:38 (22)	07:02			06:33	05:15	04:28
	16:13			17:26	21	09:59 (22)	18:33			20:44	21:53	22:46
14	09:17			08:15		09:39 (22)	06:59			06:30	05:13	04:28
	16:15			17:28	20	09:59 (22)	18:35			20:47	21:55	22:47
15	09:16			08:13		09:40 (22)	06:56			06:27	05:11	04:28
	16:17			17:31	17	09:57 (22)	18:38			20:49	21:58	22:47
16	09:15			08:10		09:42 (22)	06:53			06:24	05:08	04:27
	16:19			17:33	13	09:55 (22)	18:40			20:51	22:00	22:48
17	09:13			08:08		09:45 (22)	06:50			06:21	05:06	04:27
	16:21			17:36	8	09:53 (22)	18:42			20:54	22:02	22:49
18	09:12			08:05			06:47			06:19	05:04	04:27
	16:23			17:38			18:45			20:56	22:04	22:49
19	09:10			08:02			06:44			06:16	05:02	04:27
	16:26			17:41			18:47			20:58	22:06	22:50
20	09:09			08:00			06:42			06:13	05:00	04:27
	16:28			17:43			18:49			21:01	22:08	22:50
21	09:07			07:57			06:39			06:10	04:58	04:27
	16:30			17:45			18:52			21:03	22:10	22:50
22	09:05			07:54			06:36			06:08	04:56	04:27
	16:32			17:48			18:54			21:05	22:12	22:51
23	09:04			07:52		08:40 (24)	06:33			06:05	04:54	04:27
	16:35			17:50	5	08:45 (24)	18:56			21:08	22:14	22:51
24	09:02			07:49		08:36 (24)	06:30			06:02	04:53	04:28
	16:37			17:53	12	08:48 (24)	18:59			21:10	22:16	22:51
25	09:00			07:46		08:34 (24)	06:27			06:00	04:51	04:28
	16:39			17:55	15	08:49 (24)	19:01			21:12	22:18	22:51
26	08:58			07:44		08:33 (24)	06:24			05:57	04:49	04:29
	16:42			17:58	17	08:50 (24)	19:03			21:14	22:20	22:51
27	08:56			07:41		08:32 (24)	06:21			05:54	04:47	04:29
	16:44			18:00	18	08:50 (24)	19:05			21:17	22:22	22:50
28	08:54			07:38		08:32 (24)	06:18			05:52	04:46	04:30
	16:46			18:02	19	08:51 (24)	19:08			21:19	22:24	22:50
29	08:52						07:16			05:49	04:44	04:30
	16:49						20:10			21:21	22:26	22:50
30	08:50						07:13			05:47	04:43	04:31
	16:51						20:12			21:24	22:27	22:49
31	08:48		09:43 (22)				07:10				04:41	
	16:54	9	09:52 (22)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		9			421			117				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,72			0,73			0,73				
Total reduction		0,29			0,29			0,29				
Total, real		3			122			34				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		09:06 (22)	09:00
	22:49	22:01	20:40	19:13			16:49	24	09:30 (22)	15:51
2	04:33	05:26	06:35	07:42			07:54		09:06 (22)	09:02
	22:48	21:59	20:37	19:10			16:46	24	09:30 (22)	15:50
3	04:34	05:29	06:38	07:44			07:56		09:06 (22)	09:04
	22:47	21:56	20:34	19:07			16:44	24	09:30 (22)	15:49
4	04:35	05:31	06:40	07:46			07:59		09:07 (22)	09:05
	22:47	21:54	20:31	19:05			16:42	23	09:30 (22)	15:48
5	04:36	05:33	06:42	07:48			08:01		09:07 (22)	09:07
	22:46	21:52	20:28	19:02			16:39	22	09:29 (22)	15:47
6	04:37	05:35	06:44	07:51		09:12 (24)	08:04		09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7	09:19 (24)	16:37	21	09:29 (22)	15:46
7	04:39	05:37	06:47	07:53		09:10 (24)	08:06		09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12	09:22 (24)	16:35	20	09:29 (22)	15:46
8	04:40	05:40	06:49	07:55		09:08 (24)	08:08		09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15	09:23 (24)	16:32	18	09:27 (22)	15:45
9	04:41	05:42	06:51	07:58		09:06 (24)	08:11		09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18	09:24 (24)	16:30	17	09:27 (22)	15:44
10	04:43	05:44	06:53	08:00		09:06 (24)	08:13		09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19	09:25 (24)	16:28	13	09:25 (22)	15:44
11	04:44	05:46	06:55	08:02		09:05 (24)	08:16		09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19	09:24 (24)	16:26	9	09:23 (22)	15:43
12	04:46	05:49	06:58	08:04		09:05 (24)	08:18			09:18
	22:38	21:34	20:08	18:42	20	09:25 (24)	16:24			15:43
13	04:47	05:51	07:00	08:07		09:04 (24)	08:20			09:19
	22:37	21:32	20:05	18:39	20	09:24 (24)	16:21			15:43
14	04:49	05:53	07:02	08:09		09:04 (24)	08:23			09:20
	22:35	21:29	20:02	18:36	19	09:23 (24)	16:19			15:42
15	04:51	05:55	07:04	08:11		09:05 (24)	08:25			09:21
	22:34	21:26	20:00	18:34	18	09:23 (24)	16:17			15:42
16	04:53	05:57	07:06	08:14		09:05 (24)	08:27			09:22
	22:32	21:24	19:57	18:31	16	09:21 (24)	16:15			15:42
17	04:54	06:00	07:09	08:16		09:07 (24)	08:30			09:23
	22:31	21:21	19:54	18:28	14	09:21 (24)	16:13			15:42
18	04:56	06:02	07:11	08:18		09:08 (24)	08:32			09:24
	22:29	21:19	19:51	18:25	10	09:18 (24)	16:11			15:42
19	04:58	06:04	07:13	08:21			08:34			09:25
	22:27	21:16	19:48	18:23			16:10			15:42
20	05:00	06:06	07:15	08:23			08:37			09:26
	22:25	21:13	19:45	18:20			16:08			15:43
21	05:02	06:09	07:17	08:25			08:39			09:26
	22:24	21:10	19:42	18:17			16:06			15:43
22	05:04	06:11	07:20	08:28			08:41			09:27
	22:22	21:08	19:39	18:15			16:04			15:44
23	05:06	06:13	07:22	08:30			08:43			09:27
	22:20	21:05	19:36	18:12			16:03			15:44
24	05:08	06:15	07:24	08:32			08:45			09:28
	22:18	21:02	19:33	18:09			16:01			15:45
25	05:10	06:18	07:26	07:35		09:13 (22)	08:48			09:28
	22:16	20:59	19:30	17:07	10	09:23 (22)	15:59			15:45
26	05:12	06:20	07:28	07:37		09:11 (22)	08:50			09:28
	22:14	20:57	19:28	17:04	15	09:26 (22)	15:58			15:46
27	05:14	06:22	07:31	07:40		09:09 (22)	08:52			09:28
	22:12	20:54	19:25	17:01	18	09:27 (22)	15:56			15:47
28	05:16	06:24	07:33	07:42		09:08 (22)	08:54			09:29
	22:10	20:51	19:22	16:59	20	09:28 (22)	15:55			15:48
29	05:18	06:27	07:35	07:44		09:08 (22)	08:56			09:29
	22:08	20:48	19:19	16:56	21	09:29 (22)	15:54			15:49
30	05:20	06:29	07:37	07:47		09:07 (22)	08:58			09:28
	22:05	20:45	19:16	16:54	22	09:29 (22)	15:53			15:50
31	05:22	06:31		07:49		09:07 (22)				09:28
	22:03	20:43		16:51	23	09:30 (22)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					336			215		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,73			0,72		
Total reduction					0,29			0,29		
Total, real					98			62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
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13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	
Sun reduction			0,50									0,50		0,50	
Oper. time red.			0,80									0,80		0,80	
Wind dir. red.			0,74									0,74		0,74	
Total reduction			0,29									0,29		0,29	
Total, real			71									71		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (24)	08:46	10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (28)	09:00	10:51 (23)	
	15:53	20 12:41 (24)	16:56	20 10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (28)	15:51	28 12:23 (24)	
2	09:28	12:22 (24)	08:44	09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (28)	09:02	10:51 (23)	
	15:54	19 12:41 (24)	16:58	21 10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (28)	15:50	30 12:24 (24)	
3	09:27	12:22 (24)	08:41	10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (28)	09:04	10:52 (23)	
	15:55	19 12:41 (24)	17:01	20 10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (28)	15:49	29 12:25 (24)	
4	09:27	11:12 (23)	08:39	10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (28)	09:05	10:53 (23)	
	15:57	22 12:41 (24)	17:03	20 10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (28)	15:48	30 12:26 (24)	
5	09:26	11:11 (23)	08:37	10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (28)	09:07	10:54 (23)	
	15:58	26 12:42 (24)	17:06	19 10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (28)	15:47	29 12:27 (24)	
6	09:25	11:10 (23)	08:35	10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (28)	09:09	10:56 (23)	
	16:00	28 12:42 (24)	17:08	18 10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (28)	15:46	28 12:28 (24)	
7	09:25	11:09 (23)	08:32	10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (28)	09:10	10:58 (23)	
	16:02	29 12:42 (24)	17:11	17 10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (28)	15:45	26 12:29 (24)	
8	09:24	11:09 (23)	08:30	10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (28)	09:12	11:00 (23)	
	16:03	30 12:42 (24)	17:13	15 10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (28)	15:45	23 12:30 (24)	
9	09:23	11:09 (23)	08:27	10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (28)	09:13	12:11 (24)	
	16:05	30 12:42 (24)	17:16	12 10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (28)	15:44	19 12:30 (24)	
10	09:22	11:08 (23)	08:25	10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (28)	09:15	12:11 (24)	
	16:07	30 12:41 (24)	17:18	5 10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (28)	15:44	19 12:30 (24)	
11	09:21	11:09 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (28)	09:16	12:11 (24)	
	16:09	28 12:41 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (28)	15:43	20 12:31 (24)	
12	09:20	11:08 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (28)	09:18	12:11 (24)	
	16:11	27 12:40 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (23)	15:43	20 12:31 (24)	
13	09:19	11:08 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (28)	09:19	12:12 (24)	
	16:13	25 12:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (23)	15:42	21 12:33 (24)	
14	09:17	11:08 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (28)	09:20	12:12 (24)	
	16:15	20 11:28 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (23)	15:42	21 12:33 (24)	
15	09:16	11:08 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (28)	09:21	12:12 (24)	
	16:17	21 11:29 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (23)	15:42	21 12:33 (24)	
16	09:15	11:08 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (28)	09:22	12:13 (24)	
	16:19	21 11:29 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (23)	15:42	20 12:33 (24)	
17	09:13	11:09 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (28)	09:23	12:14 (24)	
	16:21	22 11:31 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (23)	15:42	21 12:35 (24)	
18	09:12	11:09 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (23)	09:24	12:14 (24)	
	16:23	22 11:31 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (23)	15:42	21 12:35 (24)	
19	09:10	11:09 (23)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (23)	09:25	12:14 (24)	
	16:25	22 11:31 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (23)	15:42	21 12:35 (24)	
20	09:09	11:09 (23)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (23)	09:26	12:15 (24)	
	16:28	23 11:32 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (23)	15:43	21 12:36 (24)	
21	09:07	11:09 (23)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (23)	09:26	12:16 (24)	
	16:30	23 11:32 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (23)	15:43	21 12:37 (24)	
22	09:05	11:10 (23)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (23)	09:27	12:16 (24)	
	16:32	22 11:32 (23)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (23)	15:43	21 12:37 (24)	
23	09:03	11:10 (23)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (23)	09:27	12:16 (24)	
	16:34	22 11:32 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (23)	15:44	21 12:37 (24)	
24	09:02	11:10 (23)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (23)	09:28	12:17 (24)	
	16:37	22 11:32 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (23)	15:45	21 12:38 (24)	
25	09:00	10:04 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (23)	09:28	12:17 (24)	
	16:39	28 11:32 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (23)	15:45	21 12:38 (24)	
26	08:58	10:03 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (23)	09:28	12:18 (24)	
	16:42	31 11:32 (23)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (23)	15:46	21 12:39 (24)	
27	08:56	10:02 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (23)	09:28	12:18 (24)	
	16:44	31 11:31 (23)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (23)	15:47	21 12:39 (24)	
28	08:54	10:00 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (23)	09:29	12:19 (24)	
	16:46	32 11:30 (23)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (23)	15:48	21 12:40 (24)	
29	08:52	10:00 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (23)	09:29	12:19 (24)	
	16:49	31 11:29 (23)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (24)	15:49	21 12:40 (24)	
30	08:50	09:59 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (23)	09:28	12:20 (24)	
	16:51	27 11:26 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (24)	15:50	20 12:40 (24)	
31	08:48	09:59 (28)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (24)	
	16:54	20 10:19 (28)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (24)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:42	21:50	22:44	22:37	21:34	20:08	18:42	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:13	04:28	04:49	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	22:34	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	22:33	21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	22:31	21:23	19:56	18:30	16:15	15:42
17	09:13	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	22:28	21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:47	20:58	22:05	22:49	22:26	21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:22	08:36	09:25
	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
21	09:06	07:57	06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:38	09:26
	16:30	17:45	18:51	21:02	22:10	22:49	22:23	21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:40	09:26
	16:32	17:48	18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:29	08:43	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	22:19	21:04	19:36	18:12	16:02	15:44
24	09:01	07:49	06:30	06:02	04:52	04:28	05:07	06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:16	22:50	22:17	21:02	19:33	18:09	16:01	15:45
25	08:59	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:12	22:17	22:50	22:15	20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:49	09:28
	16:41	17:57	19:03	21:14	22:19	22:50	22:13	20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	22:11	20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	05:16	06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	22:09	20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	22:07	20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:43	04:31	05:20	06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	22:05	20:45	19:16	16:54	15:52	15:50
31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:27/4.2.271

SHADOW - Calendar

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	04:32	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	22:48	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	22:47	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	04:34	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44	15:49
4	09:26	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:39	07:46	07:58	09:05
	15:57	17:03	18:12	20:23	21:32	22:34	22:46	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	22:45	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	22:44	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	04:39	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:39	22:43	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	04:40	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	22:42	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	04:43	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	22:40	21:39	20:13	18:47	16:28	15:44
11	09:20	08:22	07:07	06:38	05:19	04:30	04:44	05:46	06:55	08:02	08:15	09:16
	16:09	17:21	18:28	20:39	21:48	22:43	22:39	21:36	20:11	18:44	16:25	15:43
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	16:21	17:35	18:42	20:53	22:01	22:48	22:30	21:21	19:53	18:28	16:13	15:42
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	16:28	17:43	18:49	21:00	22:08	22:49	22:25	21:12	19:44	18:20	16:08	15:43
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31	08:47		07:09		04:41		05:22	06:31		07:48		09:27
	16:53		20:14		22:28		22:02	20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 6.2

Grafisk Moifjellet vindkraftverk

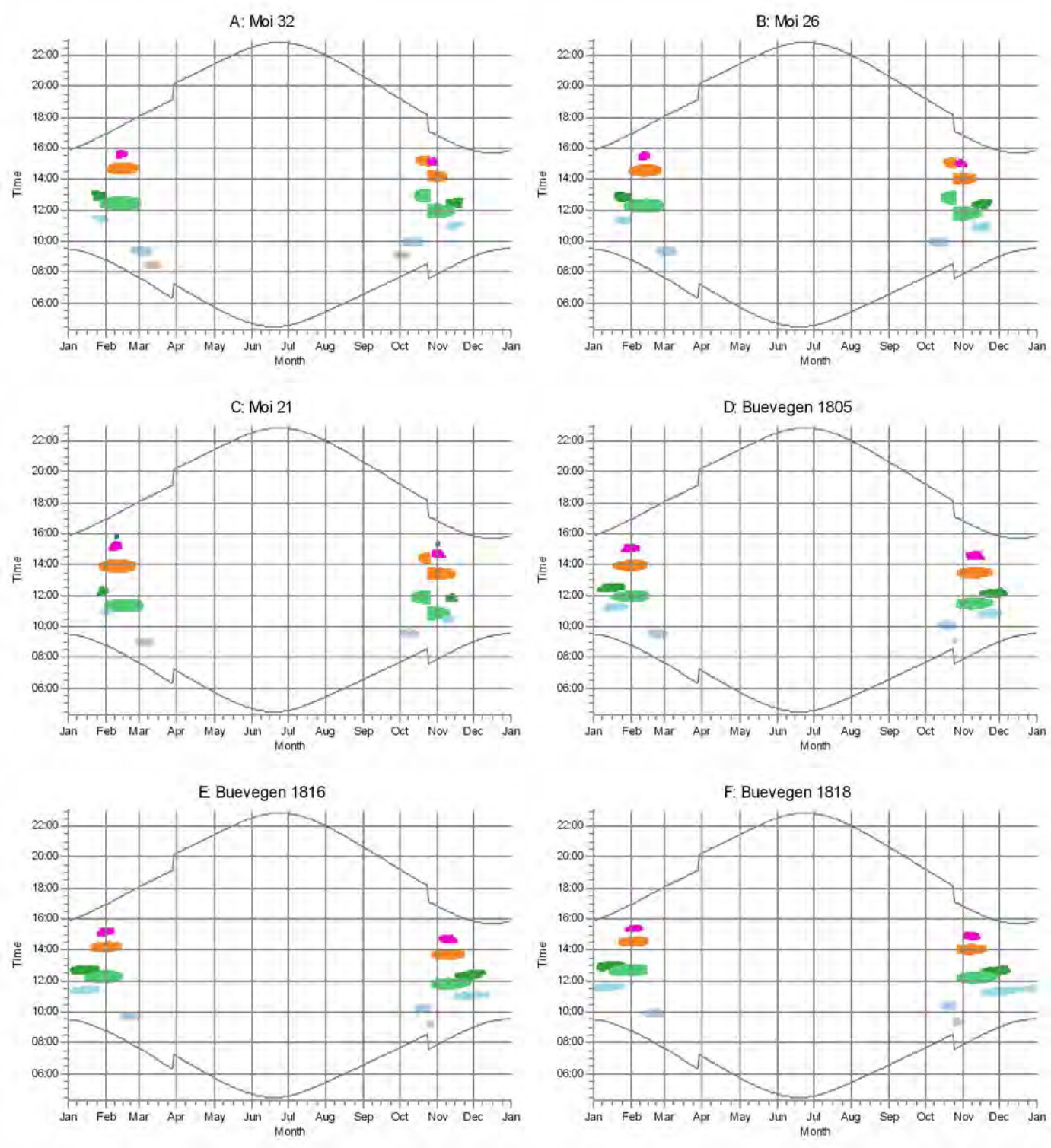
Realistic case

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere



WTGs

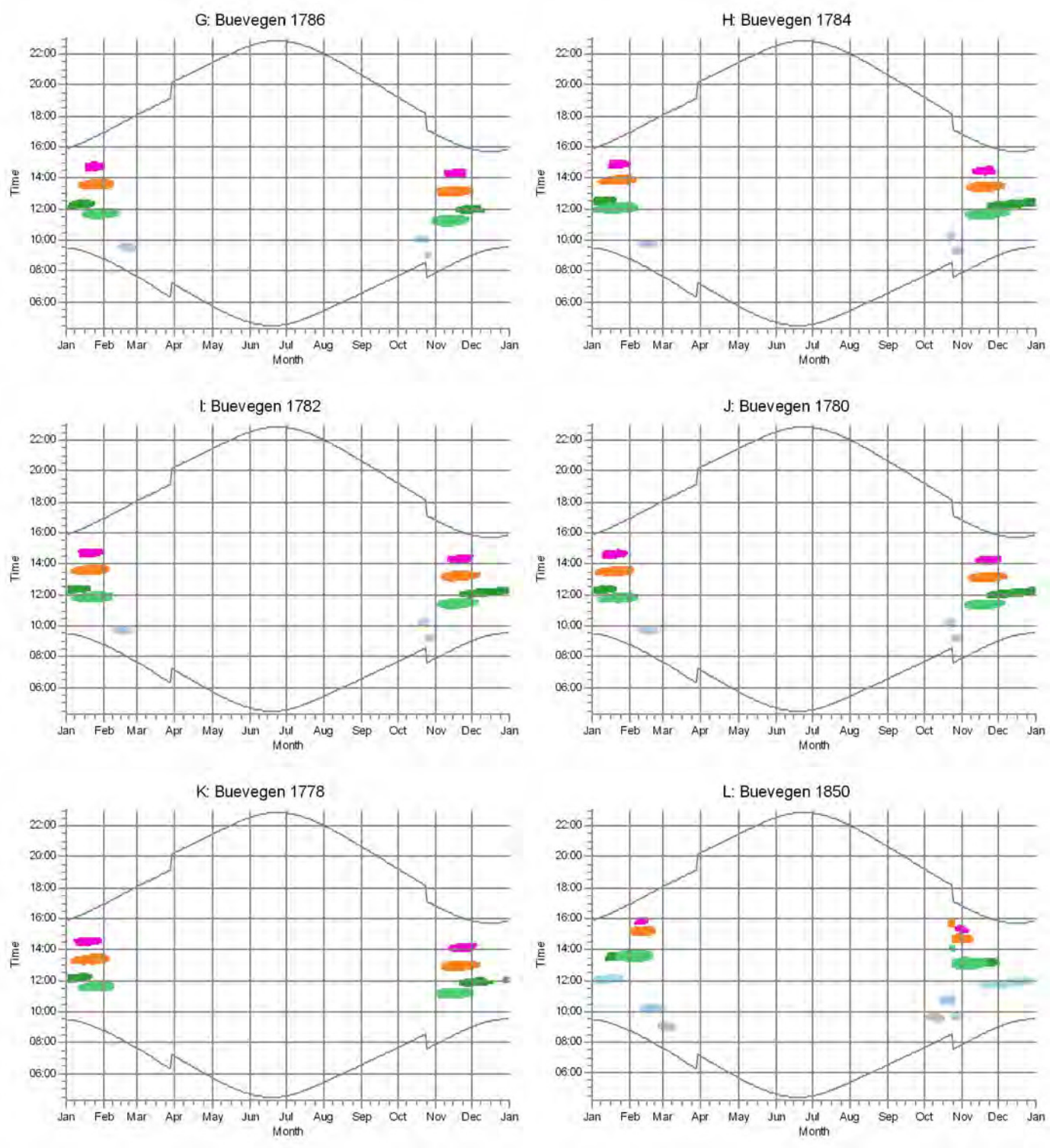
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
22: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2565
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere



WTGs

15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

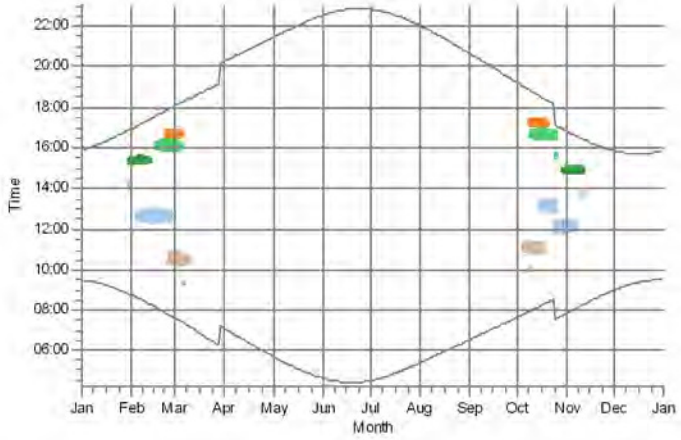
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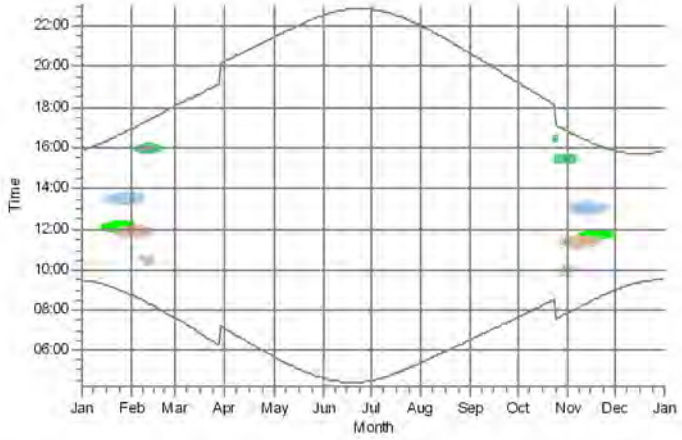
SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

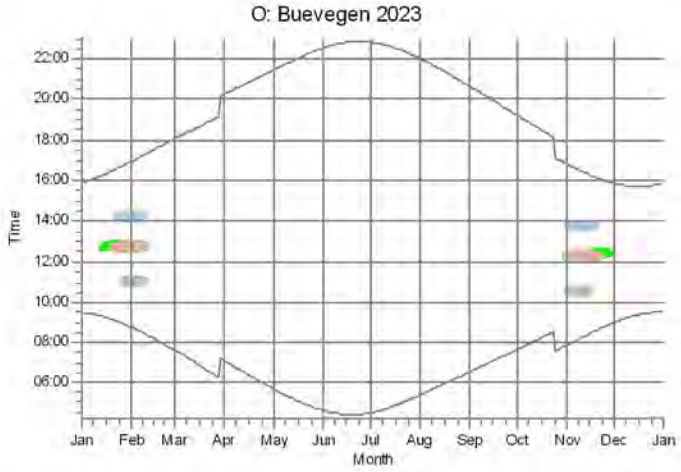
M: Buevegen 1941



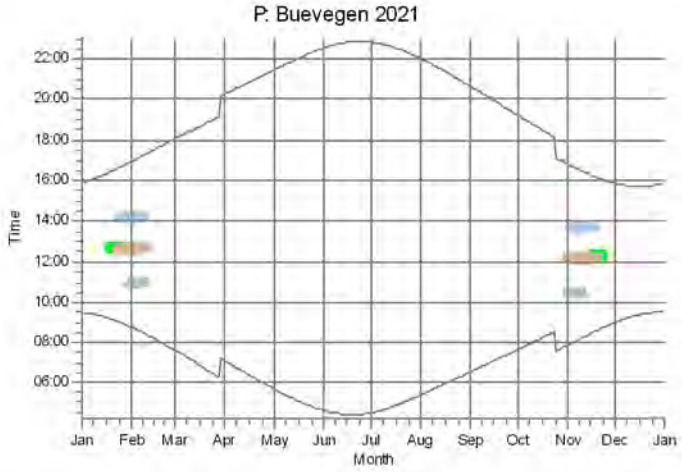
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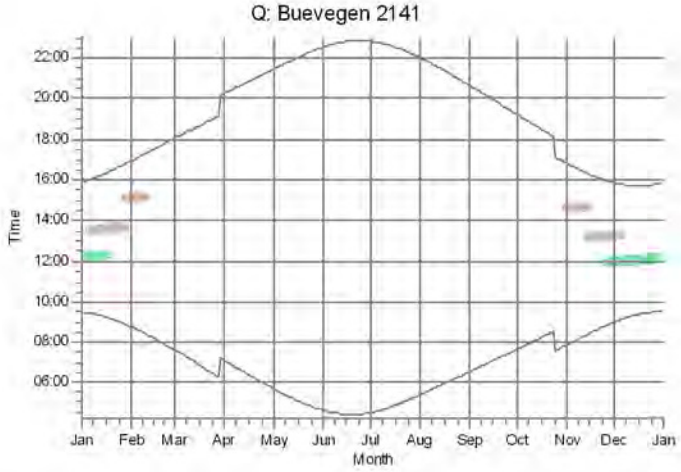
O: Buevegen 2023



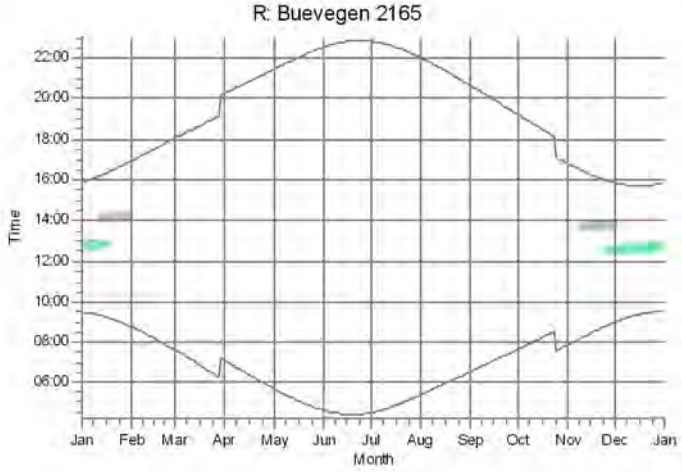
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Q: Buevegen 2141



R: Buevegen 2165



WTGs

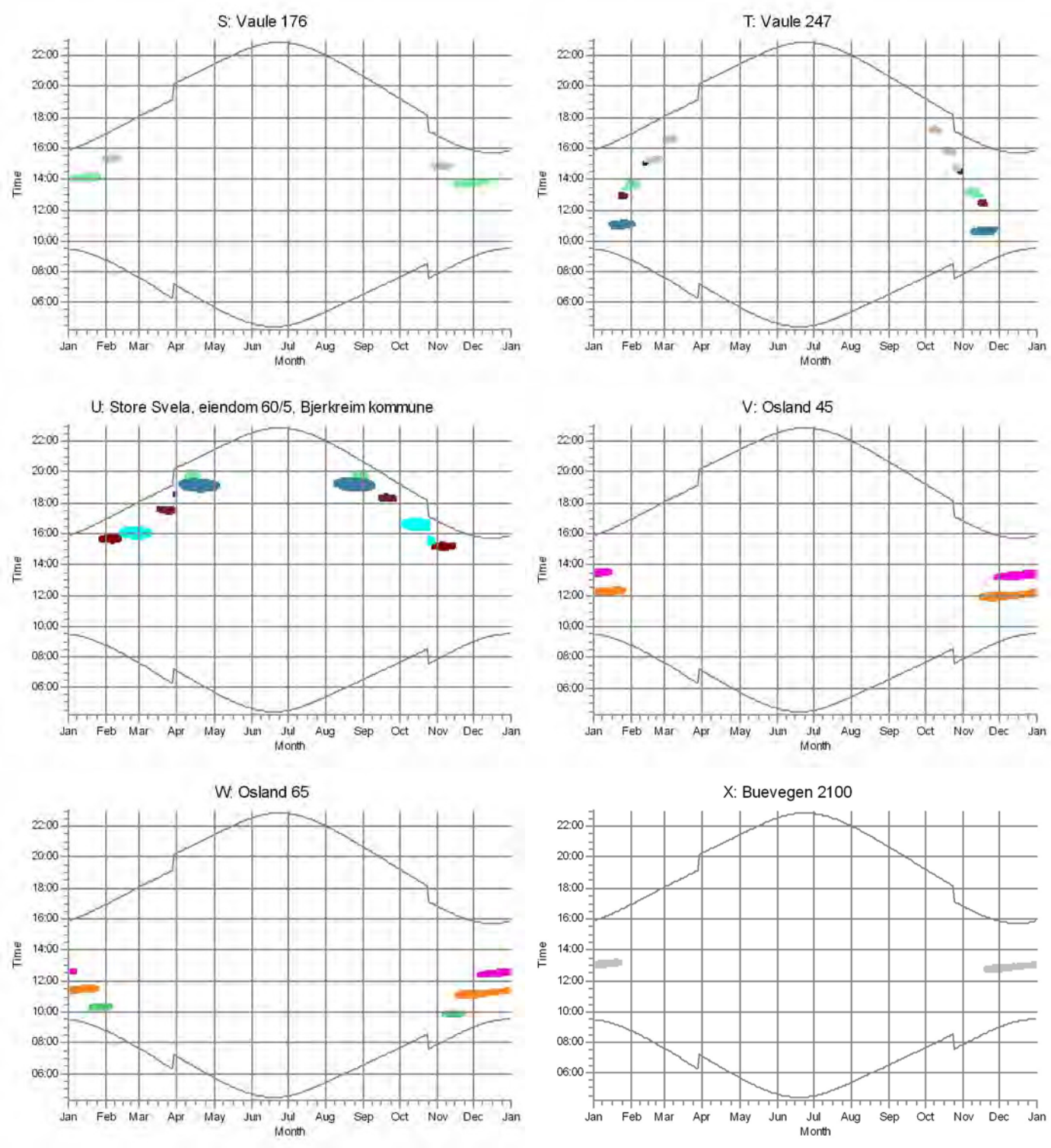
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12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
15: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2558
17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
20: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2563
23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
33: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2576

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere



WTGs

7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
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23: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2566
24: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2567
26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
28: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2571
32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
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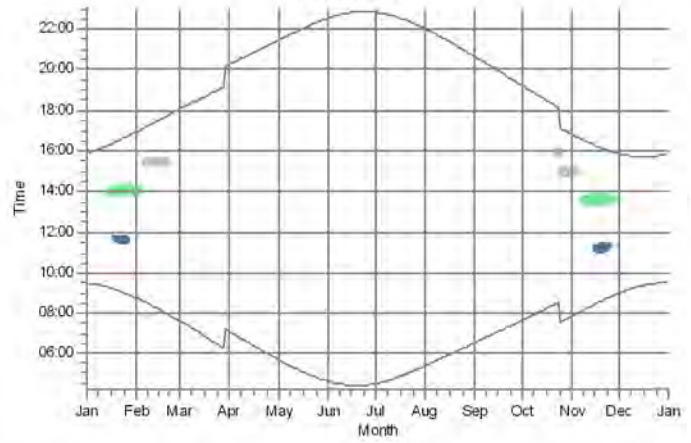
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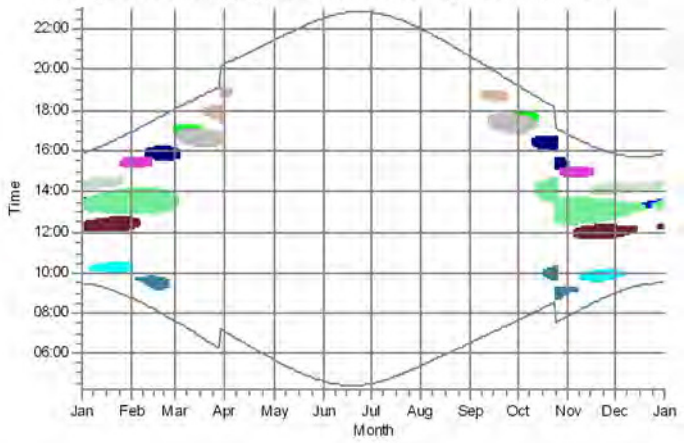
SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

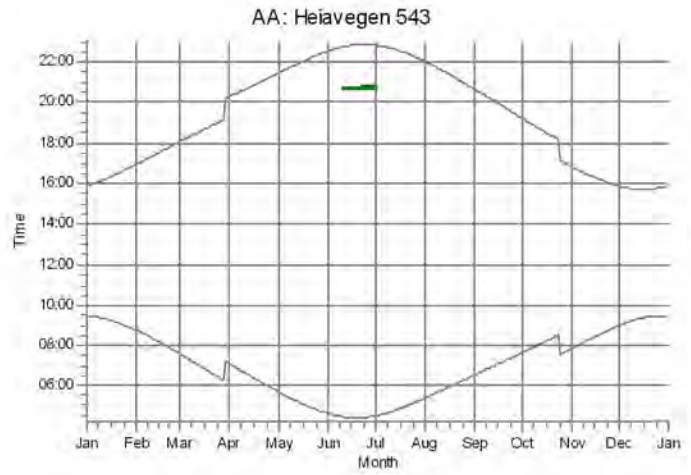
Y: Vaule 218



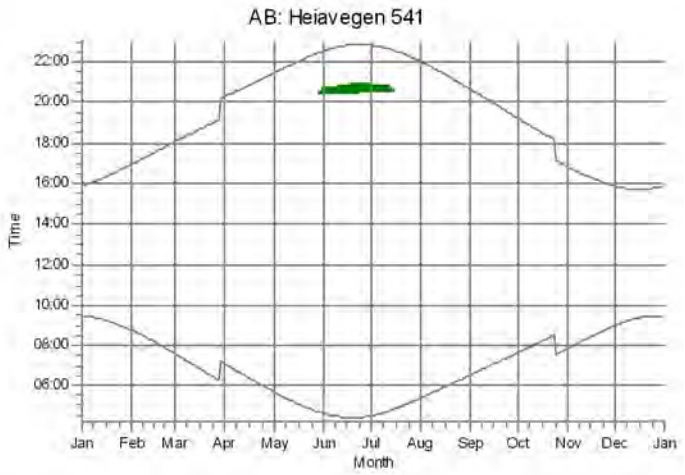
Z: Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune



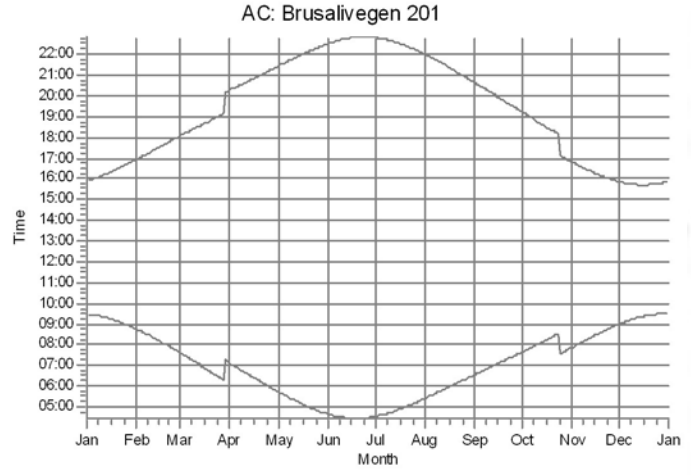
AA: Heiavegen 543



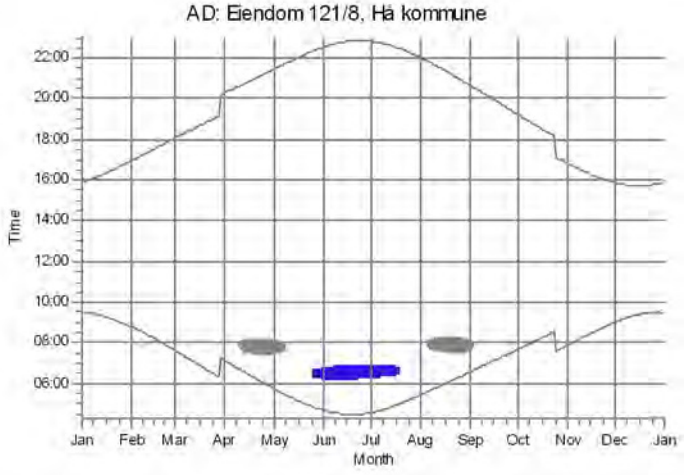
AB: Heiavegen 541



AC: Brusalivegen 201



AD: Eiendom 121/8, Hå kommune



WTGs

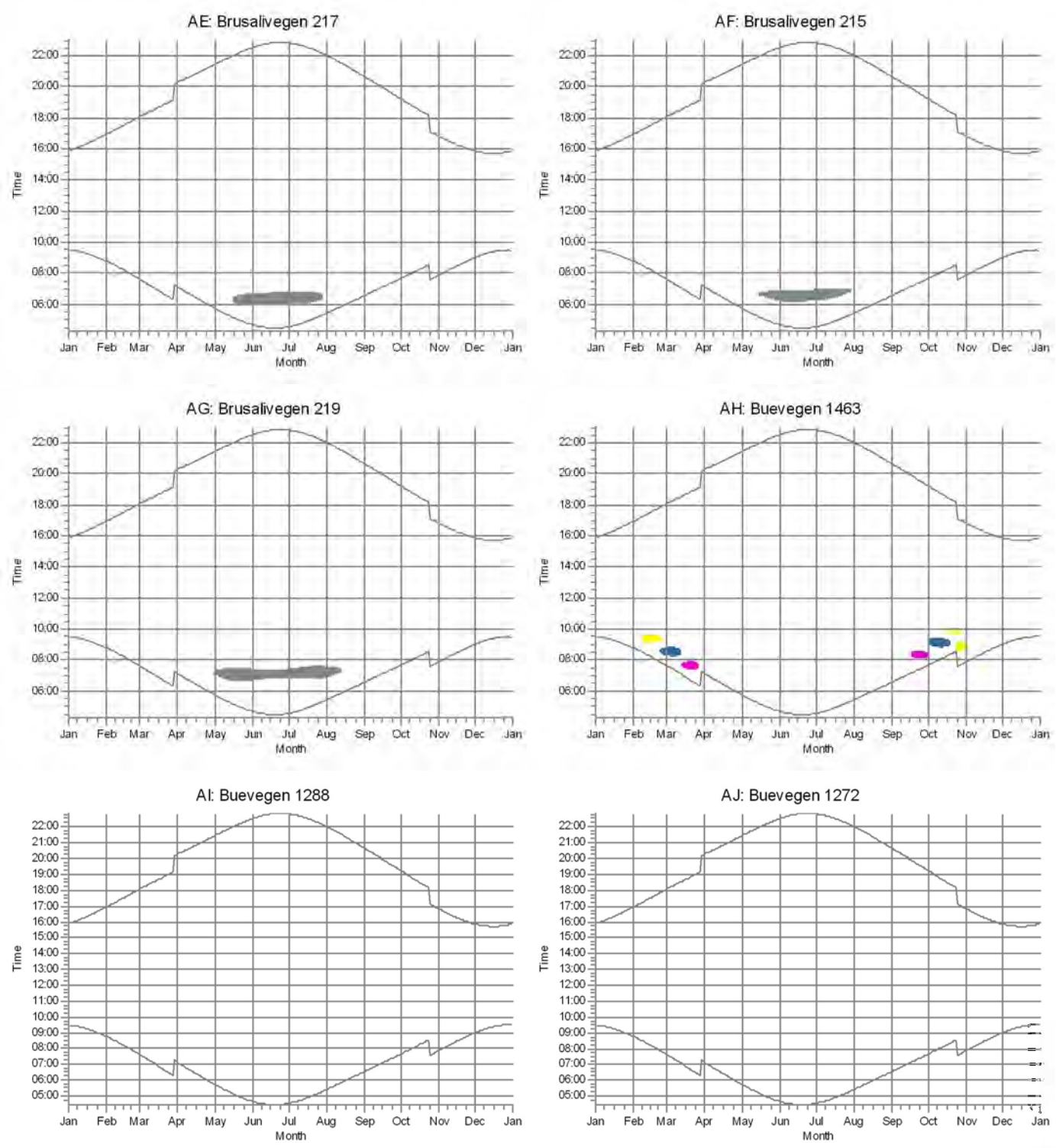
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- 3: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2546
- 7: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2550
- 9: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2552
- 12: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2555
- 13: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2556
- 14: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2557
- 17: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2560
- 26: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2569
- 32: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2575
- 35: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2578
- 36: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2579
- 37: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2580
- 38: VESTAS V162-7.2 7200 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (2543

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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

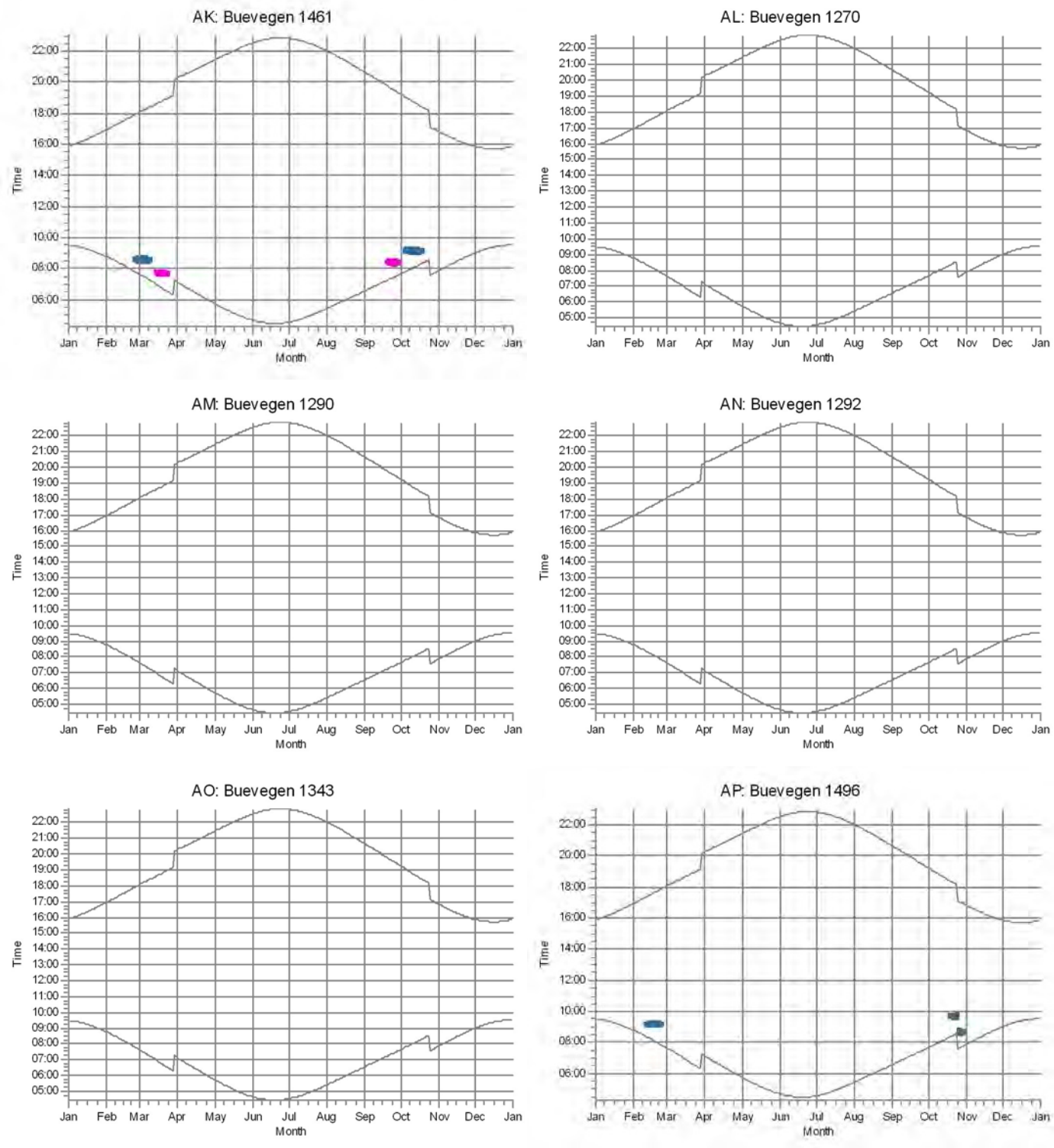


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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

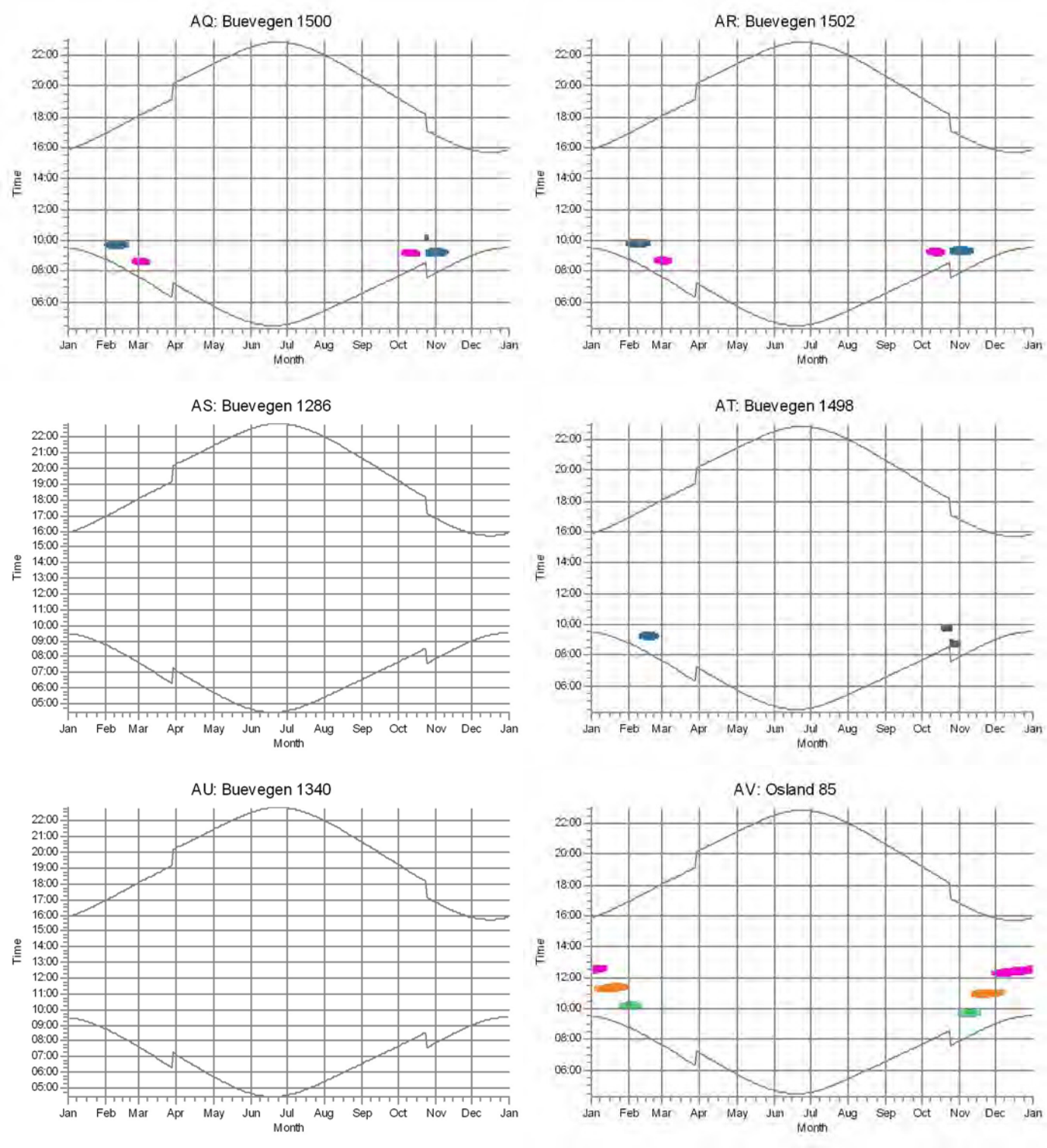


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SHADOW - Calendar, graphical

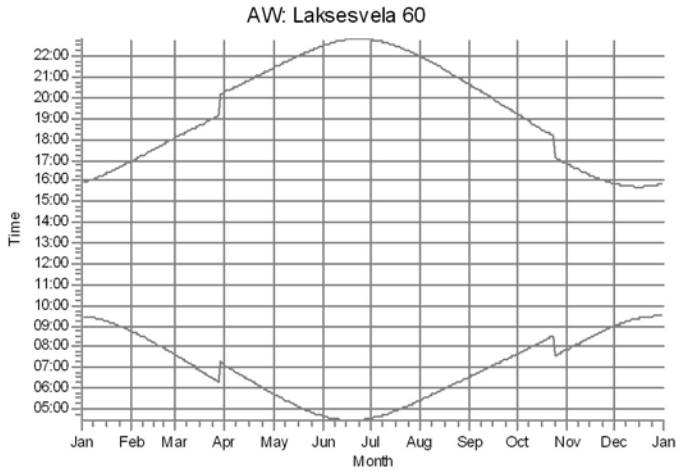
Calculation: Moifjellet uten eksisterende vkv - real case - mottakere

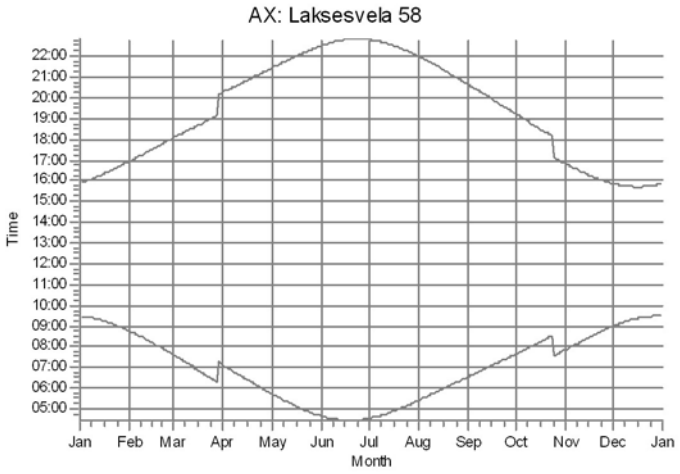


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SHADOW - Calendar, graphical

Calculation: Moifjellet uten eksisterende vkv - real case - mottakere





WTGs

Vedlegg 7.1

Tabell Moifjellet vindkraftverk

Med nærliggende - worst case

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

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Calculated:

19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07		05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17		21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04		05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19		21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01		05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21		21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58		05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24		21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55		05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26		21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52		05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28		21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50		05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30		21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47		05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33		21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44		05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35		21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41		05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37		21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38		05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40		21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35		05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42		21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32		05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44		21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30		05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47		21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27		05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49		21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24		05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51		22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21		05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53		22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00		22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10		04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03		22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08		04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05		22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05		04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07		22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02		04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10		22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59		04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12		22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57		04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14		22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54		04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17		22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52		04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19		22:24	22:50
29	08:52		11:15 (33)				07:15			05:49		04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21		22:25	22:50
30	08:50		11:15 (33)				07:12			05:46		04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24		22:27	22:49
31	08:48		11:17 (33)				07:10					04:41	
	16:54	57	13:05 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		421			1966			363					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October		November			December
1	04:32	05:24	06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49	22:01	20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33	05:26	06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48	21:58	20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34	05:28	06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47	21:56	20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35	05:31	06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47	21:54	20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36	05:33	06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46	21:51	20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37	05:35	06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45	21:49	20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39	05:37	06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44	21:47	20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40	05:39	06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43	21:44	20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41	05:42	06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42	21:42	20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43	05:44	06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40	21:39	20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44	05:46	06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39	21:37	20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46	05:48	06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38	21:34	20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47	05:51	07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37	21:31	20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49	05:53	07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35	21:29	20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51	05:55	07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34	21:26	19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52	05:57	07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32	21:24	19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54	06:00	07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30	21:21	19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56	06:02	07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29	21:18	19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58	06:04	07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27	21:16	19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00	06:06	07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25	21:13	19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01	06:08	07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24	21:10	19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03	06:11	07:19			08:27		12:35 (28)	08:41			09:27
	22:22	21:08	19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05	06:13	07:22			08:30		12:35 (28)	08:43			09:27
	22:20	21:05	19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07	06:15	07:24			08:32		12:34 (28)	08:45			09:28
	22:18	21:02	19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09	06:17	07:26			07:35		11:34 (28)	08:47			09:28
	22:16	20:59	19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11	06:20	07:28			07:37		11:33 (28)	08:50			09:28
	22:14	20:56	19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13	06:22	07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12	20:54	19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16	06:24	07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10	20:51	19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18	06:26	07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07	20:48	19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20	06:29	07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05	20:45	19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22	06:31				07:49		11:34 (28)				09:28
	22:03	20:42				16:51	90	15:09 (24)				15:51
Potential sun hours	546	478	386			319			236			199
Total, worst case				57			1700			1022		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07		05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17		21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04		05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19		21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01		05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21		21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58		05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24		21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55		05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26		21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52		05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28		21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50		05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30		21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47		05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33		21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44		05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35		21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41		05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37		21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38		05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40		21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35		05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42		21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33		05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44		21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30		05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47		21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27		05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49		21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24		05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51		22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21		05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53		22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19		05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56		22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16		05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58		22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13		05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00		22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10		04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03		22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08		04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05		04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07		22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02		04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10		22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00		04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12		22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57		04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14		22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54		04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17		22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52		04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19		22:24	22:50
29	08:52		10:56 (33)				07:15			05:49		04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21		22:25	22:50
30	08:50		10:50 (33)				07:13			05:46		04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24		22:27	22:49
31	08:48		10:44 (33)				07:10					04:41	
	16:54	62	14:05 (23)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		228			2114			237					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		10:30 (28)	09:00
	22:49	22:01	20:40	19:13		16:49	107	15:21 (22)	15:51
2	04:33	05:26	06:35	07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48	21:58	20:37	19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34	05:28	06:37	07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47	21:56	20:34	19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35	05:31	06:40	07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47	21:54	20:31	19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36	05:33	06:42	07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46	21:51	20:28	19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37	05:35	06:44	07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45	21:49	20:25	18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39	05:37	06:46	07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44	21:47	20:22	18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40	05:39	06:49	07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43	21:44	20:20	18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41	05:42	06:51	07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42	21:42	20:17	18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43	05:44	06:53	08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40	21:39	20:14	18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44	05:46	06:55	08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39	21:37	20:11	18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46	05:48	06:57	08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38	21:34	20:08	18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47	05:51	07:00	08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37	21:31	20:05	18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49	05:53	07:02	08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35	21:29	20:02	18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51	05:55	07:04	08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34	21:26	19:59	18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52	05:57	07:06	08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32	21:24	19:56	18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54	06:00	07:08	08:16		11:34 (28)	08:29			09:23
	22:30	21:21	19:54	18:28	36	12:10 (28)	16:13			15:42
18	04:56	06:02	07:11	08:18		11:32 (28)	08:32			09:24
	22:29	21:18	19:51	18:25	55	14:33 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		11:32 (28)	08:34			09:25
	22:27	21:16	19:48	18:22	62	14:36 (23)	16:09			15:42
20	05:00	06:06	07:15	08:23		11:31 (28)	08:36			09:26
	22:25	21:13	19:45	18:20	67	14:37 (23)	16:08			15:43
21	05:01	06:09	07:17	08:25		11:30 (28)	08:39			09:26
	22:24	21:10	19:42	18:17	72	14:39 (23)	16:06			15:43
22	05:03	06:11	07:19	08:27		11:29 (28)	08:41			09:27
	22:22	21:08	19:39	18:14	75	14:40 (23)	16:04			15:43
23	05:05	06:13	07:22	08:30		11:29 (28)	08:43			09:27
	22:20	21:05	19:36	18:12	78	14:41 (23)	16:02			15:44
24	05:07	06:15	07:24	08:32		11:29 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	79	14:41 (23)	16:01			15:45
25	05:09	06:17	07:26	07:35		10:29 (28)	08:47			09:28
	22:16	20:59	19:30	17:07	81	13:42 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		10:29 (28)	08:50			09:28
	22:14	20:57	19:27	17:04	82	13:43 (23)	15:58			15:46
27	05:13	06:22	07:30	07:39		10:29 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	81	13:42 (23)	15:56			15:47
28	05:16	06:24	07:33	07:42		10:29 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	87	14:45 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		10:29 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	95	14:48 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		10:30 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	14:51 (24)	15:52			15:50
31	05:22	06:31		07:49		10:31 (28)				09:28
	22:03	20:42		16:51	99	14:52 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1521			1074		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		08:46		11:39 (28)	07:35	09:25 (15)	07:07	05:44	04:40
	15:53		16:56	88	15:12 (24)	18:05	9 09:34 (15)	20:17	21:26	22:31
2	09:27		08:43		11:39 (28)	07:33		07:04	05:41	04:38
	15:54		16:58	88	15:13 (24)	18:07		20:19	21:28	22:32
3	09:27		08:41		11:40 (28)	07:30		07:01	05:39	04:37
	15:55		17:01	85	15:12 (24)	18:09		20:21	21:31	22:34
4	09:27		08:39		11:39 (28)	07:27		06:58	05:36	04:36
	15:57		17:03	83	15:11 (24)	18:12		20:24	21:33	22:35
5	09:26	12:20 (20)	08:37		11:39 (28)	07:24		06:55	05:34	04:35
	15:58	1 12:21 (20)	17:06	80	15:09 (24)	18:14		20:26	21:35	22:37
6	09:25	12:19 (20)	08:34		11:40 (28)	07:21		06:52	05:31	04:34
	16:00	5 12:24 (20)	17:08	74	15:08 (24)	18:17		20:28	21:37	22:38
7	09:24	12:17 (20)	08:32		11:40 (28)	07:19		06:50	05:29	04:33
	16:02	11 12:28 (20)	17:11	62	14:11 (23)	18:19		20:30	21:40	22:39
8	09:24	12:17 (20)	08:30		11:41 (28)	07:16		06:47	05:26	04:32
	16:03	13 12:30 (20)	17:13	61	14:11 (23)	18:21		20:33	21:42	22:40
9	09:23	12:18 (20)	08:27		11:42 (28)	07:13		06:44	05:24	04:31
	16:05	16 12:34 (20)	17:16	57	14:10 (23)	18:24		20:35	21:44	22:42
10	09:22	11:06 (33)	08:25		11:42 (28)	07:10		06:41	05:22	04:30
	16:07	25 12:39 (20)	17:18	54	14:09 (23)	18:26		20:37	21:46	22:43
11	09:21	11:02 (33)	08:23		11:44 (28)	07:07		06:38	05:19	04:29
	16:09	31 12:41 (20)	17:21	48	14:08 (23)	18:28		20:40	21:49	22:44
12	09:20	11:01 (33)	08:20		11:45 (28)	07:04		06:35	05:17	04:29
	16:11	40 12:41 (20)	17:23	42	14:06 (23)	18:31		20:42	21:51	22:45
13	09:18	11:02 (33)	08:18		11:46 (28)	07:02		06:32	05:15	04:28
	16:13	42 12:42 (20)	17:26	32	14:02 (23)	18:33		20:44	21:53	22:46
14	09:17	11:02 (33)	08:15		11:49 (28)	06:59		06:30	05:13	04:28
	16:15	42 12:42 (20)	17:28	18	12:07 (28)	18:35		20:47	21:55	22:47
15	09:16	11:02 (33)	08:13		11:52 (28)	06:56		06:27	05:10	04:27
	16:17	43 12:42 (20)	17:31	12	12:04 (28)	18:38		20:49	21:58	22:47
16	09:15	11:02 (33)	08:10		09:29 (15)	06:53		06:24	05:08	04:27
	16:19	43 12:42 (20)	17:33	5	09:34 (15)	18:40		20:51	22:00	22:48
17	09:13	11:02 (33)	08:07		09:25 (15)	06:50		06:21	05:06	04:27
	16:21	45 12:42 (20)	17:36	12	09:37 (15)	18:42		20:53	22:02	22:49
18	09:12	11:03 (33)	08:05		09:24 (15)	06:47		06:19	05:04	04:27
	16:23	57 13:55 (23)	17:38	16	09:40 (15)	18:45		20:56	22:04	22:49
19	09:10	11:03 (33)	08:02		09:23 (15)	06:44		06:16	05:02	04:27
	16:25	70 13:59 (23)	17:40	17	09:40 (15)	18:47		20:58	22:06	22:50
20	09:08	11:04 (33)	08:00		09:22 (15)	06:41		06:13	05:00	04:27
	16:28	75 14:01 (23)	17:43	19	09:41 (15)	18:49		21:00	22:08	22:50
21	09:07	11:04 (33)	07:57		09:21 (15)	06:39		06:10	04:58	04:27
	16:30	80 14:03 (23)	17:45	20	09:41 (15)	18:51		21:03	22:10	22:50
22	09:05	11:05 (33)	07:54		09:20 (15)	06:36		06:08	04:56	04:27
	16:32	82 14:05 (23)	17:48	21	09:41 (15)	18:54		21:05	22:12	22:50
23	09:03	11:05 (33)	07:52		09:21 (15)	06:33		06:05	04:54	04:27
	16:34	83 14:05 (23)	17:50	21	09:42 (15)	18:56		21:07	22:14	22:51
24	09:02	11:06 (33)	07:49		09:21 (15)	06:30		06:02	04:52	04:27
	16:37	84 14:07 (23)	17:53	20	09:41 (15)	18:58		21:10	22:16	22:51
25	09:00	11:07 (33)	07:46		09:21 (15)	06:27		05:59	04:51	04:28
	16:39	84 14:52 (24)	17:55	20	09:41 (15)	19:01		21:12	22:18	22:51
26	08:58	11:09 (33)	07:44		09:21 (15)	06:24		05:57	04:49	04:28
	16:41	79 14:57 (24)	17:57	19	09:40 (15)	19:03		21:14	22:20	22:50
27	08:56	11:10 (33)	07:41		09:22 (15)	06:21		05:54	04:47	04:29
	16:44	86 15:12 (24)	18:00	16	09:38 (15)	19:05		21:17	22:22	22:50
28	08:54	11:13 (33)	07:38		09:23 (15)	06:18		05:52	04:46	04:30
	16:46	90 15:13 (24)	18:02	14	09:37 (15)	19:08		21:19	22:24	22:50
29	08:52	11:40 (28)				07:15		05:49	04:44	04:30
	16:49	88 15:14 (24)				20:10		21:21	22:25	22:50
30	08:50	11:39 (28)				07:12		05:46	04:42	04:31
	16:51	88 15:13 (24)				20:12		21:24	22:27	22:49
31	08:48	11:39 (28)				07:10			04:41	
	16:54	88 15:13 (24)				20:14			22:29	
Potential sun hours	221		260			365		432	521	547
Total, worst case		1491		1104		9				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49		22:01		20:40		19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33		05:26		06:35		07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48		21:58		20:37		19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34		05:28		06:37		07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47		21:56		20:34		19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35		05:31		06:40		07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47		21:54		20:31		19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36		05:33		06:42		07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46		21:51		20:28		19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37		05:35		06:44		07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45		21:49		20:25		18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39		05:37		06:46		07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44		21:47		20:22		18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40		05:39		06:49		07:55			08:08		11:09 (28)	09:12		
	22:43		21:44		20:20		18:53			16:32	87	14:42 (24)	15:45		
9	04:41		05:42		06:51		07:57			08:11		11:10 (28)	09:13		
	22:42		21:42		20:17		18:50			16:30	87	14:43 (24)	15:44		
10	04:43		05:44		06:53		08:00			08:13		11:10 (28)	09:15		
	22:41		21:39		20:14		18:47			16:28	88	14:44 (24)	15:43		
11	04:44		05:46		06:55		08:02			08:15		11:10 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	88	14:44 (24)	15:43		
12	04:46		05:48		06:57		08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38		21:34		20:08		18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47		05:51		07:00		08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37		21:32		20:05		18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49		05:53		07:02		08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35		21:29		20:02		18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51		05:55		07:04		08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34		21:26		19:59		18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32		21:24		19:56		18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30		21:21		19:54		18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29		21:18		19:51		18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58		06:04		07:13		08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00		06:06		07:15		08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25		21:13		19:45		18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01		06:08		07:17		08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24		21:10		19:42		18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22		21:08		19:39		18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20		21:05		19:36		18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07		06:15		07:24		08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18		21:02		19:33		18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09		06:17		07:26		07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16		20:59		19:30		17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14		20:57		19:27		17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13		06:22		07:30		07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12		20:54		19:25		17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16		06:24		07:33		07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10		20:51		19:22		16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07		20:48		19:19		16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05		20:45		19:16		16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22		06:31				07:49		11:13 (28)				09:28		
	22:03		20:42				16:51	50	13:38 (23)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								389			2122			106	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46	11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43	11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41	12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39	11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34	12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32	12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30	12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27	12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25	12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23	12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20	12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18	12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15	09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13	09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10	09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07	09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05	09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02	09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00	09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57	09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54	09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52	09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49	09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46	09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44	09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41	09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38	09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)			07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)			20:10	21:21	22:25	22:50
30	08:50		11:58 (28)			07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)			20:12	21:24	22:27	22:49
31	08:48		11:58 (28)			07:10		04:41	
	16:54	88	15:22 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1646			1063				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49	22:01	20:40	19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33	05:26	06:35	07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48	21:58	20:37	19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34	05:28	06:37	07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47	21:56	20:34	19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35	05:31	06:40	07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47	21:54	20:31	19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36	05:33	06:42	07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46	21:51	20:28	19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37	05:35	06:44	07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45	21:49	20:25	18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39	05:37	06:46	07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44	21:47	20:22	18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40	05:39	06:49	07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43	21:44	20:20	18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41	05:42	06:51	07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42	21:42	20:17	18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43	05:44	06:53	08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41	21:39	20:14	18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44	05:46	06:55	08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39	21:37	20:11	18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46	05:48	06:57	08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38	21:34	20:08	18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47	05:51	07:00	08:07			08:20		11:30 (28)	09:19		
	22:37	21:31	20:05	18:39			16:21	83	14:50 (24)	15:42		
14	04:49	05:53	07:02	08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35	21:29	20:02	18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34	21:26	19:59	18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52	05:57	07:06	08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32	21:24	19:56	18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54	06:00	07:08	08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30	21:21	19:54	18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56	06:02	07:11	08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29	21:18	19:51	18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58	06:04	07:13	08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00	06:06	07:15	08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25	21:13	19:45	18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01	06:08	07:17	08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24	21:10	19:42	18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03	06:11	07:19	08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22	21:08	19:39	18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05	06:13	07:22	08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20	21:05	19:36	18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09	06:17	07:26	07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16	20:59	19:30	17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14	20:57	19:27	17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13	06:22	07:30	07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12	20:54	19:25	17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16	06:24	07:33	07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10	20:51	19:22	16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07	20:48	19:19	16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05	20:45	19:16	16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22	06:31		07:49		11:35 (28)				09:28		11:11 (33)
	22:03	20:42		16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					362			2086			298	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53	17	11:40 (33)	16:56	82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27		11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54	17	11:40 (33)	16:58	86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27		11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55	18	11:41 (33)	17:01	84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26		11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57	23	12:52 (20)	17:03	85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26		11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58	25	12:53 (20)	17:06	82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25		11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00	31	13:06 (20)	17:08	79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24		11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02	34	13:07 (20)	17:11	74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24		11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03	41	13:07 (20)	17:13	68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23		11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05	42	13:07 (20)	17:16	60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22		11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07	42	13:08 (20)	17:18	51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21		11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09	43	13:09 (20)	17:21	45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20		11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11	44	13:09 (20)	17:23	45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18		11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13	44	13:10 (20)	17:26	43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17		11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15	54	13:10 (20)	17:28	27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16		11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17	57	13:10 (20)	17:31	18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15		11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19	60	13:10 (20)	17:33	20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13		11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21	63	13:10 (20)	17:35	21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12		11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23	64	13:11 (20)	17:38	22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10		11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25	63	13:11 (20)	17:40	23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08		11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28	63	13:11 (20)	17:43	23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07		11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30	62	13:11 (20)	17:45	22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05		11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32	60	13:09 (20)	17:48	22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03		11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34	66	14:33 (23)	17:50	20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02		11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37	67	14:36 (23)	17:53	18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00		11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39	58	14:38 (23)	17:55	16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58		12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41	55	14:40 (23)	17:57	11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56		12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44	57	14:40 (23)	18:00	2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54		12:23 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	61	15:15 (24)	18:02			19:07	21:19	22:24	22:50
29	08:52		12:24 (28)				07:15	05:49	04:44	04:30
	16:49	67	15:19 (24)				20:10	21:21	22:25	22:50
30	08:50		12:23 (28)				07:12	05:46	04:42	04:31
	16:51	74	15:23 (24)				20:12	21:24	22:27	22:49
31	08:48		12:24 (28)				07:10		04:41	
	16:53	77	15:26 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1549			1149					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49	22:01	20:40	19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33	05:26	06:35	07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48	21:58	20:37	19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34	05:28	06:37	07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47	21:56	20:34	19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35	05:31	06:40	07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47	21:54	20:31	19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36	05:33	06:42	07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46	21:51	20:28	19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37	05:35	06:44	07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45	21:49	20:25	18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38	05:37	06:46	07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44	21:47	20:22	18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40	05:39	06:49	07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43	21:44	20:20	18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41	05:42	06:51	07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42	21:42	20:17	18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43	05:44	06:53	08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40	21:39	20:14	18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44	05:46	06:55	08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39	21:37	20:11	18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46	05:48	06:57	08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38	21:34	20:08	18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47	05:51	07:00	08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37	21:31	20:05	18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49	05:53	07:02	08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35	21:29	20:02	18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51	05:55	07:04	08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34	21:26	19:59	18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52	05:57	07:06	08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32	21:24	19:56	18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54	06:00	07:08	08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30	21:21	19:54	18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56	06:02	07:11	08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29	21:18	19:51	18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58	06:04	07:13	08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27	21:16	19:48	18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25	21:13	19:45	18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01	06:08	07:17	08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24	21:10	19:42	18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03	06:11	07:19	08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22	21:08	19:39	18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05	06:13	07:22	08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20	21:05	19:36	18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07	06:15	07:24	08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18	21:02	19:33	18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09	06:17	07:26	07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16	20:59	19:30	17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11	06:20	07:28	07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14	20:56	19:27	17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13	06:22	07:30	07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12	20:54	19:25	17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16	06:24	07:33	07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10	20:51	19:22	16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18	06:26	07:35	07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07	20:48	19:19	16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20	06:29	07:37	07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05	20:45	19:16	16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22	06:31		07:49		12:01 (28)				09:28		11:23 (33)
	22:03	20:42		16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					410			1974			580	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28		08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27	12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27	12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27	12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26	12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25	12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24	12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24	12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23	12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22	12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21	12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20	12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18	12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16	11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13	11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12	11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09	11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07	11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05	11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03	11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02	11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00	11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58	11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56	11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54	11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (24)				20:10	21:21	22:25	22:50
30	08:50	11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (24)				20:12	21:24	22:27	22:49
31	08:48	11:26 (28)				07:10		04:41	
	16:54	76 14:52 (24)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49	22:01	20:40	19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33	05:26	06:35	07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48	21:59	20:37	19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34	05:28	06:37	07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47	21:56	20:34	19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35	05:31	06:40	07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47	21:54	20:31	19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36	05:33	06:42	07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46	21:51	20:28	19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37	05:35	06:44	07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45	21:49	20:25	18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39	05:37	06:46	07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44	21:47	20:23	18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40	05:39	06:49	07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43	21:44	20:20	18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41	05:42	06:51	07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42	21:42	20:17	18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43	05:44	06:53	08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41	21:39	20:14	18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44	05:46	06:55	08:02			08:15		10:57 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	76	14:23 (24)	15:43		
12	04:46	05:48	06:57	08:04			08:18		10:57 (28)	09:18		
	22:38	21:34	20:08	18:42			16:23	80	14:25 (24)	15:43		
13	04:47	05:51	07:00	08:07			08:20		10:58 (28)	09:19		
	22:37	21:32	20:05	18:39			16:21	81	14:26 (24)	15:42		
14	04:49	05:53	07:02	08:09			08:22		10:58 (28)	09:20		
	22:35	21:29	20:02	18:36			16:19	82	14:26 (24)	15:42		
15	04:51	05:55	07:04	08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34	21:26	19:59	18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32	21:24	19:56	18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31	21:21	19:54	18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29	21:18	19:51	18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58	06:04	07:13	08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27	21:16	19:48	18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00	06:06	07:15	08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25	21:13	19:45	18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01	06:08	07:17	08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24	21:10	19:42	18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22	21:08	19:39	18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20	21:05	19:36	18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07	06:15	07:24	08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18	21:02	19:33	18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09	06:17	07:26	07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16	20:59	19:30	17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11	06:20	07:28	07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14	20:57	19:27	17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13	06:22	07:30	07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12	20:54	19:25	17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16	06:24	07:33	07:42			08:54		11:48 (20)	09:28		
	22:10	20:51	19:22	16:59			15:55	35	13:18 (23)	15:48		
29	05:18	06:26	07:35	07:44			08:56		11:48 (20)	09:28		
	22:07	20:48	19:19	16:56			15:54	33	13:17 (23)	15:49		
30	05:20	06:29	07:37	07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05	20:45	19:16	16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22	06:31		07:49		11:06 (28)				09:28		
	22:03	20:42		16:51	15	11:21 (28)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					225			1881			154	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:18 (20)	08:46		11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43		11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41		11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39		11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34		12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32			07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13			18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27		09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25		09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23		09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20		09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18		09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15		09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13		09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10		09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07		09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05		09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02		09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00		09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57		09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54		09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:51 (28)				07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)				20:10	21:21	22:25	22:50
30	08:50		11:51 (28)				07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)				20:12	21:24	22:27	22:49
31	08:48		11:52 (28)				07:10		04:41	
	16:54	55	14:55 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1930			409					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:08 (20)	08:46		11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:29 (20)	16:56	49	13:50 (23)	18:05	20:17	21:26	22:31
2	09:27		12:08 (20)	08:43		11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:29 (20)	16:58	44	13:48 (23)	18:07	20:19	21:28	22:32
3	09:27		12:09 (20)	08:41		11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:29 (20)	17:01	39	13:47 (23)	18:09	20:21	21:31	22:34
4	09:27		12:09 (20)	08:39		11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:30 (20)	17:03	32	13:45 (23)	18:12	20:24	21:33	22:35
5	09:26		12:09 (20)	08:37		11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21	12:30 (20)	17:06	19	12:02 (28)	18:14	20:26	21:35	22:37
6	09:25		12:10 (20)	08:34		11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25	13:32 (23)	17:08	14	12:00 (28)	18:17	20:28	21:37	22:38
7	09:24		11:43 (28)	08:32		11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33	13:35 (23)	17:11	6	11:56 (28)	18:19	20:30	21:40	22:39
8	09:24		11:41 (28)	08:30			07:16	06:47	05:26	04:32
	16:03	41	13:37 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:40 (28)	08:27			07:13	06:44	05:24	04:31
	16:05	47	13:39 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:38 (28)	08:25		09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51	13:40 (23)	17:18	3	09:42 (15)	18:26	20:37	21:46	22:43
11	09:21		11:38 (28)	08:23		09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55	13:42 (23)	17:21	10	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:37 (28)	08:20		09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60	14:46 (24)	17:23	14	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:37 (28)	08:18		09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72	14:49 (24)	17:26	16	09:49 (15)	18:33	20:44	21:53	22:46
14	09:17		11:36 (28)	08:15		09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83	14:49 (24)	17:28	17	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:36 (28)	08:13		09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87	14:50 (24)	17:31	18	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:35 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86	14:50 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:36 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:51 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:36 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89	14:52 (24)	17:38	19	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:36 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87	14:52 (24)	17:40	18	09:50 (15)	18:47	20:58	22:06	22:50
20	09:09		11:35 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85	14:53 (24)	17:43	17	09:49 (15)	18:49	21:00	22:08	22:50
21	09:07		11:35 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79	14:53 (24)	17:45	15	09:48 (15)	18:51	21:03	22:10	22:50
22	09:05		11:36 (28)	07:54		09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:53 (24)	17:48	12	09:46 (15)	18:54	21:05	22:12	22:50
23	09:03		11:35 (28)	07:52		09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79	14:52 (24)	17:50	6	09:44 (15)	18:56	21:07	22:14	22:51
24	09:02		11:35 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	79	14:52 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:35 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	78	14:52 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:36 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	77	14:52 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:36 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	74	14:51 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:36 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	71	14:50 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:37 (28)				07:15	05:49	04:44	04:30
	16:49	66	14:49 (24)				20:10	21:21	22:25	22:50
30	08:50		11:37 (28)				07:13	05:46	04:42	04:31
	16:51	56	14:45 (24)				20:12	21:24	22:27	22:49
31	08:48		11:38 (28)				07:10		04:41	
	16:54	51	13:50 (23)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1881			406					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June
1	09:28	12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:26 (20)	16:56	45 13:44 (23)	18:05	20:17	21:26	22:31
2	09:27	12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20 12:26 (20)	16:58	40 13:42 (23)	18:07	20:19	21:28	22:32
3	09:27	12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:26 (20)	17:01	34 13:40 (23)	18:09	20:21	21:31	22:34
4	09:27	12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:27 (20)	17:03	20 11:59 (28)	18:12	20:24	21:33	22:35
5	09:26	12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28 13:28 (23)	17:06	16 11:57 (28)	18:14	20:26	21:35	22:37
6	09:25	12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32 13:31 (23)	17:08	11 11:55 (28)	18:17	20:28	21:37	22:38
7	09:24	11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38 13:32 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24	11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46 13:34 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50 13:36 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:35 (28)	08:25	09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58 14:41 (24)	17:18	6 09:43 (15)	18:26	20:37	21:46	22:43
11	09:21	11:34 (28)	08:23	09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71 14:43 (24)	17:21	11 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:33 (28)	08:20	09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79 14:44 (24)	17:23	15 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:34 (28)	08:18	09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81 14:45 (24)	17:26	16 09:48 (15)	18:33	20:44	21:53	22:46
14	09:17	11:33 (28)	08:15	09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84 14:45 (24)	17:28	18 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:32 (28)	08:13	09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86 14:46 (24)	17:31	19 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87 14:46 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:32 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:47 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:32 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88 14:48 (24)	17:38	18 09:50 (15)	18:45	20:56	22:04	22:49
19	09:10	11:32 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86 14:48 (24)	17:40	17 09:49 (15)	18:47	20:58	22:06	22:50
20	09:09	11:32 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79 14:48 (24)	17:43	16 09:48 (15)	18:49	21:00	22:08	22:50
21	09:07	11:32 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77 14:48 (24)	17:45	14 09:47 (15)	18:51	21:03	22:10	22:50
22	09:05	11:32 (28)	07:54	09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:49 (24)	17:48	10 09:45 (15)	18:54	21:05	22:12	22:50
23	09:03	11:31 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	78 14:48 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02	11:32 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	77 14:48 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:32 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	75 14:47 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:33 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	73 14:47 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:32 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	70 14:45 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:33 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	66 14:44 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:34 (28)			07:15	05:49	04:44	04:30
	16:49	57 14:41 (24)			20:10	21:21	22:25	22:50
30	08:50	11:34 (28)			07:13	05:46	04:42	04:31
	16:51	52 13:45 (23)			20:12	21:24	22:27	22:49
31	08:48	11:35 (28)			07:10		04:41	
	16:54	48 13:44 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1914		364				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49		22:01		20:40		19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33		05:26		06:35		07:42			07:54			09:02		11:18 (28)
	22:48		21:59		20:37		19:10			16:46			15:50	58	14:24 (24)
3	04:34		05:28		06:37		07:44			07:56			09:03		11:19 (28)
	22:47		21:56		20:34		19:07			16:44			15:49	51	13:19 (23)
4	04:35		05:31		06:40		07:46			07:59			09:05		11:21 (28)
	22:47		21:54		20:31		19:04			16:41			15:48	46	13:18 (23)
5	04:36		05:33		06:42		07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46		21:51		20:28		19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37		05:35		06:44		07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45		21:49		20:25		18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38		05:37		06:46		07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44		21:47		20:23		18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40		05:39		06:49		07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43		21:44		20:20		18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41		05:42		06:51		07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42		21:42		20:17		18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43		05:44		06:53		08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41		21:39		20:14		18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44		05:46		06:55		08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39		21:37		20:11		18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46		05:48		06:57		08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38		21:34		20:08		18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47		05:51		07:00		08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37		21:32		20:05		18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49		05:53		07:02		08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35		21:29		20:02		18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51		05:55		07:04		08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34		21:26		19:59		18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52		05:57		07:06		08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32		21:24		19:56		18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54		06:00		07:08		08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31		21:21		19:54		18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56		06:02		07:11		08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29		21:18		19:51		18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58		06:04		07:13		08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27		21:16		19:48		18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00		06:06		07:15		08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25		21:13		19:45		18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01		06:08		07:17		08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24		21:10		19:42		18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03		06:11		07:19		08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22		21:08		19:39		18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05		06:13		07:22		08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20		21:05		19:36		18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18		21:02		19:33		18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09		06:17		07:26		07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16		20:59		19:30		17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14		20:57		19:27		17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13		06:22		07:30		07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12		20:54		19:25		17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16		06:24		07:33		07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10		20:51		19:22		16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18		06:26		07:35		07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07		20:48		19:19		16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20		06:29		07:37		07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05		20:45		19:16		16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22		06:31				07:49		09:05 (15)				09:28		12:04 (20)
	22:03		20:42				16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								197			1686			799	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November			December		
1	09:28		11:58 (20)	08:46		11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56	49	13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43		11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58	47	13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41		11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56		11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01	42	13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39		11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03	35	13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37		11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06	23	11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39	20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34		11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08	20	11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32		11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11	16	11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34	37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30		11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13	11	11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18			18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28	51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25	52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18			07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20		10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39		10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45			18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41		10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46			06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47		11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59	86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)				20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54	73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)				07:10		04:41		05:22	06:31		07:49				09:28		11:57 (20)
	16:54	53	13:36 (23)				20:14		22:29		22:03	20:42		16:51				15:51	11	12:08 (20)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		1841			243											1761			403	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35	08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	04:32	05:24	06:33	07:39		07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13		16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42		07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10		16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44		07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07		16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46	09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7 09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48	09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12 09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51	09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15 09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53	09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18 09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55	09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19 09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57	09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20 09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00	09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20 09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02	09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20 09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04	09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19 09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06	09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18 09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09	09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26 10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11	09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29 10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13	09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28 10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16	10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21 10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18	10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23 10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20	10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24 10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23	10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25 10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25	10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37 15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27	10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42 15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30	10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50 15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32	10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63 15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35	09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69 14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37	09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74 14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39	09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82 15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42	09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89 15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44	09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90 15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47	09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90 15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49	12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81 15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319		236			199		
Total, worst case					1111		1317			529	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07		05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17		21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04		05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19		21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01		05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21		21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58		05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23		21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55		05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26		21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52		05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28		21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49		05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30		21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47		05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33		21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44		05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35		21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41		05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37		21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38		05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40		21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35		05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42		21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32		05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44		21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30		05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46		21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27		05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49		21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24		05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51		22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21		05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53		22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18		05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56		22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16		05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58		22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13		05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00		22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10		04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03		22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07		04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05		22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05		04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07		22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02		04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10		22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59		04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12		22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57		04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14		22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54		04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17		22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51		04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19		22:24	22:50
29	08:52						07:15			05:49		04:44	04:30
	16:49						20:10			21:21		22:25	22:49
30	08:50		14:16 (33)				07:12			05:46		04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23		22:27	22:49
31	08:48		14:08 (33)				07:10					04:41	
	16:53	21	15:27 (20)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		24			1365			367					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56	15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51	15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55	15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56	15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58	15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55	15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49	13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50	13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10		11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60	13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61	13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63	13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66	13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65	13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66	13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64	13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62	13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61	13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60	13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55	13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47	13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39	13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36	13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33	13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		16:24 (28)	08:45		11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8	16:32 (28)	16:01	30	13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		15:22 (28)	08:47		11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12	15:34 (28)	15:59	20	13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		15:20 (28)	08:49		11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15	15:35 (28)	15:58	11	11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		15:19 (28)	08:52		11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17	15:36 (28)	15:56	10	11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42		09:50 (12)	08:54		11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28	15:37 (28)	15:55	8	11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		09:47 (12)	08:56			09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37	15:37 (28)	15:53			15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		09:46 (12)	08:58			09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49	15:37 (28)	15:52			15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49		09:46 (12)				09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55	15:38 (28)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319			236				199
Total, worst case		793		765									221			1347			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46	10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56 74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49 30	13:49 (15)	15:51
2	09:27		08:43	10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58 73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 45	13:52 (15)	15:50
3	09:27		08:41	10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01 74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44 54	13:54 (15)	15:49
4	09:26		08:39	10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03 71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 61	13:55 (15)	15:48
5	09:26		08:37	10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06 68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39 65	13:56 (15)	15:47
6	09:25		08:34	10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08 64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37 69	13:57 (15)	15:46
7	09:24		08:32	10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11 59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34 72	13:57 (15)	15:45
8	09:24		08:30	10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13 52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32 73	13:57 (15)	15:45
9	09:23		08:27	10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16 43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30 75	13:58 (15)	15:44
10	09:22		08:25	10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18 26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28 72	13:58 (15)	15:43
11	09:21		08:22	12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21 5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25 75	13:58 (15)	15:43
12	09:20		08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23 72	13:58 (15)	15:42
13	09:18	12:39 (9)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13 5	12:44 (9)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21 72	13:58 (15)	15:42
14	09:17	12:39 (9)	08:15		06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15 7	12:46 (9)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 68	13:57 (15)	15:42
15	09:16	12:39 (9)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17 15	12:54 (9)	17:30		18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17 63	13:57 (15)	15:42
16	09:14	12:38 (9)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19 17	12:55 (9)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15 50	13:57 (15)	15:42
17	09:13	12:38 (9)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21 18	12:56 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 45	13:55 (15)	15:42
18	09:12	12:37 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23 19	12:56 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11 42	13:55 (15)	15:42
19	09:10	12:38 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25 20	12:58 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09 39	13:54 (15)	15:42
20	09:08	12:37 (17)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27 22	12:59 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07 33	13:51 (15)	15:42
21	09:07	12:35 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30 23	12:58 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06 23	12:34 (9)	15:43
22	09:05	12:34 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32 33	14:16 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04 22	12:35 (9)	15:43
23	09:03	12:33 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34 39	14:19 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02 20	12:34 (9)	15:44
24	09:01	12:33 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37 42	14:21 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01 20	12:35 (9)	15:44
25	09:00	12:32 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39 45	14:22 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59 18	12:34 (9)	15:45
26	08:58	10:57 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41 50	14:24 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58 17	12:34 (9)	15:46
27	08:56	10:51 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44 64	14:24 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56 15	12:33 (9)	15:47
28	08:54	10:51 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46 69	14:25 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55 7	12:26 (9)	15:48
29	08:52	10:51 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49 70	14:26 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53 5	12:25 (9)	15:49
30	08:50	10:50 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51 72	14:26 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)			07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53 74	14:27 (15)			20:14		22:29		22:03	20:42		16:51 7	12:20 (17)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case	704		609									7		1322		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46	10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51	10:19 (12)	09:00
	15:53		16:56 73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49 43	13:46 (15)	15:51
2	09:27		08:43	10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:18 (12)	09:01
	15:54		16:58 74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 53	13:48 (15)	15:50
3	09:27		08:41	10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:18 (12)	09:03
	15:55		17:01 74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44 59	13:50 (15)	15:49
4	09:26		08:39	10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:16 (12)	09:05
	15:57		17:03 73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 65	13:51 (15)	15:48
5	09:26		08:37	10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:16 (12)	09:07
	15:58		17:06 71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39 70	13:52 (15)	15:47
6	09:25		08:34	10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:16 (12)	09:09
	16:00		17:08 68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37 73	13:53 (15)	15:46
7	09:24		08:32	10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:16 (12)	09:10
	16:02		17:11 65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34 73	13:52 (15)	15:45
8	09:24		08:30	10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:16 (12)	09:12
	16:03		17:13 58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32 73	13:53 (15)	15:45
9	09:23		08:27	10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:16 (12)	09:13
	16:05		17:16 50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30 75	13:53 (15)	15:44
10	09:22		08:25	10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:17 (12)	09:15
	16:07		17:18 40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28 74	13:54 (15)	15:43
11	09:21		08:22	10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:17 (12)	09:16
	16:09		17:21 22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25 69	13:53 (15)	15:43
12	09:20		08:20	12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:18 (12)	09:17
	16:11		17:23 4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23 54	13:53 (15)	15:42
13	09:18		08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:20 (12)	09:19
	16:13		17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21 53	13:53 (15)	15:42
14	09:17		08:15		06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	11:57 (17)	09:20
	16:15		17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 51	13:52 (15)	15:42
15	09:16		08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:58 (17)	09:21
	16:17		17:30		18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17 50	13:52 (15)	15:42
16	09:14		08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:59 (17)	09:22
	16:19		17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15 49	13:52 (15)	15:42
17	09:13	12:33 (9)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:00 (17)	09:23
	16:21 5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 45	13:50 (15)	15:42
18	09:12	12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:01 (17)	09:24
	16:23 18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11 43	13:50 (15)	15:42
19	09:10	12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:03 (17)	09:25
	16:25 19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09 38	13:49 (15)	15:42
20	09:08	12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:04 (17)	09:25
	16:27 20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07 27	13:41 (15)	15:42
21	09:07	12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:07 (17)	09:26
	16:30 22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06 22	12:29 (9)	15:43
22	09:05	12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:10 (9)	09:27
	16:32 27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04 20	12:30 (9)	15:43
23	09:03	12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:10 (9)	09:27
	16:34 38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02 19	12:29 (9)	15:44
24	09:01	12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:11 (9)	09:28
	16:37 43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01 18	12:29 (9)	15:44
25	09:00	12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:11 (9)	09:28
	16:39 45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59 5	12:28 (9)	15:45
26	08:58	12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49		09:28
	16:41 49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58		15:46
27	08:56	12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52		09:28
	16:44 50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56		15:47
28	08:54	12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54		09:28
	16:46 51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55		15:48
29	08:52	10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56		09:28
	16:49 53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53		15:49
30	08:50	10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58		09:28
	16:51 55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54 7	12:13 (17)	15:52		15:50
31	08:48	10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)			09:28
	16:53 69	14:22 (15)			20:14		22:29		22:03	20:42		16:51 25	12:17 (17)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case	564		672									32		1221		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		12:03 (26)	08:45		14:59 (17)	07:35	07:07	05:44	04:39
	15:52	20	12:23 (26)	16:56	18	15:17 (17)	18:04	20:16	21:26	22:30
2	09:27		12:03 (26)	08:43		14:59 (17)	07:32	07:04	05:41	04:38
	15:54	20	12:23 (26)	16:58	19	15:18 (17)	18:07	20:19	21:28	22:32
3	09:27		12:03 (26)	08:41		14:58 (17)	07:30	07:01	05:38	04:37
	15:55	20	12:23 (26)	17:01	19	15:17 (17)	18:09	20:21	21:30	22:33
4	09:26		12:03 (26)	08:39		14:59 (17)	07:27	06:58	05:36	04:36
	15:57	21	12:24 (26)	17:03	19	15:18 (17)	18:12	20:23	21:33	22:35
5	09:26		12:04 (26)	08:37		14:59 (17)	07:24	06:55	05:33	04:34
	15:58	26	13:33 (12)	17:06	19	15:18 (17)	18:14	20:26	21:35	22:36
6	09:25		12:04 (26)	08:34		15:00 (17)	07:21	06:52	05:31	04:33
	16:00	29	13:35 (12)	17:08	18	15:18 (17)	18:16	20:28	21:37	22:38
7	09:24		12:05 (26)	08:32		15:00 (17)	07:18	06:49	05:29	04:32
	16:01	31	13:37 (12)	17:11	17	15:17 (17)	18:19	20:30	21:39	22:39
8	09:23		12:06 (26)	08:30		15:00 (17)	07:16	06:46	05:26	04:31
	16:03	33	13:39 (12)	17:13	16	15:16 (17)	18:21	20:33	21:42	22:40
9	09:23		12:06 (26)	08:27		15:02 (17)	07:13	06:44	05:24	04:31
	16:05	33	13:39 (12)	17:15	14	15:16 (17)	18:23	20:35	21:44	22:42
10	09:22		12:07 (26)	08:25		15:03 (17)	07:10	06:41	05:21	04:30
	16:07	35	13:41 (12)	17:18	11	15:14 (17)	18:26	20:37	21:46	22:43
11	09:21		12:07 (26)	08:22		15:07 (17)	07:07	06:38	05:19	04:29
	16:09	35	13:41 (12)	17:20	5	15:12 (17)	18:28	20:39	21:49	22:44
12	09:19		12:08 (26)	08:20			07:04	06:35	05:17	04:29
	16:11	35	13:42 (12)	17:23			18:30	20:42	21:51	22:45
13	09:18		12:09 (26)	08:17			07:01	06:32	05:15	04:28
	16:12	35	13:43 (12)	17:25			18:33	20:44	21:53	22:46
14	09:17		12:10 (26)	08:15			06:58	06:29	05:12	04:28
	16:14	35	13:44 (12)	17:28			18:35	20:46	21:55	22:46
15	09:16		12:11 (26)	08:12			06:56	06:27	05:10	04:27
	16:17	34	13:45 (12)	17:30			18:37	20:49	21:57	22:47
16	09:14		12:12 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	32	13:45 (12)	17:33			18:40	20:51	22:00	22:48
17	09:13		12:14 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	29	13:45 (12)	17:35			18:42	20:53	22:02	22:48
18	09:11		12:16 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	26	13:46 (12)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:25 (12)	08:02			06:44	06:16	05:02	04:26
	16:25	21	13:46 (12)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:25 (12)	07:59			06:41	06:13	05:00	04:26
	16:27	22	13:47 (12)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:26 (12)	07:57			06:38	06:10	04:58	04:26
	16:30	21	13:47 (12)	17:45			18:51	21:03	22:10	22:50
22	09:05		13:26 (12)	07:54			06:35	06:07	04:56	04:27
	16:32	21	13:47 (12)	17:48			18:54	21:05	22:12	22:50
23	09:03		13:27 (12)	07:51			06:33	06:05	04:54	04:27
	16:34	20	13:47 (12)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:28 (12)	07:49			06:30	06:02	04:52	04:27
	16:37	19	13:47 (12)	17:52			18:58	21:09	22:16	22:50
25	09:00		13:29 (12)	07:46			06:27	05:59	04:50	04:28
	16:39	18	13:47 (12)	17:55			19:00	21:12	22:18	22:50
26	08:58		13:30 (12)	07:43			06:24	05:57	04:49	04:28
	16:41	17	13:47 (12)	17:57			19:03	21:14	22:20	22:50
27	08:56		13:30 (12)	07:41			06:21	05:54	04:47	04:29
	16:44	20	15:09 (17)	18:00			19:05	21:16	22:22	22:50
28	08:54		13:32 (12)	07:38			06:18	05:51	04:45	04:29
	16:46	23	15:12 (17)	18:02			19:07	21:19	22:23	22:50
29	08:52		13:35 (12)				07:15	05:49	04:44	04:30
	16:48	21	15:14 (17)				20:10	21:21	22:25	22:49
30	08:50		15:00 (17)				07:12	05:46	04:42	04:31
	16:51	15	15:15 (17)				20:12	21:23	22:27	22:49
31	08:48		15:00 (17)				07:09		04:41	
	16:53	16	15:16 (17)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		783			175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November		December	
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59	12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51 18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01	12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50 19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03	12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49 20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05	12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48 20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07	12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47 20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08	12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46 20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10	12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45 21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12	12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44 20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13	12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44 21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15	12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43 21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16	12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43 21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17	12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42 20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19	12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42 20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20	12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42 21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21	12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42 21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22	12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42 20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23	12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42 20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24	12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42 20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25	12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42 20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25	12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42 20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26	12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43 20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27	12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43 20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27	12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44 20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27	12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44 21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28	12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45 20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28	12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46 20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28	12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47 20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28	12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47 21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28	12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49 20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28	12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50 20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28	12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51 20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199	
Total, worst case		631		5										419		625

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April		May	June
1	09:28			08:45		10:57 (37)	07:35		16:28 (17)	07:06		05:44	04:39
	15:52			16:56	40	13:50 (26)	18:04	11	16:39 (17)	20:16		21:26	22:30
2	09:27			08:43		10:59 (37)	07:32		16:27 (17)	07:04		05:41	04:38
	15:54			16:58	37	13:51 (26)	18:07	13	16:40 (17)	20:19		21:28	22:32
3	09:27			08:41		11:02 (37)	07:30		16:27 (17)	07:01		05:38	04:37
	15:55			17:01	28	13:49 (26)	18:09	14	16:41 (17)	20:21		21:30	22:33
4	09:26			08:39		13:29 (26)	07:27		16:27 (17)	06:58		05:36	04:36
	15:57			17:03	20	13:49 (26)	18:12	17	16:44 (17)	20:23		21:33	22:35
5	09:26			08:37		13:30 (26)	07:24		16:27 (17)	06:55		05:33	04:34
	15:58			17:06	17	13:47 (26)	18:14	19	16:46 (17)	20:26		21:35	22:36
6	09:25			08:34		13:33 (26)	07:21		16:28 (17)	06:52		05:31	04:33
	16:00			17:08	12	13:45 (26)	18:16	17	16:45 (17)	20:28		21:37	22:38
7	09:24			08:32			07:18		16:29 (17)	06:49		05:29	04:32
	16:01			17:11			18:19	15	16:44 (17)	20:30		21:39	22:39
8	09:23			08:30			07:15		16:30 (17)	06:46		05:26	04:32
	16:03			17:13			18:21	12	16:42 (17)	20:32		21:42	22:40
9	09:23			08:27			07:13		16:33 (17)	06:44		05:24	04:31
	16:05			17:15			18:23	6	16:39 (17)	20:35		21:44	22:41
10	09:22			08:25			07:10			06:41		05:21	04:30
	16:07			17:18			18:26			20:37		21:46	22:43
11	09:20			08:22			07:07			06:38		05:19	04:29
	16:09			17:20			18:28			20:39		21:48	22:44
12	09:19			08:20		14:57 (7)	07:04			06:35		05:17	04:29
	16:11			17:23	8	15:05 (7)	18:30			20:42		21:51	22:45
13	09:18			08:17		14:59 (7)	07:01			06:32		05:15	04:28
	16:12			17:25	11	15:10 (7)	18:33			20:44		21:53	22:45
14	09:17		11:05 (37)	08:15		15:02 (7)	06:58			06:29		05:12	04:28
	16:14	3	11:08 (37)	17:28	12	15:14 (12)	18:35			20:46		21:55	22:46
15	09:16		10:59 (37)	08:12		15:06 (12)	06:56			06:27		05:10	04:27
	16:17	10	11:09 (37)	17:30	12	15:18 (12)	18:37			20:49		21:57	22:47
16	09:14		10:52 (37)	08:10		15:06 (12)	06:53			06:24		05:08	04:27
	16:19	18	11:10 (37)	17:33	15	15:21 (12)	18:40			20:51		21:59	22:48
17	09:13		10:51 (37)	08:07		15:05 (12)	06:50			06:21		05:06	04:27
	16:21	19	11:10 (37)	17:35	16	15:21 (12)	18:42			20:53		22:02	22:48
18	09:11		10:51 (37)	08:05		15:05 (12)	06:47			06:18		05:04	04:26
	16:23	20	11:11 (37)	17:38	15	15:20 (12)	18:44			20:56		22:04	22:49
19	09:10		10:51 (37)	08:02		15:06 (12)	06:44			06:16		05:02	04:26
	16:25	21	11:12 (37)	17:40	16	15:22 (12)	18:47			20:58		22:06	22:49
20	09:08		10:51 (37)	07:59		15:07 (12)	06:41			06:13		05:00	04:26
	16:27	22	11:13 (37)	17:43	17	15:24 (12)	18:49			21:00		22:08	22:50
21	09:07		10:51 (37)	07:57		15:07 (12)	06:38			06:10		04:58	04:26
	16:30	22	11:13 (37)	17:45	20	15:27 (12)	18:51			21:02		22:10	22:50
22	09:05		10:51 (37)	07:54		15:08 (12)	06:35			06:07		04:56	04:27
	16:32	27	12:49 (32)	17:47	20	15:28 (12)	18:53			21:05		22:12	22:50
23	09:03		10:51 (37)	07:51		15:09 (12)	06:32			06:05		04:54	04:27
	16:34	39	13:02 (32)	17:50	18	15:27 (12)	18:56			21:07		22:14	22:50
24	09:01		10:52 (37)	07:49		15:12 (12)	06:30			06:02		04:52	04:27
	16:37	40	13:04 (32)	17:52	13	15:25 (12)	18:58			21:09		22:16	22:50
25	08:59		10:52 (37)	07:46		15:16 (12)	06:27			05:59		04:50	04:28
	16:39	39	13:04 (32)	17:55	5	15:21 (12)	19:00			21:12		22:18	22:50
26	08:58		10:52 (37)	07:43			06:24			05:57		04:49	04:28
	16:41	39	13:24 (26)	17:57			19:03			21:14		22:20	22:50
27	08:56		10:53 (37)	07:41			06:21			05:54		04:47	04:29
	16:44	39	13:28 (26)	18:00			19:05			21:16		22:22	22:50
28	08:54		10:53 (37)	07:38		16:32 (17)	06:18			05:51		04:45	04:29
	16:46	41	13:35 (26)	18:02	4	16:36 (17)	19:07			21:19		22:23	22:50
29	08:52		10:54 (37)				07:15			05:49		04:44	04:30
	16:48	41	13:44 (26)				20:10			21:21		22:25	22:49
30	08:50		10:55 (37)				07:12			05:46		04:42	04:31
	16:51	42	13:47 (26)				20:12			21:23		22:27	22:49
31	08:48		10:56 (37)				07:09					04:41	
	16:53	42	13:49 (26)				20:14					22:29	
Potential sun hours	221			260			365			432		521	547
Total, worst case		524			356			124					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51		08:59
	22:48	22:01	20:39	19:13		16:48		15:51
2	04:33	05:26	06:35	07:41		07:54		09:01
	22:48	21:58	20:37	19:10		16:46		15:50
3	04:34	05:28	06:37	07:44		07:56		09:03
	22:47	21:56	20:34	19:07		16:44		15:49
4	04:35	05:30	06:39	07:46		07:58	13:07 (26)	09:05
	22:46	21:54	20:31	19:04		16:41	4 13:11 (26)	15:48
5	04:36	05:33	06:42	07:48	17:09 (17)	08:01	13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9 17:18 (17)	16:39	13 13:15 (26)	15:47
6	04:37	05:35	06:44	07:50	17:06 (17)	08:03	13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14 17:20 (17)	16:36	17 13:18 (26)	15:46
7	04:38	05:37	06:46	07:53	17:04 (17)	08:06	12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16 17:20 (17)	16:34	21 13:19 (26)	15:45
8	04:40	05:39	06:48	07:55	17:03 (17)	08:08	10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18 17:21 (17)	16:32	29 13:20 (26)	15:44
9	04:41	05:41	06:50	07:57	17:02 (17)	08:10	10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18 17:20 (17)	16:30	37 13:22 (26)	15:44
10	04:42	05:44	06:53	07:59	17:01 (17)	08:13	10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16 17:17 (17)	16:27	40 13:21 (26)	15:43
11	04:44	05:46	06:55	08:02	17:01 (17)	08:15	10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14 17:15 (17)	16:25	41 13:19 (26)	15:43
12	04:45	05:48	06:57	08:04	17:01 (17)	08:18	10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12 17:13 (17)	16:23	42 13:19 (26)	15:42
13	04:47	05:50	06:59	08:06	17:02 (17)	08:20	10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10 17:12 (17)	16:21	41 13:15 (26)	15:42
14	04:49	05:53	07:01	08:09	17:06 (17)	08:22	10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2 17:08 (17)	16:19	41 13:07 (26)	15:42
15	04:50	05:55	07:04	08:11		08:25	10:25 (37)	09:21
	22:33	21:26	19:59	18:33		16:17	40 13:01 (26)	15:42
16	04:52	05:57	07:06	08:13		08:27	10:26 (37)	09:22
	22:32	21:23	19:56	18:30		16:15	39 12:58 (26)	15:42
17	04:54	05:59	07:08	08:16	15:45 (12)	08:29	10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9 15:54 (12)	16:13	39 12:37 (32)	15:42
18	04:56	06:02	07:10	08:18	15:42 (12)	08:32	10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15 15:57 (12)	16:11	40 12:38 (32)	15:42
19	04:57	06:04	07:12	08:20	15:40 (12)	08:34	10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18 15:58 (12)	16:09	39 12:37 (32)	15:42
20	04:59	06:06	07:15	08:23	15:39 (12)	08:36	10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21 16:00 (12)	16:07	28 12:25 (32)	15:42
21	05:01	06:08	07:17	08:25	15:37 (12)	08:38	10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18 15:55 (12)	16:06	22 10:49 (37)	15:43
22	05:03	06:10	07:19	08:27	15:37 (12)	08:41	10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16 15:53 (12)	16:04	22 10:49 (37)	15:43
23	05:05	06:13	07:21	08:30	15:36 (12)	08:43	10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16 15:52 (12)	16:02	21 10:49 (37)	15:44
24	05:07	06:15	07:24	08:32	15:35 (12)	08:45	10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16 15:51 (12)	16:01	20 10:49 (37)	15:44
25	05:09	06:17	07:26	07:34	14:36 (12)	08:47	10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15 14:51 (12)	15:59	19 10:48 (37)	15:45
26	05:11	06:19	07:28	07:37	14:35 (12)	08:49	10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14 14:49 (12)	15:57	18 10:49 (37)	15:46
27	05:13	06:22	07:30	07:39	14:35 (12)	08:51	10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12 14:47 (12)	15:56	10 10:48 (37)	15:47
28	05:15	06:24	07:32	07:41	14:30 (7)	08:53	10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12 14:42 (12)	15:55	3 10:47 (37)	15:48
29	05:17	06:26	07:35	07:44	14:27 (7)	08:55		09:28
	22:07	20:48	19:19	16:56	11 14:38 (7)	15:53		15:49
30	05:20	06:28	07:37	07:46	14:26 (7)	08:57		09:28
	22:05	20:45	19:16	16:53	8 14:34 (7)	15:52		15:50
31	05:22	06:31		07:49				09:28
	22:03	20:42		16:51				15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case					330		686	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49
31	08:47		15:29 (8)				07:09						04:41			
	16:53	20	15:49 (8)				20:14						22:28			
Potential sun hours	221			260			365			432			521			547
Total, worst case		77			781			508			1216			65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	04:32	05:24			06:33			18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60		19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35			18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57		19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37			18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54		19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39			18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35		19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42			18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31		19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44			18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28		19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46			18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25		19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48			18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18		19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50			19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11		19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53				07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13				18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55				08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11				18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57				08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08				18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59				08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05				18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01			18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7		18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04			18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13		18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06			18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16		18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08			18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19		18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10			18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20		18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12			18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21		18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15			18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22		18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17			18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22		18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19			18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22		18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21			18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21		18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23			18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19		18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26			18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18		18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28			18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15		18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30			18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11		18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32				07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21				16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34				07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18				16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37				07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16				16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)					07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)					16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319				236			200
Total, worst case			983			565			839				305		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		11:14 (23)	08:46		10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53	31	12:43 (24)	16:56	18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28		11:14 (23)	08:44		10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54	30	12:43 (24)	16:58	17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27		11:13 (23)	08:41		10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55	31	12:43 (24)	17:01	14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27		11:13 (23)	08:39		10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57	30	12:43 (24)	17:03	11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26		11:14 (23)	08:37		10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58	28	12:42 (24)	17:06	7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25		11:14 (23)	08:35			07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:09		11:00 (23)
	16:00	28	12:42 (24)	17:08			18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	7	09:54 (28)	15:46	28	12:28 (24)
7	09:25		11:14 (23)	08:32			07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:45 (28)	09:10		11:01 (23)
	16:02	26	12:41 (24)	17:11			18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	11	09:56 (28)	15:45	29	12:30 (24)
8	09:24		11:14 (23)	08:30			07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:43 (28)	09:12		11:02 (23)
	16:03	21	11:35 (23)	17:13			18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	14	09:57 (28)	15:45	30	12:31 (24)
9	09:23		11:15 (23)	08:27			07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:42 (28)	09:14		11:03 (23)
	16:05	21	11:36 (23)	17:16			18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	17	09:59 (28)	15:44	30	12:32 (24)
10	09:22		11:15 (23)	08:25			07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:42 (28)	09:15		11:03 (23)
	16:07	21	11:36 (23)	17:18			18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	18	10:00 (28)	15:44	30	12:32 (24)
11	09:21		11:15 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:41 (28)	09:16		11:04 (23)
	16:09	22	11:37 (23)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	19	10:00 (28)	15:43	30	12:33 (24)
12	09:20		11:15 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:41 (28)	09:18		11:04 (23)
	16:11	22	11:37 (23)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	19	10:00 (28)	15:43	31	12:34 (24)
13	09:19		11:16 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:41 (28)	09:19		11:05 (23)
	16:13	22	11:38 (23)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	20	10:01 (28)	15:42	31	12:35 (24)
14	09:17		11:16 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:42 (28)	09:20		11:06 (23)
	16:15	22	11:38 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	19	10:01 (28)	15:42	30	12:35 (24)
15	09:16		11:16 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:41 (28)	09:21		11:06 (23)
	16:17	22	11:38 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	20	10:01 (28)	15:42	31	12:36 (24)
16	09:15		11:16 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:42 (28)	09:22		11:08 (23)
	16:19	22	11:38 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	19	10:01 (28)	15:42	30	12:37 (24)
17	09:13		11:18 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:43 (28)	09:23		11:09 (23)
	16:21	21	11:39 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	26	11:08 (23)	15:42	30	12:38 (24)
18	09:12		11:18 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		09:43 (28)	09:24		11:08 (23)
	16:23	21	11:39 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	29	11:10 (23)	15:42	30	12:37 (24)
19	09:10		10:13 (28)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		09:44 (28)	09:25		11:09 (23)
	16:25	27	11:39 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	31	11:12 (23)	15:42	29	12:38 (24)
20	09:09		10:12 (28)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		09:45 (28)	09:26		11:10 (23)
	16:28	30	11:39 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	32	11:13 (23)	15:43	30	12:39 (24)
21	09:07		10:11 (28)	07:57			06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		09:46 (28)	09:26		11:11 (23)
	16:30	32	11:39 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	32	11:14 (23)	15:43	29	12:40 (24)
22	09:05		10:10 (28)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		09:48 (28)	09:27		11:11 (23)
	16:32	32	11:38 (23)	17:48			18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04	29	11:15 (23)	15:43	29	12:40 (24)
23	09:03		10:09 (28)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		09:49 (28)	09:27		11:11 (23)
	16:34	31	11:37 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	27	11:15 (23)	15:44	30	12:40 (24)
24	09:02		10:09 (28)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:55 (23)	09:28		11:12 (23)
	16:37	29	11:36 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	21	11:16 (23)	15:45	30	12:41 (24)
25	09:00		10:09 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:55 (23)	09:28		11:12 (23)
	16:39	26	11:34 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	21	11:16 (23)	15:45	29	12:41 (24)
26	08:58		10:09 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:55 (23)	09:28		11:13 (23)
	16:41	19	10:28 (28)	17:57			19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58	22	11:17 (23)	15:46	30	12:42 (24)
27	08:56		10:09 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:55 (23)	09:28		11:13 (23)
	16:44	20	10:29 (28)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	22	11:17 (23)	15:47	30	12:42 (24)
28	08:54		10:09 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:56 (23)	09:29		11:13 (23)
	16:46	19	10:28 (28)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	22	11:18 (23)	15:48	31	12:43 (24)
29	08:52		10:09 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:56 (23)	09:29		11:13 (23)
	16:49	20	10:29 (28)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	11:18 (23)	15:49	30	12:42 (24)
30	08:50		10:09 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:56 (23)	09:28		11:13 (23)
	16:51	19	10:28 (28)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	22	11:18 (23)	15:50	31	12:43 (24)
31	08:48		10:10 (28)				07:10		04:41		05:22	06:31		07:49				09:28		11:14 (23)
	16:54	19	10:29 (28)				20:14		22:29		22:03	20:43		16:51				15:51	30	12:43 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199		
Total, worst case		764			67											541			888	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May	June	July	August	September	October	November		December	
1	09:28	12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51		09:00	12:38 (12)
	15:52 16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51 20	12:58 (12)
2	09:27	12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01	12:39 (12)
	15:54 16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50 20	12:59 (12)
3	09:27	12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03	12:40 (12)
	15:55 17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49 20	13:00 (12)
4	09:26	12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05	12:40 (12)
	15:57 17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48 20	13:00 (12)
5	09:26	12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07	12:41 (12)
	15:58 18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47 19	13:00 (12)
6	09:25	12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:09	12:41 (12)
	16:00 19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46 19	13:00 (12)
7	09:24	12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10	12:42 (12)
	16:01 20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34		15:45 18	13:00 (12)
8	09:24	12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12	12:43 (12)
	16:03 19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44 18	13:01 (12)
9	09:23	12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10		09:13	12:43 (12)
	16:05 20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30		15:44 17	13:00 (12)
10	09:22	12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13		09:15	12:44 (12)
	16:07 20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27		15:43 17	13:01 (12)
11	09:21	12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:16	12:45 (12)
	16:09 20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25		15:43 16	13:01 (12)
12	09:19	12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18		09:17	12:45 (12)
	16:11 20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23		15:42 16	13:01 (12)
13	09:18	12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20		09:19	12:46 (12)
	16:12 20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21		15:42 16	13:02 (12)
14	09:17	12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22		09:20	12:47 (12)
	16:14 20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19		15:42 14	13:01 (12)
15	09:16	12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25		09:21	12:47 (12)
	16:17 20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17		15:42 14	13:01 (12)
16	09:14	12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		09:22	12:48 (12)
	16:19 20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15		15:42 13	13:01 (12)
17	09:13	12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29		09:23	12:48 (12)
	16:21 19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13		15:42 14	13:02 (12)
18	09:11	12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32		09:24	12:49 (12)
	16:23 19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11		15:42 13	13:02 (12)
19	09:10	13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34	12:41 (12)	09:25	12:50 (12)
	16:25 18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 9	12:50 (12)	15:42 13	13:03 (12)
20	09:08	13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	12:39 (12)	09:25	12:51 (12)
	16:27 16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 12	12:51 (12)	15:42 12	13:03 (12)
21	09:07	13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	12:38 (12)	09:26	12:51 (12)
	16:30 15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 15	12:53 (12)	15:43 12	13:03 (12)
22	09:05	13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41	12:38 (12)	09:27	12:52 (12)
	16:32 12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04 16	12:54 (12)	15:43 12	13:04 (12)
23	09:03	13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	12:37 (12)	09:27	12:52 (12)
	16:34 9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02 18	12:55 (12)	15:44 12	13:04 (12)
24	09:01		07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	12:38 (12)	09:28	12:52 (12)
	16:37		17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	12:56 (12)	15:44 12	13:04 (12)
25	09:00		07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:37 (12)	09:28	12:53 (12)
	16:39		17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 19	12:56 (12)	15:45 13	13:06 (12)
26	08:58		07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:37 (12)	09:28	12:53 (12)
	16:41		17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 20	12:57 (12)	15:46 13	13:06 (12)
27	08:56		07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	12:37 (12)	09:28	12:54 (12)
	16:44		18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 20	12:57 (12)	15:47 13	13:07 (12)
28	08:54		07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:37 (12)	09:28	12:53 (12)
	16:46		18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55 20	12:57 (12)	15:48 14	13:07 (12)
29	08:52			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:38 (12)	09:28	12:53 (12)
	16:48			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 20	12:58 (12)	15:49 15	13:08 (12)
30	08:50			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:38 (12)	09:28	12:54 (12)
	16:51			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 20	12:58 (12)	15:50 15	13:09 (12)
31	08:48			07:09		04:41		05:22	06:31		07:49			09:28	12:54 (12)
	16:53			20:14		22:29		22:03	20:42		16:51			15:51 15	13:09 (12)
Potential sun hours	221		260	365	432	521	547	546	478	386	319	236		199	
Total, worst case		410											207		475

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February			March	April	May	June	July	August	September	October			November			December
1	09:28		08:45		13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39			07:51		14:48 (12)	08:59
	15:52		16:56	19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13			16:48	19	15:07 (12)	15:51
2	09:27		08:43		13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41			07:53		14:49 (12)	09:01
	15:54		16:58	16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10			16:46	17	15:06 (12)	15:50
3	09:27		08:41		13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44			07:56		14:49 (12)	09:03
	15:55		17:01	12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07			16:44	15	15:04 (12)	15:49
4	09:26		08:39		14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46			07:58		14:52 (12)	09:05
	15:57		17:03	5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04			16:41	10	15:02 (12)	15:48
5	09:26		08:37			07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48			08:01		14:56 (12)	09:07
	15:58		17:06			18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01			16:39	2	14:58 (12)	15:47
6	09:25		08:34		15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50			08:03			09:08
	16:00		17:08	4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58			16:36			15:46
7	09:24		08:32		15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53			08:06		13:31 (26)	09:10
	16:01		17:11	11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56			16:34	7	13:38 (26)	15:45
8	09:23		08:30		15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55			08:08		13:28 (26)	09:12
	16:03		17:13	15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53			16:32	13	13:41 (26)	15:44
9	09:23		08:27		15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57			08:10		13:27 (26)	09:13
	16:05		17:15	18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50			16:30	16	13:43 (26)	15:44
10	09:22		08:25		15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59			08:13		13:25 (26)	09:15
	16:07		17:18	19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47			16:27	19	13:44 (26)	15:43
11	09:20		08:22		15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02			08:15		13:24 (26)	09:16
	16:09		17:20	21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44			16:25	21	13:45 (26)	15:43
12	09:19		08:20		15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04			08:17		13:24 (26)	09:17
	16:10		17:23	22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41			16:23	22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17		15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06			08:20		13:23 (26)	09:19
	16:12	5 13:58 (26)	17:25	22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39			16:21	23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15		15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09			08:22		13:23 (26)	09:20
	16:14	9 14:00 (26)	17:28	23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36			16:19	24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12		15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11			08:25		11:07 (37)	09:21
	16:17	11 14:01 (26)	17:30	22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33			16:17	33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10		15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13			08:27		11:06 (37)	09:22
	16:19	17 14:07 (26)	17:33	22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30			16:15	36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07		15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16			08:29		11:04 (37)	09:23
	16:21	21 14:10 (26)	17:35	21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28			16:13	40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05		15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18			08:32		11:03 (37)	09:24
	16:23	27 14:11 (26)	17:38	19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25			16:11	42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02		15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20			08:34		11:03 (37)	09:25
	16:25	32 14:12 (26)	17:40	17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22			16:09	44	13:49 (26)	15:42
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	16:27	36 14:12 (26)	17:43	14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19			16:07	45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57		15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25		15:53 (12)	08:38		11:05 (37)	09:26
	16:30	42 14:13 (26)	17:45	8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17	10	16:03 (12)	16:06	42	13:49 (26)	15:43
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	16:32	45 14:14 (26)	17:47			18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14	15	16:06 (12)	16:04	36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51			06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30		15:49 (12)	08:43		11:12 (37)	09:27
	16:34	44 14:14 (26)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	17	16:06 (12)	16:02	32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32		15:48 (12)	08:45		11:16 (37)	09:27
	16:36	42 14:15 (26)	17:52			18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	19	16:07 (12)	16:01	28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		14:48 (12)	08:47		13:27 (26)	09:28
	16:39	40 14:15 (26)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	20	15:08 (12)	15:59	21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43			06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37		14:46 (12)	08:49		13:29 (26)	09:28
	16:41	37 14:15 (26)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	22	15:08 (12)	15:57	17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		14:46 (12)	08:51		13:29 (26)	09:28
	16:44	33 14:15 (26)	18:00			19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01	23	15:09 (12)	15:56	12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41		14:46 (12)	08:53		13:30 (26)	09:28
	16:46	24 14:15 (26)	18:02			19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	22	15:08 (12)	15:55	9	13:39 (26)	15:47
29	08:52	13:51 (26)				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44		14:46 (12)	08:55		13:35 (26)	09:28
	16:48	23 14:14 (26)				20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56	22	15:08 (12)	15:53	5	13:40 (26)	15:49
30	08:50	13:52 (26)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		14:47 (12)	08:57			09:28
	16:51	22 14:14 (26)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	21	15:08 (12)	15:52			15:50
31	08:48	13:54 (26)				07:09		04:41		05:22	06:31		07:49		14:47 (12)				09:28
	16:53	20 14:14 (26)				20:14		22:29		22:03	20:42		16:51	20	15:07 (12)				15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319			236			199
Total, worst case		530		330										211			650		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June
1	09:28		12:11 (32)	08:45		10:15 (13)	07:35		13:26 (26)	07:07		18:42 (17)	05:44		04:39
	15:52	47	14:26 (14)	16:56	119	15:37 (35)	18:04	35	17:05 (9)	20:16	19	19:01 (17)	21:26		22:30
2	09:27		12:11 (32)	08:43		12:16 (32)	07:32		15:45 (7)	07:04		18:43 (17)	05:41		04:38
	15:54	53	14:28 (14)	16:58	114	15:38 (35)	18:07	27	17:09 (9)	20:19	16	18:59 (17)	21:28		22:32
3	09:27		12:10 (32)	08:41		12:17 (32)	07:30		16:34 (12)	07:01		18:46 (17)	05:38		04:37
	15:55	58	14:29 (14)	17:01	113	15:38 (35)	18:09	33	17:12 (9)	20:21	11	18:57 (17)	21:30		22:33
4	09:26		12:10 (32)	08:39		09:39 (37)	07:27		16:31 (12)	06:58			05:36		04:36
	15:57	61	14:29 (14)	17:03	109	15:39 (35)	18:12	43	17:15 (9)	20:23			21:33		22:35
5	09:26		12:10 (32)	08:36		09:39 (37)	07:24		16:29 (12)	06:55			05:34		04:35
	15:58	64	14:30 (14)	17:06	105	15:39 (35)	18:14	46	17:15 (9)	20:26			21:35		22:36
6	09:25		12:09 (32)	08:34		09:40 (37)	07:21		16:26 (12)	06:52			05:31		04:34
	16:00	70	14:31 (14)	17:08	95	15:39 (35)	18:16	49	17:15 (9)	20:28			21:37		22:38
7	09:24		10:10 (13)	08:32		09:40 (37)	07:18		16:25 (12)	06:49			05:29		04:33
	16:01	78	14:32 (14)	17:11	96	15:39 (35)	18:19	50	17:15 (9)	20:30			21:39		22:39
8	09:23		10:10 (13)	08:30		09:38 (37)	07:15		16:23 (12)	06:46			05:26		04:32
	16:03	84	14:33 (14)	17:13	96	15:38 (35)	18:21	52	17:15 (9)	20:32			21:42		22:40
9	09:22		10:10 (13)	08:27		09:36 (37)	07:13		16:22 (12)	06:44			05:24		04:31
	16:05	86	14:33 (14)	17:16	98	15:38 (35)	18:23	53	17:15 (9)	20:35			21:44		22:41
10	09:21		10:11 (13)	08:25		09:33 (37)	07:10		16:20 (12)	06:41			05:21		04:30
	16:07	91	14:34 (14)	17:18	107	15:57 (7)	18:26	54	17:14 (9)	20:37			21:46		22:42
11	09:20		10:10 (13)	08:22		09:29 (37)	07:07		16:19 (12)	06:38			05:19		04:29
	16:09	97	14:34 (14)	17:20	114	16:00 (7)	18:28	54	17:13 (9)	20:39			21:48		22:44
12	09:19		10:09 (13)	08:20		09:27 (37)	07:04		16:18 (12)	06:35			05:17		04:29
	16:11	102	14:35 (14)	17:23	118	16:03 (7)	18:30	54	17:12 (9)	20:42			21:51		22:44
13	09:18		10:09 (13)	08:17		09:24 (37)	07:01		16:18 (12)	06:32			05:15		04:28
	16:13	105	14:35 (14)	17:25	118	16:04 (7)	18:33	52	17:10 (9)	20:44			21:53		22:45
14	09:17		10:10 (13)	08:15		09:21 (37)	06:58		16:17 (12)	06:29			05:12		04:28
	16:15	107	14:36 (14)	17:28	114	16:05 (7)	18:35	51	17:08 (9)	20:46			21:55		22:46
15	09:16		10:10 (13)	08:12		09:18 (37)	06:56		16:17 (12)	06:27			05:10		04:27
	16:17	112	14:37 (14)	17:30	120	16:07 (7)	18:37	47	17:04 (9)	20:49			21:57		22:47
16	09:14		10:02 (13)	08:10		09:13 (37)	06:53		16:17 (12)	06:24			05:08		04:27
	16:19	119	14:37 (14)	17:33	125	16:08 (7)	18:40	46	17:03 (12)	20:51			21:59		22:48
17	09:13		10:02 (13)	08:07		09:13 (37)	06:50		16:17 (12)	06:21			05:06		04:27
	16:21	126	14:37 (14)	17:35	123	16:08 (7)	18:42	46	17:03 (12)	20:53			22:02		22:48
18	09:11		10:02 (13)	08:05		09:13 (37)	06:47		16:16 (12)	06:18			05:04		04:27
	16:23	127	14:37 (14)	17:38	121	16:08 (7)	18:44	46	17:02 (12)	20:56			22:04		22:49
19	09:10		10:02 (13)	08:02		09:15 (37)	06:44		16:16 (12)	06:16			05:02		04:26
	16:25	129	14:37 (14)	17:40	118	16:09 (7)	18:47	56	18:01 (17)	20:58			22:06		22:49
20	09:08		10:02 (13)	07:59		09:16 (37)	06:41		16:16 (12)	06:13			05:00		04:26
	16:27	130	14:37 (14)	17:43	114	16:09 (7)	18:49	60	18:03 (17)	21:00			22:08		22:50
21	09:07		10:03 (13)	07:57		09:17 (37)	06:38		16:16 (12)	06:10			04:58		04:27
	16:30	131	14:37 (14)	17:45	110	16:09 (7)	18:51	64	18:05 (17)	21:02			22:10		22:50
22	09:05		10:03 (13)	07:54		09:18 (37)	06:35		16:17 (12)	06:07			04:56		04:27
	16:32	129	14:36 (14)	17:48	104	16:08 (7)	18:54	63	18:05 (17)	21:05			22:12		22:50
23	09:03		10:04 (13)	07:51		09:20 (37)	06:32		16:17 (12)	06:05			04:54		04:27
	16:34	131	14:36 (14)	17:50	95	16:08 (7)	18:56	64	18:06 (17)	21:07			22:14		22:50
24	09:01		10:04 (13)	07:49		13:09 (26)	06:30		16:18 (12)	06:02			04:52		04:27
	16:37	128	14:35 (14)	17:52	77	16:08 (7)	18:58	64	18:06 (17)	21:09			22:16		22:50
25	08:59		10:05 (13)	07:46		13:11 (26)	06:27		16:18 (12)	05:59			04:50		04:28
	16:39	125	14:34 (14)	17:55	71	16:07 (7)	19:00	62	18:06 (17)	21:12			22:18		22:50
26	08:58		10:05 (13)	07:43		13:13 (26)	06:24		16:20 (12)	05:57			04:49		04:28
	16:41	124	15:28 (35)	17:57	66	16:06 (7)	19:03	61	18:07 (17)	21:14			22:20		22:50
27	08:56		10:06 (13)	07:41		13:16 (26)	06:21		16:22 (12)	05:54			04:47		04:29
	16:44	127	15:30 (35)	18:00	58	16:05 (7)	19:05	57	18:07 (17)	21:16			22:22		22:50
28	08:54		10:07 (13)	07:38		13:19 (26)	06:18		16:23 (12)	05:51			04:45		04:29
	16:46	130	15:33 (35)	18:02	49	16:04 (7)	19:07	54	18:06 (17)	21:19			22:23		22:50
29	08:52		10:08 (13)				07:15		17:26 (12)	05:49			04:44		04:30
	16:48	131	15:35 (35)				20:10	47	19:05 (17)	21:21			22:25		22:49
30	08:50		10:09 (13)				07:12		17:29 (12)	05:46			04:42		04:31
	16:51	129	15:36 (35)				20:12	38	19:04 (17)	21:23			22:27		22:49
31	08:47		10:12 (13)				07:09		18:41 (17)				04:41		
	16:53	126	15:37 (35)				20:14	22	19:03 (17)				22:29		
Potential sun hours	221			260			365			432			521		547
Total, worst case		3257			2867			1550			46				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December		
1	04:32	05:24	06:33			07:39		16:57 (12)	07:51		09:03 (37)	08:59		09:52 (13)
	22:48	22:01	20:39			19:13	53	17:50 (9)	16:49	107	15:26 (7)	15:51	96	14:16 (14)
2	04:33	05:26	06:35			07:41		16:58 (12)	07:53		09:06 (37)	09:01		09:53 (13)
	22:48	21:58	20:37			19:10	54	17:52 (9)	16:46	98	15:08 (35)	15:50	91	14:16 (14)
3	04:34	05:28	06:37			07:44		16:58 (12)	07:56		09:08 (37)	09:03		09:54 (13)
	22:47	21:56	20:34			19:07	54	17:52 (9)	16:44	96	15:08 (35)	15:49	88	14:17 (14)
4	04:35	05:30	06:39			07:46		16:58 (12)	07:58		09:10 (37)	09:05		09:54 (13)
	22:46	21:54	20:31			19:04	54	17:52 (9)	16:41	94	15:08 (35)	15:48	83	14:17 (14)
5	04:36	05:33	06:42			07:48		17:00 (12)	08:01		09:10 (37)	09:07		09:55 (13)
	22:45	21:51	20:28			19:01	52	17:52 (9)	16:39	95	15:09 (35)	15:47	77	14:17 (14)
6	04:37	05:35	06:44			07:50		17:00 (12)	08:03		09:10 (37)	09:08		09:57 (13)
	22:45	21:49	20:25			18:58	52	17:52 (9)	16:37	105	15:09 (35)	15:46	71	14:17 (14)
7	04:38	05:37	06:46			07:53		17:01 (12)	08:06		09:08 (37)	09:10		11:57 (32)
	22:44	21:46	20:22			18:56	50	17:51 (9)	16:34	111	15:09 (35)	15:45	64	14:17 (14)
8	04:40	05:39	06:48			07:55		17:03 (12)	08:08		11:48 (32)	09:12		11:57 (32)
	22:43	21:44	20:19			18:53	48	17:51 (9)	16:32	112	15:09 (35)	15:44	62	14:17 (14)
9	04:41	05:41	06:51		18:40 (17)	07:57		17:04 (12)	08:10		11:47 (32)	09:13		11:59 (32)
	22:41	21:41	20:16	10	18:50 (17)	18:50	46	17:50 (9)	16:30	113	15:09 (35)	15:44	57	14:17 (14)
10	04:42	05:44	06:53		18:37 (17)	07:59		17:06 (12)	08:13		09:45 (13)	09:15		12:00 (32)
	22:40	21:39	20:14	15	18:52 (17)	18:47	40	17:48 (9)	16:27	121	15:08 (35)	15:43	53	14:17 (14)
11	04:44	05:46	06:55		18:35 (17)	08:02		16:22 (7)	08:15		09:42 (13)	09:16		12:01 (32)
	22:39	21:36	20:11	19	18:54 (17)	18:44	36	17:45 (9)	16:25	127	15:08 (35)	15:43	47	14:16 (14)
12	04:45	05:48	06:57		18:34 (17)	08:04		16:18 (7)	08:17		09:41 (13)	09:17		12:03 (32)
	22:38	21:34	20:08	21	18:55 (17)	18:42	25	17:41 (9)	16:23	130	15:08 (35)	15:42	44	14:17 (14)
13	04:47	05:50	06:59		17:21 (12)	08:06		13:56 (26)	08:20		09:39 (13)	09:19		12:04 (32)
	22:36	21:31	20:05	37	18:55 (17)	18:39	42	17:38 (9)	16:21	131	15:06 (35)	15:42	39	14:17 (14)
14	04:49	05:53	07:02		17:17 (12)	08:09		13:50 (26)	08:22		09:39 (13)	09:20		12:07 (32)
	22:35	21:29	20:02	45	18:55 (17)	18:36	53	16:37 (7)	16:19	131	15:05 (35)	15:42	34	14:17 (14)
15	04:50	05:55	07:04		17:13 (12)	08:11		13:46 (26)	08:25		09:39 (13)	09:21		13:06 (26)
	22:33	21:26	19:59	52	18:55 (17)	18:33	62	16:37 (7)	16:17	128	15:03 (35)	15:42	26	14:16 (14)
16	04:52	05:57	07:06		17:11 (12)	08:13		13:44 (26)	08:27		09:39 (13)	09:22		13:08 (26)
	22:32	21:23	19:56	56	18:55 (17)	18:30	69	16:39 (7)	16:15	124	15:02 (35)	15:42	22	14:15 (14)
17	04:54	05:59	07:08		17:08 (12)	08:16		13:41 (26)	08:29		09:38 (13)	09:23		13:10 (26)
	22:30	21:21	19:53	59	18:54 (17)	18:28	75	16:39 (7)	16:13	125	14:07 (14)	15:42	18	14:15 (14)
18	04:56	06:02	07:10		17:07 (12)	08:18		09:55 (37)	08:32		09:38 (13)	09:24		13:12 (26)
	22:29	21:18	19:50	63	18:55 (17)	18:25	86	16:39 (7)	16:11	129	14:09 (14)	15:42	16	14:15 (14)
19	04:58	06:04	07:12		17:06 (12)	08:20		09:51 (37)	08:34		09:39 (13)	09:25		13:16 (3)
	22:27	21:15	19:47	63	18:54 (17)	18:22	98	16:39 (7)	16:09	131	14:11 (14)	15:42	11	14:15 (14)
20	04:59	06:06	07:15		17:04 (12)	08:23		09:49 (37)	08:36		09:38 (13)	09:25		13:16 (3)
	22:25	21:13	19:45	65	18:53 (17)	18:20	106	16:40 (7)	16:07	129	14:11 (14)	15:42	9	14:14 (14)
21	05:01	06:08	07:17		17:03 (12)	08:25		09:46 (37)	08:38		09:39 (13)	09:26		13:17 (3)
	22:23	21:10	19:42	64	18:51 (17)	18:17	113	16:39 (7)	16:06	131	14:13 (14)	15:43	9	14:15 (14)
22	05:03	06:11	07:19		17:01 (12)	08:27		09:45 (37)	08:41		09:38 (13)	09:26		13:18 (3)
	22:21	21:07	19:39	64	18:50 (17)	18:14	116	16:39 (7)	16:04	131	14:13 (14)	15:43	9	14:16 (14)
23	05:05	06:13	07:21		17:00 (12)	08:30		09:44 (37)	08:43		09:39 (13)	09:27		13:18 (3)
	22:19	21:05	19:36	62	18:48 (17)	18:12	119	16:38 (7)	16:02	128	14:14 (14)	15:44	9	14:16 (14)
24	05:07	06:15	07:24		17:00 (12)	08:32		09:43 (37)	08:45		09:39 (13)	09:27		13:18 (3)
	22:18	21:02	19:33	58	18:46 (17)	18:09	122	16:38 (7)	16:01	127	14:14 (14)	15:44	11	14:17 (14)
25	05:09	06:17	07:26		16:59 (12)	07:34		08:43 (37)	08:47		09:40 (13)	09:28		13:15 (26)
	22:16	20:59	19:30	46	17:45 (12)	17:06	123	15:38 (7)	15:59	124	14:15 (14)	15:45	14	14:17 (14)
26	05:11	06:19	07:28		16:58 (12)	07:37		08:44 (37)	08:49		09:40 (13)	09:28		13:14 (26)
	22:14	20:56	19:27	47	17:45 (12)	17:04	122	15:37 (7)	15:58	119	14:15 (14)	15:46	17	14:18 (14)
27	05:13	06:22	07:30		16:58 (12)	07:39		08:48 (37)	08:51		09:49 (13)	09:28		13:13 (26)
	22:11	20:53	19:24	46	17:44 (12)	17:01	118	15:36 (7)	15:56	112	14:16 (14)	15:47	20	14:19 (14)
28	05:15	06:24	07:32		16:58 (12)	07:41		08:51 (37)	08:53		09:49 (13)	09:28		13:12 (26)
	22:09	20:51	19:21	46	17:44 (12)	16:59	115	15:35 (7)	15:55	109	14:16 (14)	15:48	24	14:21 (14)
29	05:17	06:26	07:35		16:58 (12)	07:44		08:54 (37)	08:55		09:50 (13)	09:28		12:14 (32)
	22:07	20:48	19:19	50	17:48 (9)	16:56	119	15:34 (7)	15:53	106	14:16 (14)	15:49	31	14:23 (14)
30	05:20	06:28	07:37		16:57 (12)	07:46		08:57 (37)	08:57		09:50 (13)	09:28		12:13 (32)
	22:05	20:45	19:16	52	17:49 (9)	16:53	117	15:32 (7)	15:52	103	14:16 (14)	15:50	37	14:25 (14)
31	05:22	06:31				07:49		08:59 (37)				09:28		12:12 (32)
	22:03	20:42				16:51	115	15:29 (7)				15:51	41	14:25 (14)
Potential sun hours	546	478	386			319			236			199		
Total, worst case				1040			2454			3527			1230	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case							34		1					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44		04:40		20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25		22:30	8	20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41		04:38		20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28		22:31	11	20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39		04:37		20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30		22:33	12	20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36		04:36		20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32		22:34	12	20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34		04:35		20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35		22:36	13	20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31		04:34		20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37		22:37	13	20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29		04:33		20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39		22:38	14	20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26		04:32		20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41		22:40	14	20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24		04:31		20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44		22:41	14	20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22		04:30		20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46		22:42	14	20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19		04:29		20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48		22:43	16	20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17		04:29		20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50		22:44	16	20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15		04:28		20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53		22:45	16	20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12		04:28		20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55		22:46	17	20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10		04:27		20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57		22:47	17	20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08		04:27		20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59		22:47	17	20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06		04:27		20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01		22:48	18	20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04		04:27		20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03		22:48	17	20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02		04:27		20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05		22:49	18	20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00		04:27		20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07		22:49	18	20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58		04:27		20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10		22:49	18	20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56		04:27		20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12		22:50	18	20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54		04:27		20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14		22:50	18	20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52		04:27		20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15		22:50	17	20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51		04:28		20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17		22:50	17	20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49		04:28		20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19		22:50	18	20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47		04:29		20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21		22:49	17	20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46		04:30		20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23		22:49	17	20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44		04:30		20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25		22:49	17	20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1)	04:31		20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1)	22:48	17	20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)				05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)				22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521		547			545		478	386	319	236	200
Total, worst case						5		469			150					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (82)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13	09:01 (85)	16:49	15:52
2	09:27	08:43		07:33	08:13 (85)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (82)	07:54	09:01
	15:54	16:59		18:07	6 08:19 (85)	20:19	21:28	22:32	22:48	21:58	20:37		19:10	25 09:01 (85)	16:47	15:50
3	09:27	08:41		07:30	08:10 (85)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (82)	07:56	09:03
	15:56	17:01		18:10	12 08:22 (85)	20:21	21:30	22:33	22:47	21:56	20:34		19:07	26 09:01 (85)	16:44	15:49
4	09:26	08:39		07:27	08:07 (85)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (82)	07:59	09:05
	15:57	17:04		18:12	16 08:23 (85)	20:24	21:33	22:35	22:46	21:54	20:31		19:05	28 09:02 (85)	16:42	15:48
5	09:26	08:37		07:24	08:00 (82)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (82)	08:01	09:07
	15:59	17:06		18:14	24 08:24 (85)	20:26	21:35	22:36	22:45	21:51	20:28		19:02	28 09:02 (85)	16:39	15:47
6	09:25	08:34		07:21	07:58 (82)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (82)	08:03	09:08
	16:00	17:09		18:17	26 08:24 (85)	20:28	21:37	22:38	22:45	21:49	20:25		18:59	28 09:01 (85)	16:37	15:47
7	09:24	08:32		07:19	07:57 (82)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (82)	08:06	09:10
	16:02	17:11		18:19	28 08:25 (85)	20:30	21:40	22:39	22:44	21:47	20:23		18:56	27 09:01 (85)	16:35	15:46
8	09:23	08:30		07:16	07:56 (82)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (82)	08:08	09:12
	16:04	17:14		18:21	28 08:24 (85)	20:33	21:42	22:40	22:43	21:44	20:20		18:53	25 09:00 (85)	16:32	15:45
9	09:23	08:27		07:13	07:56 (82)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (82)	08:11	09:13
	16:06	17:16		18:24	28 08:24 (85)	20:35	21:44	22:41	22:41	21:42	20:17		18:50	22 08:58 (85)	16:30	15:44
10	09:22	08:25		07:10	07:56 (82)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (85)	08:13	09:15
	16:07	17:18		18:26	27 08:23 (85)	20:37	21:46	22:43	22:40	21:39	20:14		18:48	14 08:57 (85)	16:28	15:44
11	09:21	08:23		07:07	07:58 (82)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (85)	08:15	09:16
	16:09	17:21		18:28	26 08:24 (85)	20:40	21:49	22:44	22:39	21:37	20:11		18:45	10 08:54 (85)	16:26	15:43
12	09:19	08:20		07:04	07:59 (82)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31	23 08:22 (85)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (81)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (84)	08:07		08:20	09:19
	16:13	17:26		18:33	20 08:21 (85)	20:44	21:53	22:45	22:36	21:31	20:05	8 08:21 (84)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (81)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (84)	08:09		08:22	09:20
	16:15	17:28		18:35	20 08:18 (85)	20:47	21:55	22:46	22:35	21:29	20:02	13 08:23 (84)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (81)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (84)	08:11		08:25	09:21
	16:17	17:31		18:38	14 08:14 (85)	20:49	21:57	22:47	22:33	21:26	19:59	16 08:24 (84)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (81)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (84)	08:13	09:01 (83)	08:27	09:22
	16:19	17:33		18:40	12 07:44 (81)	20:51	22:00	22:48	22:32	21:24	19:57	17 08:25 (84)	18:31	9 09:10 (83)	16:15	15:42
17	09:13	08:07		06:50	07:32 (81)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (84)	08:16	09:00 (83)	08:29	09:23
	16:21	17:36		18:42	12 07:44 (81)	20:53	22:02	22:48	22:30	21:21	19:54	18 08:25 (84)	18:28	12 09:12 (83)	16:13	15:42
18	09:12	08:05	08:36 (83)	06:47	07:32 (81)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (84)	08:18	08:59 (83)	08:32	09:24
	16:24	17:38	3 08:39 (83)	18:45	11 07:43 (81)	20:56	22:04	22:49	22:29	21:18	19:51	19 08:25 (84)	18:25	13 09:12 (83)	16:12	15:42
19	09:10	08:02	08:33 (83)	06:44	07:26 (84)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (84)	08:20	08:59 (83)	08:34	09:25
	16:26	17:41	7 08:40 (83)	18:47	16 07:42 (81)	20:58	22:06	22:49	22:27	21:16	19:48	19 08:24 (84)	18:23	14 09:13 (83)	16:10	15:43
20	09:08	08:00	08:30 (83)	06:42	07:23 (84)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (84)	08:23	08:58 (83)	08:36	09:25
	16:28	17:43	11 08:41 (83)	18:49	17 07:40 (81)	21:00	22:08	22:50	22:25	21:13	19:45	19 08:24 (84)	18:20	14 09:12 (83)	16:08	15:43
21	09:07	07:57	08:27 (83)	06:39	07:21 (84)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (84)	08:25	08:58 (83)	08:39	09:26
	16:30	17:46	14 08:41 (83)	18:52	15 07:36 (84)	21:03	22:10	22:50	22:23	21:10	19:42	17 08:22 (84)	18:17	14 09:12 (83)	16:06	15:43
22	09:05	07:54	08:27 (83)	06:36	07:20 (84)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (84)	08:27	09:01 (83)	08:41	09:27
	16:32	17:48	14 08:41 (83)	18:54	18 07:38 (84)	21:05	22:12	22:50	22:22	21:08	19:39	16 08:22 (84)	18:15	10 09:11 (83)	16:04	15:44
23	09:03	07:52	08:28 (83)	06:33	07:19 (84)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (84)	08:30	09:04 (83)	08:43	09:27
	16:35	17:50	13 08:41 (83)	18:56	19 07:38 (84)	21:07	22:14	22:50	22:20	21:05	19:36	17 08:24 (81)	18:12	6 09:10 (83)	16:03	15:44
24	09:01	07:49	08:28 (83)	06:30	07:19 (84)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (84)	08:32	09:06 (83)	08:45	09:27
	16:37	17:53	13 08:41 (83)	18:58	19 07:38 (84)	21:10	22:16	22:50	22:18	21:02	19:33	16 08:25 (81)	18:09	2 09:08 (83)	16:01	15:45
25	09:00	07:46	08:29 (83)	06:27	07:18 (84)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (81)	07:35		08:47	09:28
	16:39	17:55	10 08:39 (83)	19:01	19 07:37 (84)	21:12	22:18	22:50	22:16	20:59	19:30	11 08:26 (81)	17:07		16:00	15:46
26	08:58	07:44	08:30 (83)	06:24	07:18 (84)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (81)	07:37		08:49	09:28
	16:42	17:58	7 08:37 (83)	19:03	19 07:37 (84)	21:14	22:20	22:50	22:14	20:57	19:28	12 08:26 (81)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (84)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (81)	07:39		08:52	09:28
	16:44	18:00		19:05	18 07:36 (84)	21:17	22:22	22:50	22:12	20:54	19:25	12 08:26 (81)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (84)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (81)	07:42		08:54	09:28
	16:47	18:02		19:08	16 07:34 (84)	21:19	22:23	22:50	22:09	20:51	19:22	12 08:26 (81)	16:59		15:55	15:48
29	08:52			07:16	08:19 (84)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (81)	07:44		08:56	09:28
	16:49			20:10	14 08:33 (84)	21:21	22:25	22:49	22:07	20:48	19:19	19 08:57 (85)	16:56		15:54	15:49
30	08:50			07:13	08:21 (84)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (81)	07:47		08:58	09:28
	16:51			20:12	9 08:30 (84)	21:24	22:27	22:49	22:05	20:45	19:16	21 08:59 (85)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April		May		June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (38)	04:40	06:17 (36)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (38)	22:30	23 06:40 (36)
2	09:27	08:43		07:33	07:04		05:42		07:32 (38)	04:39	06:16 (36)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (38)	22:32	24 06:40 (36)
3	09:27	08:41		07:30	07:01		05:39		07:32 (38)	04:37	06:16 (36)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (38)	22:34	25 06:41 (36)
4	09:26	08:39		07:27	06:58		05:36		07:34 (38)	04:36	06:16 (36)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (38)	22:35	26 06:42 (36)
5	09:26	08:37		07:24	06:55		05:34		07:36 (38)	04:35	06:16 (36)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (38)	22:36	27 06:43 (36)
6	09:25	08:34		07:21	06:53		05:32		07:38 (38)	04:34	06:16 (36)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (38)	22:38	27 06:43 (36)
7	09:24	08:32		07:19	06:50		05:29		07:40 (38)	04:33	06:16 (36)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (38)	22:39	27 06:43 (36)
8	09:24	08:30	09:03 (85)	07:16	06:47		05:27			04:32	06:15 (36)
	16:04	17:14	2 09:05 (85)	18:21	20:33		21:42			22:40	29 06:44 (36)
9	09:23	08:27	09:00 (85)	07:13	06:44		05:24			04:31	06:16 (36)
	16:06	17:16	7 09:07 (85)	18:24	20:35		21:44			22:42	29 06:45 (36)
10	09:22	08:25	08:58 (85)	07:10	06:41	07:48 (38)	05:22			04:31	06:15 (36)
	16:07	17:18	10 09:08 (85)	18:26	20:37	10 07:58 (38)	21:46			22:43	30 06:45 (36)
11	09:21	08:23	08:56 (85)	07:07	06:38	07:45 (38)	05:20			04:30	06:16 (36)
	16:09	17:21	13 09:09 (85)	18:28	20:40	17 08:02 (38)	21:49			22:44	29 06:45 (36)
12	09:20	08:20	08:55 (85)	07:04	06:36	07:41 (38)	05:17			04:29	06:15 (36)
	16:11	17:23	14 09:09 (85)	18:31	20:42	22 08:03 (38)	21:51			22:45	30 06:45 (36)
13	09:18	08:18	08:55 (85)	07:02	06:33	07:37 (38)	05:15			04:29	06:16 (36)
	16:13	17:26	14 09:09 (85)	18:33	20:44	27 08:04 (38)	21:53			22:46	30 06:46 (36)
14	09:17	08:15	08:56 (85)	06:59	06:30	07:35 (38)	05:13			04:28	06:16 (36)
	16:15	17:28	13 09:09 (85)	18:35	20:47	30 08:05 (38)	21:55			22:46	30 06:46 (36)
15	09:16	08:13	08:56 (85)	06:56	06:27	07:34 (38)	05:11			04:28	06:15 (36)
	16:17	17:31	13 09:09 (85)	18:38	20:49	33 08:07 (38)	21:57			22:47	31 06:46 (36)
16	09:14	08:10	08:56 (85)	06:53	06:24	07:33 (38)	05:09			04:28	06:16 (36)
	16:19	17:33	11 09:07 (85)	18:40	20:51	34 08:07 (38)	22:00			22:48	30 06:46 (36)
17	09:13	08:07	08:58 (85)	06:50	06:22	07:32 (38)	05:06			04:27	06:16 (36)
	16:21	17:36	7 09:05 (85)	18:42	20:54	35 08:07 (38)	22:02			22:48	31 06:47 (36)
18	09:12	08:05		06:47	06:19	07:31 (38)	05:04			04:27	06:16 (36)
	16:24	17:38		18:45	20:56	37 08:08 (38)	22:04			22:49	31 06:47 (36)
19	09:10	08:02		06:44	06:16	07:30 (38)	05:02			04:27	06:16 (36)
	16:26	17:41		18:47	20:58	38 08:08 (38)	22:06			22:49	31 06:47 (36)
20	09:08	08:00		06:42	06:13	07:30 (38)	05:00			04:27	06:16 (36)
	16:28	17:43		18:49	21:00	39 08:09 (38)	22:08			22:50	31 06:47 (36)
21	09:07	07:57		06:39	06:11	07:30 (38)	04:58			04:27	06:16 (36)
	16:30	17:46		18:52	21:03	38 08:08 (38)	22:10			22:50	31 06:47 (36)
22	09:05	07:54		06:36	06:08	07:29 (38)	04:56			04:27	06:17 (36)
	16:32	17:48		18:54	21:05	39 08:08 (38)	22:12			22:50	31 06:48 (36)
23	09:03	07:52		06:33	06:05	07:29 (38)	04:55			04:28	06:17 (36)
	16:35	17:50		18:56	21:07	39 08:08 (38)	22:14			22:50	31 06:48 (36)
24	09:02	07:49		06:30	06:02	07:29 (38)	04:53			04:28	06:17 (36)
	16:37	17:53		18:58	21:10	38 08:07 (38)	22:16			22:50	31 06:48 (36)
25	09:00	07:46		06:27	06:00	07:29 (38)	04:51			04:28	06:18 (36)
	16:39	17:55		19:01	21:12	38 08:07 (38)	22:18			22:50	31 06:49 (36)
26	08:58	07:44		06:24	05:57	07:29 (38)	04:49		06:24 (36)	04:29	06:18 (36)
	16:42	17:58		19:03	21:14	37 08:06 (38)	22:20	8	06:32 (36)	22:50	31 06:49 (36)
27	08:56	07:41		06:21	05:54	07:29 (38)	04:48		06:21 (36)	04:29	06:19 (36)
	16:44	18:00		19:05	21:17	37 08:06 (38)	22:22	13	06:34 (36)	22:50	30 06:49 (36)
28	08:54	07:38		06:18	05:52	07:29 (38)	04:46		06:20 (36)	04:30	06:18 (36)
	16:47	18:02		19:08	21:19	36 08:05 (38)	22:24	16	06:36 (36)	22:50	31 06:49 (36)
29	08:52			07:16	05:49	07:30 (38)	04:44		06:19 (36)	04:31	06:19 (36)
	16:49			20:10	21:21	34 08:04 (38)	22:25	18	06:37 (36)	22:49	30 06:49 (36)
30	08:50			07:13	05:47	07:30 (38)	04:43		06:19 (36)	04:31	06:19 (36)
	16:51			20:12	21:24	33 08:03 (38)	22:27	20	06:39 (36)	22:49	30 06:49 (36)
31	08:48			07:10			04:41		06:17 (36)		
	16:54			20:14			22:29	22	06:39 (36)		
Potential sun hours	221	260		365	432		521			547	
Total, worst case			104			691		254			878

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October		November		December
1	04:32		06:20 (36)	05:24		06:33		07:44 (38)	07:39		08:28 (85)	09:00
	22:48	30	06:50 (36)	22:01		20:40	17	08:01 (38)	19:13		16:49	9	08:37 (85)	15:51
2	04:33		06:20 (36)	05:27		06:35		07:47 (38)	07:42		08:30 (85)	09:01
	22:48	30	06:50 (36)	21:58		20:37	10	07:57 (38)	19:10		16:47	6	08:36 (85)	15:50
3	04:34		06:20 (36)	05:29		06:38			07:44		07:56		08:33 (85)	09:03
	22:47	29	06:49 (36)	21:56		20:34			19:07		16:44	1	08:34 (85)	15:49
4	04:35		06:20 (36)	05:31		06:40			07:46		07:59			09:05
	22:46	29	06:49 (36)	21:54		20:31			19:05		16:42			15:48
5	04:36		06:21 (36)	05:33		06:42			07:48		08:01			09:07
	22:46	28	06:49 (36)	21:51		20:28			19:02		16:39			15:47
6	04:38		06:21 (36)	05:35	07:49 (38)	06:44			07:51		08:03			09:09
	22:45	28	06:49 (36)	21:49	13 08:02 (38)	20:25			18:59		16:37			15:47
7	04:39		06:23 (36)	05:38	07:46 (38)	06:47			07:53		08:06			09:10
	22:44	27	06:50 (36)	21:47	18 08:04 (38)	20:23			18:56		16:35			15:46
8	04:40		06:23 (36)	05:40	07:44 (38)	06:49			07:55		08:08			09:12
	22:43	26	06:49 (36)	21:44	22 08:06 (38)	20:20			18:53		16:32			15:45
9	04:42		06:23 (36)	05:42	07:43 (38)	06:51			07:57		08:11			09:13
	22:42	26	06:49 (36)	21:42	25 08:08 (38)	20:17			18:50		16:30			15:44
10	04:43		06:24 (36)	05:44	07:41 (38)	06:53			08:00		08:13			09:15
	22:40	24	06:48 (36)	21:39	28 08:09 (38)	20:14			18:48		16:28			15:44
11	04:45		06:25 (36)	05:46	07:40 (38)	06:55			08:02		08:15			09:16
	22:39	23	06:48 (36)	21:37	30 08:10 (38)	20:11			18:45		16:26			15:43
12	04:46		06:25 (36)	05:49	07:39 (38)	06:58			08:04		08:18			09:17
	22:38	23	06:48 (36)	21:34	32 08:11 (38)	20:08			18:42		16:24			15:43
13	04:48		06:26 (36)	05:51	07:38 (38)	07:00			08:07		08:20			09:19
	22:36	21	06:47 (36)	21:32	33 08:11 (38)	20:05			18:39		16:22			15:43
14	04:49		06:28 (36)	05:53	07:37 (38)	07:02			08:09		08:22			09:20
	22:35	18	06:46 (36)	21:29	35 08:12 (38)	20:02			18:36		16:19			15:43
15	04:51		06:28 (36)	05:55	07:36 (38)	07:04			08:11		08:25			09:21
	22:34	17	06:45 (36)	21:26	36 08:12 (38)	19:59			18:34		16:17			15:42
16	04:53		06:30 (36)	05:58	07:36 (38)	07:06			08:14		08:27			09:22
	22:32	14	06:44 (36)	21:24	37 08:13 (38)	19:57			18:31		16:15			15:42
17	04:54		06:31 (36)	06:00	07:35 (38)	07:09			08:16		08:29			09:23
	22:30	11	06:42 (36)	21:21	38 08:13 (38)	19:54			18:28		16:13			15:42
18	04:56		06:35 (36)	06:02	07:36 (38)	07:11			08:18		08:32			09:24
	22:29	5	06:40 (36)	21:18	38 08:14 (38)	19:51			18:25		16:12			15:42
19	04:58			06:04	07:35 (38)	07:13			08:21		08:34			09:25
	22:27			21:16	39 08:14 (38)	19:48			18:23		16:10			15:43
20	05:00			06:07	07:35 (38)	07:15			08:23		08:36			09:25
	22:25			21:13	38 08:13 (38)	19:45			18:20		16:08			15:43
21	05:02			06:09	07:34 (38)	07:17			08:25		08:39			09:26
	22:23			21:10	39 08:13 (38)	19:42			18:17		16:06			15:43
22	05:04			06:11	07:34 (38)	07:20			08:28		08:41			09:27
	22:22			21:08	39 08:13 (38)	19:39			18:15		16:04			15:44
23	05:06			06:13	07:34 (38)	07:22			08:30		08:43			09:27
	22:20			21:05	38 08:12 (38)	19:36			18:12		16:03			15:44
24	05:08			06:15	07:34 (38)	07:24			08:32		09:30 (85)	08:45		09:28
	22:18			21:02	37 08:11 (38)	19:33			18:09	3	09:33 (85)	16:01		15:45
25	05:10			06:18	07:34 (38)	07:26			07:35		08:28 (85)	08:47		09:28
	22:16			20:59	37 08:11 (38)	19:30			17:07	8	08:36 (85)	16:00		15:46
26	05:12			06:20	07:34 (38)	07:28			07:37		08:27 (85)	08:50		09:28
	22:14			20:57	36 08:10 (38)	19:28			17:04	11	08:38 (85)	15:58		15:46
27	05:14			06:22	07:35 (38)	07:31			07:39		08:25 (85)	08:52		09:28
	22:12			20:54	34 08:09 (38)	19:25			17:02	13	08:38 (85)	15:57		15:47
28	05:16			06:24	07:35 (38)	07:33			07:42		08:25 (85)	08:54		09:28
	22:10			20:51	32 08:07 (38)	19:22			16:59	14	08:39 (85)	15:55		15:48
29	05:18			06:27	07:36 (38)	07:35			07:44		08:24 (85)	08:56		09:28
	22:07			20:48	30 08:06 (38)	19:19			16:56	14	08:38 (85)	15:54		15:49
30	05:20			06:29	07:38 (38)	07:37			07:47		08:25 (85)	08:58		09:28
	22:05			20:45	27 08:05 (38)	19:16			16:54	13	08:38 (85)	15:53		15:50
31	05:22			06:31	07:41 (38)				07:49		08:26 (85)			09:28
	22:03			20:43	22 08:03 (38)				16:51	12	08:38 (85)			15:51
Potential sun hours	545			478		386			319			236		200
Total, worst case		409			833		27			88			16	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:16 (85)	07:07	05:44			04:40		06:01 (38)
	15:53	16:56		18:05	15	08:31 (85)	20:17	21:26			22:30	34	06:35 (38)
2	09:27	08:43		07:33		08:17 (85)	07:04	05:42			04:39		06:01 (38)
	15:54	16:59		18:07	13	08:30 (85)	20:19	21:28			22:32	35	06:36 (38)
3	09:27	08:41		07:30		08:18 (85)	07:01	05:39			04:38		06:01 (38)
	15:56	17:01		18:10	10	08:28 (85)	20:21	21:30			22:33	35	06:36 (38)
4	09:26	08:39		07:27		08:20 (85)	06:58	05:37			04:36		06:00 (38)
	15:57	17:04		18:12	5	08:25 (85)	20:24	21:33			22:35	36	06:36 (38)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:01 (38)
	15:59	17:06		18:14			20:26	21:35			22:36	36	06:37 (38)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:01 (38)
	16:00	17:09		18:17			20:28	21:37			22:38	36	06:37 (38)
7	09:24	08:32		07:19			06:50	05:29			04:33		06:01 (38)
	16:02	17:11		18:19			20:31	21:40			22:39	36	06:37 (38)
8	09:24	08:30		07:16		07:46 (84)	06:47	05:27			04:32		06:01 (38)
	16:04	17:14		18:21	7	07:53 (84)	20:33	21:42			22:40	36	06:37 (38)
9	09:23	08:27		07:13		07:44 (84)	06:44	05:24			04:31		06:02 (38)
	16:06	17:16		18:24	10	07:54 (84)	20:35	21:44			22:41	36	06:38 (38)
10	09:22	08:25		07:10		07:43 (84)	06:41	05:22			04:31		06:01 (38)
	16:07	17:19		18:26	13	07:56 (84)	20:37	21:46			22:43	37	06:38 (38)
11	09:21	08:23		07:07		07:42 (84)	06:38	05:20			04:30		06:02 (38)
	16:09	17:21		18:28	14	07:56 (84)	20:40	21:49			22:44	37	06:39 (38)
12	09:20	08:20		07:04		07:42 (84)	06:36	05:17			04:29		06:02 (38)
	16:11	17:23		18:31	14	07:56 (84)	20:42	21:51			22:45	36	06:38 (38)
13	09:18	08:18		07:02		07:41 (84)	06:33	05:15			04:29		06:02 (38)
	16:13	17:26		18:33	15	07:56 (84)	20:44	21:53			22:46	37	06:39 (38)
14	09:17	08:15		06:59		07:42 (84)	06:30	05:13			04:28		06:03 (38)
	16:15	17:28		18:35	13	07:55 (84)	20:47	21:55			22:46	36	06:39 (38)
15	09:16	08:13		06:56		07:42 (84)	06:27	05:11			04:28		06:02 (38)
	16:17	17:31		18:38	11	07:53 (84)	20:49	21:57			22:47	37	06:39 (38)
16	09:14	08:10		06:53		07:44 (84)	06:24	05:09			04:28		06:02 (38)
	16:19	17:33		18:40	7	07:51 (84)	20:51	22:00			22:48	37	06:39 (38)
17	09:13	08:07		06:50			06:22	05:06		06:12 (38)	04:27		06:03 (38)
	16:21	17:36		18:42			20:54	22:02	10	06:22 (38)	22:48	37	06:40 (38)
18	09:12	08:05		06:47			06:19	05:04		06:11 (38)	04:27		06:03 (38)
	16:24	17:38		18:45			20:56	22:04	14	06:25 (38)	22:49	37	06:40 (38)
19	09:10	08:02		06:44			06:16	05:02		06:09 (38)	04:27		06:03 (38)
	16:26	17:41		18:47			20:58	22:06	18	06:27 (38)	22:49	37	06:40 (38)
20	09:08	08:00		06:42			06:13	05:00		06:08 (38)	04:27		06:03 (38)
	16:28	17:43		18:49			21:00	22:08	20	06:28 (38)	22:50	37	06:40 (38)
21	09:07	07:57		06:39			06:11	04:58		06:06 (38)	04:27		06:03 (38)
	16:30	17:46		18:52			21:03	22:10	23	06:29 (38)	22:50	37	06:40 (38)
22	09:05	07:54		06:36			06:08	04:56		06:05 (38)	04:27		06:04 (38)
	16:32	17:48		18:54			21:05	22:12	25	06:30 (38)	22:50	37	06:41 (38)
23	09:03	07:52		06:33			06:05	04:55		06:03 (38)	04:28		06:04 (38)
	16:35	17:50	8	08:29 (85)	18:56			21:07	22:14	28	06:31 (38)	22:50	37	06:41 (38)
24	09:02	07:49		08:18 (85)	06:30			06:02	04:53		06:03 (38)	04:28		06:04 (38)
	16:37	17:53	12	08:30 (85)	18:58			21:10	22:16	29	06:32 (38)	22:50	37	06:41 (38)
25	09:00	07:46		08:17 (85)	06:27			06:00	04:51		06:02 (38)	04:28		06:05 (38)
	16:39	17:55	14	08:31 (85)	19:01			21:12	22:18	30	06:32 (38)	22:50	37	06:42 (38)
26	08:58	07:44		08:16 (85)	06:24			05:57	04:49		06:02 (38)	04:29		06:05 (38)
	16:42	17:58	15	08:31 (85)	19:03			21:14	22:20	31	06:33 (38)	22:50	36	06:41 (38)
27	08:56	07:41		08:15 (85)	06:21			05:54	04:48		06:01 (38)	04:29		06:05 (38)
	16:44	18:00	16	08:31 (85)	19:05			21:17	22:22	32	06:33 (38)	22:50	37	06:42 (38)
28	08:54	07:38		08:15 (85)	06:18			05:52	04:46		06:01 (38)	04:30		06:05 (38)
	16:47	18:02	15	08:30 (85)	19:08			21:19	22:24	33	06:34 (38)	22:50	37	06:42 (38)
29	08:52				07:16			05:49	04:44		06:01 (38)	04:31		06:05 (38)
	16:49				20:10			21:21	22:25	34	06:35 (38)	22:49	37	06:42 (38)
30	08:50				07:13			05:47	04:43		06:01 (38)	04:32		06:06 (38)
	16:51				20:12			21:24	22:27	34	06:35 (38)	22:49	37	06:43 (38)
31	08:48				07:10				04:41		06:01 (38)			
	16:54				20:14				22:29	34	06:35 (38)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			80			147				395			1094	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September			October			November	December
1	04:32		06:06 (38)	05:24	06:33			07:39		08:21 (84)	07:51	09:00
	22:48	37	06:43 (38)	22:01	20:40			19:13	14	08:35 (84)	16:49	15:52
2	04:33		06:07 (38)	05:27	06:35			07:42		08:20 (84)	07:54	09:01
	22:48	36	06:43 (38)	21:58	20:37			19:10	15	08:35 (84)	16:47	15:50
3	04:34		06:06 (38)	05:29	06:38			07:44		08:20 (84)	07:56	09:03
	22:47	37	06:43 (38)	21:56	20:34			19:07	13	08:33 (84)	16:44	15:49
4	04:35		06:06 (38)	05:31	06:40			07:46		08:21 (84)	07:59	09:05
	22:46	37	06:43 (38)	21:54	20:31			19:05	12	08:33 (84)	16:42	15:48
5	04:37		06:06 (38)	05:33	06:42			07:48		08:22 (84)	08:01	09:07
	22:46	37	06:43 (38)	21:51	20:28			19:02	9	08:31 (84)	16:39	15:47
6	04:38		06:08 (38)	05:35	06:44			07:51			08:03	09:09
	22:45	36	06:44 (38)	21:49	20:25			18:59			16:37	15:47
7	04:39		06:08 (38)	05:38	06:47			07:53			08:06	09:10
	22:44	36	06:44 (38)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:08 (38)	05:40	06:49			07:55			08:08	09:12
	22:43	36	06:44 (38)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:08 (38)	05:42	06:51			07:57			08:11	09:13
	22:42	36	06:44 (38)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:08 (38)	05:44	06:53			08:00		08:54 (85)	08:13	09:15
	22:40	35	06:43 (38)	21:39	20:14			18:48	7	09:01 (85)	16:28	15:44
11	04:45		06:09 (38)	05:46	06:55			08:02		08:51 (85)	08:15	09:16
	22:39	35	06:44 (38)	21:37	20:11			18:45	11	09:02 (85)	16:26	15:43
12	04:46		06:09 (38)	05:49	06:58			08:04		08:49 (85)	08:18	09:17
	22:38	35	06:44 (38)	21:34	20:08			18:42	14	09:03 (85)	16:24	15:43
13	04:48		06:09 (38)	05:51	07:00			08:07		08:49 (85)	08:20	09:19
	22:36	34	06:43 (38)	21:31	20:05			18:39	15	09:04 (85)	16:22	15:43
14	04:49		06:10 (38)	05:53	07:02			08:09		08:48 (85)	08:22	09:20
	22:35	33	06:43 (38)	21:29	20:02			18:36	15	09:03 (85)	16:19	15:43
15	04:51		06:10 (38)	05:55	07:04			08:11		08:48 (85)	08:25	09:21
	22:34	33	06:43 (38)	21:26	19:59			18:34	16	09:04 (85)	16:17	15:42
16	04:53		06:11 (38)	05:58	07:06			08:14		08:48 (85)	08:27	09:22
	22:32	32	06:43 (38)	21:24	19:57			18:31	15	09:03 (85)	16:15	15:42
17	04:54		06:11 (38)	06:00	07:09			08:16		08:49 (85)	08:29	09:23
	22:30	31	06:42 (38)	21:21	19:54			18:28	13	09:02 (85)	16:14	15:42
18	04:56		06:12 (38)	06:02	07:11			08:18		08:50 (85)	08:32	09:24
	22:29	30	06:42 (38)	21:18	19:51			18:25	11	09:01 (85)	16:12	15:42
19	04:58		06:13 (38)	06:04	07:13			08:20		08:53 (85)	08:34	09:25
	22:27	29	06:42 (38)	21:16	19:48			18:23	6	08:59 (85)	16:10	15:43
20	05:00		06:13 (38)	06:07	07:15			08:23			08:36	09:25
	22:25	28	06:41 (38)	21:13	19:45			18:20			16:08	15:43
21	05:02		06:14 (38)	06:09	07:17			08:25			08:39	09:26
	22:23	27	06:41 (38)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:16 (38)	06:11	07:20			08:28			08:41	09:27
	22:22	24	06:40 (38)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:17 (38)	06:13	07:22			08:30			08:43	09:27
	22:20	21	06:38 (38)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:18 (38)	06:15	07:24			08:32			08:45	09:28
	22:18	19	06:37 (38)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:20 (38)	06:18	07:26			07:35			08:47	09:28
	22:16	16	06:36 (38)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:22 (38)	06:20	07:28			07:37			08:49	09:28
	22:14	12	06:34 (38)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:25 (38)	06:22	07:31		08:27 (84)	07:39			08:52	09:28
	22:12	6	06:31 (38)	20:54	19:25	5	08:32 (84)	17:02			15:57	15:47
28	05:16			06:24	07:33		08:24 (84)	07:42			08:54	09:28
	22:10			20:51	19:22	10	08:34 (84)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:22 (84)	07:44			08:56	09:28
	22:07			20:48	19:19	12	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:21 (84)	07:47			08:58	09:28
	22:05			20:45	19:16	14	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		808				41			186			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April	May			June		
1	09:28	08:46		07:35		08:18 (85)	07:07	05:44			04:40		06:18 (38)
	15:53	16:56		18:05	13	08:31 (85)	20:17	21:26			22:30	28	06:46 (38)
2	09:27	08:43		07:33		08:19 (85)	07:04	05:42			04:39		06:18 (38)
	15:54	16:59		18:07	10	08:29 (85)	20:19	21:28			22:32	28	06:46 (38)
3	09:27	08:41		07:30		08:21 (85)	07:01	05:39			04:38		06:17 (38)
	15:56	17:01		18:10	5	08:26 (85)	20:21	21:31			22:33	29	06:46 (38)
4	09:26	08:39		07:27			06:58	05:37			04:36		06:16 (38)
	15:57	17:04		18:12			20:24	21:33			22:35	30	06:46 (38)
5	09:26	08:37		07:24			06:55	05:34			04:35		06:16 (38)
	15:59	17:06		18:14			20:26	21:35			22:36	31	06:47 (38)
6	09:25	08:34		07:21			06:53	05:32			04:34		06:15 (38)
	16:00	17:09		18:17			20:28	21:37			22:38	32	06:47 (38)
7	09:24	08:32		07:19		07:48 (84)	06:50	05:29			04:33		06:14 (38)
	16:02	17:11		18:19	6	07:54 (84)	20:31	21:40			22:39	32	06:46 (38)
8	09:24	08:30		07:16		07:46 (84)	06:47	05:27			04:32		06:13 (38)
	16:04	17:14		18:21	10	07:56 (84)	20:33	21:42			22:40	33	06:46 (38)
9	09:23	08:27		07:13		07:44 (84)	06:44	05:24			04:31		06:14 (38)
	16:06	17:16		18:24	13	07:57 (84)	20:35	21:44			22:41	33	06:47 (38)
10	09:22	08:25		07:10		07:44 (84)	06:41	05:22			04:31		06:13 (38)
	16:07	17:19		18:26	14	07:58 (84)	20:37	21:46			22:43	33	06:46 (38)
11	09:21	08:23		07:07		07:44 (84)	06:38	05:20			04:30		06:14 (38)
	16:09	17:21		18:28	14	07:58 (84)	20:40	21:49			22:44	33	06:47 (38)
12	09:20	08:20		07:04		07:44 (84)	06:36	05:17			04:29		06:14 (38)
	16:11	17:23		18:31	13	07:57 (84)	20:42	21:51			22:45	32	06:46 (38)
13	09:18	08:18		07:02		07:44 (84)	06:33	05:15			04:29		06:14 (38)
	16:13	17:26		18:33	12	07:56 (84)	20:44	21:53			22:46	33	06:47 (38)
14	09:17	08:15		06:59		07:45 (84)	06:30	05:13			04:28		06:15 (38)
	16:15	17:28		18:35	10	07:55 (84)	20:47	21:55			22:46	32	06:47 (38)
15	09:16	08:13		06:56		07:46 (84)	06:27	05:11			04:28		06:15 (38)
	16:17	17:31		18:38	6	07:52 (84)	20:49	21:57			22:47	32	06:47 (38)
16	09:14	08:10		06:53			06:24	05:09		06:39 (38)	04:28		06:15 (38)
	16:19	17:33		18:40			20:51	22:00	2	06:41 (38)	22:48	32	06:47 (38)
17	09:13	08:07		06:50			06:22	05:06		06:37 (38)	04:27		06:15 (38)
	16:21	17:36		18:42			20:54	22:02	4	06:41 (38)	22:48	32	06:47 (38)
18	09:12	08:05		06:47			06:19	05:04		06:36 (38)	04:27		06:16 (38)
	16:24	17:38		18:45			20:56	22:04	7	06:43 (38)	22:49	31	06:47 (38)
19	09:10	08:02		06:44			06:16	05:02		06:35 (38)	04:27		06:16 (38)
	16:26	17:41		18:47			20:58	22:06	8	06:43 (38)	22:49	31	06:47 (38)
20	09:08	08:00		06:42			06:13	05:00		06:33 (38)	04:27		06:16 (38)
	16:28	17:43		18:49			21:00	22:08	10	06:43 (38)	22:50	31	06:47 (38)
21	09:07	07:57		06:39			06:11	04:58		06:31 (38)	04:27		06:16 (38)
	16:30	17:46		18:52			21:03	22:10	12	06:43 (38)	22:50	31	06:47 (38)
22	09:05	07:54		06:36			06:08	04:56		06:30 (38)	04:27		06:17 (38)
	16:32	17:48	5	08:28 (85)	18:54			21:05	22:12	14	06:44 (38)	22:50	31	06:48 (38)
23	09:03	07:52		08:21 (85)	06:33			06:05	04:55		06:29 (38)	04:28		06:17 (38)
	16:35	17:50	10	08:31 (85)	18:56			21:07	22:14	15	06:44 (38)	22:50	31	06:48 (38)
24	09:02	07:49		08:18 (85)	06:30			06:02	04:53		06:28 (38)	04:28		06:17 (38)
	16:37	17:53	13	08:31 (85)	18:58			21:10	22:16	17	06:45 (38)	22:50	31	06:48 (38)
25	09:00	07:46		08:17 (85)	06:27			06:00	04:51		06:26 (38)	04:28		06:18 (38)
	16:39	17:55	15	08:32 (85)	19:01			21:12	22:18	19	06:45 (38)	22:50	31	06:49 (38)
26	08:58	07:44		08:17 (85)	06:24			05:57	04:49		06:25 (38)	04:29		06:17 (38)
	16:42	17:58	15	08:32 (85)	19:03			21:14	22:20	20	06:45 (38)	22:50	32	06:49 (38)
27	08:56	07:41		08:17 (85)	06:21			05:54	04:48		06:23 (38)	04:29		06:18 (38)
	16:44	18:00	14	08:31 (85)	19:05			21:17	22:22	22	06:45 (38)	22:50	32	06:50 (38)
28	08:54	07:38		08:17 (85)	06:18			05:52	04:46		06:23 (38)	04:30		06:17 (38)
	16:47	18:02	14	08:31 (85)	19:08			21:19	22:24	22	06:45 (38)	22:50	32	06:49 (38)
29	08:52				07:16			05:49	04:44		06:22 (38)	04:31		06:18 (38)
	16:49				20:10			21:21	22:25	24	06:46 (38)	22:49	32	06:50 (38)
30	08:50				07:13			05:47	04:43		06:21 (38)	04:32		06:18 (38)
	16:51				20:12			21:24	22:27	25	06:46 (38)	22:49	33	06:51 (38)
31	08:48				07:10				04:41		06:19 (38)			
	16:54				20:14				22:29	26	06:45 (38)			
Potential sun hours	221	260		365			432	521			547		
Total, worst case			86			126			247			944	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September			October		November	December
1	04:32		06:18 (38)	05:24	06:33			07:39		08:23 (84)	07:51	09:00
	22:48	33	06:51 (38)	22:01	20:40			19:13	13	08:36 (84)	16:49	15:52
2	04:33		06:19 (38)	05:27	06:35			07:42		08:22 (84)	07:54	09:01
	22:48	33	06:52 (38)	21:58	20:37			19:10	14	08:36 (84)	16:47	15:50
3	04:34		06:18 (38)	05:29	06:38			07:44		08:21 (84)	07:56	09:03
	22:47	33	06:51 (38)	21:56	20:34			19:07	14	08:35 (84)	16:44	15:49
4	04:35		06:18 (38)	05:31	06:40			07:46		08:22 (84)	07:59	09:05
	22:46	33	06:51 (38)	21:54	20:31			19:05	13	08:35 (84)	16:42	15:48
5	04:37		06:19 (38)	05:33	06:42			07:48		08:22 (84)	08:01	09:07
	22:46	33	06:52 (38)	21:51	20:28			19:02	12	08:34 (84)	16:39	15:47
6	04:38		06:21 (38)	05:35	06:44			07:51		08:23 (84)	08:03	09:09
	22:45	32	06:53 (38)	21:49	20:25			18:59	9	08:32 (84)	16:37	15:47
7	04:39		06:22 (38)	05:38	06:47			07:53			08:06	09:10
	22:44	31	06:53 (38)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:23 (38)	05:40	06:49			07:55			08:08	09:12
	22:43	30	06:53 (38)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:24 (38)	05:42	06:51			07:57			08:11	09:13
	22:42	29	06:53 (38)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:25 (38)	05:44	06:53			08:00			08:13	09:15
	22:40	28	06:53 (38)	21:39	20:14			18:48			16:28	15:44
11	04:45		06:26 (38)	05:46	06:55			08:02		08:54 (85)	08:15	09:16
	22:39	28	06:54 (38)	21:37	20:11			18:45	7	09:01 (85)	16:26	15:43
12	04:46		06:27 (38)	05:49	06:58			08:04		08:51 (85)	08:18	09:17
	22:38	27	06:54 (38)	21:34	20:08			18:42	12	09:03 (85)	16:24	15:43
13	04:48		06:28 (38)	05:51	07:00			08:07		08:51 (85)	08:20	09:19
	22:36	26	06:54 (38)	21:32	20:05			18:39	13	09:04 (85)	16:22	15:43
14	04:49		06:30 (38)	05:53	07:02			08:09		08:49 (85)	08:22	09:20
	22:35	24	06:54 (38)	21:29	20:02			18:36	15	09:04 (85)	16:19	15:43
15	04:51		06:31 (38)	05:55	07:04			08:11		08:49 (85)	08:25	09:21
	22:34	23	06:54 (38)	21:26	19:59			18:34	15	09:04 (85)	16:17	15:42
16	04:53		06:33 (38)	05:58	07:06			08:14		08:49 (85)	08:27	09:22
	22:32	22	06:55 (38)	21:24	19:57			18:31	15	09:04 (85)	16:15	15:42
17	04:54		06:33 (38)	06:00	07:09			08:16		08:50 (85)	08:29	09:23
	22:30	21	06:54 (38)	21:21	19:54			18:28	14	09:04 (85)	16:14	15:42
18	04:56		06:35 (38)	06:02	07:11			08:18		08:50 (85)	08:32	09:24
	22:29	20	06:55 (38)	21:18	19:51			18:25	12	09:02 (85)	16:12	15:42
19	04:58		06:37 (38)	06:04	07:13			08:21		08:53 (85)	08:34	09:25
	22:27	18	06:55 (38)	21:16	19:48			18:23	8	09:01 (85)	16:10	15:43
20	05:00		06:38 (38)	06:07	07:15			08:23		08:55 (85)	08:36	09:25
	22:25	16	06:54 (38)	21:13	19:45			18:20	3	08:58 (85)	16:08	15:43
21	05:02		06:39 (38)	06:09	07:17			08:25			08:39	09:26
	22:23	15	06:54 (38)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:41 (38)	06:11	07:20			08:28			08:41	09:27
	22:22	13	06:54 (38)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:42 (38)	06:13	07:22			08:30			08:43	09:27
	22:20	11	06:53 (38)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:44 (38)	06:15	07:24			08:32			08:45	09:28
	22:18	9	06:53 (38)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:45 (38)	06:18	07:26			07:35			08:47	09:28
	22:16	8	06:53 (38)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:47 (38)	06:20	07:28			07:37			08:49	09:28
	22:14	6	06:53 (38)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:49 (38)	06:22	07:31			07:39			08:52	09:28
	22:12	3	06:52 (38)	20:54	19:25			17:02			15:57	15:47
28	05:16		06:51 (38)	06:24	07:33		08:29 (84)	07:42			08:54	09:28
	22:10	1	06:52 (38)	20:51	19:22	3	08:32 (84)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:25 (84)	07:44			08:56	09:28
	22:07			20:48	19:19	9	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:23 (84)	07:47			08:58	09:28
	22:05			20:45	19:16	12	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		606				24			189			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May		June	
1	09:28	08:46		07:35	08:11 (84)	07:07	05:44	07:08 (38)	04:40	06:45 (38)
	15:53	16:56		18:05	6 08:17 (84)	20:17	21:26	1 07:09 (38)	22:30	32 07:17 (38)
2	09:27	08:43		07:33	08:08 (84)	07:04	05:42	07:06 (38)	04:39	06:46 (38)
	15:54	16:59		18:07	11 08:19 (84)	20:19	21:28	6 07:12 (38)	22:32	31 07:17 (38)
3	09:27	08:41		07:30	08:06 (84)	07:01	05:39	07:04 (38)	04:38	06:46 (38)
	15:56	17:01		18:10	13 08:19 (84)	20:21	21:31	9 07:13 (38)	22:33	31 07:17 (38)
4	09:26	08:39		07:27	08:05 (84)	06:58	05:37	07:02 (38)	04:36	06:47 (38)
	15:57	17:04		18:12	14 08:19 (84)	20:24	21:33	13 07:15 (38)	22:35	29 07:16 (38)
5	09:26	08:37		07:24	08:05 (84)	06:55	05:34	07:00 (38)	04:35	06:48 (38)
	15:59	17:06		18:14	14 08:19 (84)	20:26	21:35	16 07:16 (38)	22:36	29 07:17 (38)
6	09:25	08:34		07:21	08:05 (84)	06:53	05:32	06:58 (38)	04:34	06:49 (38)
	16:00	17:09		18:17	13 08:18 (84)	20:28	21:37	19 07:17 (38)	22:38	27 07:16 (38)
7	09:24	08:32		07:19	08:05 (84)	06:50	05:29	06:55 (38)	04:33	06:49 (38)
	16:02	17:11		18:19	12 08:17 (84)	20:31	21:40	22 07:17 (38)	22:39	27 07:16 (38)
8	09:24	08:30		07:16	08:06 (84)	06:47	05:27	06:54 (38)	04:32	06:49 (38)
	16:04	17:14		18:21	10 08:16 (84)	20:33	21:42	24 07:18 (38)	22:40	26 07:15 (38)
9	09:23	08:27		07:13	08:08 (84)	06:44	05:24	06:52 (38)	04:31	06:50 (38)
	16:06	17:16		18:24	5 08:13 (84)	20:35	21:44	27 07:19 (38)	22:42	26 07:16 (38)
10	09:22	08:25		07:10		06:41	05:22	06:50 (38)	04:31	06:51 (38)
	16:07	17:18		18:26		20:37	21:46	29 07:19 (38)	22:43	24 07:15 (38)
11	09:21	08:23		07:07		06:38	05:20	06:48 (38)	04:30	06:52 (38)
	16:09	17:21		18:28		20:40	21:49	32 07:20 (38)	22:44	23 07:15 (38)
12	09:20	08:20		07:04		06:36	05:17	06:46 (38)	04:29	06:52 (38)
	16:11	17:23		18:31		20:42	21:51	34 07:20 (38)	22:45	22 07:14 (38)
13	09:18	08:18		07:02		06:33	05:15	06:45 (38)	04:29	06:53 (38)
	16:13	17:26		18:33		20:44	21:53	35 07:20 (38)	22:46	21 07:14 (38)
14	09:17	08:15		06:59		06:30	05:13	06:43 (38)	04:28	06:53 (38)
	16:15	17:28		18:35		20:47	21:55	37 07:20 (38)	22:46	22 07:15 (38)
15	09:16	08:13	08:44 (85)	06:56		06:27	05:11	06:41 (38)	04:28	06:53 (38)
	16:17	17:31	6 08:50 (85)	18:38		20:49	21:57	39 07:20 (38)	22:47	21 07:14 (38)
16	09:14	08:10	08:42 (85)	06:53		06:24	05:09	06:41 (38)	04:28	06:54 (38)
	16:19	17:33	10 08:52 (85)	18:40		20:51	22:00	39 07:20 (38)	22:48	20 07:14 (38)
17	09:13	08:07	08:40 (85)	06:50		06:22	05:06	06:40 (38)	04:27	06:54 (38)
	16:21	17:36	13 08:53 (85)	18:42		20:54	22:02	40 07:20 (38)	22:48	20 07:14 (38)
18	09:12	08:05	08:40 (85)	06:47		06:19	05:04	06:41 (38)	04:27	06:55 (38)
	16:24	17:38	14 08:54 (85)	18:45		20:56	22:04	40 07:21 (38)	22:49	19 07:14 (38)
19	09:10	08:02	08:39 (85)	06:44		06:16	05:02	06:41 (38)	04:27	06:55 (38)
	16:26	17:41	15 08:54 (85)	18:47		20:58	22:06	40 07:21 (38)	22:49	19 07:14 (38)
20	09:08	08:00	08:39 (85)	06:42		06:13	05:00	06:41 (38)	04:27	06:55 (38)
	16:28	17:43	15 08:54 (85)	18:49		21:00	22:08	39 07:20 (38)	22:50	19 07:14 (38)
21	09:07	07:57	08:39 (85)	06:39		06:11	04:58	06:41 (38)	04:27	06:55 (38)
	16:30	17:46	14 08:53 (85)	18:52		21:03	22:10	39 07:20 (38)	22:50	19 07:14 (38)
22	09:05	07:54	08:39 (85)	06:36		06:08	04:56	06:41 (38)	04:27	06:56 (38)
	16:32	17:48	13 08:52 (85)	18:54		21:05	22:12	39 07:20 (38)	22:50	19 07:15 (38)
23	09:03	07:52	08:41 (85)	06:33		06:05	04:55	06:41 (38)	04:28	06:56 (38)
	16:35	17:50	11 08:52 (85)	18:56		21:07	22:14	39 07:20 (38)	22:50	19 07:15 (38)
24	09:02	07:49	08:42 (85)	06:30		06:02	04:53	06:42 (38)	04:28	06:56 (38)
	16:37	17:53	8 08:50 (85)	18:58		21:10	22:16	38 07:20 (38)	22:50	19 07:15 (38)
25	09:00	07:46		06:27		06:00	04:51	06:42 (38)	04:28	06:57 (38)
	16:39	17:55		19:01		21:12	22:18	37 07:19 (38)	22:50	19 07:16 (38)
26	08:58	07:44		06:24		05:57	04:49	06:43 (38)	04:29	06:56 (38)
	16:42	17:58		19:03		21:14	22:20	37 07:20 (38)	22:50	20 07:16 (38)
27	08:56	07:41		06:21		05:54	04:48	06:43 (38)	04:29	06:56 (38)
	16:44	18:00		19:05		21:17	22:22	36 07:19 (38)	22:50	21 07:17 (38)
28	08:54	07:38		06:18		05:52	04:46	06:43 (38)	04:30	06:56 (38)
	16:47	18:02		19:08		21:19	22:24	36 07:19 (38)	22:50	21 07:17 (38)
29	08:52			07:16		05:49	04:44	06:44 (38)	04:31	06:56 (38)
	16:49			20:10		21:21	22:25	35 07:19 (38)	22:49	21 07:17 (38)
30	08:50			07:13		05:47	04:43	06:45 (38)	04:32	06:56 (38)
	16:51			20:12		21:24	22:27	34 07:19 (38)	22:49	22 07:18 (38)
31	08:48			07:10			04:41	06:44 (38)		
	16:54			20:14			22:29	34 07:18 (38)		
Potential sun hours	221	260		365		432	521		547	
Total, worst case			119		98			945		688

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September	October		November	December
1	04:32		06:56 (38)	05:24	06:57 (38)	06:33	07:39		07:51	09:00
	22:48	23	07:19 (38)	22:01	33	07:30 (38)	20:40	19:13		16:49	15:52
2	04:33		06:56 (38)	05:27	06:59 (38)	06:35	07:42		07:54	09:01
	22:48	24	07:20 (38)	21:58	31	07:30 (38)	20:37	19:10		16:47	15:50
3	04:34		06:55 (38)	05:29	07:01 (38)	06:38	07:44		07:56	09:03
	22:47	25	07:20 (38)	21:56	28	07:29 (38)	20:34	19:07		16:44	15:49
4	04:35		06:55 (38)	05:31	07:03 (38)	06:40	07:46		07:59	09:05
	22:46	25	07:20 (38)	21:54	26	07:29 (38)	20:31	19:05		16:42	15:48
5	04:37		06:54 (38)	05:33	07:05 (38)	06:42	07:48	08:44 (84)	08:01	09:07
	22:46	27	07:21 (38)	21:51	23	07:28 (38)	20:28	19:02	8	08:52 (84)	16:39	15:47
6	04:38		06:55 (38)	05:35	07:06 (38)	06:44	07:51	08:42 (84)	08:03	09:09
	22:45	28	07:23 (38)	21:49	21	07:27 (38)	20:25	18:59	11	08:53 (84)	16:37	15:47
7	04:39		06:55 (38)	05:38	07:08 (38)	06:47	07:53	08:41 (84)	08:06	09:10
	22:44	28	07:23 (38)	21:47	18	07:26 (38)	20:23	18:56	13	08:54 (84)	16:35	15:46
8	04:40		06:54 (38)	05:40	07:10 (38)	06:49	07:55	08:40 (84)	08:08	09:12
	22:43	30	07:24 (38)	21:44	15	07:25 (38)	20:20	18:53	14	08:54 (84)	16:32	15:45
9	04:42		06:54 (38)	05:42	07:12 (38)	06:51	07:57	08:39 (84)	08:11	09:13
	22:42	30	07:24 (38)	21:42	12	07:24 (38)	20:17	18:50	15	08:54 (84)	16:30	15:44
10	04:43		06:53 (38)	05:44	07:13 (38)	06:53	08:00	08:40 (84)	08:13	09:15
	22:40	31	07:24 (38)	21:39	9	07:22 (38)	20:14	18:48	14	08:54 (84)	16:28	15:44
11	04:45		06:54 (38)	05:46	07:15 (38)	06:55	08:02	08:40 (84)	08:15	09:16
	22:39	32	07:26 (38)	21:37	5	07:20 (38)	20:11	18:45	13	08:53 (84)	16:26	15:43
12	04:46		06:53 (38)	05:49			06:58	08:04	08:42 (84)	08:18	09:17
	22:38	33	07:26 (38)	21:34			20:08	18:42	9	08:51 (84)	16:24	15:43
13	04:48		06:53 (38)	05:51			07:00	08:07	08:45 (84)	08:20	09:19
	22:36	33	07:26 (38)	21:32			20:05	18:39	4	08:49 (84)	16:22	15:43
14	04:49		06:53 (38)	05:53			07:02	08:09		08:22	09:20
	22:35	34	07:27 (38)	21:29			20:02	18:36		16:19	15:43
15	04:51		06:52 (38)	05:55			07:04	08:11		08:25	09:21
	22:34	35	07:27 (38)	21:26			19:59	18:34		16:17	15:42
16	04:53		06:52 (38)	05:58			07:06	08:14		08:27	09:22
	22:32	36	07:28 (38)	21:24			19:57	18:31		16:15	15:42
17	04:54		06:52 (38)	06:00			07:09	08:16	09:17 (85)	08:29	09:23
	22:30	36	07:28 (38)	21:21			19:54	18:28	2	09:19 (85)	16:13	15:42
18	04:56		06:52 (38)	06:02			07:11	08:18	09:13 (85)	08:32	09:24
	22:29	37	07:29 (38)	21:18			19:51	18:25	9	09:22 (85)	16:12	15:42
19	04:58		06:52 (38)	06:04			07:13	08:21	09:12 (85)	08:34	09:25
	22:27	38	07:30 (38)	21:16			19:48	18:23	12	09:24 (85)	16:10	15:43
20	05:00		06:51 (38)	06:07			07:15	08:23	09:10 (85)	08:36	09:25
	22:25	38	07:29 (38)	21:13			19:45	18:20	14	09:24 (85)	16:08	15:43
21	05:02		06:51 (38)	06:09			07:17	08:25	09:10 (85)	08:39	09:26
	22:23	39	07:30 (38)	21:10			19:42	18:17	15	09:25 (85)	16:06	15:43
22	05:04		06:52 (38)	06:11			07:19	08:28	09:09 (85)	08:41	09:27
	22:22	39	07:31 (38)	21:08			19:39	18:15	15	09:24 (85)	16:04	15:44
23	05:06		06:51 (38)	06:13			07:22	08:30	09:09 (85)	08:43	09:27
	22:20	39	07:30 (38)	21:05			19:36	18:12	15	09:24 (85)	16:03	15:44
24	05:08		06:51 (38)	06:15			07:24	08:32	09:09 (85)	08:45	09:28
	22:18	40	07:31 (38)	21:02			19:33	18:09	14	09:23 (85)	16:01	15:45
25	05:10		06:51 (38)	06:18			07:26	07:35	08:10 (85)	08:47	09:28
	22:16	40	07:31 (38)	20:59			19:30	17:07	13	08:23 (85)	16:00	15:46
26	05:12		06:51 (38)	06:20			07:28	07:37	08:13 (85)	08:49	09:28
	22:14	40	07:31 (38)	20:57			19:28	17:04	9	08:22 (85)	15:58	15:46
27	05:14		06:52 (38)	06:22			07:31	07:39	08:14 (85)	08:52	09:28
	22:12	39	07:31 (38)	20:54			19:25	17:02	5	08:19 (85)	15:57	15:47
28	05:16		06:52 (38)	06:24			07:33	07:42		08:54	09:28
	22:10	39	07:31 (38)	20:51			19:22	16:59		15:55	15:48
29	05:18		06:52 (38)	06:27			07:35	07:44		08:56	09:28
	22:07	38	07:30 (38)	20:48			19:19	16:56		15:54	15:49
30	05:20		06:54 (38)	06:29			07:37	07:47		08:58	09:28
	22:05	36	07:30 (38)	20:45			19:16	16:54		15:53	15:50
31	05:22		06:55 (38)	06:31				07:49			09:28
	22:03	35	07:30 (38)	20:43				16:51			15:51
Potential sun hours	545			478			386	319		236	200
Total, worst case		1047			221				224		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	04:32	05:24	06:33			07:40			07:52		08:47 (2)	09:00
	22:49	22:01	20:40			19:13			16:49	9	08:56 (2)	15:51
2	04:33	05:26	06:35			07:42		09:06 (22)	07:54			09:02
	22:48	21:59	20:37			19:10	6	09:12 (22)	16:46			15:50
3	04:34	05:29	06:38			07:44		09:02 (22)	07:56			09:04
	22:47	21:56	20:34			19:07	13	09:15 (22)	16:44			15:49
4	04:35	05:31	06:40			07:46		09:00 (22)	07:59			09:05
	22:47	21:54	20:31			19:05	17	09:17 (22)	16:42			15:48
5	04:36	05:33	06:42			07:48		08:58 (22)	08:01			09:07
	22:46	21:52	20:28			19:02	20	09:18 (22)	16:39			15:47
6	04:38	05:35	06:44			07:51		08:57 (22)	08:04			09:09
	22:45	21:49	20:26			18:59	22	09:19 (22)	16:37			15:46
7	04:39	05:37	06:47			07:53		08:57 (22)	08:06			09:10
	22:44	21:47	20:23			18:56	23	09:20 (22)	16:35			15:46
8	04:40	05:40	06:49			07:55		08:55 (22)	08:08			09:12
	22:43	21:44	20:20			18:53	24	09:19 (22)	16:32			15:45
9	04:41	05:42	06:51			07:58		08:55 (22)	08:11			09:14
	22:42	21:42	20:17			18:50	24	09:19 (22)	16:30			15:44
10	04:43	05:44	06:53			08:00		08:55 (22)	08:13			09:15
	22:41	21:39	20:14			18:48	24	09:19 (22)	16:28			15:44
11	04:44	05:46	06:55			08:02		08:54 (22)	08:16			09:16
	22:39	21:37	20:11			18:45	25	09:19 (22)	16:26			15:43
12	04:46	05:49	06:58			08:04		08:55 (22)	08:18			09:18
	22:38	21:34	20:08			18:42	23	09:18 (22)	16:24			15:43
13	04:48	05:51	07:00			08:07		08:55 (22)	08:20			09:19
	22:37	21:32	20:05			18:39	22	09:17 (22)	16:21			15:43
14	04:49	05:53	07:02			08:09		08:55 (22)	08:23			09:20
	22:35	21:29	20:02			18:36	21	09:16 (22)	16:19			15:42
15	04:51	05:55	07:04			08:11		08:57 (22)	08:25			09:21
	22:34	21:26	20:00			18:34	18	09:15 (22)	16:17			15:42
16	04:53	05:58	07:06			08:14		08:58 (22)	08:27			09:22
	22:32	21:24	19:57			18:31	15	09:13 (22)	16:15			15:42
17	04:54	06:00	07:09			08:16		09:01 (22)	08:30			09:23
	22:31	21:21	19:54			18:28	10	09:11 (22)	16:13			15:42
18	04:56	06:02	07:11		08:19 (24)	08:18			08:32			09:24
	22:29	21:19	19:51	9	08:28 (24)	18:25			16:11			15:42
19	04:58	06:04	07:13		08:16 (24)	08:21			08:34			09:25
	22:27	21:16	19:48	13	08:29 (24)	18:23			16:10			15:43
20	05:00	06:06	07:15		08:14 (24)	08:23		09:48 (2)	08:37			09:26
	22:25	21:13	19:45	16	08:30 (24)	18:20	9	09:57 (2)	16:08			15:43
21	05:02	06:09	07:17		08:14 (24)	08:25		09:46 (2)	08:39			09:26
	22:24	21:10	19:42	17	08:31 (24)	18:17	13	09:59 (2)	16:06			15:43
22	05:04	06:11	07:20		08:13 (24)	08:28		09:44 (2)	08:41			09:27
	22:22	21:08	19:39	18	08:31 (24)	18:15	16	10:00 (2)	16:04			15:44
23	05:06	06:13	07:22		08:12 (24)	08:30		09:44 (2)	08:43			09:27
	22:20	21:05	19:36	19	08:31 (24)	18:12	17	10:01 (2)	16:03			15:44
24	05:08	06:15	07:24		08:12 (24)	08:32		09:42 (2)	08:45			09:28
	22:18	21:02	19:33	19	08:31 (24)	18:09	19	10:01 (2)	16:01			15:45
25	05:10	06:18	07:26		08:11 (24)	07:35		08:42 (2)	08:48			09:28
	22:16	20:59	19:31	19	08:30 (24)	17:07	19	09:01 (2)	15:59			15:45
26	05:12	06:20	07:28		08:12 (24)	07:37		08:43 (2)	08:50			09:28
	22:14	20:57	19:28	17	08:29 (24)	17:04	19	09:02 (2)	15:58			15:46
27	05:14	06:22	07:31		08:13 (24)	07:40		08:42 (2)	08:52			09:28
	22:12	20:54	19:25	15	08:28 (24)	17:02	19	09:01 (2)	15:57			15:47
28	05:16	06:24	07:33		08:14 (24)	07:42		08:43 (2)	08:54			09:29
	22:10	20:51	19:22	12	08:26 (24)	16:59	18	09:01 (2)	15:55			15:48
29	05:18	06:27	07:35		08:15 (24)	07:44		08:44 (2)	08:56			09:29
	22:08	20:48	19:19	8	08:23 (24)	16:56	17	09:01 (2)	15:54			15:49
30	05:20	06:29	07:37			07:47		08:44 (2)	08:58			09:28
	22:05	20:45	19:16			16:54	15	08:59 (2)	15:53			15:50
31	05:22	06:31				07:49		08:45 (2)				09:28
	22:03	20:43				16:51	13	08:58 (2)				15:51
Potential sun hours	545	478	386			319			236			200
Total, worst case				182			501			9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
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	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
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24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
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29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
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	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
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	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
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16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33		07:40		07:52	09:00
	15:53	16:56		18:05	23 08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40		19:13		16:49	15:51
2	09:28	08:44		07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35		07:42		07:54	09:02
	15:54	16:59		18:07	24 08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37		19:10		16:46	15:50
3	09:27	08:41		07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38		07:44		07:56	09:04
	15:56	17:01		18:10	24 08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34		19:07		16:44	15:49
4	09:27	08:39		07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	09:05 (22)	07:59	09:05
	15:57	17:04		18:12	23 08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31		19:05	11 09:16 (22)	16:42	15:48
5	09:26	08:37		07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42		07:48	09:02 (22)	08:01	09:07
	15:59	17:06		18:14	22 08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28		19:02	16 09:18 (22)	16:39	15:47
6	09:25	08:35		07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44		07:51	09:00 (22)	08:04	09:09
	16:00	17:09		18:17	22 08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26		18:59	19 09:19 (22)	16:37	15:46
7	09:25	08:32		07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47		07:53	09:00 (22)	08:06	09:10
	16:02	17:11		18:19	19 08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23		18:56	20 09:20 (22)	16:35	15:46
8	09:24	08:30		07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:58 (22)	08:08	09:12
	16:04	17:13		18:21	18 08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20		18:53	23 09:21 (22)	16:32	15:45
9	09:23	08:28		07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51		07:58	08:57 (22)	08:11	09:14
	16:05	17:16		18:24	13 08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17		18:50	23 09:20 (22)	16:30	15:44
10	09:22	08:25		07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53		08:00	08:57 (22)	08:13	09:15
	16:07	17:18		18:26	7 08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14		18:48	24 09:21 (22)	16:28	15:44
11	09:21	08:23		07:07		06:38	05:20	04:30	04:44	05:46	06:55		08:02	08:57 (22)	08:16	09:16
	16:09	17:21		18:28		20:40	21:49	22:44	22:39	21:37	20:11		18:45	23 09:20 (22)	16:26	15:43
12	09:20	08:20		07:05		06:36	05:17	04:29	04:46	05:49	06:58		08:04	08:57 (22)	08:18	09:18
	16:11	17:23		18:31		20:42	21:51	22:45	22:38	21:34	20:08		18:42	24 09:21 (22)	16:24	15:43
13	09:19	08:18		07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00		08:07	08:57 (22)	08:20	09:19
	16:13	17:26		18:33	5 07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05		18:39	23 09:20 (22)	16:21	15:43
14	09:17	08:15		06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02		08:09	08:57 (22)	08:23	09:20
	16:15	17:28		18:35	11 07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02		18:36	21 09:18 (22)	16:19	15:42
15	09:16	08:13		06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04		08:11	08:58 (22)	08:25	09:21
	16:17	17:31		18:38	15 07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00		18:34	20 09:18 (22)	16:17	15:42
16	09:15	08:10		06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06		08:14	08:58 (22)	08:27	09:22
	16:19	17:33		18:40	16 07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57		18:31	18 09:16 (22)	16:15	15:42
17	09:13	08:08		06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09		08:16	09:00 (22)	08:30	09:23
	16:21	17:36		18:42	18 07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54		18:28	15 09:15 (22)	16:13	15:42
18	09:12	08:05		06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11		08:18	09:02 (22)	08:32	09:24
	16:23	17:38		18:45	19 07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51		18:25	10 09:12 (22)	16:11	15:42
19	09:10	08:02		06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13	08:22 (24)	08:21		08:34	09:25
	16:26	17:41		18:47	18 07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48	7 08:29 (24)	18:23		16:10	15:43
20	09:09	08:00		06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15	08:19 (24)	08:23		08:37	09:26
	16:28	17:43		18:49	19 07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45	12 08:31 (24)	18:20		16:08	15:43
21	09:07	07:57		06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17	08:18 (24)	08:25		08:39	09:26
	16:30	17:46		18:52	17 07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42	15 08:33 (24)	18:17		16:06	15:43
22	09:05	07:54		06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20	08:16 (24)	08:28		08:41	09:27
	16:32	17:48		18:54	15 07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39	17 08:33 (24)	18:15		16:04	15:44
23	09:04	07:52		06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22	08:15 (24)	08:30		08:43	09:27
	16:35	17:50		18:56	13 07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36	18 08:33 (24)	18:12		16:03	15:44
24	09:02	07:49	08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24	08:14 (24)	08:32		08:45	09:28
	16:37	17:53	12 08:42 (22)	18:59	8 07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33	19 08:33 (24)	18:09		16:01	15:45
25	09:00	07:46	08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	08:14 (24)	07:35		08:48	09:28
	16:39	17:55	15 08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31	18 08:32 (24)	17:07		15:59	15:45
26	08:58	07:44	08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	08:14 (24)	07:37		08:50	09:28
	16:42	17:58	19 08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28	19 08:33 (24)	17:04		15:58	15:46
27	08:56	07:41	08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	08:14 (24)	07:40		08:52	09:28
	16:44	18:00	20 08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	18 08:32 (24)	17:02		15:57	15:47
28	08:54	07:38	08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	08:15 (24)	07:42		08:54	09:29
	16:46	18:02	22 08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	15 08:30 (24)	16:59		15:55	15:48
29	08:52			07:16		05:49	04:44	04:31	05:18	06:27	07:35	08:15 (24)	07:44		08:56	09:29
	16:49			20:10		21:21	22:26	22:50	22:08	20:48	19:19	13 08:28 (24)	16:56		15:54	15:49
30	08:50			07:13		05:47	04:43	04:31	05:20	06:29	07:37	08:18 (24)	07:47		08:58	09:28
	16:51			20:12		21:24	22:27	22:49	22:05	20:45	19:16	8 08:26 (24)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:15			22:29		22:03	20:43			16:51			15:51
Potential sun hours	221	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			88		369							179		290		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
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	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
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16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
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16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
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	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
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	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
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	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April	May	June	July	August	September	October		November	December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January		February			March			April		May		June		July		August		September		October			November			December
1	09:28		08:46		09:41 (22)	07:35		08:28 (24)	07:07		05:44		04:40		04:32		05:24		06:33		07:39			07:52		09:00 (22)	09:00
	15:53		16:56	3	09:44 (22)	18:05	19	08:47 (24)	20:17		21:26		22:31		22:49		22:01		20:40		19:13			16:49	24	09:24 (22)	15:51
2	09:28		08:44		09:37 (22)	07:33		08:27 (24)	07:04		05:41		04:39		04:33		05:26		06:35		07:42			07:54		09:01 (22)	09:02
	15:54		16:59	10	09:47 (22)	18:07	20	08:47 (24)	20:19		21:28		22:32		22:48		21:59		20:37		19:10			16:46	23	09:24 (22)	15:50
3	09:27		08:41		09:35 (22)	07:30		08:27 (24)	07:01		05:39		04:37		04:34		05:29		06:38		07:44			07:56		09:01 (22)	09:04
	15:56		17:01	15	09:50 (22)	18:10	20	08:47 (24)	20:21		21:31		22:34		22:47		21:56		20:34		19:07			16:44	23	09:24 (22)	15:49
4	09:27		08:39		09:34 (22)	07:27		08:27 (24)	06:58		05:36		04:36		04:35		05:31		06:40		07:46			07:59		09:02 (22)	09:05
	15:57		17:04	17	09:51 (22)	18:12	19	08:46 (24)	20:24		21:33		22:35		22:47		21:54		20:31		19:05			16:42	22	09:24 (22)	15:48
5	09:26		08:37		09:33 (22)	07:24		08:28 (24)	06:55		05:34		04:35		04:36		05:33		06:42		07:48		09:11 (24)	08:01		09:02 (22)	09:07
	15:59		17:06	20	09:53 (22)	18:14	17	08:45 (24)	20:26		21:35		22:37		22:46		21:52		20:28		19:02	3	09:14 (24)	16:39	21	09:23 (22)	15:47
6	09:25		08:35		09:32 (22)	07:22		08:28 (24)	06:53		05:31		04:34		04:37		05:35		06:44		07:51		09:06 (24)	08:04		09:03 (22)	09:09
	16:00		17:08	21	09:53 (22)	18:17	16	08:44 (24)	20:28		21:38		22:38		22:45		21:49		20:26		18:59	11	09:17 (24)	16:37	19	09:22 (22)	15:46
7	09:25		08:32		09:31 (22)	07:19		08:29 (24)	06:50		05:29		04:33		04:39		05:37		06:47		07:53		09:05 (24)	08:06		09:05 (22)	09:10
	16:02		17:11	22	09:53 (22)	18:19	13	08:42 (24)	20:31		21:40		22:39		22:44		21:47		20:23		18:56	15	09:20 (24)	16:35	17	09:22 (22)	15:46
8	09:24		08:30		09:32 (22)	07:16		08:31 (24)	06:47		05:27		04:32		04:40		05:40		06:49		07:55		09:03 (24)	08:08		09:05 (22)	09:12
	16:04		17:13	22	09:54 (22)	18:21	8	08:39 (24)	20:33		21:42		22:41		22:43		21:44		20:20		18:53	17	09:20 (24)	16:32	15	09:20 (22)	15:45
9	09:23		08:28		09:31 (22)	07:13			06:44		05:24		04:31		04:41		05:42		06:51		07:58		09:02 (24)	08:11		09:08 (22)	09:14
	16:05		17:16	23	09:54 (22)	18:24			20:35		21:44		22:42		22:42		21:42		20:17		18:50	18	09:20 (24)	16:30	10	09:18 (22)	15:44
10	09:22		08:25		09:32 (22)	07:10			06:41		05:22		04:30		04:43		05:44		06:53		08:00		09:02 (24)	08:13		09:13 (22)	09:15
	16:07		17:18	23	09:55 (22)	18:26			20:38		21:47		22:43		22:41		21:39		20:14		18:48	19	09:21 (24)	16:28	1	09:14 (22)	15:44
11	09:21		08:23		09:31 (22)	07:07			06:38		05:20		04:30		04:44		05:46		06:55		08:02		09:01 (24)	08:16			09:16
	16:09		17:21	24	09:55 (22)	18:28			20:40		21:49		22:44		22:39		21:37		20:11		18:45	20	09:21 (24)	16:26			15:43
12	09:20		08:20		09:31 (22)	07:05			06:36		05:17		04:29		04:46		05:49		06:58		08:04		09:01 (24)	08:18			09:18
	16:11		17:23	23	09:54 (22)	18:31			20:42		21:51		22:45		22:38		21:34		20:08		18:42	20	09:21 (24)	16:24			15:43
13	09:19		08:18		09:31 (22)	07:02			06:33		05:15		04:28		04:47		05:51		07:00		08:07		09:01 (24)	08:20			09:19
	16:13		17:26	23	09:54 (22)	18:33			20:44		21:53		22:46		22:37		21:32		20:05		18:39	19	09:20 (24)	16:21			15:43
14	09:17		08:15		09:33 (22)	06:59			06:30		05:13		04:28		04:49		05:53		07:02		08:09		09:01 (24)	08:23			09:20
	16:15		17:28	21	09:54 (22)	18:35			20:47		21:55		22:47		22:35		21:29		20:02		18:36	18	09:19 (24)	16:19			15:42
15	09:16		08:13		09:33 (22)	06:56			06:27		05:11		04:28		04:51		05:55		07:04		08:11		09:02 (24)	08:25			09:21
	16:17		17:31	20	09:53 (22)	18:38			20:49		21:58		22:47		22:34		21:26		20:00		18:34	16	09:18 (24)	16:17			15:42
16	09:15		08:10		09:34 (22)	06:53			06:24		05:08		04:27		04:53		05:57		07:06		08:14		09:03 (24)	08:27			09:22
	16:19		17:33	17	09:51 (22)	18:40			20:51		22:00		22:48		22:32		21:24		19:57		18:31	13	09:16 (24)	16:15			15:42
17	09:13		08:08		09:36 (22)	06:50			06:22		05:06		04:27		04:54		06:00		07:09		08:16		09:05 (24)	08:30			09:23
	16:21		17:36	14	09:50 (22)	18:42			20:54		22:02		22:49		22:31		21:21		19:54		18:28	10	09:15 (24)	16:13			15:42
18	09:12		08:05		09:39 (22)	06:47			06:19		05:04		04:27		04:56		06:02		07:11		08:18			08:32			09:24
	16:23		17:38	8	09:47 (22)	18:45			20:56		22:04		22:49		22:29		21:19		19:51		18:25			16:11			15:42
19	09:10		08:02			06:44			06:16		05:02		04:27		04:58		06:04		07:13		08:21			08:34			09:25
	16:26		17:41			18:47			20:58		22:06		22:50		22:27		21:16		19:48		18:23			16:10			15:42
20	09:09		08:00			06:42			06:13		05:00		04:27		05:00		06:06		07:15		08:23			08:37			09:26
	16:28		17:43			18:49			21:01		22:08		22:50		22:25		21:13		19:45		18:20			16:08			15:43
21	09:07		07:57			06:39			06:10		04:58		04:27		05:02		06:09		07:17		08:25			08:39			09:26
	16:30		17:45			18:52			21:03		22:10		22:50		22:24		21:10		19:42		18:17			16:06			15:43
22	09:05		07:54			06:36			06:08		04:56		04:27		05:04		06:11		07:20		08:28			08:41			09:27
	16:32		17:48			18:54			21:05		22:12		22:51		22:22		21:08		19:39		18:15			16:04			15:44
23	09:04		07:52			06:33			06:05		04:54		04:27		05:06		06:13		07:22		08:30			08:43			09:27
	16:35		17:50			18:56			21:08		22:14		22:51		22:20		21:05		19:36		18:12			16:03			15:44
24	09:02		07:49		08:36 (24)	06:30			06:02		04:53		04:28		05:08		06:15		07:24		08:32		10:07 (22)	08:45			09:28
	16:37		17:53	5	08:41 (24)	18:59			21:10		22:16		22:51		22:18		21:02		19:33		18:09	10	10:17 (22)	16:01			15:45
25	09:00		07:46		08:32 (24)	06:27			06:00		04:51		04:28		05:10		06:18		07:26		07:35		09:05 (22)	08:48			09:28
	16:39		17:55	12	08:44 (24)	19:01			21:12		22:18		22:51		22:16		20:59		19:30		17:07	15	09:20 (22)	15:59			15:45
26	08:58		07:44		08:30 (24)	06:24			05:57		04:49		04:29		05:12		06:20		07:28		07:37		09:04 (22)	08:50			09:28
	16:42		17:58	15	08:45 (24)	19:03			21:14		22:20		22:51		22:14		20:57		19:28		17:04	18	09:22 (22)	15:58			15:46
27	08:56		07:41		08:29 (24)	06:21			05:54		04:47		04:29		05:14		06:22		07:31		07:40		09:02 (22)	08:52			09:28
	16:44		18:00	17	08:46 (24)	19:05			21:17		22:22		22:50		22:12		20:54		19:25		17:02	20	09:22 (22)	15:56			15:47
28	08:54		07:38		08:29 (24)	06:18			05:52		04:46		04:30		05:16		06:24		07:33		07:42		09:02 (22)	08:54			09:29
	16:46		18:02	18	08:47 (24)	19:08			21:19		22:24		22:50		22:10		20:51		19:22		16:59	21	09:23 (22)	15:55			15:48
29	08:52					07:16			05:49		04:44		04:30		05:18		06:27		07:35		07:44		09:02 (22)	08:56			09:29
	16:49					20:10			21:21		22:26		22:50		22:08		20:48		19:19		16:56	22	09:24 (22)	15:54			15:49
30	08:50					07:13			05:47		04:43		04:31		05:20		06:29		07:37		07:47		09:01 (22)	08:58			09:28
	16:51					20:12			21:24		22:27		22:49		22:05		20:45		19:16		16:54	23	09:24 (22)	15:53			15:50
31	08:48					07:10					04:41				05:22		06:31				07:49		09:01 (22)				09:28
	16:54					20:15					22:29				22:03		20:43				16:51	23	09:24 (22)				15:51
Potential sun hours	221		260			365			432		521		547		546		478		386		319			236			199
Total, worst case				393			132															351			175		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April	May	June
1	09:28			08:46		09:41 (22)	07:35		08:31 (24)	07:07	05:44	04:40
	15:53			16:56	14	09:55 (22)	18:05	20	08:51 (24)	20:17	21:26	22:31
2	09:28			08:44		09:40 (22)	07:33		08:31 (24)	07:04	05:41	04:39
	15:54			16:59	16	09:56 (22)	18:07	20	08:51 (24)	20:19	21:28	22:32
3	09:27			08:41		09:39 (22)	07:30		08:31 (24)	07:01	05:39	04:37
	15:56			17:01	19	09:58 (22)	18:10	19	08:50 (24)	20:21	21:31	22:34
4	09:27			08:39		09:38 (22)	07:27		08:31 (24)	06:58	05:36	04:36
	15:57			17:04	20	09:58 (22)	18:12	19	08:50 (24)	20:24	21:33	22:35
5	09:26			08:37		09:38 (22)	07:24		08:32 (24)	06:55	05:34	04:35
	15:59			17:06	22	10:00 (22)	18:14	16	08:48 (24)	20:26	21:35	22:37
6	09:25			08:35		09:37 (22)	07:22		08:33 (24)	06:53	05:31	04:34
	16:00			17:08	23	10:00 (22)	18:17	14	08:47 (24)	20:28	21:38	22:38
7	09:25			08:32		09:36 (22)	07:19		08:35 (24)	06:50	05:29	04:33
	16:02			17:11	24	10:00 (22)	18:19	9	08:44 (24)	20:31	21:40	22:39
8	09:24			08:30		09:37 (22)	07:16			06:47	05:27	04:32
	16:04			17:13	24	10:01 (22)	18:21			20:33	21:42	22:41
9	09:23			08:28		09:36 (22)	07:13			06:44	05:24	04:31
	16:05			17:16	24	10:00 (22)	18:24			20:35	21:44	22:42
10	09:22			08:25		09:37 (22)	07:10			06:41	05:22	04:30
	16:07			17:18	24	10:01 (22)	18:26			20:38	21:47	22:43
11	09:21			08:23		09:37 (22)	07:07			06:38	05:20	04:30
	16:09			17:21	23	10:00 (22)	18:28			20:40	21:49	22:44
12	09:20			08:20		09:37 (22)	07:05			06:36	05:17	04:29
	16:11			17:23	23	10:00 (22)	18:31			20:42	21:51	22:45
13	09:19			08:18		09:38 (22)	07:02			06:33	05:15	04:28
	16:13			17:26	21	09:59 (22)	18:33			20:44	21:53	22:46
14	09:17			08:15		09:39 (22)	06:59			06:30	05:13	04:28
	16:15			17:28	20	09:59 (22)	18:35			20:47	21:55	22:47
15	09:16			08:13		09:40 (22)	06:56			06:27	05:11	04:28
	16:17			17:31	17	09:57 (22)	18:38			20:49	21:58	22:47
16	09:15			08:10		09:42 (22)	06:53			06:24	05:08	04:27
	16:19			17:33	13	09:55 (22)	18:40			20:51	22:00	22:48
17	09:13			08:08		09:45 (22)	06:50			06:21	05:06	04:27
	16:21			17:36	8	09:53 (22)	18:42			20:54	22:02	22:49
18	09:12			08:05			06:47			06:19	05:04	04:27
	16:23			17:38			18:45			20:56	22:04	22:49
19	09:10			08:02			06:44			06:16	05:02	04:27
	16:26			17:41			18:47			20:58	22:06	22:50
20	09:09			08:00			06:42			06:13	05:00	04:27
	16:28			17:43			18:49			21:01	22:08	22:50
21	09:07			07:57			06:39			06:10	04:58	04:27
	16:30			17:45			18:52			21:03	22:10	22:50
22	09:05			07:54			06:36			06:08	04:56	04:27
	16:32			17:48			18:54			21:05	22:12	22:51
23	09:04			07:52		08:40 (24)	06:33			06:05	04:54	04:27
	16:35			17:50	5	08:45 (24)	18:56			21:08	22:14	22:51
24	09:02			07:49		08:36 (24)	06:30			06:02	04:53	04:28
	16:37			17:53	12	08:48 (24)	18:59			21:10	22:16	22:51
25	09:00			07:46		08:34 (24)	06:27			06:00	04:51	04:28
	16:39			17:55	15	08:49 (24)	19:01			21:12	22:18	22:51
26	08:58			07:44		08:33 (24)	06:24			05:57	04:49	04:29
	16:42			17:58	17	08:50 (24)	19:03			21:14	22:20	22:51
27	08:56			07:41		08:32 (24)	06:21			05:54	04:47	04:29
	16:44			18:00	18	08:50 (24)	19:05			21:17	22:22	22:50
28	08:54			07:38		08:32 (24)	06:18			05:52	04:46	04:30
	16:46			18:02	19	08:51 (24)	19:08			21:19	22:24	22:50
29	08:52						07:16			05:49	04:44	04:30
	16:49						20:10			21:21	22:26	22:50
30	08:50						07:13			05:47	04:43	04:31
	16:51						20:12			21:24	22:27	22:49
31	08:48		09:43 (22)				07:10				04:41	
	16:54	9	09:52 (22)				20:15				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		9			421			117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December
1	04:32	05:24	06:33	07:39		07:51	09:06 (22)	09:00
	22:49	22:01	20:40	19:13		16:49	24 09:30 (22)	15:51
2	04:33	05:26	06:35	07:42		07:54	09:06 (22)	09:02
	22:48	21:59	20:37	19:10		16:46	24 09:30 (22)	15:50
3	04:34	05:29	06:38	07:44		07:56	09:06 (22)	09:04
	22:47	21:56	20:34	19:07		16:44	24 09:30 (22)	15:49
4	04:35	05:31	06:40	07:46		07:59	09:07 (22)	09:05
	22:47	21:54	20:31	19:05		16:42	23 09:30 (22)	15:48
5	04:36	05:33	06:42	07:48		08:01	09:07 (22)	09:07
	22:46	21:52	20:28	19:02		16:39	22 09:29 (22)	15:47
6	04:37	05:35	06:44	07:51	09:12 (24)	08:04	09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7 09:19 (24)	16:37	21 09:29 (22)	15:46
7	04:39	05:37	06:47	07:53	09:10 (24)	08:06	09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12 09:22 (24)	16:35	20 09:29 (22)	15:46
8	04:40	05:40	06:49	07:55	09:08 (24)	08:08	09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15 09:23 (24)	16:32	18 09:27 (22)	15:45
9	04:41	05:42	06:51	07:58	09:06 (24)	08:11	09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18 09:24 (24)	16:30	17 09:27 (22)	15:44
10	04:43	05:44	06:53	08:00	09:06 (24)	08:13	09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19 09:25 (24)	16:28	13 09:25 (22)	15:44
11	04:44	05:46	06:55	08:02	09:05 (24)	08:16	09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19 09:24 (24)	16:26	9 09:23 (22)	15:43
12	04:46	05:49	06:58	08:04	09:05 (24)	08:18		09:18
	22:38	21:34	20:08	18:42	20 09:25 (24)	16:24		15:43
13	04:47	05:51	07:00	08:07	09:04 (24)	08:20		09:19
	22:37	21:32	20:05	18:39	20 09:24 (24)	16:21		15:43
14	04:49	05:53	07:02	08:09	09:04 (24)	08:23		09:20
	22:35	21:29	20:02	18:36	19 09:23 (24)	16:19		15:42
15	04:51	05:55	07:04	08:11	09:05 (24)	08:25		09:21
	22:34	21:26	20:00	18:34	18 09:23 (24)	16:17		15:42
16	04:53	05:57	07:06	08:14	09:05 (24)	08:27		09:22
	22:32	21:24	19:57	18:31	16 09:21 (24)	16:15		15:42
17	04:54	06:00	07:09	08:16	09:07 (24)	08:30		09:23
	22:31	21:21	19:54	18:28	14 09:21 (24)	16:13		15:42
18	04:56	06:02	07:11	08:18	09:08 (24)	08:32		09:24
	22:29	21:19	19:51	18:25	10 09:18 (24)	16:11		15:42
19	04:58	06:04	07:13	08:21		08:34		09:25
	22:27	21:16	19:48	18:23		16:10		15:42
20	05:00	06:06	07:15	08:23		08:37		09:26
	22:25	21:13	19:45	18:20		16:08		15:43
21	05:02	06:09	07:17	08:25		08:39		09:26
	22:24	21:10	19:42	18:17		16:06		15:43
22	05:04	06:11	07:20	08:28		08:41		09:27
	22:22	21:08	19:39	18:15		16:04		15:44
23	05:06	06:13	07:22	08:30		08:43		09:27
	22:20	21:05	19:36	18:12		16:03		15:44
24	05:08	06:15	07:24	08:32		08:45		09:28
	22:18	21:02	19:33	18:09		16:01		15:45
25	05:10	06:18	07:26	07:35	09:13 (22)	08:48		09:28
	22:16	20:59	19:30	17:07	10 09:23 (22)	15:59		15:45
26	05:12	06:20	07:28	07:37	09:11 (22)	08:50		09:28
	22:14	20:57	19:28	17:04	15 09:26 (22)	15:58		15:46
27	05:14	06:22	07:31	07:40	09:09 (22)	08:52		09:28
	22:12	20:54	19:25	17:01	18 09:27 (22)	15:56		15:47
28	05:16	06:24	07:33	07:42	09:08 (22)	08:54		09:29
	22:10	20:51	19:22	16:59	20 09:28 (22)	15:55		15:48
29	05:18	06:27	07:35	07:44	09:08 (22)	08:56		09:29
	22:08	20:48	19:19	16:56	21 09:29 (22)	15:54		15:49
30	05:20	06:29	07:37	07:47	09:07 (22)	08:58		09:28
	22:05	20:45	19:16	16:54	22 09:29 (22)	15:53		15:50
31	05:22	06:31		07:49	09:07 (22)			09:28
	22:03	20:43		16:51	23 09:30 (22)			15:51
Potential sun hours	546	478	386	319		236		199
Total, worst case				336		215		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April	May	June	July	August	September	October	November		December		
1	09:28		12:21 (24)	08:46		10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:36 (28)	09:00	10:51 (23)
	15:53	20	12:41 (24)	16:56	20	10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6	09:42 (28)	15:51	28 12:23 (24)
2	09:28		12:22 (24)	08:44		09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:34 (28)	09:02	10:51 (23)
	15:54	19	12:41 (24)	16:58	21	10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11	09:45 (28)	15:50	30 12:24 (24)
3	09:27		12:22 (24)	08:41		10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:33 (28)	09:04	10:52 (23)
	15:55	19	12:41 (24)	17:01	20	10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14	09:47 (28)	15:49	29 12:25 (24)
4	09:27		11:12 (23)	08:39		10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:31 (28)	09:05	10:53 (23)
	15:57	22	12:41 (24)	17:03	20	10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17	09:48 (28)	15:48	30 12:26 (24)
5	09:26		11:11 (23)	08:37		10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:31 (28)	09:07	10:54 (23)
	15:58	26	12:42 (24)	17:06	19	10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18	09:49 (28)	15:47	29 12:27 (24)
6	09:25		11:10 (23)	08:35		10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03		09:30 (28)	09:09	10:56 (23)
	16:00	28	12:42 (24)	17:08	18	10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20	09:50 (28)	15:46	28 12:28 (24)
7	09:25		11:09 (23)	08:32		10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06		09:30 (28)	09:10	10:58 (23)
	16:02	29	12:42 (24)	17:11	17	10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20	09:50 (28)	15:45	26 12:29 (24)
8	09:24		11:09 (23)	08:30		10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08		09:30 (28)	09:12	11:00 (23)
	16:03	30	12:42 (24)	17:13	15	10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20	09:50 (28)	15:45	23 12:30 (24)
9	09:23		11:09 (23)	08:27		10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11		09:30 (28)	09:13	12:11 (24)
	16:05	30	12:42 (24)	17:16	12	10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20	09:50 (28)	15:44	19 12:30 (24)
10	09:22		11:08 (23)	08:25		10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13		09:31 (28)	09:15	12:11 (24)
	16:07	30	12:41 (24)	17:18	5	10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20	09:51 (28)	15:44	19 12:30 (24)
11	09:21		11:09 (23)	08:23			07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15		09:30 (28)	09:16	12:11 (24)
	16:09	28	12:41 (24)	17:21			18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20	09:50 (28)	15:43	20 12:31 (24)
12	09:20		11:08 (23)	08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18		09:31 (28)	09:18	12:11 (24)
	16:11	27	12:40 (24)	17:23			18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27	10:58 (23)	15:43	20 12:31 (24)
13	09:19		11:08 (23)	08:18			07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20		09:32 (28)	09:19	12:12 (24)
	16:13	25	12:39 (24)	17:26			18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31	11:01 (23)	15:42	21 12:33 (24)
14	09:17		11:08 (23)	08:15			06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23		09:33 (28)	09:20	12:12 (24)
	16:15	20	11:28 (23)	17:28			18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32	11:03 (23)	15:42	21 12:33 (24)
15	09:16		11:08 (23)	08:13			06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		09:34 (28)	09:21	12:12 (24)
	16:17	21	11:29 (23)	17:31			18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31	11:03 (23)	15:42	21 12:33 (24)
16	09:15		11:08 (23)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27		09:36 (28)	09:22	12:13 (24)
	16:19	21	11:29 (23)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31	11:05 (23)	15:42	20 12:33 (24)
17	09:13		11:09 (23)	08:08			06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		09:38 (28)	09:23	12:14 (24)
	16:21	22	11:31 (23)	17:36			18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28	11:06 (23)	15:42	21 12:35 (24)
18	09:12		11:09 (23)	08:05			06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		10:44 (23)	09:24	12:14 (24)
	16:23	22	11:31 (23)	17:38			18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22	11:06 (23)	15:42	21 12:35 (24)
19	09:10		11:09 (23)	08:02			06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34		10:45 (23)	09:25	12:14 (24)
	16:25	22	11:31 (23)	17:40			18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22	11:07 (23)	15:42	21 12:35 (24)
20	09:09		11:09 (23)	08:00			06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		10:45 (23)	09:26	12:15 (24)
	16:28	23	11:32 (23)	17:43			18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22	11:07 (23)	15:43	21 12:36 (24)
21	09:07		11:09 (23)	07:57			06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39		10:45 (23)	09:26	12:16 (24)
	16:30	23	11:32 (23)	17:45			18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	11:07 (23)	15:43	21 12:37 (24)
22	09:05		11:10 (23)	07:54			06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		10:45 (23)	09:27	12:16 (24)
	16:32	22	11:32 (23)	17:48			18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	11:08 (23)	15:43	21 12:37 (24)
23	09:03		11:10 (23)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		10:45 (23)	09:27	12:16 (24)
	16:34	22	11:32 (23)	17:50			18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	11:08 (23)	15:44	21 12:37 (24)
24	09:02		11:10 (23)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		10:46 (23)	09:28	12:17 (24)
	16:37	22	11:32 (23)	17:53			18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22	11:08 (23)	15:45	21 12:38 (24)
25	09:00		10:04 (28)	07:46			06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		10:46 (23)	09:28	12:17 (24)
	16:39	28	11:32 (23)	17:55			19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22	11:08 (23)	15:45	21 12:38 (24)
26	08:58		10:03 (28)	07:44			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		10:47 (23)	09:28	12:18 (24)
	16:42	31	11:32 (23)	17:57			19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21	11:08 (23)	15:46	21 12:39 (24)
27	08:56		10:02 (28)	07:41			06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52		10:47 (23)	09:28	12:18 (24)
	16:44	31	11:31 (23)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21	11:08 (23)	15:47	21 12:39 (24)
28	08:54		10:00 (28)	07:38			06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		10:48 (23)	09:29	12:19 (24)
	16:46	32	11:30 (23)	18:02			19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21	11:09 (23)	15:48	21 12:40 (24)
29	08:52		10:00 (28)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		10:49 (23)	09:29	12:19 (24)
	16:49	31	11:29 (23)				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22	12:18 (24)	15:49	21 12:40 (24)
30	08:50		09:59 (28)				07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58		10:49 (23)	09:28	12:20 (24)
	16:51	27	11:26 (23)				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28	12:21 (24)	15:50	20 12:40 (24)
31	08:48		09:59 (28)				07:10		04:41		05:22	06:31		07:49				09:28	12:21 (24)
	16:54	20	10:19 (28)				20:14		22:29		22:03	20:43		16:51				15:51	20 12:41 (24)
Potential sun hours	221			260			365	432	521	547	546	478	386	319	236			199	
Total, worst case		773			167											657			697

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April			May	June
1	09:27	08:45		07:35			07:06			05:44	04:40
	15:53	16:56		18:04			20:16			21:25	22:30
2	09:27	08:43		07:32			07:04			05:41	04:38
	15:54	16:58		18:07			20:19			21:28	22:31
3	09:26	08:41		07:29			07:01			05:39	04:37
	15:55	17:01		18:09			20:21			21:30	22:33
4	09:26	08:39		07:27			06:58		19:38 (63)	05:36	04:36
	15:57	17:03		18:12			20:23	2	19:40 (63)	21:32	22:34
5	09:25	08:36		07:24			06:55		19:34 (63)	05:34	04:35
	15:58	17:06		18:14			20:25	8	19:42 (63)	21:35	22:36
6	09:25	08:34		07:21			06:52		19:32 (63)	05:31	04:34
	16:00	17:08		18:16			20:28	11	19:43 (63)	21:37	22:37
7	09:24	08:32		07:18			06:49		19:31 (63)	05:29	04:33
	16:02	17:11		18:19			20:30	12	19:43 (63)	21:39	22:39
8	09:23	08:29		07:15			06:46		19:31 (63)	05:26	04:32
	16:03	17:13		18:21			20:32	13	19:44 (63)	21:41	22:40
9	09:22	08:27		07:13			06:44		19:31 (63)	05:24	04:31
	16:05	17:16		18:23			20:35	12	19:43 (63)	21:44	22:41
10	09:21	08:24		07:10			06:41		19:31 (63)	05:22	04:30
	16:07	17:18		18:26			20:37	11	19:42 (63)	21:46	22:42
11	09:20	08:22		07:07			06:38		19:32 (63)	05:19	04:30
	16:09	17:21		18:28			20:39	8	19:40 (63)	21:48	22:43
12	09:19	08:20		07:04			06:35		19:34 (63)	05:17	04:29
	16:11	17:23		18:30			20:42	4	19:38 (63)	21:50	22:44
13	09:18	08:17		07:01			06:32			05:15	04:28
	16:13	17:25		18:33			20:44			21:53	22:45
14	09:17	08:15		06:58			06:29			05:13	04:28
	16:15	17:28		18:35			20:46			21:55	22:46
15	09:15	08:12		06:55			06:27		19:48 (62)	05:10	04:27
	16:17	17:30		18:37			20:48	9	19:57 (62)	21:57	22:47
16	09:14	08:10	16:48 (66)	06:53			06:24		19:47 (62)	05:08	04:27
	16:19	17:33	1 16:49 (66)	18:40			20:51	13	20:00 (62)	21:59	22:47
17	09:13	08:07	16:44 (66)	06:50			06:21		19:45 (62)	05:06	04:27
	16:21	17:35	8 16:52 (66)	18:42			20:53	15	20:00 (62)	22:01	22:48
18	09:11	08:04	16:42 (66)	06:47			06:18		19:44 (62)	05:04	04:27
	16:23	17:38	12 16:54 (66)	18:44			20:55	16	20:00 (62)	22:03	22:48
19	09:09	08:02	16:41 (66)	06:44			06:16		19:44 (62)	05:02	04:27
	16:25	17:40	13 16:54 (66)	18:47			20:58	17	20:01 (62)	22:05	22:49
20	09:08	07:59	16:42 (66)	06:41			06:13		19:43 (62)	05:00	04:27
	16:28	17:43	13 16:55 (66)	18:49			21:00	18	20:01 (62)	22:08	22:49
21	09:06	07:57	16:41 (66)	06:38		18:02 (65)	06:10		19:42 (62)	04:58	04:27
	16:30	17:45	14 16:55 (66)	18:51	2	18:04 (65)	21:02	18	20:00 (62)	22:10	22:49
22	09:05	07:54	16:41 (66)	06:35		17:58 (65)	06:07		19:43 (62)	04:56	04:27
	16:32	17:48	13 16:54 (66)	18:53	9	18:07 (65)	21:05	17	20:00 (62)	22:12	22:50
23	09:03	07:51	16:42 (66)	06:32		17:56 (65)	06:05		19:43 (62)	04:54	04:27
	16:34	17:50	11 16:53 (66)	18:56	12	18:08 (65)	21:07	16	19:59 (62)	22:14	22:50
24	09:01	07:49	16:43 (66)	06:30		17:55 (65)	06:02		19:44 (62)	04:52	04:28
	16:37	17:52	9 16:52 (66)	18:58	14	18:09 (65)	21:09	15	19:59 (62)	22:16	22:50
25	08:59	07:46	16:45 (66)	06:27		17:54 (65)	05:59		19:45 (62)	04:51	04:28
	16:39	17:55	4 16:49 (66)	19:00	15	18:09 (65)	21:12	12	19:57 (62)	22:17	22:50
26	08:57	07:43		06:24		17:53 (65)	05:57		19:47 (62)	04:49	04:28
	16:41	17:57		19:03	15	18:08 (65)	21:14	8	19:55 (62)	22:19	22:50
27	08:55	07:40		06:21		17:54 (65)	05:54			04:47	04:29
	16:44	18:00		19:05	15	18:09 (65)	21:16			22:21	22:49
28	08:53	07:38		06:18		17:55 (65)	05:51			04:46	04:30
	16:46	18:02		19:07	13	18:08 (65)	21:18			22:23	22:49
29	08:51			07:15		18:55 (65)	05:49			04:44	04:30
	16:49			20:09	11	19:06 (65)	21:21			22:25	22:49
30	08:49			07:12		18:57 (65)	05:46			04:43	04:31
	16:51			20:12	6	19:03 (65)	21:23			22:26	22:48
31	08:47			07:09						04:41	
	16:53			20:14						22:28	
Potential sun hours	222	260		365			432			521	547
Total, worst case			98		112			255			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:31 (63)	07:39			07:51	08:59
	22:48	22:00			20:39	8	19:39 (63)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:29 (63)	07:41			07:53	09:01
	22:47	21:58			20:36	11	19:40 (63)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:29 (63)	07:43			07:56	09:03
	22:47	21:56			20:34	12	19:41 (63)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:28 (63)	07:46			07:58	09:05
	22:46	21:53			20:31	13	19:41 (63)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:28 (63)	07:48			08:00	09:06
	22:45	21:51			20:28	12	19:40 (63)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:28 (63)	07:50			08:03	09:08
	22:44	21:48			20:25	11	19:39 (63)	18:58			16:37	15:46
7	04:39	05:37			06:46		19:29 (63)	07:52			08:05	09:10
	22:43	21:46			20:22	8	19:37 (63)	18:56			16:34	15:45
8	04:40	05:39			06:48		19:31 (63)	07:55			08:08	09:11
	22:42	21:44			20:19	3	19:34 (63)	18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55			08:02			08:15	09:16
	22:39	21:36			20:11			18:44			16:25	15:43
12	04:46	05:48			06:57			08:04			08:17	09:17
	22:37	21:34			20:08			18:42			16:23	15:43
13	04:47	05:50			06:59		18:49 (65)	08:06			08:20	09:18
	22:36	21:31			20:05	5	18:54 (65)	18:39			16:21	15:42
14	04:49	05:53			07:01		18:46 (65)	08:08			08:22	09:19
	22:34	21:28			20:02	10	18:56 (65)	18:36			16:19	15:42
15	04:51	05:55			07:04		18:44 (65)	08:11			08:24	09:20
	22:33	21:26			19:59	13	18:57 (65)	18:33			16:17	15:42
16	04:52	05:57		19:56 (62)	07:06		18:43 (65)	08:13			08:27	09:21
	22:31	21:23	4	20:00 (62)	19:56	14	18:57 (65)	18:30			16:15	15:42
17	04:54	05:59		19:53 (62)	07:08		18:42 (65)	08:15		17:16 (66)	08:29	09:22
	22:30	21:21	9	20:02 (62)	19:53	15	18:57 (65)	18:28	6	17:22 (66)	16:13	15:42
18	04:56	06:02		19:51 (62)	07:10		18:41 (65)	08:18		17:14 (66)	08:31	09:23
	22:28	21:18	13	20:04 (62)	19:50	15	18:56 (65)	18:25	10	17:24 (66)	16:11	15:42
19	04:58	06:04		19:49 (62)	07:12		18:42 (65)	08:20		17:13 (66)	08:34	09:24
	22:26	21:15	15	20:04 (62)	19:47	14	18:56 (65)	18:22	12	17:25 (66)	16:09	15:42
20	05:00	06:06		19:48 (62)	07:15		18:42 (65)	08:22		17:12 (66)	08:36	09:25
	22:25	21:12	17	20:05 (62)	19:44	13	18:55 (65)	18:20	14	17:26 (66)	16:08	15:43
21	05:01	06:08		19:48 (62)	07:17		18:43 (65)	08:25		17:12 (66)	08:38	09:26
	22:23	21:10	17	20:05 (62)	19:42	10	18:53 (65)	18:17	13	17:25 (66)	16:06	15:43
22	05:03	06:11		19:47 (62)	07:19		18:45 (65)	08:27		17:12 (66)	08:40	09:26
	22:21	21:07	18	20:05 (62)	19:39	5	18:50 (65)	18:14	13	17:25 (66)	16:04	15:43
23	05:05	06:13		19:48 (62)	07:21			08:29		17:12 (66)	08:43	09:27
	22:19	21:04	18	20:06 (62)	19:36			18:12	12	17:24 (66)	16:02	15:44
24	05:07	06:15		19:48 (62)	07:23			08:32		17:13 (66)	08:45	09:27
	22:17	21:02	17	20:05 (62)	19:33			18:09	10	17:23 (66)	16:01	15:45
25	05:09	06:17		19:48 (62)	07:26			07:34		16:14 (66)	08:47	09:27
	22:15	20:59	16	20:04 (62)	19:30			17:06	7	16:21 (66)	15:59	15:45
26	05:11	06:20		19:48 (62)	07:28			07:37			08:49	09:28
	22:13	20:56	15	20:03 (62)	19:27			17:04			15:58	15:46
27	05:13	06:22		19:49 (62)	07:30			07:39			08:51	09:28
	22:11	20:53	12	20:01 (62)	19:24			17:01			15:56	15:47
28	05:16	06:24		19:50 (62)	07:32			07:41			08:53	09:28
	22:09	20:50	9	19:59 (62)	19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28			07:37			07:46			08:57	09:28
	22:05	20:45			19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (63)				07:48				09:27
	22:02	20:42	5	19:38 (63)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			185			192			97			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February		March			April		May	June
1	09:27	08:45		07:35			07:06		19:00 (65)	05:44	04:40
	15:53	16:56		18:04			20:16	4	19:04 (65)	21:25	22:30
2	09:27	08:43		07:32			07:04			05:41	04:38
	15:54	16:58		18:07			20:19			21:28	22:31
3	09:26	08:41		07:29			07:01			05:39	04:37
	15:55	17:01		18:09			20:21			21:30	22:33
4	09:26	08:39		07:27			06:58			05:36	04:36
	15:57	17:03		18:12			20:23			21:32	22:34
5	09:25	08:36		07:24			06:55			05:34	04:35
	15:58	17:06		18:14			20:25			21:35	22:36
6	09:25	08:34		07:21			06:52		19:37 (63)	05:31	04:34
	16:00	17:08		18:16			20:28	6	19:43 (63)	21:37	22:37
7	09:24	08:32		07:18			06:49		19:35 (63)	05:29	04:33
	16:02	17:11		18:19			20:30	10	19:45 (63)	21:39	22:39
8	09:23	08:29		07:15			06:46		19:34 (63)	05:26	04:32
	16:03	17:13		18:21			20:32	12	19:46 (63)	21:41	22:40
9	09:22	08:27		07:13			06:44		19:33 (63)	05:24	04:31
	16:05	17:16		18:23			20:35	13	19:46 (63)	21:44	22:41
10	09:21	08:24		07:10			06:41		19:33 (63)	05:22	04:30
	16:07	17:18		18:26			20:37	12	19:45 (63)	21:46	22:42
11	09:20	08:22		07:07			06:38		19:33 (63)	05:19	04:30
	16:09	17:21		18:28			20:39	11	19:44 (63)	21:48	22:43
12	09:19	08:20		07:04			06:35		19:33 (63)	05:17	04:29
	16:11	17:23		18:30			20:42	10	19:43 (63)	21:50	22:44
13	09:18	08:17		07:01			06:32		19:35 (63)	05:15	04:28
	16:13	17:25		18:33			20:44	7	19:42 (63)	21:53	22:45
14	09:17	08:15		06:58			06:29			05:13	04:28
	16:15	17:28		18:35			20:46			21:55	22:46
15	09:15	08:12		06:55			06:27			05:10	04:27
	16:17	17:30		18:37			20:48			21:57	22:47
16	09:14	08:10		06:53			06:24			05:08	04:27
	16:19	17:33		18:40			20:51			21:59	22:47
17	09:13	08:07		06:50			06:21		19:53 (62)	05:06	04:27
	16:21	17:35		18:42			20:53	8	20:01 (62)	22:01	22:48
18	09:11	08:04		16:45 (66)	06:47			06:18	19:50 (62)	05:04	04:27
	16:23	17:38	8	16:53 (66)	18:44			20:55	12	20:02 (62)	22:03	22:48
19	09:09	08:02		16:43 (66)	06:44			06:16		19:49 (62)	05:02	04:27
	16:25	17:40	12	16:55 (66)	18:47			20:58	15	20:04 (62)	22:05	22:49
20	09:08	07:59		16:43 (66)	06:41			06:13		19:48 (62)	05:00	04:27
	16:28	17:43	13	16:56 (66)	18:49			21:00	16	20:04 (62)	22:08	22:49
21	09:06	07:57		16:43 (66)	06:38			06:10		19:46 (62)	04:58	04:27
	16:30	17:45	13	16:56 (66)	18:51			21:02	18	20:04 (62)	22:10	22:49
22	09:05	07:54		16:42 (66)	06:35			06:07		19:47 (62)	04:56	04:27
	16:32	17:48	14	16:56 (66)	18:53			21:05	17	20:04 (62)	22:12	22:50
23	09:03	07:51		16:42 (66)	06:32		18:01 (65)	06:05		19:46 (62)	04:54	04:27
	16:34	17:50	13	16:55 (66)	18:56	7	18:08 (65)	21:07	18	20:04 (62)	22:14	22:50
24	09:01	07:49		16:43 (66)	06:30		17:59 (65)	06:02		19:46 (62)	04:52	04:28
	16:37	17:52	11	16:54 (66)	18:58	11	18:10 (65)	21:09	18	20:04 (62)	22:16	22:50
25	08:59	07:46		16:44 (66)	06:27		17:57 (65)	05:59		19:46 (62)	04:51	04:28
	16:39	17:55	9	16:53 (66)	19:00	14	18:11 (65)	21:12	17	20:03 (62)	22:17	22:50
26	08:57	07:43		16:47 (66)	06:24		17:56 (65)	05:57		19:47 (62)	04:49	04:28
	16:41	17:57	4	16:51 (66)	19:03	15	18:11 (65)	21:14	16	20:03 (62)	22:19	22:50
27	08:55	07:40			06:21		17:56 (65)	05:54		19:47 (62)	04:47	04:29
	16:44	18:00			19:05	16	18:12 (65)	21:16	14	20:01 (62)	22:21	22:49
28	08:53	07:38			06:18		17:56 (65)	05:51		19:49 (62)	04:46	04:30
	16:46	18:02			19:07	15	18:11 (65)	21:18	11	20:00 (62)	22:23	22:49
29	08:51				07:15		18:56 (65)	05:49		19:50 (62)	04:44	04:30
	16:49				20:09	14	19:10 (65)	21:21	7	19:57 (62)	22:25	22:49
30	08:49				07:12		18:56 (65)	05:46			04:43	04:31
	16:51				20:12	13	19:09 (65)	21:23			22:26	22:48
31	08:47				07:09		18:57 (65)				04:41	
	16:53				20:14	10	19:07 (65)				22:28	
Potential sun hours	222	260			365			432			521	547
Total, worst case			97			115			272			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:32 (63)	07:39			07:51	08:59
	22:48	22:00			20:39	11	19:43 (63)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:31 (63)	07:41			07:53	09:01
	22:47	21:58			20:36	12	19:43 (63)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:31 (63)	07:43			07:56	09:03
	22:47	21:56			20:34	13	19:44 (63)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:31 (63)	07:46			07:58	09:05
	22:46	21:53			20:31	12	19:43 (63)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:32 (63)	07:48			08:00	09:06
	22:45	21:51			20:28	10	19:42 (63)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:33 (63)	07:50			08:03	09:08
	22:44	21:48			20:25	7	19:40 (63)	18:58			16:37	15:46
7	04:39	05:37			06:46			07:52			08:05	09:10
	22:43	21:46			20:22			18:56			16:34	15:45
8	04:40	05:39			06:48			07:55			08:08	09:11
	22:42	21:44			20:19			18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55		18:54 (65)	08:02			08:15	09:16
	22:39	21:36			20:11	1	18:55 (65)	18:44			16:25	15:43
12	04:46	05:48			06:57		18:50 (65)	08:04			08:17	09:17
	22:37	21:34			20:08	9	18:59 (65)	18:42			16:23	15:43
13	04:47	05:50			06:59		18:48 (65)	08:06			08:20	09:18
	22:36	21:31			20:05	12	19:00 (65)	18:39			16:21	15:42
14	04:49	05:53		19:58 (62)	07:01		18:47 (65)	08:08			08:22	09:19
	22:34	21:28	8	20:06 (62)	20:02	14	19:01 (65)	18:36			16:19	15:42
15	04:51	05:55		19:56 (62)	07:04		18:46 (65)	08:11			08:24	09:20
	22:33	21:26	12	20:08 (62)	19:59	15	19:01 (65)	18:33			16:17	15:42
16	04:52	05:57		19:54 (62)	07:06		18:45 (65)	08:13		17:18 (66)	08:27	09:21
	22:31	21:23	15	20:09 (62)	19:56	15	19:00 (65)	18:30	7	17:25 (66)	16:15	15:42
17	04:54	05:59		19:53 (62)	07:08		18:45 (65)	08:15		17:15 (66)	08:29	09:22
	22:30	21:21	16	20:09 (62)	19:53	14	18:59 (65)	18:28	11	17:26 (66)	16:13	15:42
18	04:56	06:02		19:52 (62)	07:10		18:45 (65)	08:18		17:14 (66)	08:31	09:23
	22:28	21:18	18	20:10 (62)	19:50	13	18:58 (65)	18:25	13	17:27 (66)	16:11	15:42
19	04:58	06:04		19:52 (62)	07:12		18:46 (65)	08:20		17:13 (66)	08:34	09:24
	22:26	21:15	18	20:10 (62)	19:47	12	18:58 (65)	18:22	14	17:27 (66)	16:09	15:42
20	05:00	06:06		19:51 (62)	07:15		18:47 (65)	08:22		17:13 (66)	08:36	09:25
	22:25	21:12	18	20:09 (62)	19:44	8	18:55 (65)	18:20	14	17:27 (66)	16:08	15:43
21	05:01	06:08		19:51 (62)	07:17			08:25		17:13 (66)	08:38	09:26
	22:23	21:10	18	20:09 (62)	19:42			18:17	13	17:26 (66)	16:06	15:43
22	05:03	06:11		19:51 (62)	07:19			08:27		17:14 (66)	08:40	09:26
	22:21	21:07	17	20:08 (62)	19:39			18:14	12	17:26 (66)	16:04	15:43
23	05:05	06:13		19:52 (62)	07:21			08:29		17:14 (66)	08:43	09:27
	22:19	21:04	17	20:09 (62)	19:36			18:12	10	17:24 (66)	16:02	15:44
24	05:07	06:15		19:53 (62)	07:23			08:32		17:16 (66)	08:45	09:27
	22:17	21:02	14	20:07 (62)	19:33			18:09	7	17:23 (66)	16:01	15:45
25	05:09	06:17		19:54 (62)	07:26			07:34			08:47	09:27
	22:15	20:59	12	20:06 (62)	19:30			17:06			15:59	15:45
26	05:11	06:20		19:56 (62)	07:28			07:37			08:49	09:28
	22:13	20:56	7	20:03 (62)	19:27			17:04			15:58	15:46
27	05:13	06:22			07:30			07:39			08:51	09:28
	22:11	20:53			19:24			17:01			15:56	15:47
28	05:16	06:24			07:32			07:41			08:53	09:28
	22:09	20:50			19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28		19:35 (63)	07:37			07:46			08:57	09:28
	22:05	20:45	7	19:42 (63)	19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (63)				07:48				09:27
	22:02	20:42	10	19:43 (63)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			207			178			101			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 7.2

Grafisk Moifjellet vindkraftverk

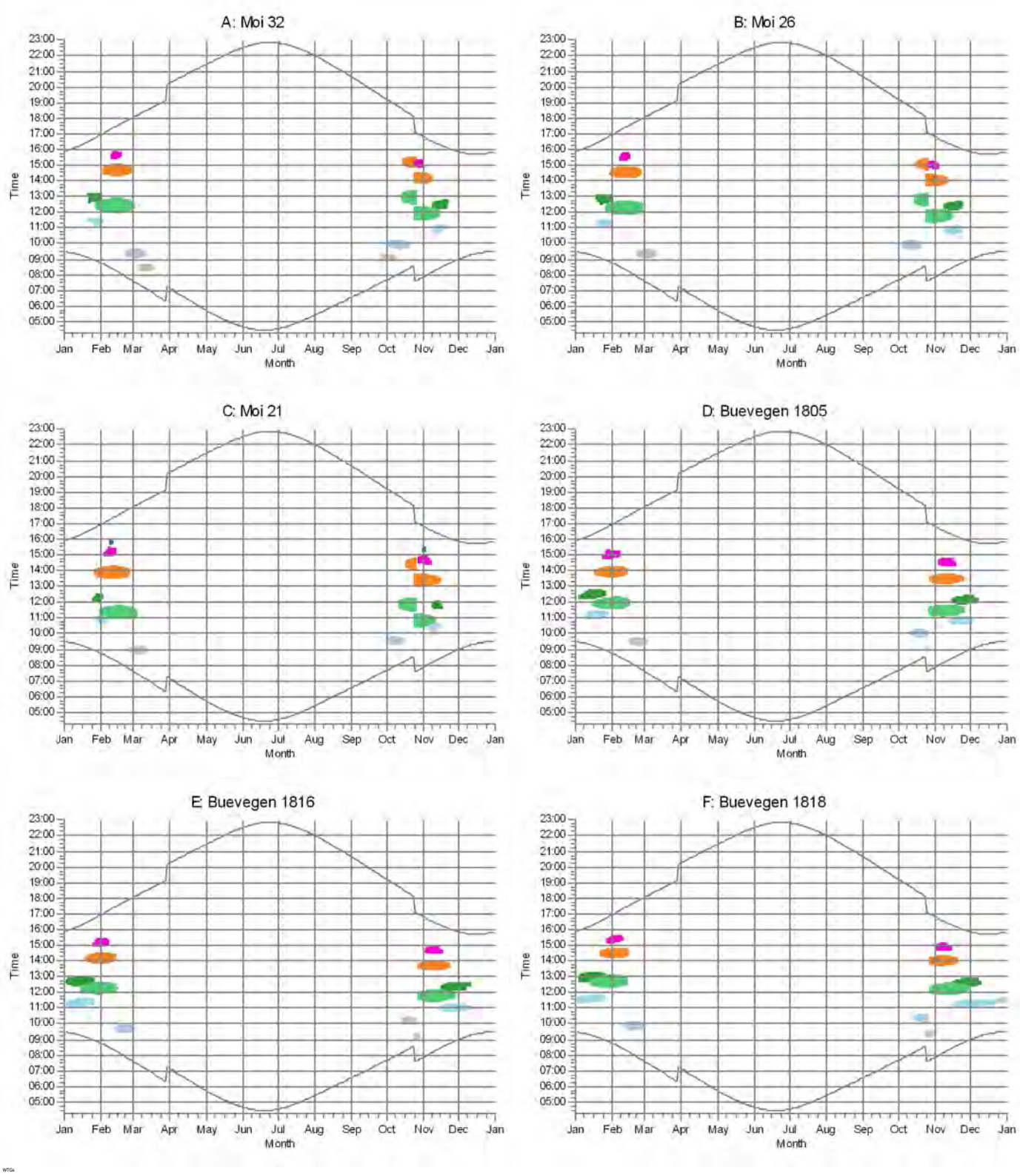
Med nærliggende - worst case

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Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

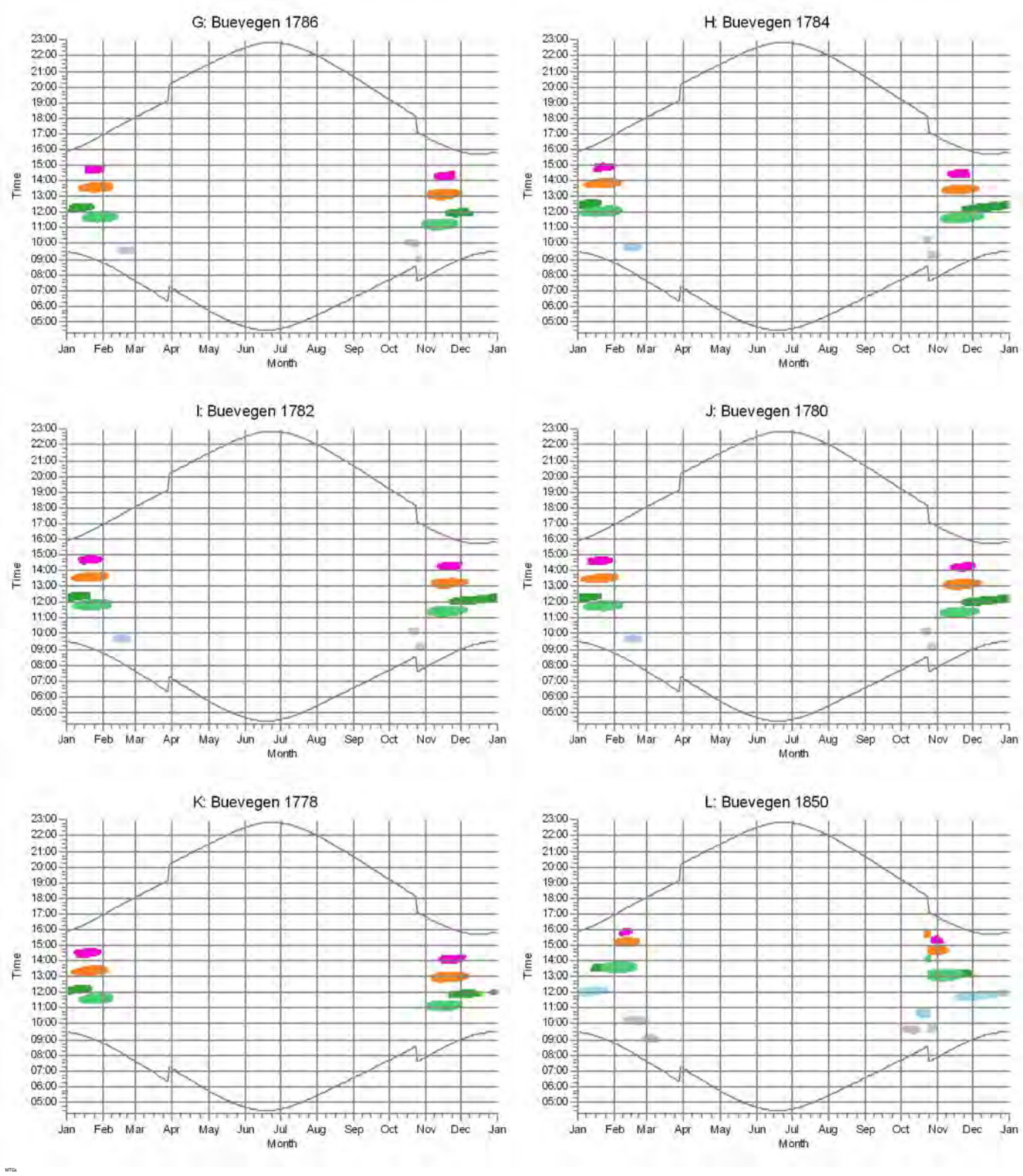


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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

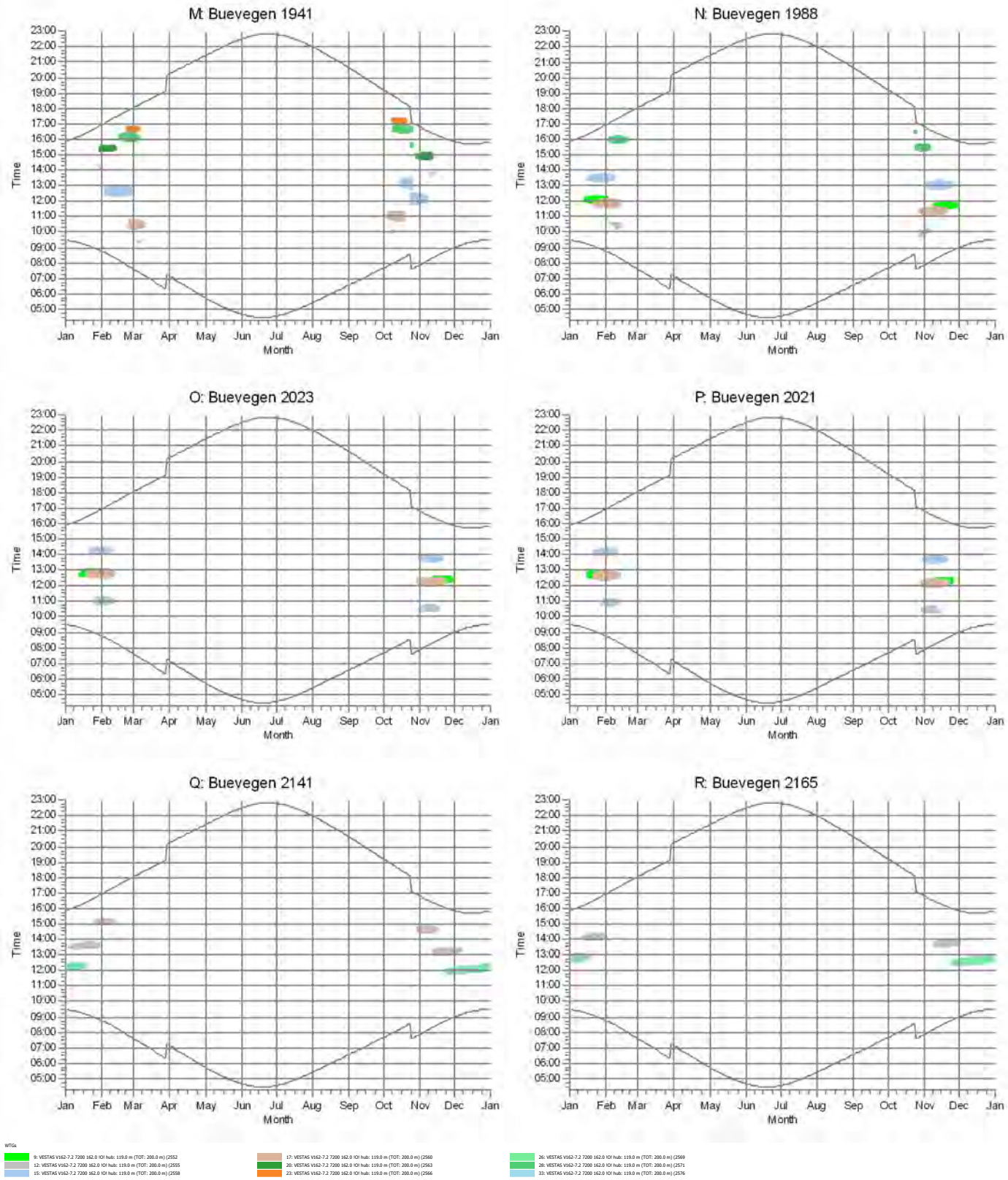


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

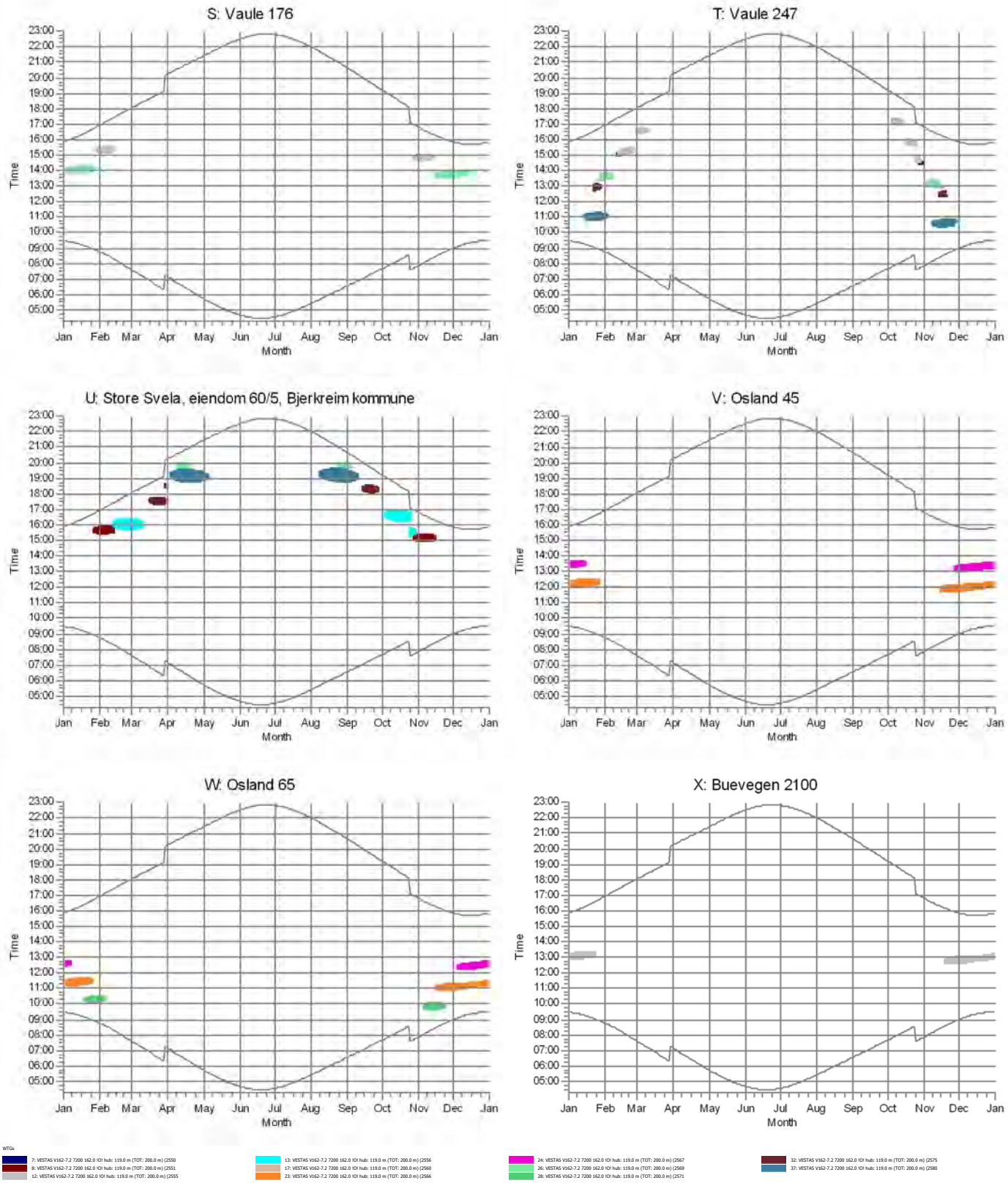


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

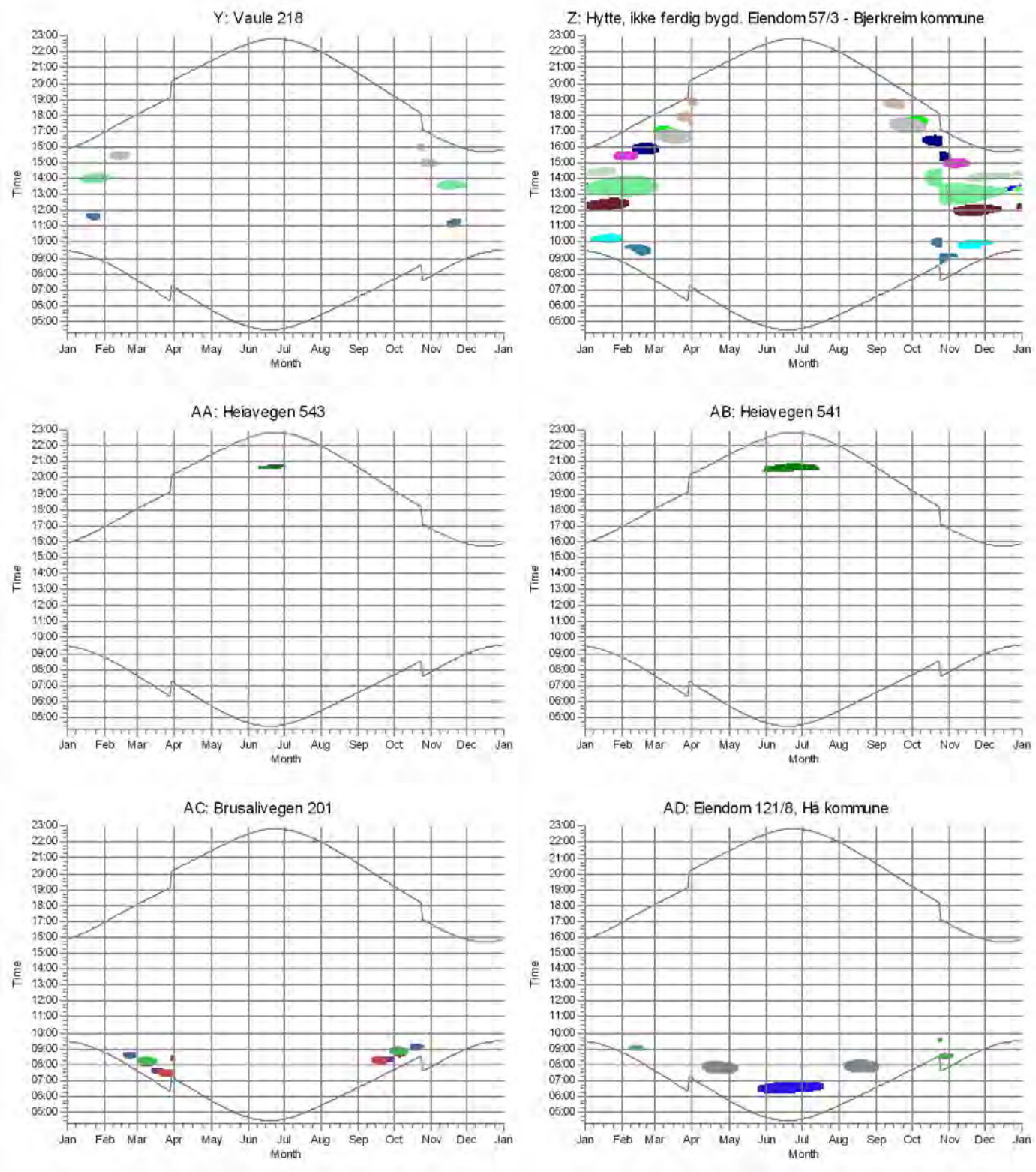


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

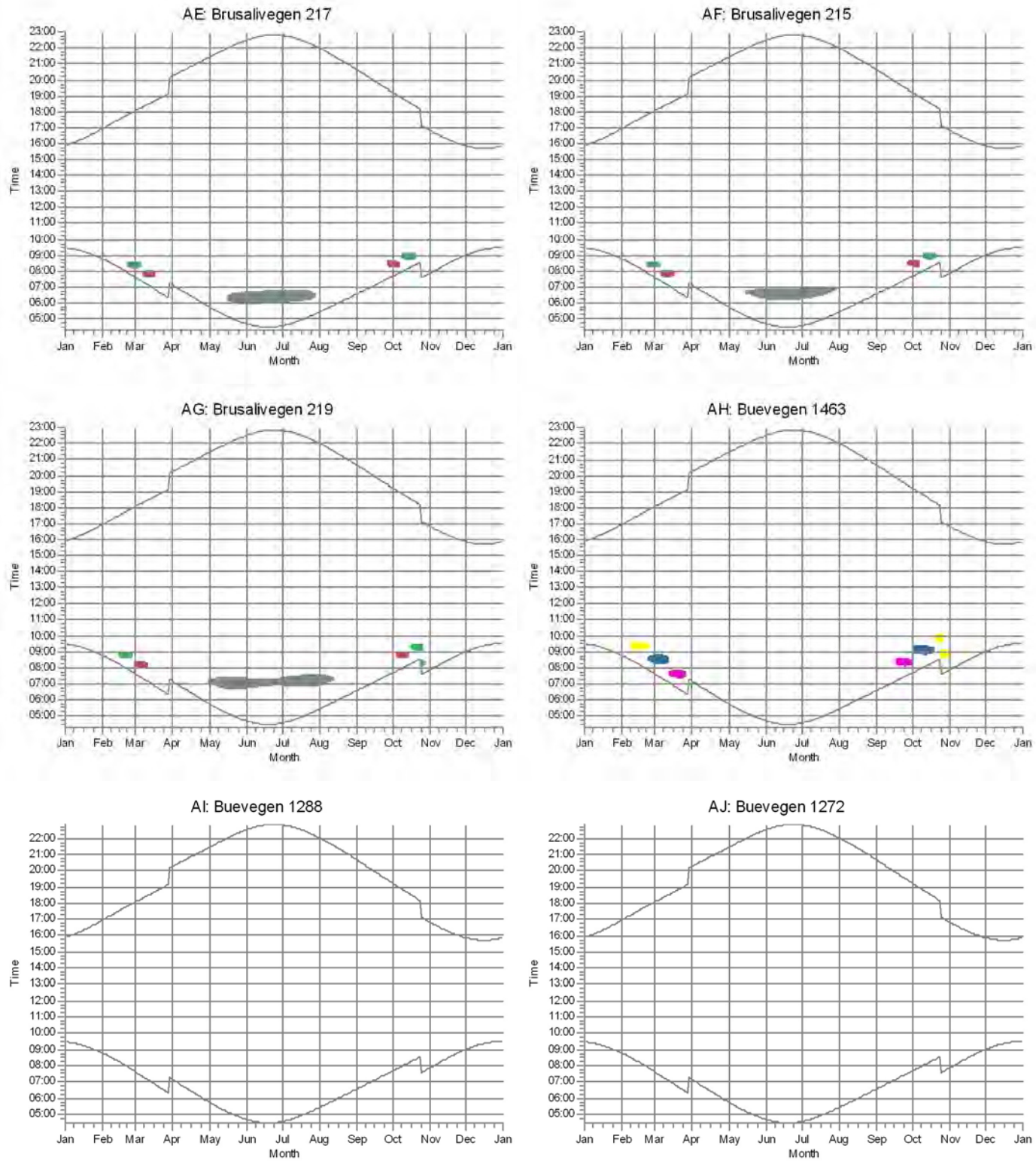


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

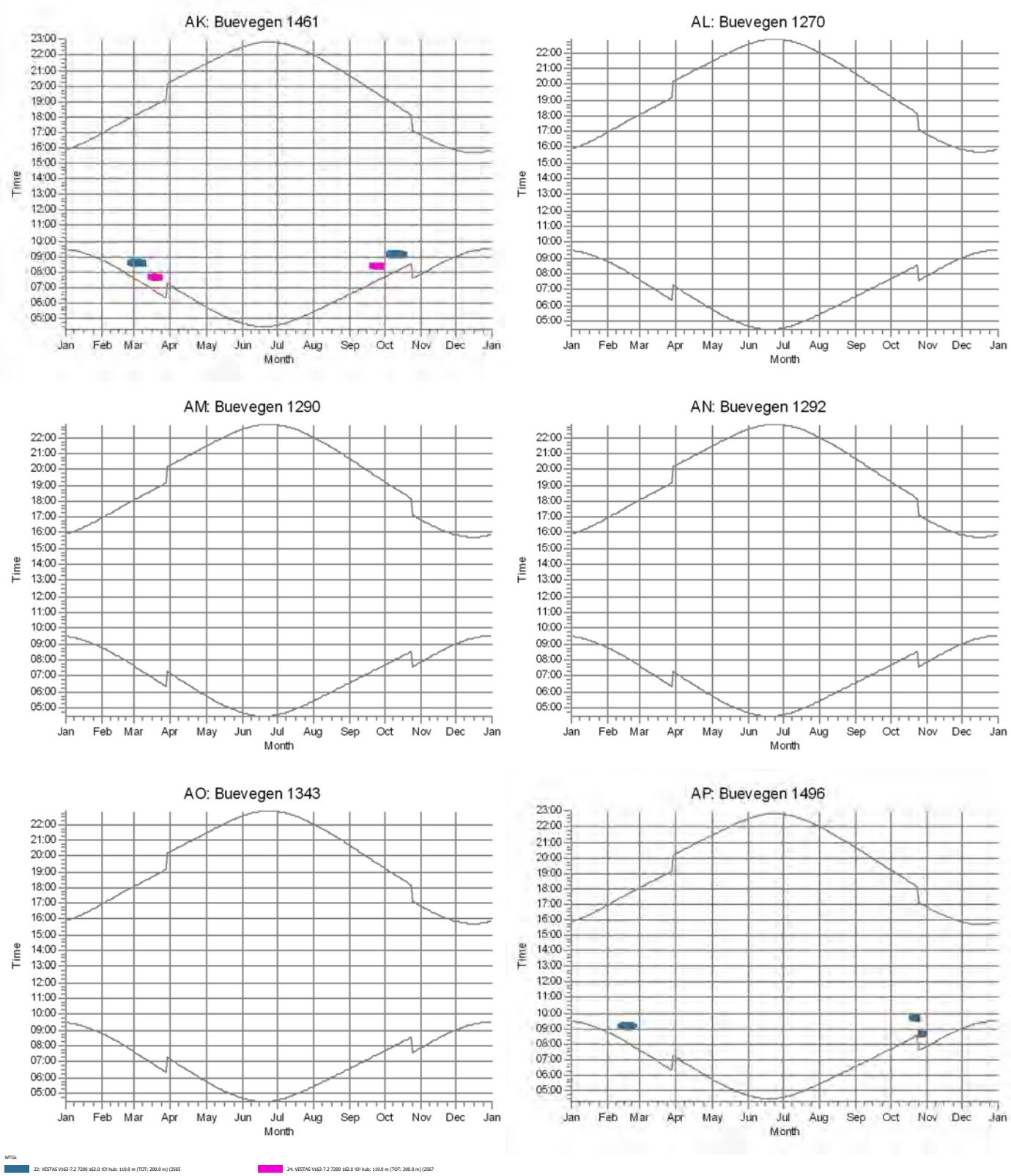


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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

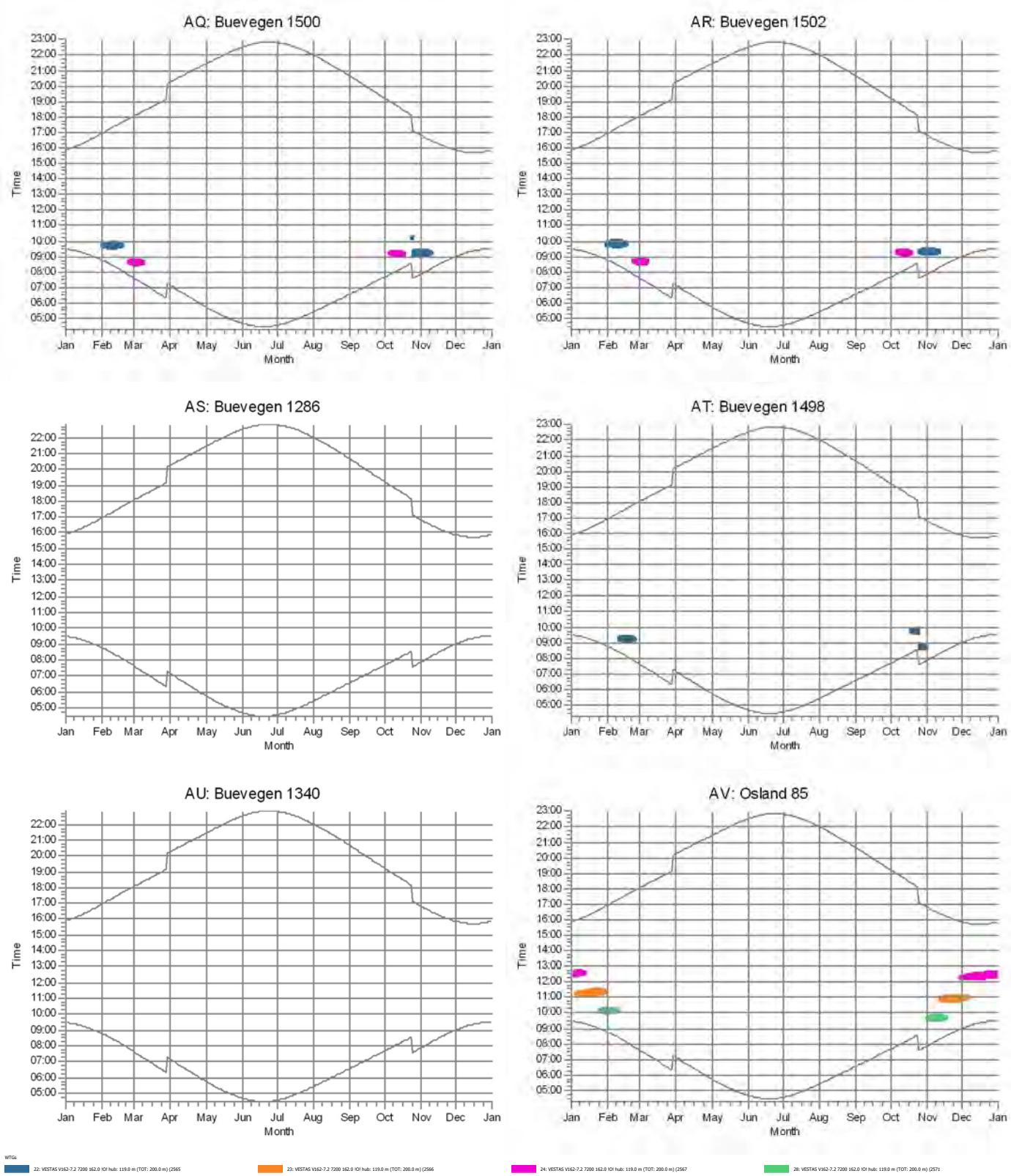


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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:12/4.2.271

SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere

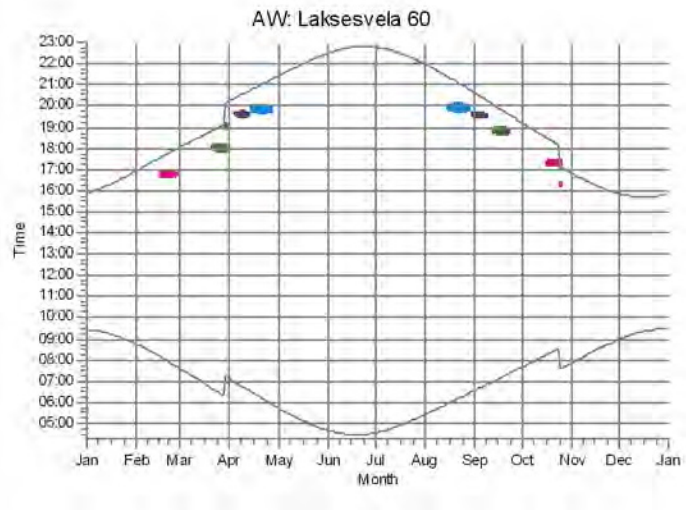


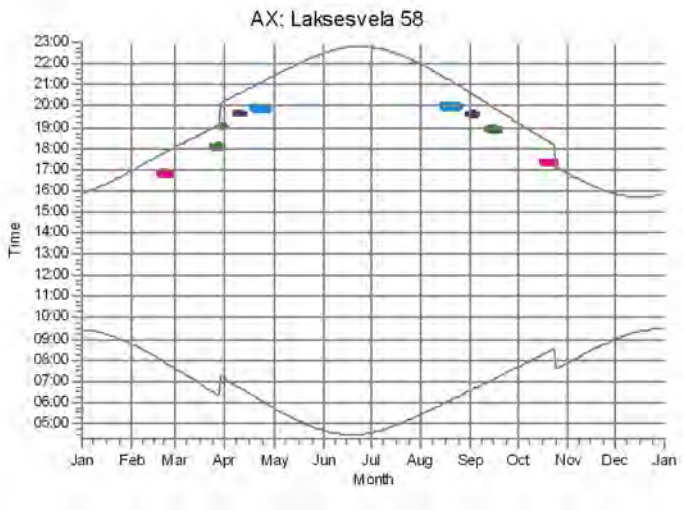
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Calculated:
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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - worst case - mottakere







Vedlegg 8.1

Tabell Moifjellet vindkraftverk

Med nærliggende - realistic case

Project:

Moifjellet og Mellomstrand vrk

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Calculated:
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SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:19 (33)	07:35		09:10 (15)	07:07	05:44	04:40
	15:53			16:56	51	13:02 (20)	18:05	24	09:34 (15)	20:17	21:26	22:30
2	09:27			08:43		11:24 (33)	07:33		09:10 (15)	07:04	05:41	04:38
	15:54			16:58	34	12:41 (28)	18:07	25	09:35 (15)	20:19	21:28	22:32
3	09:27			08:41		12:08 (28)	07:30		09:10 (15)	07:01	05:39	04:37
	15:55			17:01	43	14:41 (23)	18:09	24	09:34 (15)	20:21	21:30	22:34
4	09:26			08:39		12:07 (28)	07:27		09:10 (15)	06:58	05:36	04:36
	15:57			17:03	56	14:50 (23)	18:12	24	09:34 (15)	20:24	21:33	22:35
5	09:26			08:37		12:06 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	61	14:52 (23)	18:14	23	09:33 (15)	20:26	21:35	22:37
6	09:25			08:34		12:06 (28)	07:21		08:24 (17)	06:52	05:31	04:34
	16:00			17:08	66	14:54 (23)	18:17	28	09:32 (15)	20:28	21:37	22:38
7	09:24			08:32		12:05 (28)	07:19		08:21 (17)	06:50	05:29	04:33
	16:02			17:11	69	14:54 (23)	18:19	32	09:30 (15)	20:30	21:40	22:39
8	09:24			08:30		12:05 (28)	07:16		08:19 (17)	06:47	05:26	04:32
	16:03			17:13	72	14:56 (23)	18:21	32	09:28 (15)	20:33	21:42	22:40
9	09:23			08:27		12:04 (28)	07:13		08:18 (17)	06:44	05:24	04:31
	16:05			17:16	75	14:57 (23)	18:24	29	09:26 (15)	20:35	21:44	22:42
10	09:22			08:25		12:04 (28)	07:10		08:17 (17)	06:41	05:22	04:30
	16:07			17:18	80	15:35 (24)	18:26	18	08:35 (17)	20:37	21:46	22:43
11	09:21			08:23		12:04 (28)	07:07		08:17 (17)	06:38	05:19	04:29
	16:09			17:21	91	15:40 (24)	18:28	18	08:35 (17)	20:40	21:49	22:44
12	09:20			08:20		12:04 (28)	07:04		08:17 (17)	06:35	05:17	04:29
	16:11			17:23	99	15:47 (24)	18:31	19	08:36 (17)	20:42	21:51	22:45
13	09:18			08:18		12:03 (28)	07:01		08:17 (17)	06:32	05:15	04:28
	16:13			17:26	101	15:48 (24)	18:33	18	08:35 (17)	20:44	21:53	22:46
14	09:17			08:15		12:04 (28)	06:59		08:17 (17)	06:30	05:13	04:28
	16:15			17:28	99	15:48 (24)	18:35	17	08:34 (17)	20:47	21:55	22:47
15	09:16			08:13		12:04 (28)	06:56		08:18 (17)	06:27	05:10	04:27
	16:17			17:31	96	15:46 (24)	18:38	15	08:33 (17)	20:49	21:58	22:47
16	09:15			08:10		12:03 (28)	06:53		08:19 (17)	06:24	05:08	04:27
	16:19			17:33	92	15:44 (24)	18:40	12	08:31 (17)	20:51	22:00	22:48
17	09:13			08:07		12:03 (28)	06:50		08:22 (17)	06:21	05:06	04:27
	16:21			17:36	86	15:41 (24)	18:42	5	08:27 (17)	20:53	22:02	22:49
18	09:12			08:05		12:04 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	78	14:58 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		12:05 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	76	14:58 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		12:05 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:57 (23)	18:49			21:00	22:08	22:50
21	09:07		11:29 (33)	07:57		12:05 (28)	06:38			06:10	04:58	04:27
	16:30	8	13:08 (20)	17:45	71	14:56 (23)	18:51			21:03	22:10	22:50
22	09:05		11:28 (33)	07:54		12:06 (28)	06:36			06:08	04:56	04:27
	16:32	22	13:07 (20)	17:48	66	14:55 (23)	18:54			21:05	22:12	22:50
23	09:03		11:29 (33)	07:52		09:20 (15)	06:33			06:05	04:54	04:27
	16:34	21	13:08 (20)	17:50	69	14:54 (23)	18:56			21:07	22:14	22:50
24	09:02		11:28 (33)	07:49		09:16 (15)	06:30			06:02	04:52	04:27
	16:37	33	13:08 (20)	17:53	69	14:52 (23)	18:58			21:10	22:16	22:51
25	09:00		11:27 (33)	07:46		09:14 (15)	06:27			05:59	04:51	04:28
	16:39	33	13:08 (20)	17:55	64	14:49 (23)	19:01			21:12	22:18	22:50
26	08:58		11:22 (33)	07:44		09:13 (15)	06:24			05:57	04:49	04:28
	16:41	37	13:08 (20)	17:57	54	14:45 (23)	19:03			21:14	22:20	22:50
27	08:56		11:14 (33)	07:41		09:12 (15)	06:21			05:54	04:47	04:29
	16:44	43	13:07 (20)	18:00	41	12:35 (28)	19:05			21:17	22:22	22:50
28	08:54		11:14 (33)	07:38		09:11 (15)	06:18			05:52	04:46	04:30
	16:46	52	13:07 (20)	18:02	33	12:29 (28)	19:07			21:19	22:24	22:50
29	08:52		11:15 (33)				07:15			05:49	04:44	04:30
	16:49	56	13:07 (20)				20:10			21:21	22:25	22:50
30	08:50		11:15 (33)				07:12			05:46	04:43	04:31
	16:51	59	13:06 (20)				20:12			21:24	22:27	22:49
31	08:48		11:17 (33)				07:10				04:41	
	16:54	57	13:05 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		421			1966			363				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,64			0,61			0,73				
Total reduction		0,26			0,24			0,29				
Total, real		108			479			106				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** A - Moi 32

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October		November			December	
1	04:32		05:24		06:33			07:39		08:56 (17)	07:51		11:33 (28)	09:00
	22:49		22:01		20:40			19:13	19	09:15 (17)	16:49	78	14:57 (24)	15:51
2	04:33		05:26		06:35			07:42		08:56 (17)	07:54		11:34 (28)	09:02
	22:48		21:58		20:37			19:10	18	09:14 (17)	16:46	74	14:26 (23)	15:50
3	04:34		05:28		06:37			07:44		08:55 (17)	07:56		11:35 (28)	09:03
	22:47		21:56		20:34			19:07	19	09:14 (17)	16:44	71	14:25 (23)	15:49
4	04:35		05:31		06:40			07:46		08:55 (17)	07:59		11:35 (28)	09:05
	22:47		21:54		20:31			19:04	26	10:01 (15)	16:41	69	14:24 (23)	15:48
5	04:36		05:33		06:42			07:48		08:56 (17)	08:01		11:36 (28)	09:07
	22:46		21:51		20:28			19:02	31	10:05 (15)	16:39	64	14:23 (23)	15:47
6	04:37		05:35		06:44			07:51		08:57 (17)	08:03		11:37 (28)	09:09
	22:45		21:49		20:25			18:59	32	10:06 (15)	16:37	61	14:22 (23)	15:46
7	04:39		05:37		06:46			07:53		08:58 (17)	08:06		11:37 (28)	09:10
	22:44		21:47		20:22			18:56	31	10:07 (15)	16:34	53	14:17 (23)	15:45
8	04:40		05:39		06:49			07:55		09:03 (17)	08:08		11:39 (28)	09:12
	22:43		21:44		20:20			18:53	23	10:08 (15)	16:32	42	14:11 (23)	15:45
9	04:41		05:42		06:51			07:57		09:45 (15)	08:11		10:53 (33)	09:13
	22:42		21:42		20:17			18:50	23	10:08 (15)	16:30	37	12:12 (28)	15:44
10	04:43		05:44		06:53			08:00		09:45 (15)	08:13		10:50 (33)	09:15
	22:40		21:39		20:14			18:47	24	10:09 (15)	16:28	52	12:34 (20)	15:44
11	04:44		05:46		06:55			08:02		09:44 (15)	08:15		10:48 (33)	09:16
	22:39		21:37		20:11			18:45	24	10:08 (15)	16:25	57	12:36 (20)	15:43
12	04:46		05:48		06:57			08:04		09:43 (15)	08:18		10:47 (33)	09:18
	22:38		21:34		20:08			18:42	24	10:07 (15)	16:23	58	12:37 (20)	15:43
13	04:47		05:51		07:00			08:07		09:44 (15)	08:20		10:47 (33)	09:19
	22:37		21:31		20:05			18:39	23	10:07 (15)	16:21	57	12:39 (20)	15:42
14	04:49		05:53		07:02			08:09		09:44 (15)	08:22		10:46 (33)	09:20
	22:35		21:29		20:02			18:36	37	13:05 (28)	16:19	52	12:39 (20)	15:42
15	04:51		05:55		07:04			08:11		09:45 (15)	08:25		10:47 (33)	09:21
	22:34		21:26		19:59			18:33	44	13:09 (28)	16:17	43	12:40 (20)	15:42
16	04:52		05:57		07:06			08:13		09:45 (15)	08:27		10:55 (33)	09:22
	22:32		21:24		19:56			18:31	59	15:19 (23)	16:15	37	12:41 (20)	15:42
17	04:54		06:00		07:08			08:16		09:47 (15)	08:29		11:00 (33)	09:23
	22:30		21:21		19:54			18:28	66	15:22 (23)	16:13	33	12:41 (20)	15:42
18	04:56		06:02		07:11			08:18		09:48 (15)	08:32		11:02 (33)	09:24
	22:29		21:18		19:51			18:25	71	15:24 (23)	16:11	33	12:42 (20)	15:42
19	04:58		06:04		07:13			08:20		09:52 (15)	08:34		11:04 (33)	09:25
	22:27		21:16		19:48			18:22	70	15:26 (23)	16:09	21	12:43 (20)	15:42
20	05:00		06:06		07:15			08:23		12:37 (28)	08:36		11:03 (33)	09:26
	22:25		21:13		19:45			18:20	68	15:26 (23)	16:08	22	12:42 (20)	15:43
21	05:01		06:08		07:17			08:25		12:36 (28)	08:39		11:04 (33)	09:26
	22:24		21:10		19:42			18:17	71	15:27 (23)	16:06	8	12:43 (20)	15:43
22	05:03		06:11		07:19			08:27		12:35 (28)	08:41			09:27
	22:22		21:08		19:39			18:14	74	15:27 (23)	16:04			15:43
23	05:05		06:13		07:22			08:30		12:35 (28)	08:43			09:27
	22:20		21:05		19:36			18:12	76	15:28 (23)	16:02			15:44
24	05:07		06:15		07:24			08:32		12:34 (28)	08:45			09:28
	22:18		21:02		19:33			18:09	78	15:28 (23)	16:01			15:44
25	05:09		06:17		07:26			07:35		11:34 (28)	08:47			09:28
	22:16		20:59		19:30			17:06	86	15:12 (24)	15:59			15:45
26	05:11		06:20		07:28			07:37		11:33 (28)	08:50			09:28
	22:14		20:56		19:27			17:04	94	15:14 (24)	15:58			15:46
27	05:13		06:22		07:30		09:02 (17)	07:39		11:33 (28)	08:52			09:28
	22:12		20:54		19:25	10	09:12 (17)	17:01	97	15:16 (24)	15:56			15:47
28	05:16		06:24		07:33		09:00 (17)	07:42		11:33 (28)	08:54			09:28
	22:10		20:51		19:22	13	09:13 (17)	16:59	101	15:18 (24)	15:55			15:48
29	05:18		06:26		07:35		08:58 (17)	07:44		11:33 (28)	08:56			09:28
	22:07		20:48		19:19	16	09:14 (17)	16:56	102	15:18 (24)	15:54			15:49
30	05:20		06:29		07:37		08:56 (17)	07:47		11:33 (28)	08:58			09:28
	22:05		20:45		19:16	18	09:14 (17)	16:54	99	15:15 (24)	15:52			15:50
31	05:22		06:31					07:49		11:34 (28)				09:28
	22:03		20:42					16:51	90	15:09 (24)				15:51
Potential sun hours	546		478		386			319			236			199
Total, worst case						57			1700			1022		
Sun reduction						0,50			0,50			0,50		
Oper. time red.						0,80			0,80			0,80		
Wind dir. red.						0,72			0,63			0,62		
Total reduction						0,29			0,25			0,25		
Total, real						16			428			255		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		11:16 (33)	07:35		09:09 (15)	07:07	05:44	04:40
	15:53			16:56	59	14:39 (23)	18:05	23	09:32 (15)	20:17	21:26	22:30
2	09:27			08:43		12:00 (28)	07:33		09:09 (15)	07:04	05:41	04:38
	15:54			16:58	53	14:42 (23)	18:07	24	09:33 (15)	20:19	21:28	22:32
3	09:27			08:41		11:58 (28)	07:30		09:09 (15)	07:01	05:39	04:37
	15:55			17:01	59	14:43 (23)	18:09	24	09:33 (15)	20:21	21:30	22:34
4	09:26			08:39		11:58 (28)	07:27		09:09 (15)	06:58	05:36	04:36
	15:57			17:03	63	14:45 (23)	18:12	23	09:32 (15)	20:24	21:33	22:35
5	09:26			08:37		11:57 (28)	07:24		09:10 (15)	06:55	05:34	04:35
	15:58			17:06	67	14:46 (23)	18:14	21	09:31 (15)	20:26	21:35	22:37
6	09:25			08:34		11:57 (28)	07:21		09:10 (15)	06:52	05:31	04:34
	16:00			17:08	69	14:47 (23)	18:17	20	09:30 (15)	20:28	21:37	22:38
7	09:24			08:32		11:56 (28)	07:19		09:11 (15)	06:50	05:29	04:33
	16:02			17:11	72	14:48 (23)	18:19	17	09:28 (15)	20:30	21:40	22:39
8	09:24			08:30		11:56 (28)	07:16		09:13 (15)	06:47	05:26	04:32
	16:03			17:13	82	15:29 (24)	18:21	12	09:25 (15)	20:33	21:42	22:40
9	09:23			08:27		11:56 (28)	07:13		09:16 (15)	06:44	05:24	04:31
	16:05			17:16	91	15:35 (24)	18:24	5	09:21 (15)	20:35	21:44	22:42
10	09:22			08:25		11:55 (28)	07:10			06:41	05:22	04:30
	16:07			17:18	96	15:40 (24)	18:26			20:37	21:46	22:43
11	09:21			08:23		11:55 (28)	07:07			06:38	05:19	04:29
	16:09			17:21	100	15:44 (24)	18:28			20:40	21:49	22:44
12	09:20			08:20		11:55 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	100	15:43 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		11:55 (28)	07:01			06:32	05:15	04:28
	16:13			17:26	97	15:41 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:56 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	95	15:41 (24)	18:35			20:47	21:55	22:47
15	09:16			08:13		11:55 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	89	15:38 (24)	18:38			20:49	21:58	22:47
16	09:15			08:10		11:55 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	78	14:50 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		11:55 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	76	14:49 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		11:57 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	73	14:49 (23)	18:45			20:56	22:04	22:49
19	09:10		12:54 (20)	08:02		11:57 (28)	06:44			06:16	05:02	04:27
	16:25	5	12:59 (20)	17:40	70	14:48 (23)	18:47			20:58	22:06	22:50
20	09:08		11:12 (33)	08:00		11:57 (28)	06:41			06:13	05:00	04:27
	16:28	29	13:02 (20)	17:43	68	14:47 (23)	18:49			21:00	22:08	22:50
21	09:07		11:11 (33)	07:57		11:58 (28)	06:38			06:10	04:58	04:27
	16:30	36	13:02 (20)	17:45	64	14:46 (23)	18:51			21:03	22:10	22:50
22	09:05		11:11 (33)	07:54		11:59 (28)	06:36			06:08	04:56	04:27
	16:32	45	13:02 (20)	17:48	58	14:44 (23)	18:54			21:05	22:12	22:50
23	09:03		11:11 (33)	07:52		09:17 (15)	06:33			06:05	04:54	04:27
	16:34	45	13:02 (20)	17:50	62	14:43 (23)	18:56			21:07	22:14	22:50
24	09:02		11:10 (33)	07:49		09:14 (15)	06:30			06:02	04:52	04:27
	16:37	46	13:02 (20)	17:53	57	14:39 (23)	18:58			21:10	22:16	22:51
25	09:00		11:08 (33)	07:46		09:13 (15)	06:27			05:59	04:51	04:28
	16:39	47	13:02 (20)	17:55	42	12:28 (28)	19:01			21:12	22:18	22:50
26	08:58		11:09 (33)	07:44		09:11 (15)	06:24			05:57	04:49	04:28
	16:41	45	13:02 (20)	17:57	38	12:24 (28)	19:03			21:14	22:20	22:50
27	08:56		11:09 (33)	07:41		09:10 (15)	06:21			05:54	04:47	04:29
	16:44	53	13:01 (20)	18:00	22	09:32 (15)	19:05			21:17	22:22	22:50
28	08:54		11:10 (33)	07:38		09:09 (15)	06:18			05:52	04:46	04:30
	16:46	58	13:01 (20)	18:02	23	09:32 (15)	19:07			21:19	22:24	22:50
29	08:52		11:12 (33)				07:15			05:49	04:44	04:30
	16:49	58	13:00 (20)				20:10			21:21	22:25	22:50
30	08:50		11:12 (33)				07:12			05:46	04:43	04:31
	16:51	58	12:59 (20)				20:12			21:24	22:27	22:49
31	08:48		11:14 (33)				07:10				04:41	
	16:54	56	14:29 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		581			1923			169				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,65			0,61			0,74				
Total reduction		0,26			0,24			0,29				
Total, real		151			468			50				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** B - Moi 26

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:25 (28)	09:00
	22:49	22:01	20:40	19:13			16:49	96	15:09 (24)	15:51
2	04:33	05:26	06:35	07:42			07:54		11:25 (28)	09:02
	22:48	21:58	20:37	19:10			16:46	90	15:04 (24)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:26 (28)	09:03
	22:47	21:56	20:34	19:07			16:44	82	14:58 (24)	15:49
4	04:35	05:31	06:40	07:46			07:59		11:26 (28)	09:05
	22:47	21:54	20:31	19:04			16:41	72	14:17 (23)	15:48
5	04:36	05:33	06:42	07:48		09:51 (15)	08:01		11:27 (28)	09:07
	22:46	21:51	20:28	19:02	10	10:01 (15)	16:39	70	14:17 (23)	15:47
6	04:37	05:35	06:44	07:51		09:48 (15)	08:03		11:28 (28)	09:09
	22:45	21:49	20:25	18:59	15	10:03 (15)	16:37	65	14:16 (23)	15:46
7	04:39	05:37	06:46	07:53		09:46 (15)	08:06		11:28 (28)	09:10
	22:44	21:47	20:22	18:56	18	10:04 (15)	16:34	62	14:14 (23)	15:45
8	04:40	05:39	06:49	07:55		09:45 (15)	08:08		11:29 (28)	09:12
	22:43	21:44	20:20	18:53	21	10:06 (15)	16:32	57	14:13 (23)	15:45
9	04:41	05:42	06:51	07:57		09:44 (15)	08:11		11:30 (28)	09:13
	22:42	21:42	20:17	18:50	22	10:06 (15)	16:30	53	14:12 (23)	15:44
10	04:43	05:44	06:53	08:00		09:44 (15)	08:13		10:47 (33)	09:15
	22:40	21:39	20:14	18:47	23	10:07 (15)	16:28	58	14:10 (23)	15:44
11	04:44	05:46	06:55	08:02		09:43 (15)	08:15		10:45 (33)	09:16
	22:39	21:37	20:11	18:45	23	10:06 (15)	16:25	55	13:59 (23)	15:43
12	04:46	05:48	06:57	08:04		09:42 (15)	08:18		10:44 (33)	09:18
	22:38	21:34	20:08	18:42	24	10:06 (15)	16:23	57	12:31 (20)	15:43
13	04:47	05:51	07:00	08:07		09:43 (15)	08:20		10:43 (33)	09:19
	22:37	21:31	20:05	18:39	23	10:06 (15)	16:21	59	12:32 (20)	15:42
14	04:49	05:53	07:02	08:09		09:42 (15)	08:22		10:42 (33)	09:20
	22:35	21:29	20:02	18:36	23	10:05 (15)	16:19	58	12:33 (20)	15:42
15	04:51	05:55	07:04	08:11		09:43 (15)	08:25		10:42 (33)	09:21
	22:34	21:26	19:59	18:33	33	12:54 (28)	16:17	53	12:34 (20)	15:42
16	04:52	05:57	07:06	08:13		09:44 (15)	08:27		10:42 (33)	09:22
	22:32	21:24	19:56	18:31	39	12:58 (28)	16:15	45	12:35 (20)	15:42
17	04:54	06:00	07:08	08:16		09:45 (15)	08:29		10:41 (33)	09:23
	22:30	21:21	19:54	18:28	46	15:07 (23)	16:13	47	12:35 (20)	15:42
18	04:56	06:02	07:11	08:18		09:46 (15)	08:32		10:44 (33)	09:24
	22:29	21:18	19:51	18:25	59	15:12 (23)	16:11	46	12:36 (20)	15:42
19	04:58	06:04	07:13	08:20		09:49 (15)	08:34		10:46 (33)	09:25
	22:27	21:16	19:48	18:22	62	15:15 (23)	16:09	45	12:37 (20)	15:42
20	05:00	06:06	07:15	08:23		12:30 (28)	08:36		10:46 (33)	09:26
	22:25	21:13	19:45	18:20	60	15:16 (23)	16:08	45	12:37 (20)	15:43
21	05:01	06:08	07:17	08:25		12:29 (28)	08:39		10:46 (33)	09:26
	22:24	21:10	19:42	18:17	65	15:17 (23)	16:06	36	12:37 (20)	15:43
22	05:03	06:11	07:19	08:27		12:27 (28)	08:41		10:48 (33)	09:27
	22:22	21:08	19:39	18:14	70	15:18 (23)	16:04	30	12:38 (20)	15:43
23	05:05	06:13	07:22	08:30		12:27 (28)	08:43		12:30 (20)	09:27
	22:20	21:05	19:36	18:12	72	15:19 (23)	16:02	5	12:35 (20)	15:44
24	05:07	06:15	07:24	08:32		12:26 (28)	08:45			09:28
	22:18	21:02	19:33	18:09	75	15:19 (23)	16:01			15:44
25	05:09	06:17	07:26	07:35		11:26 (28)	08:47			09:28
	22:16	20:59	19:30	17:06	76	14:20 (23)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:25 (28)	08:50			09:28
	22:14	20:56	19:27	17:04	81	15:04 (24)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:25 (28)	08:52			09:28
	22:12	20:54	19:25	17:01	91	15:08 (24)	15:56			15:47
28	05:16	06:24	07:33	07:42		11:25 (28)	08:54			09:28
	22:10	20:51	19:22	16:59	95	15:10 (24)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:24 (28)	08:56			09:28
	22:07	20:48	19:19	16:56	99	15:11 (24)	15:54			15:49
30	05:20	06:29	07:37	07:47		11:25 (28)	08:58			09:28
	22:05	20:45	19:16	16:54	99	15:12 (24)	15:52			15:50
31	05:22	06:31		07:49		11:25 (28)				09:28
	22:03	20:42		16:51	101	15:13 (24)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1425			1286		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,63			0,62		
Total reduction					0,25			0,25		
Total, real					357			321		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		10:42 (33)	07:35		08:50 (15)	07:07	05:44	04:40
	15:53			16:56	72	14:06 (23)	18:05	39	11:29 (28)	20:17	21:26	22:30
2	09:27			08:43		10:44 (33)	07:33		08:50 (15)	07:04	05:41	04:38
	15:54			16:58	72	14:08 (23)	18:07	31	11:25 (28)	20:19	21:28	22:32
3	09:27			08:41		10:46 (33)	07:30		08:49 (15)	07:01	05:39	04:37
	15:55			17:01	71	14:10 (23)	18:09	21	09:10 (15)	20:21	21:31	22:34
4	09:26			08:39		10:47 (33)	07:27		08:48 (15)	06:58	05:36	04:36
	15:57			17:03	77	15:02 (24)	18:12	22	09:10 (15)	20:24	21:33	22:35
5	09:26			08:37		10:50 (33)	07:24		08:48 (15)	06:55	05:34	04:35
	15:58			17:06	77	15:05 (24)	18:14	21	09:09 (15)	20:26	21:35	22:37
6	09:25			08:34		11:05 (28)	07:21		08:48 (15)	06:52	05:31	04:34
	16:00			17:08	82	15:12 (24)	18:17	21	09:09 (15)	20:28	21:37	22:38
7	09:24			08:32		11:03 (28)	07:19		08:48 (15)	06:50	05:29	04:33
	16:02			17:11	92	15:18 (24)	18:19	20	09:08 (15)	20:30	21:40	22:39
8	09:24			08:30		11:03 (28)	07:16		08:48 (15)	06:47	05:26	04:32
	16:03			17:13	101	15:25 (24)	18:21	19	09:07 (15)	20:33	21:42	22:40
9	09:23			08:27		11:02 (28)	07:13		08:48 (15)	06:44	05:24	04:31
	16:05			17:16	112	15:55 (22)	18:24	18	09:06 (15)	20:35	21:44	22:42
10	09:22			08:25		11:01 (28)	07:10		08:49 (15)	06:41	05:22	04:30
	16:07			17:18	104	15:51 (22)	18:26	15	09:04 (15)	20:37	21:46	22:43
11	09:21			08:23		11:01 (28)	07:07		08:51 (15)	06:38	05:19	04:29
	16:09			17:21	101	15:23 (24)	18:28	10	09:01 (15)	20:40	21:49	22:44
12	09:20			08:20		11:00 (28)	07:04			06:35	05:17	04:29
	16:11			17:23	98	15:21 (24)	18:31			20:42	21:51	22:45
13	09:18			08:18		10:59 (28)	07:02			06:33	05:15	04:28
	16:13			17:26	94	15:18 (24)	18:33			20:44	21:53	22:46
14	09:17			08:15		11:00 (28)	06:59			06:30	05:13	04:28
	16:15			17:28	83	14:14 (23)	18:35			20:47	21:55	22:47
15	09:16			08:13		10:59 (28)	06:56			06:27	05:10	04:27
	16:17			17:31	83	14:13 (23)	18:38			20:49	21:58	22:47
16	09:15			08:10		10:59 (28)	06:53			06:24	05:08	04:27
	16:19			17:33	81	14:12 (23)	18:40			20:51	22:00	22:48
17	09:13			08:07		10:59 (28)	06:50			06:21	05:06	04:27
	16:21			17:36	81	14:12 (23)	18:42			20:53	22:02	22:49
18	09:12			08:05		10:59 (28)	06:47			06:19	05:04	04:27
	16:23			17:38	80	14:12 (23)	18:45			20:56	22:04	22:49
19	09:10			08:02		10:59 (28)	06:44			06:16	05:02	04:27
	16:25			17:40	78	14:11 (23)	18:47			20:58	22:06	22:50
20	09:08			08:00		10:59 (28)	06:41			06:13	05:00	04:27
	16:28			17:43	74	14:09 (23)	18:49			21:00	22:08	22:50
21	09:07			07:57		10:59 (28)	06:39			06:10	04:58	04:27
	16:30			17:45	71	14:08 (23)	18:51			21:03	22:10	22:50
22	09:05			07:54		11:00 (28)	06:36			06:08	04:56	04:27
	16:32			17:48	66	14:06 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		11:01 (28)	06:33			06:05	04:54	04:27
	16:34			17:50	60	14:04 (23)	18:56			21:07	22:14	22:50
24	09:02			07:49		11:01 (28)	06:30			06:02	04:52	04:27
	16:37			17:53	50	14:00 (23)	18:58			21:10	22:16	22:51
25	09:00			07:46		11:02 (28)	06:27			06:00	04:51	04:28
	16:39			17:55	36	11:38 (28)	19:01			21:12	22:18	22:50
26	08:58		12:05 (20)	07:44		08:58 (15)	06:24			05:57	04:49	04:28
	16:41	5	12:10 (20)	17:57	36	11:36 (28)	19:03			21:14	22:20	22:50
27	08:56		12:05 (20)	07:41		08:54 (15)	06:21			05:54	04:47	04:29
	16:44	19	13:53 (23)	18:00	41	11:34 (28)	19:05			21:17	22:22	22:50
28	08:54		11:00 (33)	07:38		08:52 (15)	06:18			05:52	04:46	04:30
	16:46	40	13:59 (23)	18:02	41	11:32 (28)	19:08			21:19	22:24	22:50
29	08:52		10:56 (33)				07:15			05:49	04:44	04:30
	16:49	47	14:02 (23)				20:10			21:21	22:25	22:50
30	08:50		10:50 (33)				07:13			05:46	04:43	04:31
	16:51	55	14:03 (23)				20:12			21:24	22:27	22:49
31	08:48		10:44 (33)				07:10				04:41	
	16:54	62	14:05 (23)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		228			2114			237				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,62			0,63			0,73				
Total reduction		0,25			0,25			0,29				
Total, real		56			530			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** C - Moi 21

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December
1	04:32		05:24		06:33		07:39			07:51		10:30 (28)	09:00
	22:49		22:01		20:40		19:13			16:49	107	15:21 (22)	15:51
2	04:33		05:26		06:35		07:42		09:32 (15)	07:54		10:32 (28)	09:02
	22:48		21:58		20:37		19:10	7	09:39 (15)	16:46	110	15:25 (22)	15:50
3	04:34		05:28		06:37		07:44		09:28 (15)	07:56		10:33 (28)	09:03
	22:47		21:56		20:34		19:07	13	09:41 (15)	16:44	97	14:53 (24)	15:49
4	04:35		05:31		06:40		07:46		09:26 (15)	07:59		10:33 (28)	09:05
	22:47		21:54		20:31		19:04	16	09:42 (15)	16:41	89	14:46 (24)	15:48
5	04:36		05:33		06:42		07:48		09:25 (15)	08:01		10:35 (28)	09:07
	22:46		21:51		20:28		19:02	19	09:44 (15)	16:39	81	14:41 (24)	15:47
6	04:37		05:35		06:44		07:51		09:24 (15)	08:03		10:20 (33)	09:09
	22:45		21:49		20:25		18:59	20	09:44 (15)	16:37	77	14:35 (24)	15:46
7	04:39		05:37		06:46		07:53		09:23 (15)	08:06		10:16 (33)	09:10
	22:44		21:47		20:22		18:56	21	09:44 (15)	16:34	77	14:32 (24)	15:45
8	04:40		05:39		06:49		07:55		09:23 (15)	08:08		10:15 (33)	09:12
	22:43		21:44		20:20		18:53	22	09:45 (15)	16:32	71	13:39 (23)	15:45
9	04:41		05:42		06:51		07:57		09:22 (15)	08:11		10:15 (33)	09:13
	22:42		21:42		20:17		18:50	22	09:44 (15)	16:30	72	13:39 (23)	15:44
10	04:43		05:44		06:53		08:00		09:23 (15)	08:13		10:14 (33)	09:15
	22:40		21:39		20:14		18:47	21	09:44 (15)	16:28	71	13:38 (23)	15:44
11	04:44		05:46		06:55		08:02		09:23 (15)	08:15		10:15 (33)	09:16
	22:39		21:37		20:11		18:45	20	09:43 (15)	16:25	61	13:36 (23)	15:43
12	04:46		05:48		06:57		08:04		09:23 (15)	08:18		10:24 (33)	09:18
	22:38		21:34		20:08		18:42	36	12:00 (28)	16:23	52	13:35 (23)	15:43
13	04:47		05:51		07:00		08:07		09:24 (15)	08:20		10:28 (33)	09:19
	22:37		21:31		20:05		18:39	40	12:04 (28)	16:21	47	13:33 (23)	15:42
14	04:49		05:53		07:02		08:09		09:25 (15)	08:22		10:32 (33)	09:20
	22:35		21:29		20:02		18:36	42	12:06 (28)	16:19	39	13:30 (23)	15:42
15	04:51		05:55		07:04		08:11		09:28 (15)	08:25		11:38 (20)	09:21
	22:34		21:26		19:59		18:33	40	12:08 (28)	16:17	19	13:26 (23)	15:42
16	04:52		05:57		07:06		08:13		11:35 (28)	08:27		11:38 (20)	09:22
	22:32		21:24		19:56		18:31	34	12:09 (28)	16:15	4	11:42 (20)	15:42
17	04:54		06:00		07:08		08:16		11:34 (28)	08:29			09:23
	22:30		21:21		19:54		18:28	36	12:10 (28)	16:13			15:42
18	04:56		06:02		07:11		08:18		11:32 (28)	08:32			09:24
	22:29		21:18		19:51		18:25	55	14:33 (23)	16:11			15:42
19	04:58		06:04		07:13		08:20		11:32 (28)	08:34			09:25
	22:27		21:16		19:48		18:22	62	14:36 (23)	16:09			15:42
20	05:00		06:06		07:15		08:23		11:31 (28)	08:36			09:26
	22:25		21:13		19:45		18:20	67	14:37 (23)	16:08			15:43
21	05:01		06:09		07:17		08:25		11:30 (28)	08:39			09:26
	22:24		21:10		19:42		18:17	72	14:39 (23)	16:06			15:43
22	05:03		06:11		07:19		08:27		11:29 (28)	08:41			09:27
	22:22		21:08		19:39		18:14	75	14:40 (23)	16:04			15:43
23	05:05		06:13		07:22		08:30		11:29 (28)	08:43			09:27
	22:20		21:05		19:36		18:12	78	14:41 (23)	16:02			15:44
24	05:07		06:15		07:24		08:32		11:29 (28)	08:45			09:28
	22:18		21:02		19:33		18:09	79	14:41 (23)	16:01			15:45
25	05:09		06:17		07:26		07:35		10:29 (28)	08:47			09:28
	22:16		20:59		19:30		17:07	81	13:42 (23)	15:59			15:45
26	05:11		06:20		07:28		07:37		10:29 (28)	08:50			09:28
	22:14		20:57		19:27		17:04	82	13:43 (23)	15:58			15:46
27	05:13		06:22		07:30		07:39		10:29 (28)	08:52			09:28
	22:12		20:54		19:25		17:01	81	13:42 (23)	15:56			15:47
28	05:16		06:24		07:33		07:42		10:29 (28)	08:54			09:28
	22:10		20:51		19:22		16:59	87	14:45 (24)	15:55			15:48
29	05:18		06:26		07:35		07:44		10:29 (28)	08:56			09:28
	22:07		20:48		19:19		16:56	95	14:48 (24)	15:54			15:49
30	05:20		06:29		07:37		07:47		10:30 (28)	08:58			09:28
	22:05		20:45		19:16		16:54	99	14:51 (24)	15:52			15:50
31	05:22		06:31				07:49		10:31 (28)				09:28
	22:03		20:42				16:51	99	14:52 (24)				15:51
Potential sun hours	546		478		386		319			236			199
Total, worst case								1521			1074		
Sun reduction								0,50			0,50		
Oper. time red.								0,80			0,80		
Wind dir. red.								0,65			0,62		
Total reduction								0,26			0,25		
Total, real								396			264		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April		May	June
1	09:28			08:46			11:39 (28)	07:35		09:25 (15)		07:07	05:44	04:40
	15:53			16:56	88		15:12 (24)	18:05	9	09:34 (15)		20:17	21:26	22:31
2	09:27			08:43			11:39 (28)	07:33				07:04	05:41	04:38
	15:54			16:58	88		15:13 (24)	18:07				20:19	21:28	22:32
3	09:27			08:41			11:40 (28)	07:30				07:01	05:39	04:37
	15:55			17:01	85		15:12 (24)	18:09				20:21	21:31	22:34
4	09:27			08:39			11:39 (28)	07:27				06:58	05:36	04:36
	15:57			17:03	83		15:11 (24)	18:12				20:24	21:33	22:35
5	09:26		12:20 (20)	08:37			11:39 (28)	07:24				06:55	05:34	04:35
	15:58	1	12:21 (20)	17:06	80		15:09 (24)	18:14				20:26	21:35	22:37
6	09:25		12:19 (20)	08:34			11:40 (28)	07:21				06:52	05:31	04:34
	16:00	5	12:24 (20)	17:08	74		15:08 (24)	18:17				20:28	21:37	22:38
7	09:24		12:17 (20)	08:32			11:40 (28)	07:19				06:50	05:29	04:33
	16:02	11	12:28 (20)	17:11	62		14:11 (23)	18:19				20:30	21:40	22:39
8	09:24		12:17 (20)	08:30			11:41 (28)	07:16				06:47	05:26	04:32
	16:03	13	12:30 (20)	17:13	61		14:11 (23)	18:21				20:33	21:42	22:40
9	09:23		12:18 (20)	08:27			11:42 (28)	07:13				06:44	05:24	04:31
	16:05	16	12:34 (20)	17:16	57		14:10 (23)	18:24				20:35	21:44	22:42
10	09:22		11:06 (33)	08:25			11:42 (28)	07:10				06:41	05:22	04:30
	16:07	25	12:39 (20)	17:18	54		14:09 (23)	18:26				20:37	21:46	22:43
11	09:21		11:02 (33)	08:23			11:44 (28)	07:07				06:38	05:19	04:29
	16:09	31	12:41 (20)	17:21	48		14:08 (23)	18:28				20:40	21:49	22:44
12	09:20		11:01 (33)	08:20			11:45 (28)	07:04				06:35	05:17	04:29
	16:11	40	12:41 (20)	17:23	42		14:06 (23)	18:31				20:42	21:51	22:45
13	09:18		11:02 (33)	08:18			11:46 (28)	07:02				06:32	05:15	04:28
	16:13	42	12:42 (20)	17:26	32		14:02 (23)	18:33				20:44	21:53	22:46
14	09:17		11:02 (33)	08:15			11:49 (28)	06:59				06:30	05:13	04:28
	16:15	42	12:42 (20)	17:28	18		12:07 (28)	18:35				20:47	21:55	22:47
15	09:16		11:02 (33)	08:13			11:52 (28)	06:56				06:27	05:10	04:27
	16:17	43	12:42 (20)	17:31	12		12:04 (28)	18:38				20:49	21:58	22:47
16	09:15		11:02 (33)	08:10			09:29 (15)	06:53				06:24	05:08	04:27
	16:19	43	12:42 (20)	17:33	5		09:34 (15)	18:40				20:51	22:00	22:48
17	09:13		11:02 (33)	08:07			09:25 (15)	06:50				06:21	05:06	04:27
	16:21	45	12:42 (20)	17:36	12		09:37 (15)	18:42				20:53	22:02	22:49
18	09:12		11:03 (33)	08:05			09:24 (15)	06:47				06:19	05:04	04:27
	16:23	57	13:55 (23)	17:38	16		09:40 (15)	18:45				20:56	22:04	22:49
19	09:10		11:03 (33)	08:02			09:23 (15)	06:44				06:16	05:02	04:27
	16:25	70	13:59 (23)	17:40	17		09:40 (15)	18:47				20:58	22:06	22:50
20	09:08		11:04 (33)	08:00			09:22 (15)	06:41				06:13	05:00	04:27
	16:28	75	14:01 (23)	17:43	19		09:41 (15)	18:49				21:00	22:08	22:50
21	09:07		11:04 (33)	07:57			09:21 (15)	06:39				06:10	04:58	04:27
	16:30	80	14:03 (23)	17:45	20		09:41 (15)	18:51				21:03	22:10	22:50
22	09:05		11:05 (33)	07:54			09:20 (15)	06:36				06:08	04:56	04:27
	16:32	82	14:05 (23)	17:48	21		09:41 (15)	18:54				21:05	22:12	22:50
23	09:03		11:05 (33)	07:52			09:21 (15)	06:33				06:05	04:54	04:27
	16:34	83	14:05 (23)	17:50	21		09:42 (15)	18:56				21:07	22:14	22:51
24	09:02		11:06 (33)	07:49			09:21 (15)	06:30				06:02	04:52	04:27
	16:37	84	14:07 (23)	17:53	20		09:41 (15)	18:58				21:10	22:16	22:51
25	09:00		11:07 (33)	07:46			09:21 (15)	06:27				05:59	04:51	04:28
	16:39	84	14:52 (24)	17:55	20		09:41 (15)	19:01				21:12	22:18	22:51
26	08:58		11:09 (33)	07:44			09:21 (15)	06:24				05:57	04:49	04:28
	16:41	79	14:57 (24)	17:57	19		09:40 (15)	19:03				21:14	22:20	22:50
27	08:56		11:10 (33)	07:41			09:22 (15)	06:21				05:54	04:47	04:29
	16:44	86	15:12 (24)	18:00	16		09:38 (15)	19:05				21:17	22:22	22:50
28	08:54		11:13 (33)	07:38			09:23 (15)	06:18				05:52	04:46	04:30
	16:46	90	15:13 (24)	18:02	14		09:37 (15)	19:08				21:19	22:24	22:50
29	08:52		11:40 (28)					07:15				05:49	04:44	04:30
	16:49	88	15:14 (24)					20:10				21:21	22:25	22:50
30	08:50		11:39 (28)					07:12				05:46	04:42	04:31
	16:51	88	15:13 (24)					20:12				21:24	22:27	22:49
31	08:48		11:39 (28)					07:10					04:41	
	16:54	88	15:13 (24)					20:14					22:29	
Potential sun hours	221			260			365			432		521	547	
Total, worst case		1491			1104			9						
Sun reduction		0,50			0,50			0,50						
Oper. time red.		0,80			0,80			0,80						
Wind dir. red.		0,62			0,63			0,73						
Total reduction		0,25			0,25			0,29						
Total, real		371			276			3						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** D - Buevegen 1805

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		11:12 (28)	09:00		10:44 (33)
	22:49	22:01	20:40	19:13			16:49	53	13:38 (23)	15:51	31	12:23 (20)
2	04:33	05:26	06:35	07:42			07:54		11:11 (28)	09:02		10:48 (33)
	22:48	21:58	20:37	19:10			16:46	58	13:40 (23)	15:50	27	12:23 (20)
3	04:34	05:28	06:37	07:44			07:56		11:11 (28)	09:03		12:01 (20)
	22:47	21:56	20:34	19:07			16:44	60	13:41 (23)	15:49	17	12:18 (20)
4	04:35	05:31	06:40	07:46			07:59		11:10 (28)	09:05		12:01 (20)
	22:47	21:54	20:31	19:04			16:41	63	13:41 (23)	15:48	13	12:14 (20)
5	04:36	05:33	06:42	07:48			08:01		11:10 (28)	09:07		12:02 (20)
	22:46	21:51	20:28	19:02			16:39	75	14:38 (24)	15:47	11	12:13 (20)
6	04:37	05:35	06:44	07:51			08:03		11:10 (28)	09:09		12:05 (20)
	22:45	21:49	20:25	18:59			16:37	79	14:40 (24)	15:46	5	12:10 (20)
7	04:39	05:37	06:46	07:53			08:06		11:09 (28)	09:10		12:07 (20)
	22:44	21:47	20:22	18:56			16:34	84	14:41 (24)	15:45	2	12:09 (20)
8	04:40	05:39	06:49	07:55			08:08		11:09 (28)	09:12		
	22:43	21:44	20:20	18:53			16:32	87	14:42 (24)	15:45		
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		
	22:42	21:42	20:17	18:50			16:30	87	14:43 (24)	15:44		
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		
	22:41	21:39	20:14	18:47			16:28	88	14:44 (24)	15:43		
11	04:44	05:46	06:55	08:02			08:15		11:10 (28)	09:16		
	22:39	21:37	20:11	18:45			16:25	88	14:44 (24)	15:43		
12	04:46	05:48	06:57	08:04		10:02 (15)	08:18		11:11 (28)	09:18		
	22:38	21:34	20:08	18:42	2	10:04 (15)	16:23	88	14:45 (24)	15:43		
13	04:47	05:51	07:00	08:07		09:58 (15)	08:20		11:12 (28)	09:19		
	22:37	21:32	20:05	18:39	11	10:09 (15)	16:21	86	14:45 (24)	15:42		
14	04:49	05:53	07:02	08:09		09:55 (15)	08:22		10:45 (33)	09:20		
	22:35	21:29	20:02	18:36	15	10:10 (15)	16:19	89	14:45 (24)	15:42		
15	04:51	05:55	07:04	08:11		09:54 (15)	08:25		10:42 (33)	09:21		
	22:34	21:26	19:59	18:33	18	10:12 (15)	16:17	87	14:45 (24)	15:42		
16	04:52	05:57	07:06	08:13		09:53 (15)	08:27		10:41 (33)	09:22		
	22:32	21:24	19:56	18:31	19	10:12 (15)	16:15	81	14:30 (24)	15:42		
17	04:54	06:00	07:08	08:16		09:53 (15)	08:30		10:41 (33)	09:23		
	22:30	21:21	19:54	18:28	20	10:13 (15)	16:13	83	14:25 (24)	15:42		
18	04:56	06:02	07:11	08:18		09:52 (15)	08:32		10:40 (33)	09:24		
	22:29	21:18	19:51	18:25	21	10:13 (15)	16:11	84	13:41 (23)	15:42		
19	04:58	06:04	07:13	08:20		09:52 (15)	08:34		10:40 (33)	09:25		
	22:27	21:16	19:48	18:22	21	10:13 (15)	16:09	83	13:40 (23)	15:42		
20	05:00	06:06	07:15	08:23		09:52 (15)	08:36		10:39 (33)	09:26		
	22:25	21:13	19:45	18:20	20	10:12 (15)	16:08	82	13:39 (23)	15:43		
21	05:01	06:08	07:17	08:25		09:52 (15)	08:39		10:39 (33)	09:26		
	22:24	21:10	19:42	18:17	20	10:12 (15)	16:06	80	13:38 (23)	15:43		
22	05:03	06:11	07:19	08:27		09:52 (15)	08:41		10:40 (33)	09:27		
	22:22	21:08	19:39	18:14	19	10:11 (15)	16:04	75	13:37 (23)	15:43		
23	05:05	06:13	07:22	08:30		09:53 (15)	08:43		10:39 (33)	09:27		
	22:20	21:05	19:36	18:12	17	10:10 (15)	16:02	69	13:35 (23)	15:44		
24	05:07	06:15	07:24	08:32		09:54 (15)	08:45		10:40 (33)	09:28		
	22:18	21:02	19:33	18:09	14	10:08 (15)	16:01	58	13:32 (23)	15:44		
25	05:09	06:17	07:26	07:35		08:56 (15)	08:47		10:40 (33)	09:28		
	22:16	20:59	19:30	17:06	11	09:07 (15)	15:59	45	12:20 (20)	15:45		
26	05:11	06:20	07:28	07:37		09:01 (15)	08:50		10:41 (33)	09:28		
	22:14	20:57	19:27	17:04	2	09:03 (15)	15:58	43	12:21 (20)	15:46		
27	05:13	06:22	07:30	07:39		11:20 (28)	08:52		10:41 (33)	09:28		
	22:12	20:54	19:25	17:01	14	11:34 (28)	15:56	43	12:21 (20)	15:47		
28	05:16	06:24	07:33	07:42		11:18 (28)	08:54		10:42 (33)	09:28		
	22:10	20:51	19:22	16:59	19	11:37 (28)	15:55	42	12:22 (20)	15:48		
29	05:18	06:26	07:35	07:44		11:15 (28)	08:56		10:42 (33)	09:28		
	22:07	20:48	19:19	16:56	34	13:32 (23)	15:54	42	12:22 (20)	15:49		
30	05:20	06:29	07:37	07:47		11:14 (28)	08:58		10:42 (33)	09:28		
	22:05	20:45	19:16	16:54	42	13:35 (23)	15:52	40	12:22 (20)	15:50		
31	05:22	06:31		07:49		11:13 (28)				09:28		
	22:03	20:42		16:51	50	13:38 (23)				15:51		
Potential sun hours	546	478	386	319			236			199		
Total, worst case					389			2122			106	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,69			0,61			0,64	
Total reduction					0,27			0,25			0,25	
Total, real					107			520			27	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		11:12 (33)	08:46		11:58 (28)	07:35	07:07	05:44	04:40
	15:53	2	11:14 (33)	16:56	88	15:21 (24)	18:05	20:17	21:26	22:30
2	09:27		11:11 (33)	08:43		11:59 (28)	07:33	07:04	05:41	04:38
	15:54	3	11:14 (33)	16:58	85	15:21 (24)	18:07	20:19	21:28	22:32
3	09:27		11:11 (33)	08:41		12:00 (28)	07:30	07:01	05:39	04:37
	15:55	12	12:45 (20)	17:01	84	15:21 (24)	18:09	20:21	21:31	22:34
4	09:27		11:11 (33)	08:39		11:59 (28)	07:27	06:58	05:36	04:36
	15:57	14	12:45 (20)	17:03	82	15:20 (24)	18:12	20:24	21:33	22:35
5	09:26		11:11 (33)	08:37		11:59 (28)	07:24	06:55	05:34	04:35
	15:58	28	12:49 (20)	17:06	81	15:19 (24)	18:14	20:26	21:35	22:37
6	09:25		11:11 (33)	08:34		12:00 (28)	07:21	06:52	05:31	04:34
	16:00	29	12:50 (20)	17:08	75	15:18 (24)	18:17	20:28	21:37	22:38
7	09:24		11:11 (33)	08:32		12:01 (28)	07:19	06:50	05:29	04:33
	16:02	36	12:50 (20)	17:11	64	15:14 (24)	18:19	20:30	21:40	22:39
8	09:24		11:11 (33)	08:30		12:02 (28)	07:16	06:47	05:26	04:32
	16:03	40	12:51 (20)	17:13	57	14:25 (23)	18:21	20:33	21:42	22:40
9	09:23		11:12 (33)	08:27		12:03 (28)	07:13	06:44	05:24	04:31
	16:05	40	12:52 (20)	17:16	53	14:24 (23)	18:24	20:35	21:44	22:42
10	09:22		11:11 (33)	08:25		12:04 (28)	07:10	06:41	05:22	04:30
	16:07	41	12:52 (20)	17:18	48	14:23 (23)	18:26	20:37	21:46	22:43
11	09:21		11:12 (33)	08:23		12:06 (28)	07:07	06:38	05:19	04:29
	16:09	42	12:53 (20)	17:21	43	14:22 (23)	18:28	20:40	21:49	22:44
12	09:20		11:12 (33)	08:20		12:07 (28)	07:04	06:35	05:17	04:29
	16:11	43	12:53 (20)	17:23	35	14:20 (23)	18:31	20:42	21:51	22:45
13	09:18		11:12 (33)	08:18		12:10 (28)	07:02	06:32	05:15	04:28
	16:13	44	12:54 (20)	17:26	22	14:16 (23)	18:33	20:44	21:53	22:46
14	09:17		11:12 (33)	08:15		09:38 (15)	06:59	06:30	05:13	04:28
	16:15	44	12:54 (20)	17:28	10	12:19 (28)	18:35	20:47	21:55	22:47
15	09:16		11:12 (33)	08:13		09:35 (15)	06:56	06:27	05:10	04:27
	16:17	54	12:54 (20)	17:31	12	09:47 (15)	18:38	20:49	21:58	22:47
16	09:15		11:12 (33)	08:10		09:33 (15)	06:53	06:24	05:08	04:27
	16:19	57	12:54 (20)	17:33	16	09:49 (15)	18:40	20:51	22:00	22:48
17	09:13		11:13 (33)	08:07		09:32 (15)	06:50	06:21	05:06	04:27
	16:21	60	12:54 (20)	17:36	18	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:14 (33)	08:05		09:31 (15)	06:47	06:19	05:04	04:27
	16:23	62	12:55 (20)	17:38	20	09:51 (15)	18:45	20:56	22:04	22:49
19	09:10		11:15 (33)	08:02		09:31 (15)	06:44	06:16	05:02	04:27
	16:25	64	12:55 (20)	17:40	20	09:51 (15)	18:47	20:58	22:06	22:50
20	09:08		11:15 (33)	08:00		09:30 (15)	06:41	06:13	05:00	04:27
	16:28	73	14:13 (23)	17:43	21	09:51 (15)	18:49	21:00	22:08	22:50
21	09:07		11:16 (33)	07:57		09:30 (15)	06:38	06:10	04:58	04:27
	16:30	78	14:16 (23)	17:45	21	09:51 (15)	18:51	21:03	22:10	22:50
22	09:05		11:16 (33)	07:54		09:29 (15)	06:36	06:08	04:56	04:27
	16:32	80	14:17 (23)	17:48	22	09:51 (15)	18:54	21:05	22:12	22:50
23	09:03		11:17 (33)	07:52		09:30 (15)	06:33	06:05	04:54	04:27
	16:34	81	14:19 (23)	17:50	21	09:51 (15)	18:56	21:07	22:14	22:51
24	09:02		11:19 (33)	07:49		09:31 (15)	06:30	06:02	04:52	04:27
	16:37	77	14:20 (23)	17:53	19	09:50 (15)	18:58	21:10	22:16	22:51
25	09:00		11:20 (33)	07:46		09:31 (15)	06:27	05:59	04:51	04:28
	16:39	73	14:21 (23)	17:55	18	09:49 (15)	19:01	21:12	22:18	22:51
26	08:58		11:23 (33)	07:44		09:32 (15)	06:24	05:57	04:49	04:28
	16:41	69	15:03 (24)	17:57	15	09:47 (15)	19:03	21:14	22:20	22:50
27	08:56		11:58 (28)	07:41		09:34 (15)	06:21	05:54	04:47	04:29
	16:44	68	15:06 (24)	18:00	11	09:45 (15)	19:05	21:17	22:22	22:50
28	08:54		11:58 (28)	07:38		09:38 (15)	06:18	05:52	04:46	04:30
	16:46	75	15:11 (24)	18:02	2	09:40 (15)	19:07	21:19	22:24	22:50
29	08:52		11:59 (28)				07:15	05:49	04:44	04:30
	16:49	83	15:18 (24)				20:10	21:21	22:25	22:50
30	08:50		11:58 (28)				07:12	05:46	04:42	04:31
	16:51	86	15:21 (24)				20:12	21:24	22:27	22:49
31	08:48		11:58 (28)				07:10		04:41	
	16:54	88	15:22 (24)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		1646			1063					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,63			0,63					
Total reduction		0,25			0,25					
Total, real		411			265					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** E - Buevegen 1816

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:33 (28)	09:00		10:54 (33)
	22:49		22:01		20:40		19:13			16:49	50	13:53 (23)	15:51	43	12:35 (20)
2	04:33		05:26		06:35		07:42			07:54		11:32 (28)	09:02		10:54 (33)
	22:48		21:58		20:37		19:10			16:46	54	13:54 (23)	15:50	42	12:35 (20)
3	04:34		05:28		06:37		07:44			07:56		11:32 (28)	09:03		10:55 (33)
	22:47		21:56		20:34		19:07			16:44	57	13:55 (23)	15:49	40	12:35 (20)
4	04:35		05:31		06:40		07:46			07:59		11:30 (28)	09:05		10:56 (33)
	22:47		21:54		20:31		19:04			16:41	68	14:45 (24)	15:48	39	12:35 (20)
5	04:36		05:33		06:42		07:48			08:01		11:30 (28)	09:07		10:56 (33)
	22:46		21:51		20:28		19:02			16:39	76	14:48 (24)	15:47	39	12:36 (20)
6	04:37		05:35		06:44		07:51			08:03		11:30 (28)	09:09		10:57 (33)
	22:45		21:49		20:25		18:59			16:37	78	14:49 (24)	15:46	30	12:36 (20)
7	04:39		05:37		06:46		07:53			08:06		11:29 (28)	09:10		10:58 (33)
	22:44		21:47		20:22		18:56			16:34	83	14:50 (24)	15:45	29	12:36 (20)
8	04:40		05:39		06:49		07:55			08:08		11:29 (28)	09:12		10:59 (33)
	22:43		21:44		20:20		18:53			16:32	86	14:51 (24)	15:45	15	12:33 (20)
9	04:41		05:42		06:51		07:57			08:11		11:29 (28)	09:13		11:00 (33)
	22:42		21:42		20:17		18:50			16:30	87	14:52 (24)	15:44	12	12:34 (20)
10	04:43		05:44		06:53		08:00			08:13		11:30 (28)	09:15		11:00 (33)
	22:41		21:39		20:14		18:47			16:28	88	14:53 (24)	15:43	4	12:31 (20)
11	04:44		05:46		06:55		08:02			08:15		11:29 (28)	09:16		11:02 (33)
	22:39		21:37		20:11		18:45			16:25	87	14:52 (24)	15:43	2	11:04 (33)
12	04:46		05:48		06:57		08:04			08:18		11:30 (28)	09:18		11:02 (33)
	22:38		21:34		20:08		18:42			16:23	87	14:53 (24)	15:43	2	11:04 (33)
13	04:47		05:51		07:00		08:07			08:20		11:30 (28)	09:19		
	22:37		21:31		20:05		18:39			16:21	83	14:50 (24)	15:42		
14	04:49		05:53		07:02		08:09		10:08 (15)	08:22		11:30 (28)	09:20		
	22:35		21:29		20:02		18:36	8	10:16 (15)	16:19	74	14:42 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:06 (15)	08:25		11:31 (28)	09:21		
	22:34		21:26		19:59		18:33	13	10:19 (15)	16:17	68	14:38 (24)	15:42		
16	04:52		05:57		07:06		08:13		10:04 (15)	08:27		10:56 (33)	09:22		
	22:32		21:24		19:56		18:31	16	10:20 (15)	16:15	69	14:36 (24)	15:42		
17	04:54		06:00		07:08		08:16		10:03 (15)	08:30		10:54 (33)	09:23		
	22:30		21:21		19:54		18:28	18	10:21 (15)	16:13	73	13:55 (23)	15:42		
18	04:56		06:02		07:11		08:18		10:02 (15)	08:32		10:52 (33)	09:24		
	22:29		21:18		19:51		18:25	20	10:22 (15)	16:11	78	13:54 (23)	15:42		
19	04:58		06:04		07:13		08:20		10:01 (15)	08:34		10:52 (33)	09:25		
	22:27		21:16		19:48		18:22	21	10:22 (15)	16:09	81	13:54 (23)	15:42		
20	05:00		06:06		07:15		08:23		10:01 (15)	08:36		10:51 (33)	09:26		
	22:25		21:13		19:45		18:20	21	10:22 (15)	16:08	80	13:52 (23)	15:43		
21	05:01		06:08		07:17		08:25		10:01 (15)	08:39		10:51 (33)	09:26		
	22:24		21:10		19:42		18:17	21	10:22 (15)	16:06	78	13:51 (23)	15:43		
22	05:03		06:11		07:19		08:27		10:00 (15)	08:41		10:51 (33)	09:27		
	22:22		21:08		19:39		18:14	21	10:21 (15)	16:04	75	13:50 (23)	15:43		
23	05:05		06:13		07:22		08:30		10:01 (15)	08:43		10:51 (33)	09:27		
	22:20		21:05		19:36		18:12	20	10:21 (15)	16:02	64	12:31 (20)	15:44		
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		10:51 (33)	09:28		
	22:18		21:02		19:33		18:09	19	10:20 (15)	16:01	63	12:32 (20)	15:44		
25	05:09		06:17		07:26		07:35		09:02 (15)	08:47		10:51 (33)	09:28		
	22:16		20:59		19:30		17:06	18	09:20 (15)	15:59	60	12:32 (20)	15:45		
26	05:11		06:20		07:28		07:37		09:03 (15)	08:50		10:52 (33)	09:28		
	22:14		20:57		19:27		17:04	15	09:18 (15)	15:58	56	12:33 (20)	15:46		
27	05:13		06:22		07:30		07:39		09:05 (15)	08:52		10:51 (33)	09:28		
	22:12		20:54		19:25		17:01	11	09:16 (15)	15:56	53	12:33 (20)	15:47		
28	05:16		06:24		07:33		07:42		09:08 (15)	08:54		10:52 (33)	09:28		
	22:10		20:51		19:22		16:59	13	11:51 (28)	15:55	44	12:34 (20)	15:48		
29	05:18		06:26		07:35		07:44		11:38 (28)	08:56		10:53 (33)	09:28		
	22:07		20:48		19:19		16:56	26	13:46 (23)	15:54	43	12:34 (20)	15:49		
30	05:20		06:29		07:37		07:47		11:36 (28)	08:58		10:53 (33)	09:28		
	22:05		20:45		19:16		16:54	37	13:50 (23)	15:52	43	12:34 (20)	15:50		
31	05:22		06:31				07:49		11:35 (28)				09:28		11:11 (33)
	22:03		20:42				16:51	44	13:52 (23)				15:51	1	11:12 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								362			2086			298	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,69			0,61			0,65	
Total reduction								0,28			0,24			0,26	
Total, real								100			508			77	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	11:23 (33)	08:46	12:23 (28)	07:35	07:07	05:44	04:40
	15:53 17	11:40 (33)	16:56 82	15:30 (24)	18:05	20:17	21:26	22:30
2	09:27	11:23 (33)	08:43	12:24 (28)	07:33	07:04	05:41	04:38
	15:54 17	11:40 (33)	16:58 86	15:34 (24)	18:07	20:19	21:28	22:32
3	09:27	11:23 (33)	08:41	12:25 (28)	07:30	07:01	05:39	04:37
	15:55 18	11:41 (33)	17:01 84	15:34 (24)	18:09	20:21	21:31	22:34
4	09:26	11:23 (33)	08:39	12:25 (28)	07:27	06:58	05:36	04:36
	15:57 23	12:52 (20)	17:03 85	15:34 (24)	18:12	20:24	21:33	22:35
5	09:26	11:23 (33)	08:37	12:25 (28)	07:24	06:55	05:34	04:35
	15:58 25	12:53 (20)	17:06 82	15:33 (24)	18:14	20:26	21:35	22:37
6	09:25	11:24 (33)	08:34	12:26 (28)	07:21	06:52	05:31	04:34
	16:00 31	13:06 (20)	17:08 79	15:33 (24)	18:17	20:28	21:37	22:38
7	09:24	11:24 (33)	08:32	12:26 (28)	07:19	06:50	05:29	04:33
	16:02 34	13:07 (20)	17:11 74	15:31 (24)	18:19	20:30	21:40	22:39
8	09:24	11:24 (33)	08:30	12:28 (28)	07:16	06:47	05:26	04:32
	16:03 41	13:07 (20)	17:13 68	15:30 (24)	18:21	20:33	21:42	22:40
9	09:23	11:24 (33)	08:27	12:28 (28)	07:13	06:44	05:24	04:31
	16:05 42	13:07 (20)	17:16 60	15:26 (24)	18:24	20:35	21:44	22:42
10	09:22	11:25 (33)	08:25	12:29 (28)	07:10	06:41	05:22	04:30
	16:07 42	13:08 (20)	17:18 51	14:44 (23)	18:26	20:37	21:46	22:43
11	09:21	11:25 (33)	08:23	12:32 (28)	07:07	06:38	05:19	04:29
	16:09 43	13:09 (20)	17:21 45	14:43 (23)	18:28	20:40	21:49	22:44
12	09:20	11:25 (33)	08:20	09:49 (15)	07:04	06:35	05:17	04:29
	16:11 44	13:09 (20)	17:23 45	14:42 (23)	18:31	20:42	21:51	22:45
13	09:18	11:26 (33)	08:18	09:45 (15)	07:01	06:32	05:15	04:28
	16:13 44	13:10 (20)	17:26 43	14:40 (23)	18:33	20:44	21:53	22:46
14	09:17	11:26 (33)	08:15	09:44 (15)	06:59	06:30	05:13	04:28
	16:15 54	13:10 (20)	17:28 27	14:38 (23)	18:35	20:47	21:55	22:47
15	09:16	11:26 (33)	08:13	09:43 (15)	06:56	06:27	05:10	04:27
	16:17 57	13:10 (20)	17:31 18	10:01 (15)	18:38	20:49	21:58	22:47
16	09:15	11:27 (33)	08:10	09:42 (15)	06:53	06:24	05:08	04:27
	16:19 60	13:10 (20)	17:33 20	10:02 (15)	18:40	20:51	22:00	22:48
17	09:13	11:27 (33)	08:07	09:41 (15)	06:50	06:21	05:06	04:27
	16:21 63	13:10 (20)	17:35 21	10:02 (15)	18:42	20:53	22:02	22:49
18	09:12	11:28 (33)	08:05	09:41 (15)	06:47	06:19	05:04	04:27
	16:23 64	13:11 (20)	17:38 22	10:03 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (33)	08:02	09:40 (15)	06:44	06:16	05:02	04:27
	16:25 63	13:11 (20)	17:40 23	10:03 (15)	18:47	20:58	22:06	22:50
20	09:08	11:30 (33)	08:00	09:40 (15)	06:41	06:13	05:00	04:27
	16:28 63	13:11 (20)	17:43 23	10:03 (15)	18:49	21:00	22:08	22:50
21	09:07	11:31 (33)	07:57	09:40 (15)	06:38	06:10	04:58	04:27
	16:30 62	13:11 (20)	17:45 22	10:02 (15)	18:51	21:03	22:10	22:50
22	09:05	11:31 (33)	07:54	09:40 (15)	06:36	06:08	04:56	04:27
	16:32 60	13:09 (20)	17:48 22	10:02 (15)	18:54	21:05	22:12	22:50
23	09:03	11:33 (33)	07:52	09:42 (15)	06:33	06:05	04:54	04:27
	16:34 66	14:33 (23)	17:50 20	10:02 (15)	18:56	21:07	22:14	22:50
24	09:02	11:35 (33)	07:49	09:42 (15)	06:30	06:02	04:52	04:27
	16:37 67	14:36 (23)	17:53 18	10:00 (15)	18:58	21:10	22:16	22:51
25	09:00	11:39 (33)	07:46	09:43 (15)	06:27	05:59	04:51	04:28
	16:39 58	14:38 (23)	17:55 16	09:59 (15)	19:01	21:12	22:18	22:50
26	08:58	12:24 (28)	07:44	09:45 (15)	06:24	05:57	04:49	04:28
	16:41 55	14:40 (23)	17:57 11	09:56 (15)	19:03	21:14	22:20	22:50
27	08:56	12:23 (28)	07:41	09:49 (15)	06:21	05:54	04:47	04:29
	16:44 57	14:40 (23)	18:00 2	09:51 (15)	19:05	21:17	22:22	22:50
28	08:54	12:23 (28)	07:38		06:18	05:52	04:46	04:30
	16:46 61	15:15 (24)	18:02		19:07	21:19	22:24	22:50
29	08:52	12:24 (28)			07:15	05:49	04:44	04:30
	16:49 67	15:19 (24)			20:10	21:21	22:25	22:50
30	08:50	12:23 (28)			07:12	05:46	04:42	04:31
	16:51 74	15:23 (24)			20:12	21:24	22:27	22:49
31	08:48	12:24 (28)			07:10		04:41	
	16:53 77	15:26 (24)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case	1549		1149					
Sun reduction	0,50		0,50					
Oper. time red.	0,80		0,80					
Wind dir. red.	0,62		0,62					
Total reduction	0,25		0,25					
Total, real	386		284					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** F - Buevegen 1818

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:59 (28)	09:00		11:07 (33)
	22:49		22:01		20:40		19:13			16:49	51	14:13 (23)	15:51	43	12:51 (20)
2	04:33		05:26		06:35		07:42			07:54		11:58 (28)	09:02		11:08 (33)
	22:48		21:58		20:37		19:10			16:46	61	14:57 (24)	15:50	42	12:51 (20)
3	04:34		05:28		06:37		07:44			07:56		11:57 (28)	09:03		11:08 (33)
	22:47		21:56		20:34		19:07			16:44	71	15:00 (24)	15:49	42	12:51 (20)
4	04:35		05:31		06:40		07:46			07:59		11:56 (28)	09:05		11:09 (33)
	22:47		21:54		20:31		19:04			16:41	76	15:01 (24)	15:48	41	12:52 (20)
5	04:36		05:33		06:42		07:48			08:01		11:55 (28)	09:07		11:09 (33)
	22:46		21:51		20:28		19:02			16:39	80	15:02 (24)	15:47	35	12:52 (20)
6	04:37		05:35		06:44		07:51			08:03		11:55 (28)	09:09		11:10 (33)
	22:45		21:49		20:25		18:59			16:37	82	15:03 (24)	15:46	31	12:52 (20)
7	04:38		05:37		06:46		07:53			08:06		11:54 (28)	09:10		11:11 (33)
	22:44		21:47		20:22		18:56			16:34	84	15:03 (24)	15:45	24	12:40 (20)
8	04:40		05:39		06:49		07:55			08:08		11:54 (28)	09:12		11:11 (33)
	22:43		21:44		20:20		18:53			16:32	87	15:04 (24)	15:45	24	12:41 (20)
9	04:41		05:42		06:51		07:57			08:11		11:55 (28)	09:13		11:12 (33)
	22:42		21:42		20:17		18:50			16:30	87	15:05 (24)	15:44	20	12:37 (20)
10	04:43		05:44		06:53		08:00			08:13		11:55 (28)	09:15		11:12 (33)
	22:40		21:39		20:14		18:47			16:28	81	15:01 (24)	15:43	17	11:29 (33)
11	04:44		05:46		06:55		08:02			08:15		11:54 (28)	09:16		11:14 (33)
	22:39		21:37		20:11		18:45			16:25	78	14:57 (24)	15:43	16	11:30 (33)
12	04:46		05:48		06:57		08:04			08:18		11:55 (28)	09:18		11:14 (33)
	22:38		21:34		20:08		18:42			16:23	74	14:55 (24)	15:43	15	11:29 (33)
13	04:47		05:51		07:00		08:07			08:20		11:56 (28)	09:19		11:15 (33)
	22:37		21:31		20:05		18:39			16:21	67	14:51 (24)	15:42	15	11:30 (33)
14	04:49		05:53		07:02		08:09			08:22		11:55 (28)	09:20		11:16 (33)
	22:35		21:29		20:02		18:36			16:19	62	14:47 (24)	15:42	14	11:30 (33)
15	04:51		05:55		07:04		08:11		10:19 (15)	08:25		11:56 (28)	09:21		11:16 (33)
	22:34		21:26		19:59		18:33	8	10:27 (15)	16:17	57	14:13 (23)	15:42	14	11:30 (33)
16	04:52		05:57		07:06		08:13		10:16 (15)	08:27		11:57 (28)	09:22		11:17 (33)
	22:32		21:24		19:56		18:31	13	10:29 (15)	16:15	54	14:12 (23)	15:42	12	11:29 (33)
17	04:54		06:00		07:08		08:16		10:15 (15)	08:29		11:12 (33)	09:23		11:17 (33)
	22:30		21:21		19:54		18:28	16	10:31 (15)	16:13	58	14:11 (23)	15:42	12	11:29 (33)
18	04:56		06:02		07:11		08:18		10:13 (15)	08:32		11:09 (33)	09:24		11:18 (33)
	22:29		21:18		19:51		18:25	19	10:32 (15)	16:11	67	14:10 (23)	15:42	11	11:29 (33)
19	04:58		06:04		07:13		08:20		10:12 (15)	08:34		11:08 (33)	09:25		11:19 (33)
	22:27		21:16		19:48		18:22	21	10:33 (15)	16:09	66	14:08 (23)	15:42	11	11:30 (33)
20	05:00		06:06		07:15		08:23		10:11 (15)	08:36		11:06 (33)	09:26		11:20 (33)
	22:25		21:13		19:45		18:20	22	10:33 (15)	16:08	60	12:44 (20)	15:43	10	11:30 (33)
21	05:01		06:08		07:17		08:25		10:11 (15)	08:39		11:06 (33)	09:26		11:20 (33)
	22:24		21:10		19:42		18:17	23	10:34 (15)	16:06	62	12:46 (20)	15:43	10	11:30 (33)
22	05:03		06:11		07:19		08:27		10:10 (15)	08:41		11:06 (33)	09:27		11:21 (33)
	22:22		21:08		19:39		18:14	23	10:33 (15)	16:04	63	12:47 (20)	15:43	10	11:31 (33)
23	05:05		06:13		07:22		08:30		10:11 (15)	08:43		11:05 (33)	09:27		11:21 (33)
	22:20		21:05		19:36		18:12	22	10:33 (15)	16:02	63	12:47 (20)	15:44	10	11:31 (33)
24	05:07		06:15		07:24		08:32		10:10 (15)	08:45		11:05 (33)	09:28		11:22 (33)
	22:18		21:02		19:33		18:09	22	10:32 (15)	16:01	64	12:48 (20)	15:44	10	11:32 (33)
25	05:09		06:17		07:26		07:35		09:11 (15)	08:47		11:05 (33)	09:28		11:22 (33)
	22:16		20:59		19:30		17:06	21	09:32 (15)	15:59	63	12:48 (20)	15:45	11	11:33 (33)
26	05:11		06:20		07:28		07:37		09:11 (15)	08:50		11:06 (33)	09:28		11:22 (33)
	22:14		20:56		19:27		17:04	20	09:31 (15)	15:58	59	12:49 (20)	15:46	12	11:34 (33)
27	05:13		06:22		07:30		07:39		09:12 (15)	08:52		11:05 (33)	09:28		11:23 (33)
	22:12		20:54		19:25		17:01	18	09:30 (15)	15:56	57	12:49 (20)	15:47	11	11:34 (33)
28	05:16		06:24		07:33		07:42		09:14 (15)	08:54		11:06 (33)	09:28		11:23 (33)
	22:10		20:51		19:22		16:59	28	14:08 (23)	15:55	53	12:50 (20)	15:48	13	11:36 (33)
29	05:18		06:26		07:35		07:44		09:15 (15)	08:56		11:06 (33)	09:28		11:22 (33)
	22:07		20:48		19:19		16:56	44	14:10 (23)	15:54	44	12:50 (20)	15:49	14	11:36 (33)
30	05:20		06:29		07:37		07:47		09:19 (15)	08:58		11:06 (33)	09:28		11:23 (33)
	22:05		20:45		19:16		16:54	44	14:11 (23)	15:52	43	12:50 (20)	15:50	15	11:38 (33)
31	05:22		06:31				07:49		12:01 (28)				09:28		11:23 (33)
	22:03		20:42				16:51	46	14:13 (23)				15:51	15	11:38 (33)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								410			1974			580	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,68			0,61			0,65	
Total reduction								0,27			0,24			0,26	
Total, real								112			477			151	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		08:46		11:27 (28)	07:35	07:07	05:44	04:40
	15:53		16:56	70	14:51 (24)	18:05	20:17	21:26	22:31
2	09:27	12:04 (20)	08:43		11:27 (28)	07:33	07:04	05:41	04:38
	15:54	1 12:05 (20)	16:58	60	13:50 (23)	18:07	20:19	21:28	22:32
3	09:27	12:04 (20)	08:41		11:28 (28)	07:30	07:01	05:39	04:37
	15:55	4 12:08 (20)	17:01	58	13:50 (23)	18:09	20:21	21:31	22:34
4	09:27	12:04 (20)	08:39		11:28 (28)	07:27	06:58	05:36	04:36
	15:57	7 12:11 (20)	17:03	54	13:48 (23)	18:12	20:24	21:33	22:35
5	09:26	12:04 (20)	08:37		11:28 (28)	07:24	06:55	05:34	04:35
	15:58	17 12:21 (20)	17:06	52	13:47 (23)	18:14	20:26	21:35	22:37
6	09:25	12:05 (20)	08:34		11:29 (28)	07:21	06:52	05:31	04:34
	16:00	16 12:21 (20)	17:08	49	13:47 (23)	18:17	20:28	21:37	22:38
7	09:24	12:05 (20)	08:32		11:29 (28)	07:19	06:50	05:29	04:33
	16:02	19 12:26 (20)	17:11	43	13:44 (23)	18:19	20:30	21:40	22:39
8	09:24	12:05 (20)	08:30		11:31 (28)	07:16	06:47	05:26	04:32
	16:03	22 12:27 (20)	17:13	35	13:42 (23)	18:21	20:33	21:42	22:40
9	09:23	12:06 (20)	08:27		11:32 (28)	07:13	06:44	05:24	04:31
	16:05	22 12:28 (20)	17:16	22	11:54 (28)	18:24	20:35	21:44	22:42
10	09:22	12:06 (20)	08:25		11:34 (28)	07:10	06:41	05:22	04:30
	16:07	22 12:28 (20)	17:18	18	11:52 (28)	18:26	20:37	21:46	22:43
11	09:21	12:07 (20)	08:23		11:37 (28)	07:07	06:38	05:19	04:29
	16:09	22 12:29 (20)	17:21	14	11:51 (28)	18:28	20:40	21:49	22:44
12	09:20	12:07 (20)	08:20		11:41 (28)	07:04	06:35	05:17	04:29
	16:11	28 13:33 (23)	17:23	4	11:45 (28)	18:31	20:42	21:51	22:45
13	09:18	12:08 (20)	08:18			07:02	06:32	05:15	04:28
	16:13	33 13:37 (23)	17:26			18:33	20:44	21:53	22:46
14	09:17	12:08 (20)	08:15		09:30 (15)	06:59	06:30	05:13	04:28
	16:15	36 13:38 (23)	17:28	5	09:35 (15)	18:35	20:47	21:55	22:47
15	09:16	11:34 (28)	08:13		09:27 (15)	06:56	06:27	05:10	04:27
	16:17	47 13:40 (23)	17:31	11	09:38 (15)	18:38	20:49	21:58	22:47
16	09:15	11:32 (28)	08:10		09:25 (15)	06:53	06:24	05:08	04:27
	16:19	54 13:41 (23)	17:33	14	09:39 (15)	18:40	20:51	22:00	22:48
17	09:13	11:31 (28)	08:07		09:23 (15)	06:50	06:21	05:06	04:27
	16:21	57 13:43 (23)	17:36	17	09:40 (15)	18:42	20:53	22:02	22:49
18	09:12	11:30 (28)	08:05		09:23 (15)	06:47	06:19	05:04	04:27
	16:23	72 14:53 (24)	17:38	18	09:41 (15)	18:45	20:56	22:04	22:49
19	09:10	11:29 (28)	08:02		09:22 (15)	06:44	06:16	05:02	04:27
	16:25	85 14:53 (24)	17:40	19	09:41 (15)	18:47	20:58	22:06	22:50
20	09:09	11:28 (28)	08:00		09:22 (15)	06:41	06:13	05:00	04:27
	16:28	88 14:54 (24)	17:43	19	09:41 (15)	18:49	21:00	22:08	22:50
21	09:07	11:28 (28)	07:57		09:22 (15)	06:39	06:10	04:58	04:27
	16:30	88 14:54 (24)	17:45	19	09:41 (15)	18:51	21:03	22:10	22:50
22	09:05	11:28 (28)	07:54		09:22 (15)	06:36	06:08	04:56	04:27
	16:32	89 14:55 (24)	17:48	19	09:41 (15)	18:54	21:05	22:12	22:50
23	09:03	11:26 (28)	07:52		09:23 (15)	06:33	06:05	04:54	04:27
	16:34	87 14:54 (24)	17:50	18	09:41 (15)	18:56	21:07	22:14	22:51
24	09:02	11:26 (28)	07:49		09:23 (15)	06:30	06:02	04:52	04:27
	16:37	81 14:55 (24)	17:53	17	09:40 (15)	18:58	21:10	22:16	22:51
25	09:00	11:26 (28)	07:46		09:24 (15)	06:27	05:59	04:51	04:28
	16:39	82 14:55 (24)	17:55	14	09:38 (15)	19:01	21:12	22:18	22:51
26	08:58	11:26 (28)	07:44		09:25 (15)	06:24	05:57	04:49	04:28
	16:41	83 14:55 (24)	17:57	11	09:36 (15)	19:03	21:14	22:20	22:50
27	08:56	11:25 (28)	07:41		09:30 (15)	06:21	05:54	04:47	04:29
	16:44	83 14:54 (24)	18:00	1	09:31 (15)	19:05	21:17	22:22	22:50
28	08:54	11:26 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	82 14:54 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52	11:26 (28)				07:15	05:49	04:44	04:30
	16:49	80 14:54 (24)				20:10	21:21	22:25	22:50
30	08:50	11:26 (28)				07:13	05:46	04:42	04:31
	16:51	79 14:53 (24)				20:12	21:24	22:27	22:49
31	08:48	11:26 (28)				07:10		04:41	
	16:54	76 14:52 (24)				20:14		22:29	
Potential sun hours	221		260			365	432	521	547
Total, worst case		1562		681					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,66					
Total reduction		0,24		0,26					
Total, real		382		180					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** G - Buevegen 1786

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		11:03 (28)	09:00		11:49 (20)
	22:49		22:01		20:40		19:13			16:49	19	11:22 (28)	15:51	22	12:11 (20)
2	04:33		05:26		06:35		07:42			07:54		11:01 (28)	09:02		11:49 (20)
	22:48		21:59		20:37		19:10			16:46	23	11:24 (28)	15:50	22	12:11 (20)
3	04:34		05:28		06:37		07:44			07:56		11:01 (28)	09:03		11:49 (20)
	22:47		21:56		20:34		19:07			16:44	36	13:12 (23)	15:49	22	12:11 (20)
4	04:35		05:31		06:40		07:46			07:59		10:59 (28)	09:05		11:50 (20)
	22:47		21:54		20:31		19:04			16:41	43	13:14 (23)	15:48	21	12:11 (20)
5	04:36		05:33		06:42		07:48			08:01		10:59 (28)	09:07		11:50 (20)
	22:46		21:51		20:28		19:02			16:39	48	13:16 (23)	15:47	21	12:11 (20)
6	04:37		05:35		06:44		07:51			08:03		10:58 (28)	09:09		11:51 (20)
	22:45		21:49		20:25		18:59			16:37	53	13:18 (23)	15:46	16	12:07 (20)
7	04:39		05:37		06:46		07:53			08:06		10:57 (28)	09:10		11:51 (20)
	22:44		21:47		20:23		18:56			16:34	55	13:18 (23)	15:45	17	12:08 (20)
8	04:40		05:39		06:49		07:55			08:08		10:57 (28)	09:12		11:52 (20)
	22:43		21:44		20:20		18:53			16:32	58	13:19 (23)	15:45	8	12:00 (20)
9	04:41		05:42		06:51		07:57			08:11		10:57 (28)	09:13		11:53 (20)
	22:42		21:42		20:17		18:50			16:30	63	14:18 (24)	15:44	4	11:57 (20)
10	04:43		05:44		06:53		08:00			08:13		10:58 (28)	09:15		11:53 (20)
	22:41		21:39		20:14		18:47			16:28	71	14:22 (24)	15:43	1	11:54 (20)
11	04:44		05:46		06:55		08:02			08:15		10:57 (28)	09:16		
	22:39		21:37		20:11		18:45			16:25	76	14:23 (24)	15:43		
12	04:46		05:48		06:57		08:04			08:18		10:57 (28)	09:18		
	22:38		21:34		20:08		18:42			16:23	80	14:25 (24)	15:43		
13	04:47		05:51		07:00		08:07			08:20		10:58 (28)	09:19		
	22:37		21:32		20:05		18:39			16:21	81	14:26 (24)	15:42		
14	04:49		05:53		07:02		08:09			08:22		10:58 (28)	09:20		
	22:35		21:29		20:02		18:36			16:19	82	14:26 (24)	15:42		
15	04:51		05:55		07:04		08:11		10:00 (15)	08:25		10:58 (28)	09:21		
	22:34		21:26		19:59		18:33	7	10:07 (15)	16:17	83	14:27 (24)	15:42		
16	04:52		05:57		07:06		08:13		09:57 (15)	08:27		10:59 (28)	09:22		
	22:32		21:24		19:56		18:31	12	10:09 (15)	16:15	83	14:28 (24)	15:42		
17	04:54		06:00		07:08		08:16		09:56 (15)	08:30		11:00 (28)	09:23		
	22:31		21:21		19:54		18:28	15	10:11 (15)	16:13	83	14:29 (24)	15:42		
18	04:56		06:02		07:11		08:18		09:54 (15)	08:32		11:00 (28)	09:24		
	22:29		21:18		19:51		18:25	17	10:11 (15)	16:11	81	14:29 (24)	15:42		
19	04:58		06:04		07:13		08:20		09:54 (15)	08:34		11:01 (28)	09:25		
	22:27		21:16		19:48		18:22	18	10:12 (15)	16:09	87	14:29 (24)	15:42		
20	05:00		06:06		07:15		08:23		09:53 (15)	08:36		11:02 (28)	09:26		
	22:25		21:13		19:45		18:20	19	10:12 (15)	16:08	88	14:29 (24)	15:43		
21	05:01		06:08		07:17		08:25		09:53 (15)	08:39		11:03 (28)	09:26		
	22:24		21:10		19:42		18:17	19	10:12 (15)	16:06	88	14:29 (24)	15:43		
22	05:03		06:11		07:19		08:27		09:52 (15)	08:41		11:04 (28)	09:27		
	22:22		21:08		19:39		18:14	20	10:12 (15)	16:04	88	14:30 (24)	15:43		
23	05:05		06:13		07:22		08:30		09:53 (15)	08:43		11:05 (28)	09:27		
	22:20		21:05		19:36		18:12	19	10:12 (15)	16:02	84	14:29 (24)	15:44		
24	05:07		06:15		07:24		08:32		09:53 (15)	08:45		11:07 (28)	09:28		
	22:18		21:02		19:33		18:09	17	10:10 (15)	16:01	72	14:30 (24)	15:44		
25	05:09		06:17		07:26		07:35		08:54 (15)	08:47		11:08 (28)	09:28		
	22:16		20:59		19:30		17:06	16	09:10 (15)	15:59	58	13:20 (23)	15:45		
26	05:11		06:20		07:28		07:37		08:55 (15)	08:50		11:11 (28)	09:28		
	22:14		20:57		19:27		17:04	14	09:09 (15)	15:58	53	13:20 (23)	15:46		
27	05:13		06:22		07:30		07:39		08:56 (15)	08:52		11:13 (28)	09:28		
	22:12		20:54		19:25		17:01	10	09:06 (15)	15:56	47	13:19 (23)	15:47		
28	05:16		06:24		07:33		07:42			08:54		11:48 (20)	09:28		
	22:10		20:51		19:22		16:59			15:55	35	13:18 (23)	15:48		
29	05:18		06:26		07:35		07:44			08:56		11:48 (20)	09:28		
	22:07		20:48		19:19		16:56			15:54	33	13:17 (23)	15:49		
30	05:20		06:29		07:37		07:47		11:09 (28)	08:58		11:48 (20)	09:28		
	22:05		20:45		19:16		16:54	7	11:16 (28)	15:52	30	13:15 (23)	15:50		
31	05:22		06:31				07:49		11:06 (28)				09:28		
	22:03		20:42				16:51	15	11:21 (28)				15:51		
Potential sun hours	546		478		386		319			236			199		
Total, worst case								225			1881			154	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,64	
Total reduction								0,29			0,25			0,25	
Total, real								65			461			39	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:18 (20)	08:46	11:53 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:39 (20)	16:56	49	14:04 (23)	18:05	20:17	21:26	22:31
2	09:27		12:18 (20)	08:43	11:54 (28)	07:33	07:04	05:41	04:38
	15:54	21	12:39 (20)	16:58	44	14:02 (23)	18:07	20:19	21:28	22:32
3	09:27		11:54 (28)	08:41	11:56 (28)	07:30	07:01	05:39	04:37
	15:55	27	12:39 (20)	17:01	39	14:01 (23)	18:09	20:21	21:31	22:34
4	09:27		11:52 (28)	08:39	11:57 (28)	07:27	06:58	05:36	04:36
	15:57	32	12:40 (20)	17:03	32	13:59 (23)	18:12	20:24	21:33	22:35
5	09:26		11:51 (28)	08:37	11:59 (28)	07:24	06:55	05:34	04:35
	15:58	33	12:40 (20)	17:06	19	13:55 (23)	18:14	20:26	21:35	22:37
6	09:25		11:50 (28)	08:34	12:04 (28)	07:21	06:52	05:31	04:34
	16:00	36	12:40 (20)	17:08	5	12:09 (28)	18:17	20:28	21:37	22:38
7	09:24		11:50 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	42	13:46 (23)	17:11		18:19	20:30	21:40	22:39
8	09:24		11:50 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	48	13:49 (23)	17:13		18:21	20:33	21:42	22:40
9	09:23		11:50 (28)	08:27	09:42 (15)	07:13	06:44	05:24	04:31
	16:05	53	13:52 (23)	17:16	7	09:49 (15)	18:24	20:35	21:44	22:42
10	09:22		11:49 (28)	08:25	09:40 (15)	07:10	06:41	05:22	04:30
	16:07	57	13:53 (23)	17:18	12	09:52 (15)	18:26	20:37	21:46	22:43
11	09:21		11:49 (28)	08:23	09:39 (15)	07:07	06:38	05:19	04:29
	16:09	60	13:55 (23)	17:21	15	09:54 (15)	18:28	20:40	21:49	22:44
12	09:20		11:48 (28)	08:20	09:37 (15)	07:04	06:35	05:17	04:29
	16:11	61	13:55 (23)	17:23	17	09:54 (15)	18:31	20:42	21:51	22:45
13	09:18		11:49 (28)	08:18	09:36 (15)	07:02	06:32	05:15	04:28
	16:13	64	13:57 (23)	17:26	19	09:55 (15)	18:33	20:44	21:53	22:46
14	09:17		11:48 (28)	08:15	09:37 (15)	06:59	06:30	05:13	04:28
	16:15	65	13:58 (23)	17:28	19	09:56 (15)	18:35	20:47	21:55	22:47
15	09:16		11:48 (28)	08:13	09:36 (15)	06:56	06:27	05:10	04:27
	16:17	71	14:46 (24)	17:31	20	09:56 (15)	18:38	20:49	21:58	22:47
16	09:15		11:47 (28)	08:10	09:36 (15)	06:53	06:24	05:08	04:27
	16:19	81	14:58 (24)	17:33	20	09:56 (15)	18:40	20:51	22:00	22:48
17	09:13		11:48 (28)	08:07	09:36 (15)	06:50	06:21	05:06	04:27
	16:21	89	15:01 (24)	17:36	19	09:55 (15)	18:42	20:53	22:02	22:49
18	09:12		11:48 (28)	08:05	09:37 (15)	06:47	06:19	05:04	04:27
	16:23	88	15:01 (24)	17:38	19	09:56 (15)	18:45	20:56	22:04	22:49
19	09:10		11:48 (28)	08:02	09:37 (15)	06:44	06:16	05:02	04:27
	16:25	85	15:02 (24)	17:40	18	09:55 (15)	18:47	20:58	22:06	22:50
20	09:08		11:48 (28)	08:00	09:38 (15)	06:41	06:13	05:00	04:27
	16:28	79	15:02 (24)	17:43	15	09:53 (15)	18:49	21:00	22:08	22:50
21	09:07		11:48 (28)	07:57	09:39 (15)	06:39	06:10	04:58	04:27
	16:30	80	15:02 (24)	17:45	13	09:52 (15)	18:51	21:03	22:10	22:50
22	09:05		11:48 (28)	07:54	09:41 (15)	06:36	06:08	04:56	04:27
	16:32	82	15:03 (24)	17:48	8	09:49 (15)	18:54	21:05	22:12	22:50
23	09:03		11:48 (28)	07:52		06:33	06:05	04:54	04:27
	16:34	80	15:02 (24)	17:50		18:56	21:07	22:14	22:51
24	09:02		11:48 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	80	15:02 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00		11:49 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	80	15:02 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58		11:49 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	79	15:02 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56		11:49 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	75	15:01 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54		11:50 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	73	15:01 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52		11:51 (28)			07:15	05:49	04:44	04:30
	16:49	69	15:00 (24)			20:10	21:21	22:25	22:50
30	08:50		11:51 (28)			07:12	05:46	04:42	04:31
	16:51	64	14:58 (24)			20:12	21:24	22:27	22:49
31	08:48		11:52 (28)			07:10		04:41	
	16:54	55	14:55 (24)			20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1930		409					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,60		0,67					
Total reduction		0,24		0,27					
Total, real		465		110					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** H - Buevegen 1784

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		09:09 (15)	09:00		11:31 (28)
	22:49	22:01	20:40	19:13			16:49	12	09:21 (15)	15:51	60	13:37 (23)
2	04:33	05:26	06:35	07:42			07:54		09:12 (15)	09:02		11:32 (28)
	22:48	21:59	20:37	19:10			16:46	6	09:18 (15)	15:50	56	13:36 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:33 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	52	13:35 (23)
4	04:35	05:31	06:40	07:46			07:59			09:05		11:34 (28)
	22:47	21:54	20:31	19:04			16:41			15:48	49	13:34 (23)
5	04:36	05:33	06:42	07:48			08:01		11:32 (28)	09:07		11:35 (28)
	22:46	21:51	20:28	19:02			16:39	8	11:40 (28)	15:47	43	13:32 (23)
6	04:37	05:35	06:44	07:51			08:03		11:29 (28)	09:09		11:37 (28)
	22:45	21:49	20:25	18:59			16:37	21	13:26 (23)	15:46	36	12:27 (20)
7	04:38	05:37	06:46	07:53			08:06		11:27 (28)	09:10		11:38 (28)
	22:44	21:47	20:22	18:56			16:34	31	13:29 (23)	15:45	34	12:27 (20)
8	04:40	05:39	06:49	07:55			08:08		11:25 (28)	09:12		11:40 (28)
	22:43	21:44	20:20	18:53			16:32	39	13:31 (23)	15:45	32	12:28 (20)
9	04:41	05:42	06:51	07:57			08:11		11:25 (28)	09:13		11:42 (28)
	22:42	21:42	20:17	18:50			16:30	44	13:33 (23)	15:44	28	12:28 (20)
10	04:43	05:44	06:53	08:00			08:13		11:24 (28)	09:15		12:07 (20)
	22:41	21:39	20:14	18:47			16:28	48	13:34 (23)	15:43	21	12:28 (20)
11	04:44	05:46	06:55	08:02			08:15		11:23 (28)	09:16		12:08 (20)
	22:39	21:37	20:11	18:45			16:25	55	14:27 (24)	15:43	21	12:29 (20)
12	04:46	05:48	06:57	08:04			08:18		11:23 (28)	09:18		12:08 (20)
	22:38	21:34	20:08	18:42			16:23	65	14:30 (24)	15:43	21	12:29 (20)
13	04:47	05:51	07:00	08:07			08:20		11:23 (28)	09:19		12:09 (20)
	22:37	21:32	20:05	18:39			16:21	69	14:32 (24)	15:42	21	12:30 (20)
14	04:49	05:53	07:02	08:09			08:22		11:22 (28)	09:20		12:09 (20)
	22:35	21:29	20:02	18:36			16:19	74	14:33 (24)	15:42	21	12:30 (20)
15	04:51	05:55	07:04	08:11			08:25		11:22 (28)	09:21		12:09 (20)
	22:34	21:26	19:59	18:33			16:17	76	14:34 (24)	15:42	21	12:30 (20)
16	04:52	05:57	07:06	08:13			08:27		11:22 (28)	09:22		12:10 (20)
	22:32	21:24	19:56	18:31			16:15	79	14:35 (24)	15:42	20	12:30 (20)
17	04:54	06:00	07:08	08:16			08:30		11:23 (28)	09:23		12:10 (20)
	22:31	21:21	19:54	18:28			16:13	80	14:36 (24)	15:42	21	12:31 (20)
18	04:56	06:02	07:11	08:18			08:32		11:22 (28)	09:24		12:11 (20)
	22:29	21:18	19:51	18:25			16:11	80	14:36 (24)	15:42	20	12:31 (20)
19	04:58	06:04	07:13	08:20			08:34		11:23 (28)	09:25		12:12 (20)
	22:27	21:16	19:48	18:22			16:09	80	14:37 (24)	15:42	20	12:32 (20)
20	05:00	06:06	07:15	08:23		10:11 (15)	08:36		11:22 (28)	09:26		12:12 (20)
	22:25	21:13	19:45	18:20	10	10:21 (15)	16:08	82	14:37 (24)	15:43	20	12:32 (20)
21	05:01	06:08	07:17	08:25		10:10 (15)	08:39		11:23 (28)	09:26		12:12 (20)
	22:24	21:10	19:42	18:17	13	10:23 (15)	16:06	80	14:37 (24)	15:43	20	12:32 (20)
22	05:03	06:11	07:19	08:27		10:08 (15)	08:41		11:24 (28)	09:27		12:13 (20)
	22:22	21:08	19:39	18:14	16	10:24 (15)	16:04	79	14:38 (24)	15:43	20	12:33 (20)
23	05:05	06:13	07:22	08:30		10:07 (15)	08:43		11:24 (28)	09:27		12:13 (20)
	22:20	21:05	19:36	18:12	18	10:25 (15)	16:02	84	14:38 (24)	15:44	20	12:33 (20)
24	05:07	06:15	07:24	08:32		10:06 (15)	08:45		11:25 (28)	09:28		12:14 (20)
	22:18	21:02	19:33	18:09	19	10:25 (15)	16:01	88	14:38 (24)	15:44	21	12:35 (20)
25	05:09	06:17	07:26	07:35		09:06 (15)	08:47		11:25 (28)	09:28		12:15 (20)
	22:16	20:59	19:30	17:06	20	09:26 (15)	15:59	88	14:38 (24)	15:45	20	12:35 (20)
26	05:11	06:20	07:28	07:37		09:06 (15)	08:50		11:26 (28)	09:28		12:15 (20)
	22:14	20:57	19:27	17:04	20	09:26 (15)	15:58	81	14:37 (24)	15:46	20	12:35 (20)
27	05:13	06:22	07:30	07:39		09:06 (15)	08:52		11:27 (28)	09:28		12:16 (20)
	22:12	20:54	19:25	17:01	19	09:25 (15)	15:56	73	14:26 (24)	15:47	20	12:36 (20)
28	05:16	06:24	07:33	07:42		09:06 (15)	08:54		11:28 (28)	09:28		12:16 (20)
	22:10	20:51	19:22	16:59	19	09:25 (15)	15:55	65	13:38 (23)	15:48	21	12:37 (20)
29	05:18	06:26	07:35	07:44		09:06 (15)	08:56		11:29 (28)	09:28		12:16 (20)
	22:07	20:48	19:19	16:56	18	09:24 (15)	15:54	64	13:37 (23)	15:49	20	12:36 (20)
30	05:20	06:29	07:37	07:47		09:07 (15)	08:58		11:29 (28)	09:28		12:17 (20)
	22:05	20:45	19:16	16:54	17	09:24 (15)	15:52	62	13:37 (23)	15:50	20	12:37 (20)
31	05:22	06:31		07:49		09:08 (15)				09:28		12:16 (20)
	22:03	20:42		16:51	15	09:23 (15)				15:51	21	12:37 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					204			1713			840	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,60			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			410			210	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:08 (20)	08:46	11:39 (28)	07:35	07:07	05:44	04:40
	15:53	21 12:29 (20)	16:56	49 13:50 (23)	18:05	20:17	21:26	22:31
2	09:27	12:08 (20)	08:43	11:40 (28)	07:33	07:04	05:41	04:38
	15:54	21 12:29 (20)	16:58	44 13:48 (23)	18:07	20:19	21:28	22:32
3	09:27	12:09 (20)	08:41	11:41 (28)	07:30	07:01	05:39	04:37
	15:55	20 12:29 (20)	17:01	39 13:47 (23)	18:09	20:21	21:31	22:34
4	09:27	12:09 (20)	08:39	11:42 (28)	07:27	06:58	05:36	04:36
	15:57	21 12:30 (20)	17:03	32 13:45 (23)	18:12	20:24	21:33	22:35
5	09:26	12:09 (20)	08:37	11:43 (28)	07:24	06:55	05:34	04:35
	15:58	21 12:30 (20)	17:06	19 12:02 (28)	18:14	20:26	21:35	22:37
6	09:25	12:10 (20)	08:34	11:46 (28)	07:21	06:52	05:31	04:34
	16:00	25 13:32 (23)	17:08	14 12:00 (28)	18:17	20:28	21:37	22:38
7	09:24	11:43 (28)	08:32	11:50 (28)	07:19	06:50	05:29	04:33
	16:02	33 13:35 (23)	17:11	6 11:56 (28)	18:19	20:30	21:40	22:39
8	09:24	11:41 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	41 13:37 (23)	17:13		18:21	20:33	21:42	22:41
9	09:23	11:40 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	47 13:39 (23)	17:16		18:24	20:35	21:44	22:42
10	09:22	11:38 (28)	08:25	09:39 (15)	07:10	06:41	05:22	04:30
	16:07	51 13:40 (23)	17:18	3 09:42 (15)	18:26	20:37	21:46	22:43
11	09:21	11:38 (28)	08:23	09:36 (15)	07:07	06:38	05:19	04:29
	16:09	55 13:42 (23)	17:21	10 09:46 (15)	18:28	20:40	21:49	22:44
12	09:20	11:37 (28)	08:20	09:34 (15)	07:04	06:35	05:17	04:29
	16:11	60 14:46 (24)	17:23	14 09:48 (15)	18:31	20:42	21:51	22:45
13	09:18	11:37 (28)	08:18	09:33 (15)	07:02	06:32	05:15	04:28
	16:13	72 14:49 (24)	17:26	16 09:49 (15)	18:33	20:44	21:53	22:46
14	09:17	11:36 (28)	08:15	09:33 (15)	06:59	06:30	05:13	04:28
	16:15	83 14:49 (24)	17:28	17 09:50 (15)	18:35	20:47	21:55	22:47
15	09:16	11:36 (28)	08:13	09:32 (15)	06:56	06:27	05:10	04:27
	16:17	87 14:50 (24)	17:31	18 09:50 (15)	18:38	20:49	21:58	22:47
16	09:15	11:35 (28)	08:10	09:31 (15)	06:53	06:24	05:08	04:27
	16:19	86 14:50 (24)	17:33	19 09:50 (15)	18:40	20:51	22:00	22:48
17	09:13	11:36 (28)	08:07	09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87 14:51 (24)	17:36	19 09:50 (15)	18:42	20:53	22:02	22:49
18	09:12	11:36 (28)	08:05	09:32 (15)	06:47	06:19	05:04	04:27
	16:23	89 14:52 (24)	17:38	19 09:51 (15)	18:45	20:56	22:04	22:49
19	09:10	11:36 (28)	08:02	09:32 (15)	06:44	06:16	05:02	04:27
	16:25	87 14:52 (24)	17:40	18 09:50 (15)	18:47	20:58	22:06	22:50
20	09:09	11:35 (28)	08:00	09:32 (15)	06:41	06:13	05:00	04:27
	16:28	85 14:53 (24)	17:43	17 09:49 (15)	18:49	21:00	22:08	22:50
21	09:07	11:35 (28)	07:57	09:33 (15)	06:39	06:10	04:58	04:27
	16:30	79 14:53 (24)	17:45	15 09:48 (15)	18:51	21:03	22:10	22:50
22	09:05	11:36 (28)	07:54	09:34 (15)	06:36	06:08	04:56	04:27
	16:32	79 14:53 (24)	17:48	12 09:46 (15)	18:54	21:05	22:12	22:50
23	09:03	11:35 (28)	07:52	09:38 (15)	06:33	06:05	04:54	04:27
	16:34	79 14:52 (24)	17:50	6 09:44 (15)	18:56	21:07	22:14	22:51
24	09:02	11:35 (28)	07:49		06:30	06:02	04:52	04:27
	16:37	79 14:52 (24)	17:53		18:58	21:10	22:16	22:51
25	09:00	11:35 (28)	07:46		06:27	05:59	04:51	04:28
	16:39	78 14:52 (24)	17:55		19:01	21:12	22:18	22:51
26	08:58	11:36 (28)	07:44		06:24	05:57	04:49	04:28
	16:41	77 14:52 (24)	17:57		19:03	21:14	22:20	22:50
27	08:56	11:36 (28)	07:41		06:21	05:54	04:47	04:29
	16:44	74 14:51 (24)	18:00		19:05	21:17	22:22	22:50
28	08:54	11:36 (28)	07:38		06:18	05:52	04:46	04:30
	16:46	71 14:50 (24)	18:02		19:08	21:19	22:24	22:50
29	08:52	11:37 (28)			07:15	05:49	04:44	04:30
	16:49	66 14:49 (24)			20:10	21:21	22:25	22:50
30	08:50	11:37 (28)			07:13	05:46	04:42	04:31
	16:51	56 14:45 (24)			20:12	21:24	22:27	22:49
31	08:48	11:38 (28)			07:10		04:41	
	16:54	51 13:50 (23)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		1881		406				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,61		0,68				
Total reduction		0,24		0,27				
Total, real		457		110				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** I - Buevegen 1782

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51			09:00		11:20 (28)
	22:49	22:01	20:40	19:13			16:49			15:51	56	13:24 (23)
2	04:33	05:26	06:35	07:42			07:54			09:02		11:21 (28)
	22:48	21:59	20:37	19:10			16:46			15:50	52	13:23 (23)
3	04:34	05:28	06:37	07:44			07:56			09:03		11:23 (28)
	22:47	21:56	20:34	19:07			16:44			15:49	49	13:23 (23)
4	04:35	05:31	06:40	07:46			07:59		11:18 (28)	09:05		11:25 (28)
	22:47	21:54	20:31	19:04			16:41	8	11:26 (28)	15:48	42	13:22 (23)
5	04:36	05:33	06:42	07:48			08:01		11:15 (28)	09:07		11:28 (28)
	22:46	21:51	20:28	19:02			16:39	15	11:30 (28)	15:47	34	13:21 (23)
6	04:37	05:35	06:44	07:51			08:03		11:14 (28)	09:09		11:56 (20)
	22:45	21:49	20:25	18:59			16:37	18	11:32 (28)	15:46	26	13:19 (23)
7	04:38	05:37	06:46	07:53			08:06		11:12 (28)	09:10		11:56 (20)
	22:44	21:47	20:23	18:56			16:34	33	13:15 (23)	15:45	21	12:17 (20)
8	04:40	05:39	06:49	07:55			08:08		11:11 (28)	09:12		11:57 (20)
	22:43	21:44	20:20	18:53			16:32	40	13:17 (23)	15:45	21	12:18 (20)
9	04:41	05:42	06:51	07:57			08:11		11:10 (28)	09:13		11:58 (20)
	22:42	21:42	20:17	18:50			16:30	45	13:19 (23)	15:44	20	12:18 (20)
10	04:43	05:44	06:53	08:00			08:13		11:10 (28)	09:15		11:58 (20)
	22:41	21:39	20:14	18:47			16:28	49	13:21 (23)	15:43	20	12:18 (20)
11	04:44	05:46	06:55	08:02			08:15		11:09 (28)	09:16		11:58 (20)
	22:39	21:37	20:11	18:45			16:25	51	13:21 (23)	15:43	21	12:19 (20)
12	04:46	05:48	06:57	08:04			08:18		11:09 (28)	09:18		11:58 (20)
	22:38	21:34	20:08	18:42			16:23	57	14:17 (24)	15:43	21	12:19 (20)
13	04:47	05:51	07:00	08:07			08:20		11:09 (28)	09:19		12:00 (20)
	22:37	21:32	20:05	18:39			16:21	66	14:21 (24)	15:42	20	12:20 (20)
14	04:49	05:53	07:02	08:09			08:23		11:08 (28)	09:20		12:00 (20)
	22:35	21:29	20:02	18:36			16:19	72	14:22 (24)	15:42	20	12:20 (20)
15	04:51	05:55	07:04	08:11			08:25		11:08 (28)	09:21		12:00 (20)
	22:34	21:26	19:59	18:33			16:17	75	14:24 (24)	15:42	20	12:20 (20)
16	04:52	05:57	07:06	08:13			08:27		11:09 (28)	09:22		12:01 (20)
	22:32	21:24	19:56	18:31			16:15	77	14:25 (24)	15:42	19	12:20 (20)
17	04:54	06:00	07:08	08:16			08:30		11:09 (28)	09:23		12:01 (20)
	22:31	21:21	19:54	18:28			16:13	78	14:26 (24)	15:42	20	12:21 (20)
18	04:56	06:02	07:11	08:18			08:32		11:09 (28)	09:24		12:02 (20)
	22:29	21:18	19:51	18:25			16:11	79	14:26 (24)	15:42	19	12:21 (20)
19	04:58	06:04	07:13	08:20		10:07 (15)	08:34		11:10 (28)	09:25		12:02 (20)
	22:27	21:16	19:48	18:22	9	10:16 (15)	16:09	79	14:27 (24)	15:42	20	12:22 (20)
20	05:00	06:06	07:15	08:23		10:05 (15)	08:36		11:10 (28)	09:26		12:03 (20)
	22:25	21:13	19:45	18:20	13	10:18 (15)	16:08	79	14:27 (24)	15:43	19	12:22 (20)
21	05:01	06:08	07:17	08:25		10:04 (15)	08:39		11:10 (28)	09:26		12:03 (20)
	22:24	21:10	19:42	18:17	15	10:19 (15)	16:06	79	14:28 (24)	15:43	19	12:22 (20)
22	05:03	06:11	07:19	08:27		10:02 (15)	08:41		11:11 (28)	09:27		12:04 (20)
	22:22	21:08	19:39	18:14	17	10:19 (15)	16:04	84	14:29 (24)	15:43	19	12:23 (20)
23	05:05	06:13	07:22	08:30		10:02 (15)	08:43		11:12 (28)	09:27		12:04 (20)
	22:20	21:05	19:36	18:12	18	10:20 (15)	16:02	86	14:28 (24)	15:44	19	12:23 (20)
24	05:07	06:15	07:24	08:32		10:01 (15)	08:45		11:13 (28)	09:28		12:05 (20)
	22:18	21:02	19:33	18:09	19	10:20 (15)	16:01	88	14:29 (24)	15:44	19	12:24 (20)
25	05:09	06:17	07:26	07:35		09:01 (15)	08:47		11:13 (28)	09:28		12:06 (20)
	22:16	20:59	19:30	17:06	19	09:20 (15)	15:59	88	14:29 (24)	15:45	19	12:25 (20)
26	05:11	06:20	07:28	07:37		09:02 (15)	08:50		11:14 (28)	09:28		12:06 (20)
	22:14	20:57	19:27	17:04	19	09:21 (15)	15:58	87	14:29 (24)	15:46	19	12:25 (20)
27	05:13	06:22	07:30	07:39		09:01 (15)	08:52		11:15 (28)	09:28		12:06 (20)
	22:12	20:54	19:25	17:01	19	09:20 (15)	15:56	86	14:29 (24)	15:47	20	12:26 (20)
28	05:16	06:24	07:33	07:42		09:02 (15)	08:54		11:16 (28)	09:28		12:07 (20)
	22:10	20:51	19:22	16:59	17	09:19 (15)	15:55	82	14:29 (24)	15:48	20	12:27 (20)
29	05:18	06:26	07:35	07:44		09:02 (15)	08:56		11:17 (28)	09:28		12:07 (20)
	22:07	20:48	19:19	16:56	16	09:18 (15)	15:54	72	14:29 (24)	15:49	19	12:26 (20)
30	05:20	06:29	07:37	07:47		09:04 (15)	08:58		11:18 (28)	09:28		12:07 (20)
	22:05	20:45	19:16	16:54	13	09:17 (15)	15:52	60	14:28 (24)	15:50	20	12:27 (20)
31	05:22	06:31		07:49		09:06 (15)				09:28		12:07 (20)
	22:03	20:42		16:51	9	09:15 (15)				15:51	20	12:27 (20)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					203			1733			753	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,73			0,61			0,63	
Total reduction					0,29			0,24			0,25	
Total, real					59			420			190	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28		12:05 (20)	08:46	11:36 (28)	07:35	07:07	05:44	04:40
	15:53	21	12:26 (20)	16:56	45	13:44 (23)	18:05	20:17	21:26	22:31
2	09:27		12:06 (20)	08:43	11:37 (28)	07:33	07:04	05:41	04:38
	15:54	20	12:26 (20)	16:58	40	13:42 (23)	18:07	20:19	21:28	22:32
3	09:27		12:06 (20)	08:41	11:38 (28)	07:30	07:01	05:39	04:37
	15:55	20	12:26 (20)	17:01	34	13:40 (23)	18:09	20:21	21:31	22:34
4	09:27		12:06 (20)	08:39	11:39 (28)	07:27	06:58	05:36	04:36
	15:57	21	12:27 (20)	17:03	20	11:59 (28)	18:12	20:24	21:33	22:35
5	09:26		12:06 (20)	08:37	11:41 (28)	07:24	06:55	05:34	04:35
	15:58	28	13:28 (23)	17:06	16	11:57 (28)	18:14	20:26	21:35	22:37
6	09:25		12:07 (20)	08:34	11:44 (28)	07:21	06:52	05:31	04:34
	16:00	32	13:31 (23)	17:08	11	11:55 (28)	18:17	20:28	21:37	22:38
7	09:24		11:39 (28)	08:32		07:19	06:50	05:29	04:33
	16:02	38	13:32 (23)	17:11			18:19	20:30	21:40	22:39
8	09:24		11:37 (28)	08:30		07:16	06:47	05:26	04:32
	16:03	46	13:34 (23)	17:13			18:21	20:33	21:42	22:41
9	09:23		11:36 (28)	08:27		07:13	06:44	05:24	04:31
	16:05	50	13:36 (23)	17:16			18:24	20:35	21:44	22:42
10	09:22		11:35 (28)	08:25		09:37 (15)	07:10	06:41	05:22	04:30
	16:07	58	14:41 (24)	17:18	6	09:43 (15)	18:26	20:37	21:46	22:43
11	09:21		11:34 (28)	08:23		09:35 (15)	07:07	06:38	05:19	04:29
	16:09	71	14:43 (24)	17:21	11	09:46 (15)	18:28	20:40	21:49	22:44
12	09:20		11:33 (28)	08:20		09:33 (15)	07:04	06:35	05:17	04:29
	16:11	79	14:44 (24)	17:23	15	09:48 (15)	18:31	20:42	21:51	22:45
13	09:18		11:34 (28)	08:18		09:32 (15)	07:02	06:32	05:15	04:28
	16:13	81	14:45 (24)	17:26	16	09:48 (15)	18:33	20:44	21:53	22:46
14	09:17		11:33 (28)	08:15		09:32 (15)	06:59	06:30	05:13	04:28
	16:15	84	14:45 (24)	17:28	18	09:50 (15)	18:35	20:47	21:55	22:47
15	09:16		11:32 (28)	08:13		09:31 (15)	06:56	06:27	05:10	04:27
	16:17	86	14:46 (24)	17:31	19	09:50 (15)	18:38	20:49	21:58	22:47
16	09:15		11:32 (28)	08:10		09:31 (15)	06:53	06:24	05:08	04:27
	16:19	87	14:46 (24)	17:33	19	09:50 (15)	18:40	20:51	22:00	22:48
17	09:13		11:32 (28)	08:07		09:31 (15)	06:50	06:21	05:06	04:27
	16:21	87	14:47 (24)	17:36	19	09:50 (15)	18:42	20:53	22:02	22:49
18	09:12		11:32 (28)	08:05		09:32 (15)	06:47	06:19	05:04	04:27
	16:23	88	14:48 (24)	17:38	18	09:50 (15)	18:45	20:56	22:04	22:49
19	09:10		11:32 (28)	08:02		09:32 (15)	06:44	06:16	05:02	04:27
	16:25	86	14:48 (24)	17:40	17	09:49 (15)	18:47	20:58	22:06	22:50
20	09:09		11:32 (28)	08:00		09:32 (15)	06:41	06:13	05:00	04:27
	16:28	79	14:48 (24)	17:43	16	09:48 (15)	18:49	21:00	22:08	22:50
21	09:07		11:32 (28)	07:57		09:33 (15)	06:39	06:10	04:58	04:27
	16:30	77	14:48 (24)	17:45	14	09:47 (15)	18:51	21:03	22:10	22:50
22	09:05		11:32 (28)	07:54		09:35 (15)	06:36	06:08	04:56	04:27
	16:32	79	14:49 (24)	17:48	10	09:45 (15)	18:54	21:05	22:12	22:50
23	09:03		11:31 (28)	07:52			06:33	06:05	04:54	04:27
	16:34	78	14:48 (24)	17:50			18:56	21:07	22:14	22:51
24	09:02		11:32 (28)	07:49			06:30	06:02	04:52	04:27
	16:37	77	14:48 (24)	17:53			18:58	21:10	22:16	22:51
25	09:00		11:32 (28)	07:46			06:27	05:59	04:51	04:28
	16:39	75	14:47 (24)	17:55			19:01	21:12	22:18	22:51
26	08:58		11:33 (28)	07:44			06:24	05:57	04:49	04:28
	16:41	73	14:47 (24)	17:57			19:03	21:14	22:20	22:50
27	08:56		11:32 (28)	07:41			06:21	05:54	04:47	04:29
	16:44	70	14:45 (24)	18:00			19:05	21:17	22:22	22:50
28	08:54		11:33 (28)	07:38			06:18	05:52	04:46	04:30
	16:46	66	14:44 (24)	18:02			19:08	21:19	22:24	22:50
29	08:52		11:34 (28)				07:15	05:49	04:44	04:30
	16:49	57	14:41 (24)				20:10	21:21	22:25	22:50
30	08:50		11:34 (28)				07:13	05:46	04:42	04:31
	16:51	52	13:45 (23)				20:12	21:24	22:27	22:49
31	08:48		11:35 (28)				07:10		04:41	
	16:54	48	13:44 (23)				20:14		22:29	
Potential sun hours	221			260		365	432	521	547
Total, worst case		1914		364					
Sun reduction		0,50		0,50					
Oper. time red.		0,80		0,80					
Wind dir. red.		0,61		0,69					
Total reduction		0,24		0,27					
Total, real		467		100					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** J - Buevegen 1780

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October			November			December		
1	04:32		05:24		06:33		07:39			07:51		09:08 (15)	09:00		11:16 (28)
	22:49		22:01		20:40		19:13			16:49	4	09:12 (15)	15:51	74	14:26 (24)
2	04:33		05:26		06:35		07:42			07:54			09:02		11:18 (28)
	22:48		21:59		20:37		19:10			16:46			15:50	58	14:24 (24)
3	04:34		05:28		06:37		07:44			07:56			09:03		11:19 (28)
	22:47		21:56		20:34		19:07			16:44			15:49	51	13:19 (23)
4	04:35		05:31		06:40		07:46			07:59			09:05		11:21 (28)
	22:47		21:54		20:31		19:04			16:41			15:48	46	13:18 (23)
5	04:36		05:33		06:42		07:48			08:01		11:13 (28)	09:07		11:23 (28)
	22:46		21:51		20:28		19:02			16:39	12	11:25 (28)	15:47	39	13:18 (23)
6	04:37		05:35		06:44		07:51			08:03		11:11 (28)	09:09		11:53 (20)
	22:45		21:49		20:25		18:59			16:37	17	11:28 (28)	15:46	32	13:17 (23)
7	04:38		05:37		06:46		07:53			08:06		11:10 (28)	09:10		11:54 (20)
	22:44		21:47		20:23		18:56			16:34	22	13:06 (23)	15:45	28	13:16 (23)
8	04:40		05:39		06:49		07:55			08:08		11:08 (28)	09:12		11:54 (20)
	22:43		21:44		20:20		18:53			16:32	34	13:10 (23)	15:45	22	13:13 (23)
9	04:41		05:42		06:51		07:57			08:11		11:07 (28)	09:13		11:55 (20)
	22:42		21:42		20:17		18:50			16:30	41	13:13 (23)	15:44	20	12:15 (20)
10	04:43		05:44		06:53		08:00			08:13		11:07 (28)	09:15		11:55 (20)
	22:41		21:39		20:14		18:47			16:28	46	13:15 (23)	15:43	20	12:15 (20)
11	04:44		05:46		06:55		08:02			08:15		11:06 (28)	09:16		11:56 (20)
	22:39		21:37		20:11		18:45			16:25	48	13:15 (23)	15:43	20	12:16 (20)
12	04:46		05:48		06:57		08:04			08:18		11:06 (28)	09:18		11:56 (20)
	22:38		21:34		20:08		18:42			16:23	52	13:17 (23)	15:43	20	12:16 (20)
13	04:47		05:51		07:00		08:07			08:20		11:06 (28)	09:19		11:57 (20)
	22:37		21:32		20:05		18:39			16:21	58	14:14 (24)	15:42	20	12:17 (20)
14	04:49		05:53		07:02		08:09			08:23		11:05 (28)	09:20		11:57 (20)
	22:35		21:29		20:02		18:36			16:19	66	14:16 (24)	15:42	20	12:17 (20)
15	04:51		05:55		07:04		08:11			08:25		11:05 (28)	09:21		11:57 (20)
	22:34		21:26		19:59		18:33			16:17	70	14:18 (24)	15:42	20	12:17 (20)
16	04:52		05:57		07:06		08:13			08:27		11:06 (28)	09:22		11:58 (20)
	22:32		21:24		19:56		18:31			16:15	73	14:20 (24)	15:42	19	12:17 (20)
17	04:54		06:00		07:08		08:16			08:30		11:06 (28)	09:23		11:58 (20)
	22:31		21:21		19:54		18:28			16:13	75	14:21 (24)	15:42	19	12:17 (20)
18	04:56		06:02		07:11		08:18			08:32		11:06 (28)	09:24		11:59 (20)
	22:29		21:18		19:51		18:25			16:11	77	14:22 (24)	15:42	19	12:18 (20)
19	04:58		06:04		07:13		08:20		10:09 (15)	08:34		11:06 (28)	09:25		11:59 (20)
	22:27		21:16		19:48		18:22	5	10:14 (15)	16:09	78	14:23 (24)	15:42	20	12:19 (20)
20	05:00		06:06		07:15		08:23		10:05 (15)	08:36		11:06 (28)	09:26		12:00 (20)
	22:25		21:13		19:45		18:20	11	10:16 (15)	16:08	79	14:23 (24)	15:43	19	12:19 (20)
21	05:01		06:08		07:17		08:25		10:04 (15)	08:39		11:07 (28)	09:26		12:00 (20)
	22:24		21:10		19:42		18:17	14	10:18 (15)	16:06	77	14:23 (24)	15:43	19	12:19 (20)
22	05:03		06:11		07:19		08:27		10:02 (15)	08:41		11:08 (28)	09:27		12:01 (20)
	22:22		21:08		19:39		18:14	17	10:19 (15)	16:04	77	14:24 (24)	15:43	19	12:20 (20)
23	05:05		06:13		07:22		08:30		10:02 (15)	08:43		11:08 (28)	09:27		12:01 (20)
	22:20		21:05		19:36		18:12	18	10:20 (15)	16:02	86	14:24 (24)	15:44	19	12:20 (20)
24	05:07		06:15		07:24		08:32		10:01 (15)	08:45		11:09 (28)	09:28		12:02 (20)
	22:18		21:02		19:33		18:09	18	10:19 (15)	16:01	87	14:25 (24)	15:44	19	12:21 (20)
25	05:09		06:17		07:26		07:35		09:01 (15)	08:47		11:10 (28)	09:28		12:03 (20)
	22:16		20:59		19:30		17:06	19	09:20 (15)	15:59	87	14:25 (24)	15:45	19	12:22 (20)
26	05:11		06:20		07:28		07:37		09:01 (15)	08:50		11:11 (28)	09:28		12:03 (20)
	22:14		20:57		19:27		17:04	19	09:20 (15)	15:58	87	14:25 (24)	15:46	19	12:22 (20)
27	05:13		06:22		07:30		07:39		09:01 (15)	08:52		11:11 (28)	09:28		12:03 (20)
	22:12		20:54		19:25		17:01	18	09:19 (15)	15:56	86	14:25 (24)	15:47	20	12:23 (20)
28	05:16		06:24		07:33		07:42		09:02 (15)	08:54		11:13 (28)	09:28		12:04 (20)
	22:10		20:51		19:22		16:59	17	09:19 (15)	15:55	85	14:26 (24)	15:48	20	12:24 (20)
29	05:18		06:26		07:35		07:44		09:02 (15)	08:56		11:14 (28)	09:28		12:04 (20)
	22:07		20:48		19:19		16:56	16	09:18 (15)	15:54	82	14:25 (24)	15:49	19	12:23 (20)
30	05:20		06:29		07:37		07:47		09:03 (15)	08:58		11:14 (28)	09:28		12:04 (20)
	22:05		20:45		19:16		16:54	14	09:17 (15)	15:52	80	14:25 (24)	15:50	20	12:24 (20)
31	05:22		06:31				07:49		09:05 (15)				09:28		12:04 (20)
	22:03		20:42				16:51	11	09:16 (15)				15:51	20	12:24 (20)
Potential sun hours	546		478		386		319			236			199		
Total, worst case								197			1686			799	
Sun reduction								0,50			0,50			0,50	
Oper. time red.								0,80			0,80			0,80	
Wind dir. red.								0,73			0,61			0,63	
Total reduction								0,29			0,24			0,25	
Total, real								57			411			201	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** K - Buevegen 1778

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28		08:46	11:24 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		11:44 (20)
	15:53	16	12:14 (20)	16:56 49 13:35 (23)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	57	14:20 (24)
2	09:28		11:58 (20)	08:43 11:24 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		11:44 (20)
	15:54	18	12:16 (20)	16:58 47 13:34 (23)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	50	14:19 (24)
3	09:27		11:58 (20)	08:41 11:25 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56	11:02 (28)	09:03		11:44 (20)
	15:55	20	12:18 (20)	17:01 42 13:33 (23)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44 12	11:14 (28)	15:49	40	14:19 (24)
4	09:27		11:58 (20)	08:39 11:26 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	10:59 (28)	09:05		11:44 (20)
	15:57	21	12:19 (20)	17:03 35 13:30 (23)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41 17	11:16 (28)	15:48	34	14:19 (24)
5	09:26		11:59 (20)	08:37 11:26 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	10:58 (28)	09:07		11:45 (20)
	15:58	20	12:19 (20)	17:06 23 11:49 (28)	18:14	20:26	21:35	22:37	22:46	21:51	20:28	19:02	16:39 20	11:18 (28)	15:47	31	13:06 (23)
6	09:25		11:59 (20)	08:34 11:28 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	10:57 (28)	09:09		11:45 (20)
	16:00	26	13:18 (23)	17:08 20 11:48 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 23	11:20 (28)	15:46	27	13:05 (23)
7	09:25		12:00 (20)	08:32 11:30 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	10:56 (28)	09:10		11:46 (20)
	16:02	30	13:21 (23)	17:11 16 11:46 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34 37	13:01 (23)	15:45	20	12:06 (20)
8	09:24		12:00 (20)	08:30 11:33 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	10:55 (28)	09:12		11:47 (20)
	16:03	34	14:35 (24)	17:13 11 11:44 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 43	13:03 (23)	15:45	20	12:07 (20)
9	09:23		12:01 (20)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	10:54 (28)	09:13		11:47 (20)
	16:05	41	14:36 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 48	13:05 (23)	15:44	20	12:07 (20)
10	09:22		12:01 (20)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	10:54 (28)	09:15		11:47 (20)
	16:07	50	14:36 (24)	17:18	18:26	20:37	21:46	22:43	22:41	21:39	20:14	18:47	16:28 51	13:06 (23)	15:43	19	12:07 (20)
11	09:21		12:02 (20)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	10:54 (28)	09:16		11:48 (20)
	16:09	57	14:37 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25 52	13:06 (23)	15:43	16	12:04 (20)
12	09:20		11:28 (28)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	10:54 (28)	09:18		11:48 (20)
	16:11	68	14:38 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 55	13:08 (23)	15:43	11	11:59 (20)
13	09:18		11:26 (28)	08:18	07:02	06:32	05:15	04:28	04:47	05:51	07:00	08:07	08:20	10:54 (28)	09:19		11:49 (20)
	16:13	75	14:39 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 62	14:08 (24)	15:42	11	12:00 (20)
14	09:17		11:25 (28)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	10:53 (28)	09:20		11:50 (20)
	16:15	78	14:39 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 69	14:10 (24)	15:42	7	12:00 (20)
15	09:16		11:24 (28)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	10:54 (28)	09:21		11:50 (20)
	16:17	82	14:40 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 71	14:12 (24)	15:42	3	11:53 (20)
16	09:15		11:23 (28)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	10:54 (28)	09:22		11:50 (20)
	16:19	85	14:40 (24)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15 75	14:14 (24)	15:42	3	11:53 (20)
17	09:13		11:23 (28)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	10:55 (28)	09:23		11:51 (20)
	16:21	86	14:41 (24)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 77	14:15 (24)	15:42	1	11:52 (20)
18	09:12		11:23 (28)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:55 (28)	09:24		
	16:23	87	14:42 (24)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 76	14:15 (24)	15:42		
19	09:10		11:22 (28)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34	10:56 (28)	09:25		
	16:25	88	14:42 (24)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09 77	14:16 (24)	15:42		
20	09:09		11:22 (28)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:56 (28)	09:26		
	16:28	86	14:42 (24)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08 77	14:16 (24)	15:43		
21	09:07		11:22 (28)	07:57	06:39	06:10	04:58	04:27	05:01	06:08	07:17	08:25	08:39	10:57 (28)	09:26		
	16:30	83	14:42 (24)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 83	14:17 (24)	15:43		
22	09:05		11:22 (28)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:27	08:41	10:58 (28)	09:27		
	16:32	77	14:42 (24)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04 86	14:18 (24)	15:43		
23	09:03		11:21 (28)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:58 (28)	09:27		
	16:34	77	14:41 (24)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 88	14:18 (24)	15:44		
24	09:02		11:21 (28)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	11:00 (28)	09:28		
	16:37	76	14:41 (24)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 87	14:19 (24)	15:44		
25	09:00		11:21 (28)	07:46	06:27	05:59	04:51	04:28	05:09	06:17	07:26	07:35	08:47	11:00 (28)	09:28		
	16:39	77	14:41 (24)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:06	15:59 86	14:18 (24)	15:45		
26	08:58		11:22 (28)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	11:02 (28)	09:28		
	16:41	74	14:41 (24)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58 85	14:19 (24)	15:46		
27	08:56		11:21 (28)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52	11:03 (28)	09:28		11:56 (20)
	16:44	71	14:39 (24)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 83	14:19 (24)	15:47	3	11:59 (20)
28	08:54		11:21 (28)	07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	11:05 (28)	09:28		11:57 (20)
	16:46	69	14:38 (24)	18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 79	14:19 (24)	15:48	3	12:00 (20)
29	08:52		11:22 (28)		07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	11:07 (28)	09:28		11:56 (20)
	16:49	61	14:36 (24)		20:10	21:21	22:25	22:50	22:07	20:48	19:19	16:56	15:54 73	14:19 (24)	15:49	5	12:07 (20)
30	08:50		11:22 (28)		07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58	11:08 (28)	09:28		11:57 (20)
	16:51	55	13:36 (23)		20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 69	14:19 (24)	15:50	11	12:08 (20)
31	08:48		11:23 (28)		07:10		04:41		05:22	06:31		07:49			09:28		11:57 (20)
	16:54	53	13:36 (23)		20:14		22:29		22:03	20:42		16:51			15:51	11	12:08 (20)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		1841		243										1761		403	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,65										0,62		0,62	
Total reduction		0,25		0,26										0,25		0,25	
Total, real		452		63										435		100	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28		11:52 (33)	08:46		13:17 (28)	07:35		08:53 (17)	07:07	05:44	04:40
	15:53	17	12:09 (33)	16:56	36	13:53 (28)	18:05	19	09:12 (17)	20:17	21:26	22:30
2	09:27		11:51 (33)	08:43		13:18 (28)	07:32		08:53 (17)	07:04	05:41	04:38
	15:54	19	12:10 (33)	16:58	43	15:13 (23)	18:07	20	09:13 (17)	20:19	21:28	22:32
3	09:27		11:51 (33)	08:41		13:17 (28)	07:30		08:52 (17)	07:01	05:39	04:37
	15:55	19	12:10 (33)	17:01	52	15:18 (23)	18:09	21	09:13 (17)	20:21	21:30	22:34
4	09:26		11:51 (33)	08:39		13:18 (28)	07:27		08:52 (17)	06:58	05:36	04:36
	15:57	20	12:11 (33)	17:03	54	15:20 (23)	18:12	20	09:12 (17)	20:24	21:33	22:35
5	09:26		11:52 (33)	08:37		13:17 (28)	07:24		08:52 (17)	06:55	05:34	04:35
	15:58	20	12:12 (33)	17:06	58	15:21 (23)	18:14	20	09:12 (17)	20:26	21:35	22:37
6	09:25		11:52 (33)	08:34		13:18 (28)	07:21		08:52 (17)	06:52	05:31	04:34
	16:00	20	12:12 (33)	17:08	62	15:43 (24)	18:16	19	09:11 (17)	20:28	21:37	22:38
7	09:24		11:52 (33)	08:32		13:17 (28)	07:19		08:53 (17)	06:49	05:29	04:33
	16:02	21	12:13 (33)	17:11	68	15:46 (24)	18:19	17	09:10 (17)	20:30	21:40	22:39
8	09:24		11:53 (33)	08:30		13:18 (28)	07:16		08:54 (17)	06:47	05:26	04:32
	16:03	21	12:14 (33)	17:13	72	15:51 (24)	18:21	14	09:08 (17)	20:33	21:42	22:40
9	09:23		11:52 (33)	08:27		13:18 (28)	07:13		08:55 (17)	06:44	05:24	04:31
	16:05	22	12:14 (33)	17:16	78	15:59 (24)	18:24	10	09:05 (17)	20:35	21:44	22:42
10	09:22		11:53 (33)	08:25		13:18 (28)	07:10			06:41	05:22	04:30
	16:07	22	12:15 (33)	17:18	82	16:00 (24)	18:26			20:37	21:46	22:43
11	09:21		11:54 (33)	08:23		10:11 (15)	07:07			06:38	05:19	04:29
	16:09	22	12:16 (33)	17:21	84	16:00 (24)	18:28			20:40	21:49	22:44
12	09:20		11:53 (33)	08:20		10:06 (15)	07:04			06:35	05:17	04:29
	16:11	23	12:16 (33)	17:23	89	15:59 (24)	18:31			20:42	21:51	22:45
13	09:18		11:53 (33)	08:18		10:04 (15)	07:01			06:32	05:15	04:28
	16:13	29	13:27 (20)	17:26	90	15:58 (24)	18:33			20:44	21:53	22:46
14	09:17		11:54 (33)	08:15		10:03 (15)	06:59			06:30	05:13	04:28
	16:15	38	13:37 (20)	17:28	87	15:57 (24)	18:35			20:47	21:55	22:46
15	09:16		11:55 (33)	08:13		10:02 (15)	06:56			06:27	05:10	04:27
	16:17	44	13:43 (20)	17:31	81	15:54 (24)	18:38			20:49	21:57	22:47
16	09:15		11:55 (33)	08:10		10:01 (15)	06:53			06:24	05:08	04:27
	16:19	45	13:44 (20)	17:33	72	15:24 (23)	18:40			20:51	22:00	22:48
17	09:13		11:55 (33)	08:07		10:00 (15)	06:50			06:21	05:06	04:27
	16:21	45	13:44 (20)	17:35	67	15:23 (23)	18:42			20:53	22:02	22:49
18	09:12		11:57 (33)	08:05		10:00 (15)	06:47			06:19	05:04	04:27
	16:23	44	13:46 (20)	17:38	61	15:23 (23)	18:45			20:56	22:04	22:49
19	09:10		11:57 (33)	08:02		10:00 (15)	06:44			06:16	05:02	04:27
	16:25	44	13:46 (20)	17:40	43	15:21 (23)	18:47			20:58	22:06	22:50
20	09:08		11:58 (33)	08:00		09:59 (15)	06:41			06:13	05:00	04:27
	16:28	43	13:46 (20)	17:43	41	15:19 (23)	18:49			21:00	22:08	22:50
21	09:07		11:59 (33)	07:57		09:59 (15)	06:38			06:10	04:58	04:27
	16:30	40	13:46 (20)	17:45	32	15:15 (23)	18:51			21:03	22:10	22:50
22	09:05		11:59 (33)	07:54		09:59 (15)	06:36			06:08	04:56	04:27
	16:32	40	13:46 (20)	17:48	25	10:24 (15)	18:54			21:05	22:12	22:50
23	09:03		12:01 (33)	07:52		10:00 (15)	06:33			06:05	04:54	04:27
	16:34	36	13:46 (20)	17:50	24	10:24 (15)	18:56			21:07	22:14	22:50
24	09:02		12:03 (33)	07:49		10:01 (15)	06:30			06:02	04:52	04:27
	16:37	34	13:46 (20)	17:53	22	10:23 (15)	18:58			21:10	22:16	22:51
25	09:00		12:05 (33)	07:46		09:00 (17)	06:27			05:59	04:51	04:28
	16:39	32	13:46 (28)	17:55	27	10:22 (15)	19:01			21:12	22:18	22:50
26	08:58		13:21 (28)	07:43		08:57 (17)	06:24			05:57	04:49	04:28
	16:41	27	13:48 (28)	17:57	30	10:20 (15)	19:03			21:14	22:20	22:50
27	08:56		13:20 (28)	07:41		08:55 (17)	06:21			05:54	04:47	04:29
	16:44	28	13:48 (28)	18:00	28	10:17 (15)	19:05			21:17	22:22	22:50
28	08:54		13:19 (28)	07:38		08:54 (17)	06:18			05:52	04:46	04:30
	16:46	31	13:50 (28)	18:02	22	10:13 (15)	19:07			21:19	22:24	22:50
29	08:52		13:19 (28)				07:15			05:49	04:44	04:30
	16:49	32	13:51 (28)				20:10			21:21	22:25	22:50
30	08:50		13:18 (28)				07:12			05:46	04:42	04:31
	16:51	33	13:51 (28)				20:12			21:24	22:27	22:49
31	08:48		13:18 (28)				07:10				04:41	
	16:53	34	13:52 (28)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		945			1530			160				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,61			0,61			0,74				
Total reduction		0,24			0,24			0,29				
Total, real		230			370			47				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** L - Buevegen 1850

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		12:48 (28)	09:00		11:36 (33)
	22:49	22:01	20:40	19:13			16:49	83	15:30 (24)	15:51	22	11:58 (33)
2	04:33	05:26	06:35	07:42			07:54		12:48 (28)	09:02		11:36 (33)
	22:48	21:58	20:37	19:10			16:46	76	15:28 (24)	15:50	22	11:58 (33)
3	04:34	05:28	06:37	07:44			07:56		12:48 (28)	09:03		11:36 (33)
	22:47	21:56	20:34	19:07			16:44	71	15:20 (24)	15:49	22	11:58 (33)
4	04:35	05:31	06:40	07:46		09:34 (17)	07:59		12:47 (28)	09:05		11:37 (33)
	22:47	21:54	20:31	19:04	7	09:41 (17)	16:41	66	15:15 (24)	15:48	21	11:58 (33)
5	04:36	05:33	06:42	07:48		09:32 (17)	08:01		12:47 (28)	09:07		11:37 (33)
	22:46	21:51	20:28	19:01	12	09:44 (17)	16:39	62	15:13 (24)	15:47	21	11:58 (33)
6	04:37	05:35	06:44	07:51		09:30 (17)	08:03		12:48 (28)	09:09		11:38 (33)
	22:45	21:49	20:25	18:59	15	09:45 (17)	16:37	57	14:51 (23)	15:46	21	11:59 (33)
7	04:38	05:37	06:46	07:53		09:28 (17)	08:06		12:47 (28)	09:10		11:39 (33)
	22:44	21:47	20:22	18:56	18	09:46 (17)	16:34	55	14:50 (23)	15:45	20	11:59 (33)
8	04:40	05:39	06:48	07:55		09:28 (17)	08:08		12:48 (28)	09:12		11:40 (33)
	22:43	21:44	20:20	18:53	19	09:47 (17)	16:32	50	14:48 (23)	15:45	19	11:59 (33)
9	04:41	05:42	06:51	07:57		09:27 (17)	08:11		12:48 (28)	09:13		11:41 (33)
	22:42	21:42	20:17	18:50	20	09:47 (17)	16:30	42	14:43 (23)	15:44	19	12:00 (33)
10	04:43	05:44	06:53	08:00		09:27 (17)	08:13		12:49 (28)	09:15		11:41 (33)
	22:40	21:39	20:14	18:47	20	09:47 (17)	16:28	35	13:24 (28)	15:43	18	11:59 (33)
11	04:44	05:46	06:55	08:02		09:26 (17)	08:15		12:49 (28)	09:16		11:42 (33)
	22:39	21:37	20:11	18:45	20	09:46 (17)	16:25	34	13:23 (28)	15:43	18	12:00 (33)
12	04:46	05:48	06:57	08:04		09:26 (17)	08:18		12:50 (28)	09:18		11:42 (33)
	22:38	21:34	20:08	18:42	19	09:45 (17)	16:23	33	13:23 (28)	15:43	17	11:59 (33)
13	04:47	05:51	07:00	08:06		09:27 (17)	08:20		12:51 (28)	09:19		11:43 (33)
	22:37	21:31	20:05	18:39	18	09:45 (17)	16:21	32	13:23 (28)	15:42	17	12:00 (33)
14	04:49	05:53	07:02	08:09		09:27 (17)	08:22		12:51 (28)	09:20		11:44 (33)
	22:35	21:29	20:02	18:36	26	10:48 (15)	16:19	31	13:22 (28)	15:42	16	12:00 (33)
15	04:51	05:55	07:04	08:11		09:29 (17)	08:25		12:53 (28)	09:21		11:44 (33)
	22:34	21:26	19:59	18:33	29	10:51 (15)	16:17	28	13:21 (28)	15:42	16	12:00 (33)
16	04:52	05:57	07:06	08:13		09:30 (17)	08:27		12:54 (28)	09:22		11:45 (33)
	22:32	21:24	19:56	18:31	28	10:52 (15)	16:15	27	13:21 (28)	15:42	15	12:00 (33)
17	04:54	05:59	07:08	08:16		10:33 (15)	08:29		11:38 (33)	09:23		11:45 (33)
	22:30	21:21	19:54	18:28	21	10:54 (15)	16:13	32	13:19 (28)	15:42	15	12:00 (33)
18	04:56	06:02	07:10	08:18		10:31 (15)	08:32		11:36 (33)	09:24		11:46 (33)
	22:29	21:18	19:51	18:25	23	10:54 (15)	16:11	35	13:20 (20)	15:42	15	12:01 (33)
19	04:58	06:04	07:13	08:20		10:31 (15)	08:34		11:36 (33)	09:25		11:47 (33)
	22:27	21:16	19:48	18:22	24	10:55 (15)	16:09	36	13:21 (20)	15:42	14	12:01 (33)
20	05:00	06:06	07:15	08:23		10:30 (15)	08:36		11:34 (33)	09:26		11:48 (33)
	22:25	21:13	19:45	18:20	25	10:55 (15)	16:08	40	13:21 (20)	15:42	14	12:02 (33)
21	05:01	06:08	07:17	08:25		10:30 (15)	08:39		11:34 (33)	09:26		11:48 (33)
	22:24	21:10	19:42	18:17	37	15:48 (23)	16:06	40	13:21 (20)	15:43	14	12:02 (33)
22	05:03	06:11	07:19	08:27		10:29 (15)	08:41		11:34 (33)	09:27		11:49 (33)
	22:22	21:08	19:39	18:14	42	15:50 (23)	16:04	43	13:22 (20)	15:43	14	12:03 (33)
23	05:05	06:13	07:22	08:30		10:30 (15)	08:43		11:33 (33)	09:27		11:49 (33)
	22:20	21:05	19:36	18:12	50	15:52 (23)	16:02	44	13:22 (20)	15:44	14	12:03 (33)
24	05:07	06:15	07:24	08:32		10:29 (15)	08:45		11:34 (33)	09:28		11:50 (33)
	22:18	21:02	19:33	18:09	63	15:52 (23)	16:01	44	13:23 (20)	15:44	14	12:04 (33)
25	05:09	06:17	07:26	07:35		09:30 (15)	08:47		11:33 (33)	09:28		11:50 (33)
	22:16	20:59	19:30	17:06	69	14:54 (23)	15:59	44	13:22 (20)	15:45	14	12:04 (33)
26	05:11	06:20	07:28	07:37		09:30 (15)	08:50		11:34 (33)	09:28		11:50 (33)
	22:14	20:56	19:27	17:04	74	14:54 (23)	15:58	44	13:23 (20)	15:46	15	12:05 (33)
27	05:13	06:22	07:30	07:39		09:31 (15)	08:52		11:34 (33)	09:28		11:50 (33)
	22:12	20:54	19:24	17:01	82	15:24 (24)	15:56	44	13:23 (20)	15:47	16	12:06 (33)
28	05:16	06:24	07:33	07:42		09:33 (15)	08:54		11:35 (33)	09:28		11:50 (33)
	22:10	20:51	19:22	16:59	89	15:27 (24)	15:55	37	13:17 (20)	15:48	16	12:06 (33)
29	05:18	06:26	07:35	07:44		09:34 (15)	08:56		11:35 (33)	09:28		11:50 (33)
	22:07	20:48	19:19	16:56	90	15:28 (24)	15:54	29	13:09 (20)	15:49	16	12:06 (33)
30	05:20	06:29	07:37	07:47		09:36 (15)	08:58		11:35 (33)	09:28		11:51 (33)
	22:05	20:45	19:16	16:54	90	15:29 (24)	15:52	23	13:03 (20)	15:50	17	12:08 (33)
31	05:22	06:31		07:49		12:49 (28)				09:28		11:51 (33)
	22:03	20:42		16:51	81	15:30 (24)				15:51	17	12:08 (33)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					1111			1317			529	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,64			0,59			0,64	
Total reduction					0,26			0,23			0,26	
Total, real					286			308			135	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:46		14:11 (33)	07:35		10:14 (17)	07:07	05:44	04:40
	15:53			16:56	18	15:31 (20)	18:05	73	16:49 (23)	20:17	21:26	22:30
2	09:27			08:43		15:15 (20)	07:32		10:15 (17)	07:04	05:41	04:38
	15:54			16:58	17	15:32 (20)	18:07	70	16:50 (23)	20:19	21:28	22:32
3	09:27			08:41		15:14 (20)	07:30		10:16 (17)	07:01	05:39	04:37
	15:55			17:01	19	15:33 (20)	18:09	63	16:48 (23)	20:21	21:30	22:34
4	09:26			08:39		12:33 (15)	07:27		10:16 (17)	06:58	05:36	04:36
	15:57			17:03	32	15:33 (20)	18:12	54	16:47 (23)	20:23	21:33	22:35
5	09:26			08:37		12:30 (15)	07:24		09:25 (12)	06:55	05:34	04:35
	15:58			17:06	37	15:33 (20)	18:14	37	16:44 (23)	20:26	21:35	22:36
6	09:25			08:34		12:29 (15)	07:21		09:21 (12)	06:52	05:31	04:34
	16:00			17:08	40	15:34 (20)	18:16	27	10:42 (17)	20:28	21:37	22:38
7	09:24			08:32		12:27 (15)	07:18		10:19 (17)	06:49	05:29	04:33
	16:02			17:11	43	15:33 (20)	18:19	20	10:39 (17)	20:30	21:40	22:39
8	09:24			08:30		12:26 (15)	07:16		10:21 (17)	06:47	05:26	04:32
	16:03			17:13	46	15:34 (20)	18:21	15	10:36 (17)	20:33	21:42	22:40
9	09:23			08:27		12:25 (15)	07:13		10:24 (17)	06:44	05:24	04:31
	16:05			17:16	46	15:33 (20)	18:24	8	10:32 (17)	20:35	21:44	22:42
10	09:22			08:25		12:24 (15)	07:10			06:41	05:22	04:30
	16:07			17:18	45	15:31 (20)	18:26			20:37	21:46	22:43
11	09:21			08:22		12:24 (15)	07:07			06:38	05:19	04:29
	16:09			17:21	43	15:30 (20)	18:28			20:40	21:49	22:44
12	09:20			08:20		12:23 (15)	07:04			06:35	05:17	04:29
	16:11			17:23	38	15:27 (20)	18:31			20:42	21:51	22:45
13	09:18			08:18		12:22 (15)	07:01			06:32	05:15	04:28
	16:13			17:26	35	12:57 (15)	18:33			20:44	21:53	22:46
14	09:17			08:15		12:23 (15)	06:59			06:30	05:12	04:28
	16:15			17:28	35	12:58 (15)	18:35			20:46	21:55	22:46
15	09:16			08:12		12:22 (15)	06:56			06:27	05:10	04:27
	16:17			17:30	35	12:57 (15)	18:38			20:49	21:57	22:47
16	09:14			08:10		12:22 (15)	06:53			06:24	05:08	04:27
	16:19			17:33	43	16:12 (28)	18:40			20:51	22:00	22:48
17	09:13			08:07		12:22 (15)	06:50			06:21	05:06	04:27
	16:21			17:35	49	16:15 (28)	18:42			20:53	22:02	22:48
18	09:12			08:05		12:23 (15)	06:47			06:18	05:04	04:27
	16:23			17:38	51	16:17 (28)	18:44			20:56	22:04	22:49
19	09:10			08:02		12:23 (15)	06:44			06:16	05:02	04:27
	16:25			17:40	54	16:18 (28)	18:47			20:58	22:06	22:49
20	09:08			08:00		12:23 (15)	06:41			06:13	05:00	04:27
	16:28			17:43	55	16:19 (28)	18:49			21:00	22:08	22:50
21	09:07			07:57		12:23 (15)	06:38			06:10	04:58	04:27
	16:30			17:45	56	16:20 (28)	18:51			21:03	22:10	22:50
22	09:05			07:54		12:24 (15)	06:36			06:07	04:56	04:27
	16:32			17:48	61	16:42 (23)	18:54			21:05	22:12	22:50
23	09:03			07:52		12:26 (15)	06:33			06:05	04:54	04:27
	16:34			17:50	66	16:48 (23)	18:56			21:07	22:14	22:50
24	09:01			07:49		10:20 (17)	06:30			06:02	04:52	04:27
	16:37			17:52	68	16:49 (23)	18:58			21:10	22:16	22:50
25	09:00			07:46		10:16 (17)	06:27			05:59	04:51	04:28
	16:39			17:55	89	16:50 (23)	19:01			21:12	22:18	22:50
26	08:58			07:43		10:15 (17)	06:24			05:57	04:49	04:28
	16:41			17:57	92	16:50 (23)	19:03			21:14	22:20	22:50
27	08:56			07:41		10:15 (17)	06:21			05:54	04:47	04:29
	16:44			18:00	77	16:50 (23)	19:05			21:17	22:22	22:50
28	08:54			07:38		10:15 (17)	06:18			05:51	04:45	04:29
	16:46			18:02	75	16:50 (23)	19:07			21:19	22:24	22:50
29	08:52						07:15			05:49	04:44	04:30
	16:49						20:10			21:21	22:25	22:49
30	08:50		14:16 (33)				07:12			05:46	04:42	04:31
	16:51	3	14:19 (33)				20:12			21:23	22:27	22:49
31	08:48		14:08 (33)				07:10				04:41	
	16:53	21	15:27 (20)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		24			1365			367				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,55			0,60			0,65				
Total reduction		0,22			0,24			0,26				
Total, real		5			328			96				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** M - Buevegen 1941

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		11:53 (15)	09:00
	22:48	22:01	20:40	19:13			16:49	46	15:01 (20)	15:51
2	04:33	05:26	06:35	07:41			07:54		11:55 (15)	09:01
	22:48	21:58	20:37	19:10			16:46	45	15:02 (20)	15:50
3	04:34	05:28	06:37	07:44			07:56		11:56 (15)	09:03
	22:47	21:56	20:34	19:07			16:44	45	15:03 (20)	15:49
4	04:35	05:31	06:40	07:46			07:58		11:57 (15)	09:05
	22:46	21:54	20:31	19:04			16:41	43	15:03 (20)	15:48
5	04:36	05:33	06:42	07:48		10:59 (17)	08:01		11:58 (15)	09:07
	22:46	21:51	20:28	19:01	13	11:12 (17)	16:39	41	15:03 (20)	15:47
6	04:37	05:35	06:44	07:50		10:56 (17)	08:03		12:01 (15)	09:09
	22:45	21:49	20:25	18:59	19	11:15 (17)	16:37	36	15:04 (20)	15:46
7	04:38	05:37	06:46	07:53		09:54 (12)	08:06		12:03 (15)	09:10
	22:44	21:47	20:22	18:56	24	11:16 (17)	16:34	31	15:03 (20)	15:45
8	04:40	05:39	06:48	07:55		09:58 (12)	08:08		14:45 (20)	09:12
	22:43	21:44	20:20	18:53	33	17:18 (23)	16:32	18	15:03 (20)	15:45
9	04:41	05:42	06:51	07:57		10:01 (12)	08:10		14:46 (20)	09:13
	22:42	21:42	20:17	18:50	49	17:20 (23)	16:30	17	15:03 (20)	15:44
10	04:43	05:44	06:53	08:00		10:49 (17)	08:13		13:42 (33)	09:15
	22:40	21:39	20:14	18:47	59	17:21 (23)	16:28	20	15:03 (20)	15:43
11	04:44	05:46	06:55	08:02		10:49 (17)	08:15		13:39 (33)	09:16
	22:39	21:37	20:11	18:44	67	17:23 (23)	16:25	20	14:58 (20)	15:43
12	04:46	05:48	06:57	08:04		10:48 (17)	08:18		13:48 (33)	09:17
	22:38	21:34	20:08	18:42	72	17:23 (23)	16:23	3	13:51 (33)	15:43
13	04:47	05:50	06:59	08:06		10:48 (17)	08:20			09:19
	22:36	21:31	20:05	18:39	73	17:23 (23)	16:21			15:42
14	04:49	05:53	07:02	08:09		10:47 (17)	08:22			09:20
	22:35	21:29	20:02	18:36	77	17:23 (23)	16:19			15:42
15	04:50	05:55	07:04	08:11		10:48 (17)	08:25			09:21
	22:34	21:26	19:59	18:33	86	17:23 (23)	16:17			15:42
16	04:52	05:57	07:06	08:13		10:47 (17)	08:27			09:22
	22:32	21:24	19:56	18:31	93	17:22 (23)	16:15			15:42
17	04:54	05:59	07:08	08:16		10:48 (17)	08:29			09:23
	22:30	21:21	19:53	18:28	85	17:22 (23)	16:13			15:42
18	04:56	06:02	07:10	08:18		12:58 (15)	08:32			09:24
	22:29	21:18	19:51	18:25	66	17:20 (23)	16:11			15:42
19	04:58	06:04	07:13	08:20		12:57 (15)	08:34			09:25
	22:27	21:16	19:48	18:22	64	17:17 (23)	16:09			15:42
20	04:59	06:06	07:15	08:23		12:55 (15)	08:36			09:25
	22:25	21:13	19:45	18:20	58	17:12 (23)	16:07			15:42
21	05:01	06:08	07:17	08:25		12:54 (15)	08:39			09:26
	22:23	21:10	19:42	18:17	56	16:51 (28)	16:06			15:43
22	05:03	06:11	07:19	08:27		12:53 (15)	08:41			09:27
	22:22	21:07	19:39	18:14	55	16:49 (28)	16:04			15:43
23	05:05	06:13	07:21	08:30		12:53 (15)	08:43			09:27
	22:20	21:05	19:36	18:12	53	16:48 (28)	16:02			15:44
24	05:07	06:15	07:24	08:32		12:52 (15)	08:45			09:28
	22:18	21:02	19:33	18:09	52	16:46 (28)	16:01			15:44
25	05:09	06:17	07:26	07:34		11:52 (15)	08:47			09:28
	22:16	20:59	19:30	17:06	47	15:44 (28)	15:59			15:45
26	05:11	06:20	07:28	07:37		11:51 (15)	08:49			09:28
	22:14	20:56	19:27	17:04	39	15:39 (28)	15:58			15:46
27	05:13	06:22	07:30	07:39		11:52 (15)	08:52			09:28
	22:12	20:54	19:24	17:01	35	12:27 (15)	15:56			15:47
28	05:15	06:24	07:33	07:42		11:52 (15)	08:54			09:28
	22:10	20:51	19:22	16:59	35	12:27 (15)	15:55			15:48
29	05:18	06:26	07:35	07:44		11:52 (15)	08:56			09:28
	22:07	20:48	19:19	16:56	34	12:26 (15)	15:53			15:49
30	05:20	06:29	07:37	07:46		11:53 (15)	08:58			09:28
	22:05	20:45	19:16	16:54	40	14:58 (20)	15:52			15:50
31	05:22	06:31		07:49		11:53 (15)				09:28
	22:03	20:42		16:51	44	15:00 (20)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					1428			365		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,62			0,58		
Total reduction					0,25			0,23		
Total, real					353			85		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** N - Buevegen 1988

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		11:38 (17)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51	09:44 (12)	09:00
	15:53		16:56	63	13:43 (15)	18:05	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	56 15:37 (28)	15:51
2	09:27		08:43		11:39 (17)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	09:56 (12)	09:01
	15:54		16:58	59	13:43 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	51 15:37 (28)	15:50
3	09:27		08:41		11:38 (17)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	09:57 (12)	09:03
	15:55		17:01	51	13:42 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	55 15:36 (28)	15:49
4	09:26		08:39		11:39 (17)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:02 (12)	09:05
	15:57		17:03	51	15:59 (28)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	56 15:35 (28)	15:48
5	09:26		08:37		11:39 (17)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:04 (12)	09:07
	15:58		17:06	56	16:02 (28)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	58 15:34 (28)	15:47
6	09:25		08:34		10:34 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	11:10 (17)	09:09
	16:00		17:08	57	16:05 (28)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	55 15:33 (28)	15:46
7	09:24		08:32		10:32 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	11:09 (17)	09:10
	16:02		17:11	55	16:05 (28)	18:19	20:30	21:40	22:39	22:44	21:47	20:22	18:56		16:34	49 13:12 (15)	15:45
8	09:24		08:30		10:27 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	11:09 (17)	09:12
	16:03		17:13	53	16:07 (28)	18:21	20:33	21:42	22:40	22:43	21:44	20:20	18:53		16:32	50 13:13 (15)	15:45
9	09:23		08:27		10:26 (12)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57		08:10	11:09 (17)	09:13
	16:05		17:16	49	16:07 (28)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	60 13:14 (15)	15:44
10	09:22		08:25		10:15 (12)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	11:10 (17)	09:15
	16:07		17:18	58	16:07 (28)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	61 13:14 (15)	15:43
11	09:21		08:22		10:16 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	11:10 (17)	09:16
	16:09		17:21	55	16:08 (28)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	63 13:14 (15)	15:43
12	09:20		08:20		10:17 (12)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	11:10 (17)	09:17
	16:11		17:23	48	16:08 (28)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	66 13:15 (15)	15:43
13	09:18		08:17		10:18 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	11:11 (17)	09:19
	16:13		17:26	33	16:07 (28)	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	65 13:15 (15)	15:42
14	09:17	12:02 (9)	08:15		10:21 (12)	06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	11:11 (17)	09:20
	16:15	8 12:10 (9)	17:28	28	16:08 (28)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	66 13:15 (15)	15:42
15	09:16	12:02 (9)	08:12		15:50 (28)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:13 (17)	09:21
	16:17	9 12:11 (9)	17:30	17	16:07 (28)	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	64 13:15 (15)	15:42
16	09:14	12:02 (9)	08:10		15:51 (28)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:14 (17)	09:22
	16:19	11 12:13 (9)	17:33	14	16:05 (28)	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	62 13:15 (15)	15:42
17	09:13	12:02 (9)	08:07		15:52 (28)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:15 (17)	09:23
	16:21	20 13:30 (15)	17:35	12	16:04 (28)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	61 13:14 (15)	15:42
18	09:12	11:58 (9)	08:05		15:56 (28)	06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	11:16 (17)	09:24
	16:23	30 13:34 (15)	17:38	6	16:02 (28)	18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	60 13:14 (15)	15:42
19	09:10	11:58 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	11:19 (17)	09:25
	16:25	33 13:35 (15)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	55 13:14 (15)	15:42
20	09:08	11:58 (9)	08:00			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:21 (17)	09:25
	16:27	36 13:37 (15)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	47 13:13 (15)	15:42
21	09:07	11:58 (9)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	11:33 (9)	09:26
	16:30	39 13:38 (15)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	39 13:13 (15)	15:43
22	09:05	11:46 (17)	07:54			06:36	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	11:34 (9)	09:27
	16:32	47 13:38 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	36 13:13 (15)	15:43
23	09:03	11:44 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	11:34 (9)	09:27
	16:34	55 13:39 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	33 13:12 (15)	15:44
24	09:01	11:42 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	11:35 (9)	09:28
	16:37	60 13:40 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	8 16:24 (28)	16:01	30 13:11 (15)	15:44
25	09:00	11:42 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	15:22 (28)	08:47	11:41 (9)	09:28
	16:39	61 13:41 (15)	17:55			19:01	21:12	22:18	22:50	22:16	20:59	19:30	17:06	12 15:34 (28)	15:59	20 13:09 (15)	15:45
26	08:58	11:41 (17)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	15:20 (28)	08:49	11:41 (9)	09:28
	16:41	62 13:42 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15 15:35 (28)	15:58	11 11:52 (9)	15:46
27	08:56	11:40 (17)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	15:19 (28)	08:52	11:41 (9)	09:28
	16:44	64 13:42 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01	17 15:36 (28)	15:56	10 11:51 (9)	15:47
28	08:54	11:40 (17)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:33	07:42	09:50 (12)	08:54	11:42 (9)	09:28
	16:46	65 13:43 (15)	18:02			19:07	21:19	22:24	22:50	22:10	20:51	19:22	16:59	28 15:37 (28)	15:55	8 11:50 (9)	15:48
29	08:52	11:39 (17)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	09:47 (12)	08:56		09:28
	16:49	65 13:43 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	37 15:37 (28)	15:53		15:49
30	08:50	11:39 (17)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	09:46 (12)	08:58		09:28
	16:51	65 13:43 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	49 15:37 (28)	15:52		15:50
31	08:48	11:39 (17)				07:09		04:41		05:22	06:31		07:49	09:46 (12)			09:28
	16:53	63 13:43 (15)				20:14		22:29		22:03	20:42		16:51	55 15:38 (28)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319			236		199
Total, worst case		793		765									221		1347		
Sun reduction		0,50		0,50									0,50		0,50		
Oper. time red.		0,80		0,80									0,80		0,80		
Wind dir. red.		0,62		0,61									0,60		0,62		
Total reduction		0,25		0,24									0,24		0,25		
Total, real		197		187									53		334		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** O - Buevegen 2023

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:50 (12)	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39		07:51	10:27 (12)	09:00
	15:53		16:56	74	14:26 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	30 13:49 (15)	15:51
2	09:27		08:43		10:51 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54	10:25 (12)	09:01
	15:54		16:58	73	14:27 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	45 13:52 (15)	15:50
3	09:27		08:41		10:50 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56	10:24 (12)	09:03
	15:55		17:01	74	14:27 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	54 13:54 (15)	15:49
4	09:26		08:39		10:51 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58	10:22 (12)	09:05
	15:57		17:03	71	14:27 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	61 13:55 (15)	15:48
5	09:26		08:37		10:51 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01	10:22 (12)	09:07
	15:58		17:06	68	14:26 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	65 13:56 (15)	15:47
6	09:25		08:34		10:53 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03	10:22 (12)	09:09
	16:00		17:08	64	14:26 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	69 13:57 (15)	15:46
7	09:24		08:32		10:53 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06	10:21 (12)	09:10
	16:02		17:11	59	14:25 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	72 13:57 (15)	15:45
8	09:24		08:30		10:55 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08	10:21 (12)	09:12
	16:03		17:13	52	14:24 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73 13:57 (15)	15:45
9	09:23		08:27		10:56 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10	10:21 (12)	09:13
	16:05		17:16	43	14:22 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75 13:58 (15)	15:44
10	09:22		08:25		10:58 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13	10:22 (12)	09:15
	16:07		17:18	26	14:18 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	72 13:58 (15)	15:43
11	09:21		08:22		12:44 (17)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	10:21 (12)	09:16
	16:09		17:21	5	12:49 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	75 13:58 (15)	15:43
12	09:20		08:20			07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18	10:22 (12)	09:17
	16:11		17:23			18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	72 13:58 (15)	15:42
13	09:18	12:39 (9)	08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	10:23 (12)	09:19
	16:13	5 12:44 (9)	17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	72 13:58 (15)	15:42
14	09:17	12:39 (9)	08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22	10:23 (12)	09:20
	16:15	7 12:46 (9)	17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	68 13:57 (15)	15:42
15	09:16	12:39 (9)	08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	10:24 (12)	09:21
	16:17	15 12:54 (9)	17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	63 13:57 (15)	15:42
16	09:14	12:38 (9)	08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	10:30 (12)	09:22
	16:19	17 12:55 (9)	17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	50 13:57 (15)	15:42
17	09:13	12:38 (9)	08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	12:05 (17)	09:23
	16:21	18 12:56 (9)	17:35			18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45 13:55 (15)	15:42
18	09:12	12:37 (9)	08:05			06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32	12:07 (17)	09:24
	16:23	19 12:56 (9)	17:38			18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	42 13:55 (15)	15:42
19	09:10	12:38 (9)	08:02			06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34	12:08 (17)	09:25
	16:25	20 12:58 (9)	17:40			18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	39 13:54 (15)	15:42
20	09:08	12:37 (17)	07:59			06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	12:09 (17)	09:25
	16:27	22 12:59 (9)	17:43			18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	33 13:51 (15)	15:42
21	09:07	12:35 (17)	07:57			06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39	12:11 (17)	09:26
	16:30	23 12:58 (9)	17:45			18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	23 12:34 (9)	15:43
22	09:05	12:34 (17)	07:54			06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41	12:13 (17)	09:27
	16:32	33 14:16 (15)	17:48			18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	22 12:35 (9)	15:43
23	09:03	12:33 (17)	07:52			06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43	12:14 (9)	09:27
	16:34	39 14:19 (15)	17:50			18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	20 12:34 (9)	15:44
24	09:01	12:33 (17)	07:49			06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45	12:15 (9)	09:28
	16:37	42 14:21 (15)	17:52			18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	20 12:35 (9)	15:44
25	09:00	12:32 (17)	07:46			06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47	12:16 (9)	09:28
	16:39	45 14:22 (15)	17:55			19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	18 12:34 (9)	15:45
26	08:58	10:57 (12)	07:43			06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49	12:17 (9)	09:28
	16:41	50 14:24 (15)	17:57			19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58	17 12:34 (9)	15:46
27	08:56	10:51 (12)	07:41			06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52	12:18 (9)	09:28
	16:44	64 14:24 (15)	18:00			19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56	15 12:33 (9)	15:47
28	08:54	10:51 (12)	07:38			06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54	12:19 (9)	09:28
	16:46	69 14:25 (15)	18:02			19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59		15:55	7 12:26 (9)	15:48
29	08:52	10:51 (12)				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56	12:20 (9)	09:28
	16:49	70 14:26 (15)				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53	5 12:25 (9)	15:49
30	08:50	10:50 (12)				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46		08:58		09:28
	16:51	72 14:26 (15)				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54		15:52		15:50
31	08:48	10:51 (12)				07:09		04:41		05:22	06:31		07:49	12:13 (17)			09:28
	16:53	74 14:27 (15)				20:14		22:29		22:03	20:42		16:51	7 12:20 (17)			15:51
Potential sun hours	221		260			365	432	521	547	546	478	386	319		236		199
Total, worst case		704		609										7		1322	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,62		0,63										0,63		0,62	
Total reduction		0,25		0,25										0,25		0,25	
Total, real		174		153										2		328	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** P - Buevegen 2021

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:46		10:45 (12)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:51		10:19 (12)	09:00
	15:53		16:56	73	14:22 (15)	18:04	20:17	21:26	22:30	22:48	22:01	20:40	19:13		16:49	43	13:46 (15)	15:51
2	09:27		08:43		10:46 (12)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:54		10:18 (12)	09:01
	15:54		16:58	74	14:23 (15)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46	53	13:48 (15)	15:50
3	09:27		08:41		10:45 (12)	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44		07:56		10:18 (12)	09:03
	15:55		17:01	74	14:22 (15)	18:09	20:21	21:30	22:34	22:47	21:56	20:34	19:07		16:44	59	13:50 (15)	15:49
4	09:26		08:39		10:46 (12)	07:27	06:58	05:36	04:36	04:35	05:30	06:40	07:46		07:58		10:16 (12)	09:05
	15:57		17:03	73	14:23 (15)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41	65	13:51 (15)	15:48
5	09:26		08:37		10:46 (12)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		10:16 (12)	09:07
	15:58		17:06	71	14:22 (15)	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01		16:39	70	13:52 (15)	15:47
6	09:25		08:34		10:47 (12)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:50		08:03		10:16 (12)	09:09
	16:00		17:08	68	14:22 (15)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:59		16:37	73	13:53 (15)	15:46
7	09:24		08:32		10:47 (12)	07:18	06:49	05:29	04:33	04:38	05:37	06:46	07:53		08:06		10:16 (12)	09:10
	16:02		17:11	65	14:21 (15)	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56		16:34	73	13:52 (15)	15:45
8	09:24		08:30		10:48 (12)	07:16	06:47	05:26	04:32	04:40	05:39	06:48	07:55		08:08		10:16 (12)	09:12
	16:03		17:13	58	14:20 (15)	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53		16:32	73	13:53 (15)	15:45
9	09:23		08:27		10:49 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57		08:10		10:16 (12)	09:13
	16:05		17:16	50	14:18 (15)	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	75	13:53 (15)	15:44
10	09:22		08:25		10:50 (12)	07:10	06:41	05:22	04:30	04:42	05:44	06:53	08:00		08:13		10:17 (12)	09:15
	16:07		17:18	40	14:16 (15)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:28	74	13:54 (15)	15:43
11	09:21		08:22		10:53 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15		10:17 (12)	09:16
	16:09		17:21	22	12:47 (17)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:44		16:25	69	13:53 (15)	15:43
12	09:20		08:20		12:38 (17)	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04		08:18		10:18 (12)	09:17
	16:11		17:23	4	12:42 (17)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:23	54	13:53 (15)	15:42
13	09:18		08:17			07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20		10:20 (12)	09:19
	16:13		17:25			18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39		16:21	53	13:53 (15)	15:42
14	09:17		08:15			06:59	06:30	05:12	04:28	04:49	05:53	07:02	08:09		08:22		11:57 (17)	09:20
	16:15		17:28			18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19	51	13:52 (15)	15:42
15	09:16		08:12			06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25		11:58 (17)	09:21
	16:17		17:30			18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33		16:17	50	13:52 (15)	15:42
16	09:14		08:10			06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27		11:59 (17)	09:22
	16:19		17:33			18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31		16:15	49	13:52 (15)	15:42
17	09:13		08:07			06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29		12:00 (17)	09:23
	16:21	5	12:50 (9)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13	45	13:50 (15)	15:42
18	09:12		12:33 (9)	08:05		06:47	06:18	05:04	04:27	04:56	06:02	07:10	08:18		08:32		12:01 (17)	09:24
	16:23	18	12:51 (9)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:51	18:25		16:11	43	13:50 (15)	15:42
19	09:10		12:34 (9)	08:02		06:44	06:16	05:02	04:26	04:58	06:04	07:13	08:20		08:34		12:03 (17)	09:25
	16:25	19	12:53 (9)	17:40		18:47	20:58	22:06	22:49	22:27	21:16	19:48	18:22		16:09	38	13:49 (15)	15:42
20	09:08		12:34 (9)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36		12:04 (17)	09:25
	16:27	20	12:54 (9)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20		16:07	27	13:41 (15)	15:42
21	09:07		12:31 (17)	07:57		06:38	06:10	04:58	04:27	05:01	06:08	07:17	08:25		08:39		12:07 (17)	09:26
	16:30	22	12:53 (9)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17		16:06	22	12:29 (9)	15:43
22	09:05		12:29 (17)	07:54		06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27		08:41		12:10 (9)	09:27
	16:32	27	14:06 (15)	17:48		18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14		16:04	20	12:30 (9)	15:43
23	09:03		12:28 (17)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30		08:43		12:10 (9)	09:27
	16:34	38	14:14 (15)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12		16:02	19	12:29 (9)	15:44
24	09:01		12:27 (17)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32		08:45		12:11 (9)	09:28
	16:37	43	14:16 (15)	17:52		18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09		16:01	18	12:29 (9)	15:44
25	09:00		12:27 (17)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34		08:47		12:11 (9)	09:28
	16:39	45	14:17 (15)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06		15:59	5	12:28 (9)	15:45
26	08:58		12:26 (17)	07:43		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37		08:49			09:28
	16:41	49	14:19 (15)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04		15:58			15:46
27	08:56		12:25 (17)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39		08:52			09:28
	16:44	50	14:19 (15)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:24	17:01		15:56			15:47
28	08:54		12:25 (17)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42		08:54			09:28
	16:46	51	14:20 (15)	18:02		19:07	21:19	22:24	22:50	22:09	20:51	19:22	16:59		15:55			15:48
29	08:52		10:48 (12)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44		08:56			09:28
	16:49	53	14:21 (15)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56		15:53			15:49
30	08:50		10:46 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	12:06 (17)	08:58			09:28
	16:51	55	14:21 (15)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:54	7 12:13 (17)	15:52			15:50
31	08:48		10:46 (12)			07:09		04:41		05:22	06:31		07:49	10:22 (12)				09:28
	16:53	69	14:22 (15)			20:14		22:29		22:03	20:42		16:51	25 12:17 (17)				15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236				199
Total, worst case		564		672									32		1221			
Sun reduction		0,50		0,50									0,50		0,50			
Oper. time red.		0,80		0,80									0,80		0,80			
Wind dir. red.		0,61		0,63									0,66		0,62			
Total reduction		0,24		0,25									0,26		0,25			
Total, real		138		169									8		303			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June
1	09:28	12:03 (26)	08:45	14:59 (17)	07:35	07:07	05:44	04:39
	15:52	20 12:23 (26)	16:56	18 15:17 (17)	18:04	20:16	21:26	22:30
2	09:27	12:03 (26)	08:43	14:59 (17)	07:32	07:04	05:41	04:38
	15:54	20 12:23 (26)	16:58	19 15:18 (17)	18:07	20:19	21:28	22:32
3	09:27	12:03 (26)	08:41	14:58 (17)	07:30	07:01	05:38	04:37
	15:55	20 12:23 (26)	17:01	19 15:17 (17)	18:09	20:21	21:30	22:33
4	09:26	12:03 (26)	08:39	14:59 (17)	07:27	06:58	05:36	04:36
	15:57	21 12:24 (26)	17:03	19 15:18 (17)	18:12	20:23	21:33	22:35
5	09:26	12:04 (26)	08:37	14:59 (17)	07:24	06:55	05:33	04:34
	15:58	26 13:33 (12)	17:06	19 15:18 (17)	18:14	20:26	21:35	22:36
6	09:25	12:04 (26)	08:34	15:00 (17)	07:21	06:52	05:31	04:33
	16:00	29 13:35 (12)	17:08	18 15:18 (17)	18:16	20:28	21:37	22:38
7	09:24	12:05 (26)	08:32	15:00 (17)	07:18	06:49	05:29	04:32
	16:01	31 13:37 (12)	17:11	17 15:17 (17)	18:19	20:30	21:39	22:39
8	09:23	12:06 (26)	08:30	15:00 (17)	07:16	06:46	05:26	04:31
	16:03	33 13:39 (12)	17:13	16 15:16 (17)	18:21	20:33	21:42	22:40
9	09:23	12:06 (26)	08:27	15:02 (17)	07:13	06:44	05:24	04:31
	16:05	33 13:39 (12)	17:15	14 15:16 (17)	18:23	20:35	21:44	22:42
10	09:22	12:07 (26)	08:25	15:03 (17)	07:10	06:41	05:21	04:30
	16:07	35 13:41 (12)	17:18	11 15:14 (17)	18:26	20:37	21:46	22:43
11	09:21	12:07 (26)	08:22	15:07 (17)	07:07	06:38	05:19	04:29
	16:09	35 13:41 (12)	17:20	5 15:12 (17)	18:28	20:39	21:49	22:44
12	09:19	12:08 (26)	08:20		07:04	06:35	05:17	04:29
	16:11	35 13:42 (12)	17:23		18:30	20:42	21:51	22:45
13	09:18	12:09 (26)	08:17		07:01	06:32	05:15	04:28
	16:12	35 13:43 (12)	17:25		18:33	20:44	21:53	22:46
14	09:17	12:10 (26)	08:15		06:58	06:29	05:12	04:28
	16:14	35 13:44 (12)	17:28		18:35	20:46	21:55	22:46
15	09:16	12:11 (26)	08:12		06:56	06:27	05:10	04:27
	16:17	34 13:45 (12)	17:30		18:37	20:49	21:57	22:47
16	09:14	12:12 (26)	08:10		06:53	06:24	05:08	04:27
	16:19	32 13:45 (12)	17:33		18:40	20:51	22:00	22:48
17	09:13	12:14 (26)	08:07		06:50	06:21	05:06	04:27
	16:21	29 13:45 (12)	17:35		18:42	20:53	22:02	22:48
18	09:11	12:16 (26)	08:05		06:47	06:18	05:04	04:26
	16:23	26 13:46 (12)	17:38		18:44	20:56	22:04	22:49
19	09:10	13:25 (12)	08:02		06:44	06:16	05:02	04:26
	16:25	21 13:46 (12)	17:40		18:47	20:58	22:06	22:49
20	09:08	13:25 (12)	07:59		06:41	06:13	05:00	04:26
	16:27	22 13:47 (12)	17:43		18:49	21:00	22:08	22:50
21	09:07	13:26 (12)	07:57		06:38	06:10	04:58	04:26
	16:30	21 13:47 (12)	17:45		18:51	21:03	22:10	22:50
22	09:05	13:26 (12)	07:54		06:35	06:07	04:56	04:27
	16:32	21 13:47 (12)	17:48		18:54	21:05	22:12	22:50
23	09:03	13:27 (12)	07:51		06:33	06:05	04:54	04:27
	16:34	20 13:47 (12)	17:50		18:56	21:07	22:14	22:50
24	09:01	13:28 (12)	07:49		06:30	06:02	04:52	04:27
	16:37	19 13:47 (12)	17:52		18:58	21:09	22:16	22:50
25	09:00	13:29 (12)	07:46		06:27	05:59	04:50	04:28
	16:39	18 13:47 (12)	17:55		19:00	21:12	22:18	22:50
26	08:58	13:30 (12)	07:43		06:24	05:57	04:49	04:28
	16:41	17 13:47 (12)	17:57		19:03	21:14	22:20	22:50
27	08:56	13:30 (12)	07:41		06:21	05:54	04:47	04:29
	16:44	20 15:09 (17)	18:00		19:05	21:16	22:22	22:50
28	08:54	13:32 (12)	07:38		06:18	05:51	04:45	04:29
	16:46	23 15:12 (17)	18:02		19:07	21:19	22:23	22:50
29	08:52	13:35 (12)			07:15	05:49	04:44	04:30
	16:48	21 15:14 (17)			20:10	21:21	22:25	22:49
30	08:50	15:00 (17)			07:12	05:46	04:42	04:31
	16:51	15 15:15 (17)			20:12	21:23	22:27	22:49
31	08:48	15:00 (17)			07:09		04:41	
	16:53	16 15:16 (17)			20:14		22:29	
Potential sun hours	221		260		365	432	521	547
Total, worst case		783		175				
Sun reduction		0,50		0,50				
Oper. time red.		0,80		0,80				
Wind dir. red.		0,60		0,55				
Total reduction		0,24		0,22				
Total, real		187		39				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Q - Buevegen 2141

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:32 (17)	08:59		11:49 (26)
	22:48	22:01	20:39	19:13			16:48	12	14:44 (17)	15:51	35	13:23 (12)
2	04:33	05:26	06:35	07:41			07:54		14:31 (17)	09:01		11:50 (26)
	22:48	21:58	20:37	19:10			16:46	15	14:46 (17)	15:50	35	13:24 (12)
3	04:34	05:28	06:37	07:44			07:56		14:31 (17)	09:03		11:50 (26)
	22:47	21:56	20:34	19:07			16:44	16	14:47 (17)	15:49	33	13:23 (12)
4	04:35	05:30	06:39	07:46			07:58		14:29 (17)	09:05		11:50 (26)
	22:46	21:54	20:31	19:04			16:41	18	14:47 (17)	15:48	33	13:23 (12)
5	04:36	05:33	06:42	07:48			08:01		14:29 (17)	09:07		11:50 (26)
	22:46	21:51	20:28	19:01			16:39	19	14:48 (17)	15:47	31	13:22 (12)
6	04:37	05:35	06:44	07:50			08:03		14:29 (17)	09:08		11:50 (26)
	22:45	21:49	20:25	18:58			16:36	19	14:48 (17)	15:46	30	13:22 (12)
7	04:38	05:37	06:46	07:53			08:06		14:29 (17)	09:10		11:51 (26)
	22:44	21:46	20:22	18:56			16:34	19	14:48 (17)	15:45	27	13:21 (12)
8	04:40	05:39	06:48	07:55			08:08		14:29 (17)	09:12		11:51 (26)
	22:43	21:44	20:19	18:53			16:32	19	14:48 (17)	15:44	21	12:12 (26)
9	04:41	05:41	06:51	07:57			08:10		14:30 (17)	09:13		11:51 (26)
	22:42	21:41	20:17	18:50			16:30	18	14:48 (17)	15:44	21	12:12 (26)
10	04:42	05:44	06:53	07:59			08:13		14:29 (17)	09:15		11:52 (26)
	22:40	21:39	20:14	18:47			16:27	18	14:47 (17)	15:43	20	12:12 (26)
11	04:44	05:46	06:55	08:02			08:15		14:30 (17)	09:16		11:53 (26)
	22:39	21:36	20:11	18:44			16:25	17	14:47 (17)	15:43	20	12:13 (26)
12	04:45	05:48	06:57	08:04			08:18		14:32 (17)	09:17		11:53 (26)
	22:38	21:34	20:08	18:42			16:23	15	14:47 (17)	15:42	20	12:13 (26)
13	04:47	05:50	06:59	08:06			08:20		13:07 (12)	09:19		11:54 (26)
	22:36	21:31	20:05	18:39			16:21	21	14:46 (17)	15:42	20	12:14 (26)
14	04:49	05:53	07:02	08:09			08:22		13:04 (12)	09:20		11:54 (26)
	22:35	21:29	20:02	18:36			16:19	23	14:44 (17)	15:42	20	12:14 (26)
15	04:50	05:55	07:04	08:11			08:25		13:03 (12)	09:21		11:54 (26)
	22:33	21:26	19:59	18:33			16:17	20	14:42 (17)	15:42	20	12:14 (26)
16	04:52	05:57	07:06	08:13			08:27		13:03 (12)	09:22		11:55 (26)
	22:32	21:23	19:56	18:30			16:15	17	13:20 (12)	15:42	20	12:15 (26)
17	04:54	05:59	07:08	08:16			08:29		13:02 (12)	09:23		11:55 (26)
	22:30	21:21	19:53	18:28			16:13	18	13:20 (12)	15:42	20	12:15 (26)
18	04:56	06:02	07:10	08:18			08:32		13:02 (12)	09:24		11:56 (26)
	22:29	21:18	19:50	18:25			16:11	19	13:21 (12)	15:42	19	12:15 (26)
19	04:57	06:04	07:13	08:20			08:34		13:02 (12)	09:25		11:56 (26)
	22:27	21:15	19:48	18:22			16:09	20	13:22 (12)	15:42	20	12:16 (26)
20	04:59	06:06	07:15	08:23			08:36		13:01 (12)	09:25		11:57 (26)
	22:25	21:13	19:45	18:20			16:07	21	13:22 (12)	15:42	20	12:17 (26)
21	05:01	06:08	07:17	08:25			08:38		13:02 (12)	09:26		11:57 (26)
	22:23	21:10	19:42	18:17			16:06	21	13:23 (12)	15:43	20	12:17 (26)
22	05:03	06:10	07:19	08:27			08:41		13:02 (12)	09:27		11:58 (26)
	22:22	21:07	19:39	18:14			16:04	22	13:24 (12)	15:43	20	12:18 (26)
23	05:05	06:13	07:21	08:30			08:43		13:02 (12)	09:27		11:58 (26)
	22:20	21:05	19:36	18:12			16:02	21	13:23 (12)	15:44	20	12:18 (26)
24	05:07	06:15	07:24	08:32			08:45		11:55 (26)	09:27		11:58 (26)
	22:18	21:02	19:33	18:09			16:01	25	13:24 (12)	15:44	20	12:18 (26)
25	05:09	06:17	07:26	07:34			08:47		11:52 (26)	09:28		11:59 (26)
	22:16	20:59	19:30	17:06			15:59	30	13:24 (12)	15:45	20	12:19 (26)
26	05:11	06:19	07:28	07:37			08:49		11:51 (26)	09:28		12:00 (26)
	22:14	20:56	19:27	17:04			15:57	32	13:24 (12)	15:46	20	12:20 (26)
27	05:13	06:22	07:30	07:39			08:51		11:50 (26)	09:28		12:00 (26)
	22:12	20:54	19:24	17:01			15:56	34	13:24 (12)	15:47	20	12:20 (26)
28	05:15	06:24	07:32	07:42			08:54		11:49 (26)	09:28		12:00 (26)
	22:09	20:51	19:21	16:59			15:55	35	13:23 (12)	15:48	20	12:20 (26)
29	05:17	06:26	07:35	07:44			08:56		11:50 (26)	09:28		12:01 (26)
	22:07	20:48	19:19	16:56			15:53	35	13:24 (12)	15:49	20	12:21 (26)
30	05:20	06:28	07:37	07:46			08:58		11:49 (26)	09:28		12:01 (26)
	22:05	20:45	19:16	16:53			15:52	36	13:24 (12)	15:50	21	12:22 (26)
31	05:22	06:31		07:49		14:35 (17)				09:28		12:01 (26)
	22:03	20:42		16:51	6	14:41 (17)				15:51	21	12:22 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					6			655			707	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,58			0,63	
Total reduction					0,22			0,23			0,25	
Total, real					1			151			178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** R - Buevegen 2165

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:35 (26)	08:45	14:09 (12)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39	07:51		08:59		12:23 (26)
	15:52 20	12:55 (26)	16:56 5	14:14 (12)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48		15:51	18	12:41 (26)
2	09:27	12:36 (26)	08:43		07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54		09:01		12:23 (26)
	15:54 21	12:57 (26)	16:58		18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46		15:50	19	12:42 (26)
3	09:27	12:36 (26)	08:41		07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56		09:03		12:23 (26)
	15:55 21	12:57 (26)	17:01		18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44		15:49	20	12:43 (26)
4	09:26	12:37 (26)	08:39		07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58		09:05		12:23 (26)
	15:57 20	12:57 (26)	17:03		18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41		15:48	20	12:43 (26)
5	09:26	12:37 (26)	08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01		09:07		12:24 (26)
	15:58 20	12:57 (26)	17:06		18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39		15:47	20	12:44 (26)
6	09:25	12:38 (26)	08:34		07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03		09:08		12:24 (26)
	16:00 20	12:58 (26)	17:08		18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36		15:46	20	12:44 (26)
7	09:24	12:38 (26)	08:32		07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06		09:10		12:24 (26)
	16:01 20	12:58 (26)	17:11		18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56	16:34		15:45	21	12:45 (26)
8	09:23	12:39 (26)	08:30		07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08		09:12		12:25 (26)
	16:03 20	12:59 (26)	17:13		18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32		15:44	20	12:45 (26)
9	09:23	12:39 (26)	08:27		07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57	08:10		09:13		12:24 (26)
	16:05 19	12:58 (26)	17:15		18:23	20:35	21:44	22:41	22:42	21:41	20:17	18:50	16:30		15:44	21	12:45 (26)
10	09:22	12:40 (26)	08:25		07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13	13:40 (12)	09:15		12:25 (26)
	16:07 19	12:59 (26)	17:18		18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27 5	13:45 (12)	15:43	21	12:46 (26)
11	09:21	12:40 (26)	08:22		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	13:37 (12)	09:16		12:26 (26)
	16:09 19	12:59 (26)	17:20		18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25 11	13:48 (12)	15:43	21	12:47 (26)
12	09:19	12:42 (26)	08:20		07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18	13:36 (12)	09:17		12:26 (26)
	16:10 24	14:10 (12)	17:23		18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 14	13:50 (12)	15:42	20	12:46 (26)
13	09:18	12:42 (26)	08:17		07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20	13:35 (12)	09:19		12:27 (26)
	16:12 27	14:11 (12)	17:25		18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21 17	13:52 (12)	15:42	20	12:47 (26)
14	09:17	12:44 (26)	08:15		06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09	08:22	13:34 (12)	09:20		12:27 (26)
	16:14 27	14:13 (12)	17:28		18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19 18	13:52 (12)	15:42	21	12:48 (26)
15	09:16	12:45 (26)	08:12		06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25	13:34 (12)	09:21		12:27 (26)
	16:17 27	14:14 (12)	17:30		18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33	16:17 19	13:53 (12)	15:42	21	12:48 (26)
16	09:14	12:46 (26)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27	13:34 (12)	09:22		12:28 (26)
	16:19 27	14:15 (12)	17:33		18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30	16:15 20	13:54 (12)	15:42	20	12:48 (26)
17	09:13	12:48 (26)	08:07		06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29	13:33 (12)	09:23		12:28 (26)
	16:21 25	14:16 (12)	17:35		18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13 20	13:53 (12)	15:42	20	12:48 (26)
18	09:11	13:59 (12)	08:05		06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32	13:34 (12)	09:24		12:29 (26)
	16:23 18	14:17 (12)	17:38		18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11 20	13:54 (12)	15:42	20	12:49 (26)
19	09:10	13:59 (12)	08:02		06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20	08:34	13:34 (12)	09:25		12:30 (26)
	16:25 19	14:18 (12)	17:40		18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09 21	13:55 (12)	15:42	20	12:50 (26)
20	09:08	13:59 (12)	07:59		06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36	13:34 (12)	09:25		12:30 (26)
	16:27 19	14:18 (12)	17:43		18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07 20	13:54 (12)	15:42	20	12:50 (26)
21	09:07	13:59 (12)	07:57		06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38	13:35 (12)	09:26		12:30 (26)
	16:30 20	14:19 (12)	17:45		18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06 20	13:55 (12)	15:43	20	12:50 (26)
22	09:05	13:59 (12)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	08:41	13:35 (12)	09:27		12:31 (26)
	16:32 20	14:19 (12)	17:47		18:54	21:05	22:12	22:50	22:21	21:07	19:39	18:14	16:04 19	13:54 (12)	15:43	20	12:51 (26)
23	09:03	13:59 (12)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43	13:36 (12)	09:27		12:31 (26)
	16:34 21	14:20 (12)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11	16:02 19	13:55 (12)	15:44	20	12:51 (26)
24	09:01	14:00 (12)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	13:37 (12)	09:27		12:31 (26)
	16:36 20	14:20 (12)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09	16:01 18	13:55 (12)	15:44	21	12:52 (26)
25	09:00	14:00 (12)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47	12:26 (26)	09:28		12:33 (26)
	16:39 21	14:21 (12)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59 25	13:54 (12)	15:45	20	12:53 (26)
26	08:58	14:01 (12)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49	12:25 (26)	09:28		12:33 (26)
	16:41 20	14:21 (12)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57 26	13:54 (12)	15:46	20	12:53 (26)
27	08:56	14:01 (12)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:51	12:24 (26)	09:28		12:34 (26)
	16:44 19	14:20 (12)	18:00		19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56 28	13:54 (12)	15:47	20	12:54 (26)
28	08:54	14:02 (12)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54	12:23 (26)	09:28		12:33 (26)
	16:46 18	14:20 (12)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58	15:55 28	13:53 (12)	15:47	21	12:54 (26)
29	08:52	14:04 (12)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56	12:23 (26)	09:28		12:34 (26)
	16:48 16	14:20 (12)			20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53 27	13:52 (12)	15:49	20	12:54 (26)
30	08:50	14:04 (12)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58	12:23 (26)	09:28		12:35 (26)
	16:51 14	14:18 (12)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52 24	13:51 (12)	15:50	20	12:55 (26)
31	08:48	14:07 (12)			07:09		04:41		05:22	06:31		07:49			09:28		12:35 (26)
	16:53 10	14:17 (12)			20:14		22:29		22:03	20:42		16:51			15:51	20	12:55 (26)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	631		5										419		625		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,58		0,55										0,56		0,62		
Total reduction	0,23		0,22										0,23		0,25		
Total, real	147		1										94		154		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March	April	May	June
1	09:28		13:54 (26)	08:45		15:12 (12)	07:35	07:06	05:43	04:39
	15:52	9	14:03 (26)	16:56	14	15:26 (12)	18:04	20:16	21:26	22:30
2	09:27		13:54 (26)	08:43		15:12 (12)	07:32	07:04	05:41	04:38
	15:54	11	14:05 (26)	16:58	16	15:28 (12)	18:07	20:19	21:28	22:32
3	09:27		13:54 (26)	08:41		15:11 (12)	07:29	07:01	05:38	04:37
	15:55	12	14:06 (26)	17:01	17	15:28 (12)	18:09	20:21	21:30	22:33
4	09:26		13:54 (26)	08:39		15:11 (12)	07:27	06:58	05:36	04:36
	15:57	13	14:07 (26)	17:03	18	15:29 (12)	18:12	20:23	21:33	22:35
5	09:26		13:53 (26)	08:37		15:11 (12)	07:24	06:55	05:33	04:34
	15:58	15	14:08 (26)	17:06	18	15:29 (12)	18:14	20:26	21:35	22:36
6	09:25		13:53 (26)	08:34		15:11 (12)	07:21	06:52	05:31	04:33
	16:00	16	14:09 (26)	17:08	19	15:30 (12)	18:16	20:28	21:37	22:38
7	09:24		13:54 (26)	08:32		15:11 (12)	07:18	06:49	05:29	04:32
	16:01	16	14:10 (26)	17:10	19	15:30 (12)	18:19	20:30	21:39	22:39
8	09:23		13:54 (26)	08:30		15:11 (12)	07:15	06:46	05:26	04:31
	16:03	17	14:11 (26)	17:13	18	15:29 (12)	18:21	20:32	21:42	22:40
9	09:23		13:53 (26)	08:27		15:12 (12)	07:13	06:44	05:24	04:31
	16:05	18	14:11 (26)	17:15	18	15:30 (12)	18:23	20:35	21:44	22:41
10	09:22		13:53 (26)	08:25		15:12 (12)	07:10	06:41	05:21	04:30
	16:07	19	14:12 (26)	17:18	17	15:29 (12)	18:26	20:37	21:46	22:43
11	09:20		13:53 (26)	08:22		15:13 (12)	07:07	06:38	05:19	04:29
	16:09	19	14:12 (26)	17:20	14	15:27 (12)	18:28	20:39	21:48	22:44
12	09:19		13:54 (26)	08:20		15:16 (12)	07:04	06:35	05:17	04:28
	16:10	19	14:13 (26)	17:23	11	15:27 (12)	18:30	20:42	21:51	22:45
13	09:18		13:53 (26)	08:17		15:18 (12)	07:01	06:32	05:14	04:28
	16:12	21	14:14 (26)	17:25	5	15:23 (12)	18:33	20:44	21:53	22:45
14	09:17		13:54 (26)	08:15			06:58	06:29	05:12	04:27
	16:14	21	14:15 (26)	17:28			18:35	20:46	21:55	22:46
15	09:16		13:54 (26)	08:12			06:56	06:27	05:10	04:27
	16:16	21	14:15 (26)	17:30			18:37	20:49	21:57	22:47
16	09:14		13:54 (26)	08:10			06:53	06:24	05:08	04:27
	16:19	21	14:15 (26)	17:33			18:40	20:51	21:59	22:48
17	09:13		13:54 (26)	08:07			06:50	06:21	05:06	04:27
	16:21	22	14:16 (26)	17:35			18:42	20:53	22:02	22:48
18	09:11		13:55 (26)	08:05			06:47	06:18	05:04	04:26
	16:23	21	14:16 (26)	17:38			18:44	20:56	22:04	22:49
19	09:10		13:55 (26)	08:02			06:44	06:15	05:02	04:26
	16:25	21	14:16 (26)	17:40			18:47	20:58	22:06	22:49
20	09:08		13:56 (26)	07:59			06:41	06:13	05:00	04:26
	16:27	20	14:16 (26)	17:43			18:49	21:00	22:08	22:50
21	09:07		13:56 (26)	07:57			06:38	06:10	04:58	04:26
	16:30	20	14:16 (26)	17:45			18:51	21:02	22:10	22:50
22	09:05		13:57 (26)	07:54			06:35	06:07	04:56	04:27
	16:32	19	14:16 (26)	17:47			18:53	21:05	22:12	22:50
23	09:03		13:58 (26)	07:51			06:32	06:05	04:54	04:27
	16:34	18	14:16 (26)	17:50			18:56	21:07	22:14	22:50
24	09:01		13:59 (26)	07:49			06:30	06:02	04:52	04:27
	16:36	17	14:16 (26)	17:52			18:58	21:09	22:16	22:50
25	08:59		14:01 (26)	07:46			06:27	05:59	04:50	04:28
	16:39	14	14:15 (26)	17:55			19:00	21:12	22:18	22:50
26	08:58		14:02 (26)	07:43			06:24	05:57	04:49	04:28
	16:41	11	14:13 (26)	17:57			19:03	21:14	22:20	22:50
27	08:56		14:05 (26)	07:41			06:21	05:54	04:47	04:29
	16:44	6	14:11 (26)	18:00			19:05	21:16	22:22	22:50
28	08:54			07:38			06:18	05:51	04:45	04:29
	16:46			18:02			19:07	21:19	22:23	22:50
29	08:52						07:15	05:49	04:44	04:30
	16:48						20:10	21:21	22:25	22:49
30	08:50		15:15 (12)				07:12	05:46	04:42	04:31
	16:51	8	15:23 (12)				20:12	21:23	22:27	22:49
31	08:48		15:14 (12)				07:09		04:41	
	16:53	11	15:25 (12)				20:14		22:29	
Potential sun hours	221			260			365	432	521	547
Total, worst case		476			204					
Sun reduction		0,50			0,50					
Oper. time red.		0,80			0,80					
Wind dir. red.		0,55			0,55					
Total reduction		0,22			0,22					
Total, real		104			45					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** S - Vaule 176

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December		
1	04:32	05:24	06:33	07:39			07:51		14:42 (12)	08:59		13:35 (26)
	22:48	22:01	20:39	19:13			16:48	16	14:58 (12)	15:51	19	13:54 (26)
2	04:33	05:26	06:35	07:41			07:53		14:41 (12)	09:01		13:37 (26)
	22:48	21:58	20:37	19:10			16:46	18	14:59 (12)	15:50	18	13:55 (26)
3	04:34	05:28	06:37	07:44			07:56		14:40 (12)	09:03		13:37 (26)
	22:47	21:56	20:34	19:07			16:44	19	14:59 (12)	15:49	18	13:55 (26)
4	04:35	05:30	06:39	07:46			07:58		14:40 (12)	09:05		13:38 (26)
	22:46	21:54	20:31	19:04			16:41	20	15:00 (12)	15:48	17	13:55 (26)
5	04:36	05:32	06:42	07:48			08:01		14:41 (12)	09:07		13:39 (26)
	22:45	21:51	20:28	19:01			16:39	19	15:00 (12)	15:47	16	13:55 (26)
6	04:37	05:35	06:44	07:50			08:03		14:41 (12)	09:08		13:40 (26)
	22:45	21:49	20:25	18:58			16:36	19	15:00 (12)	15:46	15	13:55 (26)
7	04:38	05:37	06:46	07:53			08:06		14:41 (12)	09:10		13:41 (26)
	22:44	21:46	20:22	18:56			16:34	18	14:59 (12)	15:45	14	13:55 (26)
8	04:40	05:39	06:48	07:55			08:08		14:42 (12)	09:12		13:42 (26)
	22:43	21:44	20:19	18:53			16:32	17	14:59 (12)	15:44	13	13:55 (26)
9	04:41	05:41	06:50	07:57			08:10		14:43 (12)	09:13		13:42 (26)
	22:41	21:41	20:16	18:50			16:30	16	14:59 (12)	15:44	12	13:54 (26)
10	04:42	05:44	06:53	07:59			08:13		14:43 (12)	09:15		13:43 (26)
	22:40	21:39	20:14	18:47			16:27	14	14:57 (12)	15:43	11	13:54 (26)
11	04:44	05:46	06:55	08:02			08:15		14:45 (12)	09:16		13:45 (26)
	22:39	21:36	20:11	18:44			16:25	11	14:56 (12)	15:43	9	13:54 (26)
12	04:45	05:48	06:57	08:04			08:18		14:47 (12)	09:17		13:46 (26)
	22:38	21:34	20:08	18:41			16:23	7	14:54 (12)	15:42	7	13:53 (26)
13	04:47	05:50	06:59	08:06			08:20			09:19		13:48 (26)
	22:36	21:31	20:05	18:39			16:21			15:42	5	13:53 (26)
14	04:49	05:53	07:01	08:09			08:22			09:20		13:49 (26)
	22:35	21:29	20:02	18:36			16:19			15:42	3	13:52 (26)
15	04:50	05:55	07:04	08:11			08:25		13:37 (26)	09:21		
	22:33	21:26	19:59	18:33			16:17	7	13:44 (26)	15:42		
16	04:52	05:57	07:06	08:13			08:27		13:36 (26)	09:22		
	22:32	21:23	19:56	18:30			16:15	11	13:47 (26)	15:42		
17	04:54	05:59	07:08	08:16			08:29		13:34 (26)	09:23		
	22:30	21:21	19:53	18:28			16:13	14	13:48 (26)	15:42		
18	04:56	06:01	07:10	08:18			08:32		13:33 (26)	09:24		
	22:29	21:18	19:50	18:25			16:11	17	13:50 (26)	15:42		
19	04:57	06:04	07:12	08:20			08:34		13:33 (26)	09:25		
	22:27	21:15	19:47	18:22			16:09	18	13:51 (26)	15:42		
20	04:59	06:06	07:15	08:23			08:36		13:32 (26)	09:25		
	22:25	21:13	19:45	18:19			16:07	19	13:51 (26)	15:42		
21	05:01	06:08	07:17	08:25			08:38		13:32 (26)	09:26		
	22:23	21:10	19:42	18:17			16:06	20	13:52 (26)	15:43		
22	05:03	06:10	07:19	08:27			08:41		13:32 (26)	09:27		
	22:21	21:07	19:39	18:14			16:04	20	13:52 (26)	15:43		
23	05:05	06:13	07:21	08:30			08:43		13:32 (26)	09:27		
	22:20	21:05	19:36	18:11			16:02	21	13:53 (26)	15:44		
24	05:07	06:15	07:23	08:32			08:45		13:33 (26)	09:27		
	22:18	21:02	19:33	18:09			16:00	21	13:54 (26)	15:44		
25	05:09	06:17	07:26	07:34			08:47		13:33 (26)	09:28		
	22:16	20:59	19:30	17:06			15:59	21	13:54 (26)	15:45		
26	05:11	06:19	07:28	07:37			08:49		13:33 (26)	09:28		
	22:14	20:56	19:27	17:04			15:57	21	13:54 (26)	15:46		
27	05:13	06:22	07:30	07:39			08:51		13:33 (26)	09:28		
	22:11	20:53	19:24	17:01			15:56	21	13:54 (26)	15:47		
28	05:15	06:24	07:32	07:41			08:53		13:33 (26)	09:28		
	22:09	20:51	19:21	16:58			15:55	21	13:54 (26)	15:47		
29	05:17	06:26	07:35	07:44		14:47 (12)	08:55		13:35 (26)	09:28		
	22:07	20:48	19:18	16:56	7	14:54 (12)	15:53	20	13:55 (26)	15:48		
30	05:19	06:28	07:37	07:46		14:45 (12)	08:57		13:35 (26)	09:28		13:56 (26)
	22:05	20:45	19:16	16:53	11	14:56 (12)	15:52	20	13:55 (26)	15:50	4	14:00 (26)
31	05:22	06:31		07:49		14:42 (12)				09:28		13:55 (26)
	22:03	20:42		16:51	15	14:57 (12)				15:51	6	14:01 (26)
Potential sun hours	546	478	386	319			236			199		
Total, worst case					33			486			187	
Sun reduction					0,50			0,50			0,50	
Oper. time red.					0,80			0,80			0,80	
Wind dir. red.					0,55			0,55			0,55	
Total reduction					0,22			0,22			0,22	
Total, real					7			107			41	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April	May	June
1	09:28			08:45		10:57 (37)	07:35		16:28 (17)	07:06	05:44	04:39
	15:52			16:56	40	13:50 (26)	18:04	11	16:39 (17)	20:16	21:26	22:30
2	09:27			08:43		10:59 (37)	07:32		16:27 (17)	07:04	05:41	04:38
	15:54			16:58	37	13:51 (26)	18:07	13	16:40 (17)	20:19	21:28	22:32
3	09:27			08:41		11:02 (37)	07:30		16:27 (17)	07:01	05:38	04:37
	15:55			17:01	28	13:49 (26)	18:09	14	16:41 (17)	20:21	21:30	22:33
4	09:26			08:39		13:29 (26)	07:27		16:27 (17)	06:58	05:36	04:36
	15:57			17:03	20	13:49 (26)	18:12	17	16:44 (17)	20:23	21:33	22:35
5	09:26			08:37		13:30 (26)	07:24		16:27 (17)	06:55	05:33	04:34
	15:58			17:06	17	13:47 (26)	18:14	19	16:46 (17)	20:26	21:35	22:36
6	09:25			08:34		13:33 (26)	07:21		16:28 (17)	06:52	05:31	04:33
	16:00			17:08	12	13:45 (26)	18:16	17	16:45 (17)	20:28	21:37	22:38
7	09:24			08:32			07:18		16:29 (17)	06:49	05:29	04:32
	16:01			17:11			18:19	15	16:44 (17)	20:30	21:39	22:39
8	09:23			08:30			07:15		16:30 (17)	06:46	05:26	04:32
	16:03			17:13			18:21	12	16:42 (17)	20:32	21:42	22:40
9	09:23			08:27			07:13		16:33 (17)	06:44	05:24	04:31
	16:05			17:15			18:23	6	16:39 (17)	20:35	21:44	22:41
10	09:22			08:25			07:10			06:41	05:21	04:30
	16:07			17:18			18:26			20:37	21:46	22:43
11	09:20			08:22			07:07			06:38	05:19	04:29
	16:09			17:20			18:28			20:39	21:48	22:44
12	09:19			08:20		14:57 (7)	07:04			06:35	05:17	04:29
	16:11			17:23	8	15:05 (7)	18:30			20:42	21:51	22:45
13	09:18			08:17		14:59 (7)	07:01			06:32	05:15	04:28
	16:12			17:25	11	15:10 (7)	18:33			20:44	21:53	22:45
14	09:17		11:05 (37)	08:15		15:02 (7)	06:58			06:29	05:12	04:28
	16:14	3	11:08 (37)	17:28	12	15:14 (12)	18:35			20:46	21:55	22:46
15	09:16		10:59 (37)	08:12		15:06 (12)	06:56			06:27	05:10	04:27
	16:17	10	11:09 (37)	17:30	12	15:18 (12)	18:37			20:49	21:57	22:47
16	09:14		10:52 (37)	08:10		15:06 (12)	06:53			06:24	05:08	04:27
	16:19	18	11:10 (37)	17:33	15	15:21 (12)	18:40			20:51	21:59	22:48
17	09:13		10:51 (37)	08:07		15:05 (12)	06:50			06:21	05:06	04:27
	16:21	19	11:10 (37)	17:35	16	15:21 (12)	18:42			20:53	22:02	22:48
18	09:11		10:51 (37)	08:05		15:05 (12)	06:47			06:18	05:04	04:26
	16:23	20	11:11 (37)	17:38	15	15:20 (12)	18:44			20:56	22:04	22:49
19	09:10		10:51 (37)	08:02		15:06 (12)	06:44			06:16	05:02	04:26
	16:25	21	11:12 (37)	17:40	16	15:22 (12)	18:47			20:58	22:06	22:49
20	09:08		10:51 (37)	07:59		15:07 (12)	06:41			06:13	05:00	04:26
	16:27	22	11:13 (37)	17:43	17	15:24 (12)	18:49			21:00	22:08	22:50
21	09:07		10:51 (37)	07:57		15:07 (12)	06:38			06:10	04:58	04:26
	16:30	22	11:13 (37)	17:45	20	15:27 (12)	18:51			21:02	22:10	22:50
22	09:05		10:51 (37)	07:54		15:08 (12)	06:35			06:07	04:56	04:27
	16:32	27	12:49 (32)	17:47	20	15:28 (12)	18:53			21:05	22:12	22:50
23	09:03		10:51 (37)	07:51		15:09 (12)	06:32			06:05	04:54	04:27
	16:34	39	13:02 (32)	17:50	18	15:27 (12)	18:56			21:07	22:14	22:50
24	09:01		10:52 (37)	07:49		15:12 (12)	06:30			06:02	04:52	04:27
	16:37	40	13:04 (32)	17:52	13	15:25 (12)	18:58			21:09	22:16	22:50
25	08:59		10:52 (37)	07:46		15:16 (12)	06:27			05:59	04:50	04:28
	16:39	39	13:04 (32)	17:55	5	15:21 (12)	19:00			21:12	22:18	22:50
26	08:58		10:52 (37)	07:43			06:24			05:57	04:49	04:28
	16:41	39	13:24 (26)	17:57			19:03			21:14	22:20	22:50
27	08:56		10:53 (37)	07:41			06:21			05:54	04:47	04:29
	16:44	39	13:28 (26)	18:00			19:05			21:16	22:22	22:50
28	08:54		10:53 (37)	07:38		16:32 (17)	06:18			05:51	04:45	04:29
	16:46	41	13:35 (26)	18:02	4	16:36 (17)	19:07			21:19	22:23	22:50
29	08:52		10:54 (37)				07:15			05:49	04:44	04:30
	16:48	41	13:44 (26)				20:10			21:21	22:25	22:49
30	08:50		10:55 (37)				07:12			05:46	04:42	04:31
	16:51	42	13:47 (26)				20:12			21:23	22:27	22:49
31	08:48		10:56 (37)				07:09				04:41	
	16:53	42	13:49 (26)				20:14				22:29	
Potential sun hours	221			260			365			432	521	547
Total, worst case		524			356			124				
Sun reduction		0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80				
Wind dir. red.		0,67			0,57			0,57				
Total reduction		0,27			0,23			0,23				
Total, real		139			81			28				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** T - Vaule 247

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51			08:59
	22:48	22:01	20:39	19:13			16:48			15:51
2	04:33	05:26	06:35	07:41			07:54			09:01
	22:48	21:58	20:37	19:10			16:46			15:50
3	04:34	05:28	06:37	07:44			07:56			09:03
	22:47	21:56	20:34	19:07			16:44			15:49
4	04:35	05:30	06:39	07:46			07:58		13:07 (26)	09:05
	22:46	21:54	20:31	19:04			16:41	4	13:11 (26)	15:48
5	04:36	05:33	06:42	07:48		17:09 (17)	08:01		13:02 (26)	09:07
	22:45	21:51	20:28	19:01	9	17:18 (17)	16:39	13	13:15 (26)	15:47
6	04:37	05:35	06:44	07:50		17:06 (17)	08:03		13:01 (26)	09:08
	22:45	21:49	20:25	18:58	14	17:20 (17)	16:36	17	13:18 (26)	15:46
7	04:38	05:37	06:46	07:53		17:04 (17)	08:06		12:58 (26)	09:10
	22:44	21:46	20:22	18:56	16	17:20 (17)	16:34	21	13:19 (26)	15:45
8	04:40	05:39	06:48	07:55		17:03 (17)	08:08		10:32 (37)	09:12
	22:43	21:44	20:19	18:53	18	17:21 (17)	16:32	29	13:20 (26)	15:44
9	04:41	05:41	06:50	07:57		17:02 (17)	08:10		10:30 (37)	09:13
	22:41	21:41	20:16	18:50	18	17:20 (17)	16:30	37	13:22 (26)	15:44
10	04:42	05:44	06:53	07:59		17:01 (17)	08:13		10:28 (37)	09:15
	22:40	21:39	20:14	18:47	16	17:17 (17)	16:27	40	13:21 (26)	15:43
11	04:44	05:46	06:55	08:02		17:01 (17)	08:15		10:27 (37)	09:16
	22:39	21:36	20:11	18:44	14	17:15 (17)	16:25	41	13:19 (26)	15:43
12	04:45	05:48	06:57	08:04		17:01 (17)	08:18		10:27 (37)	09:17
	22:38	21:34	20:08	18:41	12	17:13 (17)	16:23	42	13:19 (26)	15:42
13	04:47	05:50	06:59	08:06		17:02 (17)	08:20		10:25 (37)	09:19
	22:36	21:31	20:05	18:39	10	17:12 (17)	16:21	41	13:15 (26)	15:42
14	04:49	05:53	07:01	08:09		17:06 (17)	08:22		10:25 (37)	09:20
	22:35	21:29	20:02	18:36	2	17:08 (17)	16:19	41	13:07 (26)	15:42
15	04:50	05:55	07:04	08:11			08:25		10:25 (37)	09:21
	22:33	21:26	19:59	18:33			16:17	40	13:01 (26)	15:42
16	04:52	05:57	07:06	08:13			08:27		10:26 (37)	09:22
	22:32	21:23	19:56	18:30			16:15	39	12:58 (26)	15:42
17	04:54	05:59	07:08	08:16		15:45 (12)	08:29		10:25 (37)	09:23
	22:30	21:21	19:53	18:28	9	15:54 (12)	16:13	39	12:37 (32)	15:42
18	04:56	06:02	07:10	08:18		15:42 (12)	08:32		10:26 (37)	09:24
	22:29	21:18	19:50	18:25	15	15:57 (12)	16:11	40	12:38 (32)	15:42
19	04:57	06:04	07:12	08:20		15:40 (12)	08:34		10:26 (37)	09:25
	22:27	21:15	19:47	18:22	18	15:58 (12)	16:09	39	12:37 (32)	15:42
20	04:59	06:06	07:15	08:23		15:39 (12)	08:36		10:26 (37)	09:25
	22:25	21:13	19:45	18:20	21	16:00 (12)	16:07	28	12:25 (32)	15:42
21	05:01	06:08	07:17	08:25		15:37 (12)	08:38		10:27 (37)	09:26
	22:23	21:10	19:42	18:17	18	15:55 (12)	16:06	22	10:49 (37)	15:43
22	05:03	06:10	07:19	08:27		15:37 (12)	08:41		10:27 (37)	09:27
	22:21	21:07	19:39	18:14	16	15:53 (12)	16:04	22	10:49 (37)	15:43
23	05:05	06:13	07:21	08:30		15:36 (12)	08:43		10:28 (37)	09:27
	22:20	21:05	19:36	18:12	16	15:52 (12)	16:02	21	10:49 (37)	15:44
24	05:07	06:15	07:24	08:32		15:35 (12)	08:45		10:29 (37)	09:27
	22:18	21:02	19:33	18:09	16	15:51 (12)	16:01	20	10:49 (37)	15:44
25	05:09	06:17	07:26	07:34		14:36 (12)	08:47		10:29 (37)	09:28
	22:16	20:59	19:30	17:06	15	14:51 (12)	15:59	19	10:48 (37)	15:45
26	05:11	06:19	07:28	07:37		14:35 (12)	08:49		10:31 (37)	09:28
	22:14	20:56	19:27	17:04	14	14:49 (12)	15:57	18	10:49 (37)	15:46
27	05:13	06:22	07:30	07:39		14:35 (12)	08:51		10:38 (37)	09:28
	22:11	20:53	19:24	17:01	12	14:47 (12)	15:56	10	10:48 (37)	15:47
28	05:15	06:24	07:32	07:41		14:30 (7)	08:53		10:44 (37)	09:28
	22:09	20:51	19:21	16:58	12	14:42 (12)	15:55	3	10:47 (37)	15:48
29	05:17	06:26	07:35	07:44		14:27 (7)	08:55			09:28
	22:07	20:48	19:19	16:56	11	14:38 (7)	15:53			15:49
30	05:20	06:28	07:37	07:46		14:26 (7)	08:57			09:28
	22:05	20:45	19:16	16:53	8	14:34 (7)	15:52			15:50
31	05:22	06:31		07:49						09:28
	22:03	20:42		16:51						15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					330			686		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,56			0,65		
Total reduction					0,22			0,26		
Total, real					73			178		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February			March			April			May			June		
1	09:27			08:45		15:29 (8)	07:35		15:43 (13)	07:06			05:43		18:54 (37)	04:39		
	15:52			16:56	22	15:51 (8)	18:04	38	16:21 (13)	20:16			21:25	25	19:19 (37)	22:30		
2	09:27			08:43		15:29 (8)	07:32		15:44 (13)	07:04			05:41		18:56 (37)	04:38		
	15:54			16:58	23	15:52 (8)	18:07	36	16:20 (13)	20:19			21:28	20	19:16 (37)	22:32		
3	09:27			08:41		15:29 (8)	07:29		15:44 (13)	07:01		19:08 (37)	05:38		18:59 (37)	04:37		
	15:55			17:01	23	15:52 (8)	18:09	35	16:19 (13)	20:21	9	19:17 (37)	21:30	15	19:14 (37)	22:33		
4	09:26			08:39		15:29 (8)	07:27		15:45 (13)	06:58		19:03 (37)	05:36		19:04 (37)	04:36		
	15:57			17:03	24	15:53 (8)	18:11	33	16:18 (13)	20:23	18	19:21 (37)	21:32	5	19:09 (37)	22:35		
5	09:25			08:36		15:29 (8)	07:24		15:46 (13)	06:55		18:59 (37)	05:33			04:35		
	15:58			17:06	23	15:52 (8)	18:14	32	16:18 (13)	20:25	24	19:23 (37)	21:35			22:36		
6	09:25			08:34		15:28 (8)	07:21		15:48 (13)	06:52		18:57 (37)	05:31			04:33		
	16:00			17:08	24	15:52 (8)	18:16	28	16:16 (13)	20:28	28	19:25 (37)	21:37			22:37		
7	09:24			08:32		15:29 (8)	07:18		15:49 (13)	06:49		18:55 (37)	05:29			04:32		
	16:01			17:10	24	15:53 (8)	18:19	25	16:14 (13)	20:30	31	19:26 (37)	21:39			22:39		
8	09:23			08:29		15:29 (8)	07:15		15:51 (13)	06:46		18:53 (37)	05:26			04:32		
	16:03			17:13	23	15:52 (8)	18:21	21	16:12 (13)	20:32	35	19:42 (26)	21:42			22:40		
9	09:22			08:27		15:31 (8)	07:13		15:54 (13)	06:43		18:52 (37)	05:24			04:31		
	16:05			17:15	21	15:52 (8)	18:23	15	16:09 (13)	20:35	54	19:59 (26)	21:44			22:41		
10	09:21			08:25		15:31 (8)	07:10			06:41		18:51 (37)	05:21			04:30		
	16:07			17:18	20	15:51 (8)	18:26			20:37	57	19:59 (26)	21:46			22:42		
11	09:20			08:22		15:32 (8)	07:07			06:38		18:49 (37)	05:19			04:29		
	16:09			17:20	18	15:50 (8)	18:28			20:39	60	19:59 (26)	21:48			22:43		
12	09:19			08:20		15:34 (8)	07:04			06:35		18:48 (37)	05:17			04:29		
	16:11			17:23	15	15:49 (8)	18:30			20:42	62	19:58 (26)	21:50			22:44		
13	09:18			08:17		15:36 (8)	07:01			06:32		18:48 (37)	05:15			04:28		
	16:12			17:25	22	16:09 (13)	18:33			20:44	64	19:59 (26)	21:53			22:45		
14	09:17			08:15		15:54 (13)	06:58			06:29		18:47 (37)	05:12			04:28		
	16:14			17:28	18	16:12 (13)	18:35			20:46	63	19:58 (26)	21:55			22:46		
15	09:15			08:12		15:52 (13)	06:55			06:27		18:46 (37)	05:10			04:27		
	16:17			17:30	22	16:14 (13)	18:37			20:48	63	19:57 (26)	21:57			22:47		
16	09:14			08:10		15:51 (13)	06:53		17:30 (32)	06:24		18:47 (37)	05:08			04:27		
	16:19			17:33	26	16:17 (13)	18:40	8	17:38 (32)	20:51	62	19:57 (26)	21:59			22:47		
17	09:13			08:07		15:49 (13)	06:50		17:27 (32)	06:21		18:46 (37)	05:06			04:27		
	16:21			17:35	29	16:18 (13)	18:42	13	17:40 (32)	20:53	60	19:55 (26)	22:01			22:48		
18	09:11			08:04		15:47 (13)	06:47		17:25 (32)	06:18		18:45 (37)	05:04			04:26		
	16:23			17:38	32	16:19 (13)	18:44	17	17:42 (32)	20:55	58	19:53 (26)	22:04			22:49		
19	09:10			08:02		15:46 (13)	06:44		17:23 (32)	06:15		18:46 (37)	05:02			04:26		
	16:25			17:40	33	16:19 (13)	18:46	19	17:42 (32)	20:58	53	19:52 (26)	22:06			22:49		
20	09:08			07:59		15:46 (13)	06:41		17:22 (32)	06:13		18:45 (37)	05:00			04:26		
	16:27			17:43	35	16:21 (13)	18:49	21	17:43 (32)	21:00	44	19:29 (37)	22:08			22:49		
21	09:06			07:57		15:45 (13)	06:38		17:21 (32)	06:10		18:45 (37)	04:58			04:26		
	16:30			17:45	36	16:21 (13)	18:51	22	17:43 (32)	21:02	43	19:28 (37)	22:10			22:50		
22	09:05			07:54		15:44 (13)	06:35		17:21 (32)	06:07		18:46 (37)	04:56			04:27		
	16:32			17:47	37	16:21 (13)	18:53	22	17:43 (32)	21:05	43	19:29 (37)	22:12			22:50		
23	09:03			07:51		15:44 (13)	06:32		17:20 (32)	06:05		18:46 (37)	04:54			04:27		
	16:34			17:50	38	16:22 (13)	18:56	22	17:42 (32)	21:07	41	19:27 (37)	22:14			22:50		
24	09:01			07:49		15:43 (13)	06:29		17:20 (32)	06:02		18:47 (37)	04:52			04:27		
	16:36			17:52	39	16:22 (13)	18:58	22	17:42 (32)	21:09	40	19:27 (37)	22:16			22:50		
25	08:59			07:46		15:44 (13)	06:27		17:20 (32)	05:59		18:47 (37)	04:50			04:28		
	16:39			17:55	38	16:22 (13)	19:00	21	17:41 (32)	21:12	39	19:26 (37)	22:18			22:50		
26	08:57			07:43		15:43 (13)	06:24		17:20 (32)	05:57		18:48 (37)	04:49			04:28		
	16:41			17:57	39	16:22 (13)	19:03	20	17:40 (32)	21:14	37	19:25 (37)	22:20			22:50		
27	08:55		15:34 (8)	07:40		15:43 (13)	06:21		17:22 (32)	05:54		18:48 (37)	04:47			04:29		
	16:44	10	15:44 (8)	18:00	39	16:22 (13)	19:05	17	17:39 (32)	21:16	36	19:24 (37)	22:21			22:50		
28	08:54		15:33 (8)	07:38		15:43 (13)	06:18		17:24 (32)	05:51		18:50 (37)	04:45			04:29		
	16:46	13	15:46 (8)	18:02	38	16:21 (13)	19:07	13	17:37 (32)	21:19	33	19:23 (37)	22:23			22:49		
29	08:51		15:31 (8)				07:15		18:26 (32)	05:49		18:50 (37)	04:44			04:30		
	16:48	16	15:47 (8)				20:09	8	18:34 (32)	21:21	31	19:21 (37)	22:25			22:49		
30	08:49		15:31 (8)				07:12			05:46		18:52 (37)	04:42			04:31		
	16:51	18	15:49 (8)				20:12			21:23	28	19:20 (37)	22:27			22:49		
31	08:47		15:29 (8)				07:09						04:41					
	16:53	20	15:49 (8)				20:14						22:28					
Potential sun hours	221			260			365			432			521			547		
Total, worst case		77			781			508			1216			65				
Sun reduction		0,50			0,50			0,50			0,50			0,50				
Oper. time red.		0,80			0,80			0,80			0,80			0,80				
Wind dir. red.		0,53			0,54			0,58			0,68			0,68				
Total reduction		0,21			0,22			0,23			0,27			0,27				
Total, real		16			169			118			331			18				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

Shadow receptor: U - Store Svela, eiendom 60/5, Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November			December
1	04:32	05:24			06:33		18:48 (37)	07:39			07:51		15:00 (8)	08:59
	22:48	22:00			20:39	60	19:58 (26)	19:13			16:48	21	15:21 (8)	15:51
2	04:33	05:26			06:35		18:49 (37)	07:41			07:53		15:00 (8)	09:01
	22:47	21:58			20:36	57	19:57 (26)	19:10			16:46	22	15:22 (8)	15:50
3	04:34	05:28			06:37		18:49 (37)	07:43			07:56		14:59 (8)	09:03
	22:47	21:56			20:34	54	19:56 (26)	19:07			16:44	23	15:22 (8)	15:49
4	04:35	05:30			06:39		18:51 (37)	07:46		16:33 (13)	07:58		14:59 (8)	09:05
	22:46	21:53			20:31	35	19:40 (26)	19:04	11	16:44 (13)	16:41	23	15:22 (8)	15:48
5	04:36	05:33			06:42		18:52 (37)	07:48		16:29 (13)	08:01		14:59 (8)	09:07
	22:45	21:51			20:28	31	19:23 (37)	19:01	18	16:47 (13)	16:39	24	15:23 (8)	15:47
6	04:37	05:35			06:44		18:53 (37)	07:50		16:26 (13)	08:03		14:58 (8)	09:08
	22:44	21:49			20:25	28	19:21 (37)	18:58	24	16:50 (13)	16:36	24	15:22 (8)	15:46
7	04:38	05:37			06:46		18:54 (37)	07:52		16:24 (13)	08:05		14:59 (8)	09:10
	22:43	21:46			20:22	25	19:19 (37)	18:55	27	16:51 (13)	16:34	23	15:22 (8)	15:45
8	04:40	05:39			06:48		18:57 (37)	07:55		16:21 (13)	08:08		14:59 (8)	09:11
	22:42	21:44			20:19	18	19:15 (37)	18:53	30	16:51 (13)	16:32	23	15:22 (8)	15:44
9	04:41	05:41		19:10 (37)	06:50		19:00 (37)	07:57		16:21 (13)	08:10		14:59 (8)	09:13
	22:41	21:41	10	19:20 (37)	20:16	11	19:11 (37)	18:50	32	16:53 (13)	16:30	23	15:22 (8)	15:44
10	04:42	05:44		19:07 (37)	06:53			07:59		16:19 (13)	08:13		15:00 (8)	09:14
	22:40	21:39	17	19:24 (37)	20:13			18:47	34	16:53 (13)	16:27	21	15:21 (8)	15:43
11	04:44	05:46		19:04 (37)	06:55			08:02		16:18 (13)	08:15		15:01 (8)	09:16
	22:39	21:36	22	19:26 (37)	20:11			18:44	36	16:54 (13)	16:25	20	15:21 (8)	15:43
12	04:45	05:48		19:02 (37)	06:57			08:04		16:17 (13)	08:17		15:02 (8)	09:17
	22:37	21:34	26	19:28 (37)	20:08			18:41	37	16:54 (13)	16:23	19	15:21 (8)	15:42
13	04:47	05:50		19:00 (37)	06:59			08:06		16:16 (13)	08:20		15:03 (8)	09:18
	22:36	21:31	29	19:29 (37)	20:05			18:39	38	16:54 (13)	16:21	16	15:19 (8)	15:42
14	04:49	05:53		18:58 (37)	07:01		18:17 (32)	08:08		16:16 (13)	08:22		15:05 (8)	09:20
	22:35	21:28	32	19:30 (37)	20:02	7	18:24 (32)	18:36	38	16:54 (13)	16:19	13	15:18 (8)	15:42
15	04:50	05:55		18:57 (37)	07:04		18:13 (32)	08:11		16:15 (13)	08:24		15:07 (8)	09:21
	22:33	21:26	34	19:31 (37)	19:59	13	18:26 (32)	18:33	39	16:54 (13)	16:17	10	15:17 (8)	15:42
16	04:52	05:57		18:56 (37)	07:06		18:11 (32)	08:13		16:15 (13)	08:27			09:22
	22:32	21:23	36	19:32 (37)	19:56	16	18:27 (32)	18:30	39	16:54 (13)	16:15			15:42
17	04:54	05:59		18:54 (37)	07:08		18:09 (32)	08:15		16:15 (13)	08:29			09:23
	22:30	21:21	38	19:32 (37)	19:53	19	18:28 (32)	18:28	38	16:53 (13)	16:13			15:42
18	04:56	06:01		18:53 (37)	07:10		18:08 (32)	08:18		16:15 (13)	08:31			09:24
	22:28	21:18	40	19:33 (37)	19:50	20	18:28 (32)	18:25	39	16:54 (13)	16:11			15:42
19	04:57	06:04		18:52 (37)	07:12		18:08 (32)	08:20		16:15 (13)	08:34			09:24
	22:27	21:15	41	19:33 (37)	19:47	21	18:29 (32)	18:22	38	16:53 (13)	16:09			15:42
20	04:59	06:06		18:51 (37)	07:15		18:07 (32)	08:22		16:16 (13)	08:36			09:25
	22:25	21:13	42	19:33 (37)	19:44	22	18:29 (32)	18:19	36	16:52 (13)	16:07			15:42
21	05:01	06:08		18:50 (37)	07:17		18:06 (32)	08:25		16:16 (13)	08:38			09:26
	22:23	21:10	43	19:33 (37)	19:42	22	18:28 (32)	18:17	35	16:51 (13)	16:06			15:43
22	05:03	06:10		18:50 (37)	07:19		18:06 (32)	08:27		16:17 (13)	08:40			09:26
	22:21	21:07	43	19:33 (37)	19:39	22	18:28 (32)	18:14	34	16:51 (13)	16:04			15:43
23	05:05	06:13		18:49 (37)	07:21		18:06 (32)	08:29		16:17 (13)	08:43			09:27
	22:19	21:04	44	19:33 (37)	19:36	21	18:27 (32)	18:11	32	16:49 (13)	16:02			15:44
24	05:07	06:15		18:49 (37)	07:23		18:07 (32)	08:32		16:18 (13)	08:45			09:27
	22:17	21:02	54	19:55 (26)	19:33	19	18:26 (32)	18:09	31	16:49 (13)	16:01			15:44
25	05:09	06:17		18:49 (37)	07:26		18:07 (32)	07:34		15:18 (13)	08:47			09:28
	22:15	20:59	58	19:57 (26)	19:30	18	18:25 (32)	17:06	29	15:47 (13)	15:59			15:45
26	05:11	06:19		18:49 (37)	07:28		18:08 (32)	07:37		15:20 (13)	08:49			09:28
	22:13	20:56	60	19:58 (26)	19:27	15	18:23 (32)	17:04	25	15:45 (13)	15:57			15:46
27	05:13	06:22		18:48 (37)	07:30		18:09 (32)	07:39		15:22 (13)	08:51			09:28
	22:11	20:53	63	19:59 (26)	19:24	11	18:20 (32)	17:01	22	15:44 (13)	15:56			15:47
28	05:15	06:24		18:48 (37)	07:32			07:41		15:08 (8)	08:53			09:28
	22:09	20:51	63	19:59 (26)	19:21			16:58	22	15:41 (13)	15:55			15:48
29	05:17	06:26		18:48 (37)	07:34			07:44		15:05 (8)	08:55			09:28
	22:07	20:48	63	19:59 (26)	19:18			16:56	21	15:37 (13)	15:53			15:49
30	05:20	06:28		18:48 (37)	07:37			07:46		15:03 (8)	08:57			09:28
	22:05	20:45	63	19:59 (26)	19:16			16:53	16	15:19 (8)	15:52			15:50
31	05:22	06:30		18:48 (37)				07:49		15:01 (8)				09:28
	22:03	20:42	62	19:58 (26)				16:51	18	15:19 (8)				15:51
Potential sun hours	545	478			386			319			236			200
Total, worst case			983			565			839			305		
Sun reduction			0,50			0,50			0,50			0,50		
Oper. time red.			0,80			0,80			0,80			0,80		
Wind dir. red.			0,68			0,65			0,55			0,53		
Total reduction			0,27			0,26			0,22			0,21		
Total, real			268			147			184			64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** V - Osland 45

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:02 (23)	08:46	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51			09:00		11:45 (23)
	15:53	39	13:36 (24)	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49			15:51	40	13:20 (24)
2	09:28		12:01 (23)	08:44	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54			09:02		11:46 (23)
	15:54	41	13:36 (24)	16:58	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46			15:50	40	13:20 (24)
3	09:27		12:01 (23)	08:41	07:30	07:01	05:39	04:37	04:34	05:28	06:37	07:44	07:56			09:03		11:46 (23)
	15:55	41	13:36 (24)	17:01	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44			15:49	41	13:21 (24)
4	09:27		12:01 (23)	08:39	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59			09:05		11:47 (23)
	15:57	41	13:36 (24)	17:03	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41			15:48	41	13:22 (24)
5	09:26		12:01 (23)	08:37	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01			09:07		11:47 (23)
	15:58	43	13:37 (24)	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39			15:47	41	13:22 (24)
6	09:25		12:02 (23)	08:35	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03			09:09		11:48 (23)
	16:00	41	13:37 (24)	17:08	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37			15:46	42	13:23 (24)
7	09:25		12:02 (23)	08:32	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06			09:10		11:49 (23)
	16:02	41	13:37 (24)	17:11	18:19	20:30	21:40	22:39	22:44	21:47	20:23	18:56	16:34			15:45	41	13:24 (24)
8	09:24		12:02 (23)	08:30	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08			09:12		11:49 (23)
	16:03	42	13:38 (24)	17:13	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32			15:45	41	13:24 (24)
9	09:23		12:03 (23)	08:27	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11			09:13		11:50 (23)
	16:05	41	13:38 (24)	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	41	13:25 (24)
10	09:22		12:03 (23)	08:25	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13			09:15		11:50 (23)
	16:07	40	13:37 (24)	17:18	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28			15:43	41	13:25 (24)
11	09:21		12:03 (23)	08:23	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		11:52 (23)
	16:09	41	13:38 (24)	17:21	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:25			15:43	40	13:26 (24)
12	09:20		12:03 (23)	08:20	07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18			09:18		11:52 (23)
	16:11	39	13:37 (24)	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:43	39	13:26 (24)
13	09:19		12:04 (23)	08:18	07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20			09:19		11:53 (23)
	16:13	37	13:37 (24)	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21			15:42	39	13:27 (24)
14	09:17		12:04 (23)	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23			09:20		11:54 (23)
	16:15	35	13:36 (24)	17:28	18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19			15:42	38	13:27 (24)
15	09:16		12:04 (23)	08:13	06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25		11:50 (23)	09:21		11:54 (23)
	16:17	32	13:35 (24)	17:31	18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	5	11:55 (23)	15:42	38	13:27 (24)
16	09:15		12:04 (23)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27		11:47 (23)	09:22		11:55 (23)
	16:19	24	12:28 (23)	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:56	18:31	16:15	11	11:58 (23)	15:42	37	13:28 (24)
17	09:13		12:06 (23)	08:07	06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30		11:46 (23)	09:23		11:55 (23)
	16:21	24	12:30 (23)	17:36	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	15	12:01 (23)	15:42	37	13:28 (24)
18	09:12		12:06 (23)	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32		11:44 (23)	09:24		11:56 (23)
	16:23	24	12:30 (23)	17:38	18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	17	12:01 (23)	15:42	36	13:29 (24)
19	09:10		12:06 (23)	08:02	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:20	08:34		11:44 (23)	09:25		11:57 (23)
	16:25	24	12:30 (23)	17:40	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:22	16:09	19	12:03 (23)	15:42	36	13:29 (24)
20	09:09		12:07 (23)	08:00	06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36		11:44 (23)	09:26		11:58 (23)
	16:28	23	12:30 (23)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:08	20	12:04 (23)	15:43	36	13:30 (24)
21	09:07		12:08 (23)	07:57	06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39		11:43 (23)	09:26		11:59 (23)
	16:30	21	12:29 (23)	17:45	18:51	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22	12:05 (23)	15:43	35	13:31 (24)
22	09:05		12:09 (23)	07:54	06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41		11:43 (23)	09:27		11:58 (23)
	16:32	20	12:29 (23)	17:48	18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23	12:06 (23)	15:43	36	13:31 (24)
23	09:03		12:09 (23)	07:52	06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43		11:43 (23)	09:27		11:59 (23)
	16:34	19	12:28 (23)	17:50	18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23	12:06 (23)	15:44	36	13:31 (24)
24	09:02		12:10 (23)	07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		11:43 (23)	09:28		12:00 (23)
	16:37	17	12:27 (23)	17:53	18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	24	12:07 (23)	15:44	36	13:32 (24)
25	09:00		12:12 (23)	07:46	06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48		11:43 (23)	09:28		12:00 (23)
	16:39	15	12:27 (23)	17:55	19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	24	12:07 (23)	15:45	37	13:33 (24)
26	08:58		12:14 (23)	07:44	06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50		11:43 (23)	09:28		12:00 (23)
	16:41	11	12:25 (23)	17:57	19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	25	12:08 (23)	15:46	37	13:33 (24)
27	08:56		12:17 (23)	07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		11:43 (23)	09:28		12:00 (23)
	16:44	4	12:21 (23)	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	32	13:14 (24)	15:47	38	13:33 (24)
28	08:54			07:38	06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54		11:44 (23)	09:29		12:01 (23)
	16:46			18:02	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	35	13:16 (24)	15:48	37	13:34 (24)
29	08:52				07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56		11:44 (23)	09:28		12:00 (23)
	16:49				20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	37	13:17 (24)	15:49	38	13:34 (24)
30	08:50				07:13	05:46	04:42	04:31	05:20	06:29	07:37	07:47	08:58		11:44 (23)	09:28		12:01 (23)
	16:51				20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	39	13:18 (24)	15:50	39	13:35 (24)
31	08:48				07:10		04:41		05:22	06:31		07:49				09:28		12:01 (23)
	16:54				20:14		22:29		22:03	20:43		16:51				15:51	39	13:35 (24)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		820												371			1193	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,62												0,63			0,61	
Total reduction		0,25												0,25			0,24	
Total, real		203												93			290	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** W - Osland 65

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	11:14 (23)	08:46	10:11 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51		09:00		10:57 (23)
	15:53 31	12:43 (24)	16:56 18	10:29 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49		15:51	22	11:19 (23)
2	09:28	11:14 (23)	08:44	10:11 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54		09:02		10:58 (23)
	15:54 30	12:43 (24)	16:58 17	10:28 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46		15:50	21	11:19 (23)
3	09:27	11:13 (23)	08:41	10:13 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56		09:04		10:58 (23)
	15:55 31	12:43 (24)	17:01 14	10:27 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44		15:49	21	11:19 (23)
4	09:27	11:13 (23)	08:39	10:14 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59		09:05		10:59 (23)
	15:57 30	12:43 (24)	17:03 11	10:25 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41		15:48	20	11:19 (23)
5	09:26	11:14 (23)	08:37	10:17 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01		09:07		10:59 (23)
	15:58 28	12:42 (24)	17:06 7	10:24 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39		15:47	26	12:26 (24)
6	09:25	11:14 (23)	08:35		07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:47 (28)	09:09		11:00 (23)
	16:00 28	12:42 (24)	17:08		18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37 7	09:54 (28)	15:46	28	12:28 (24)
7	09:25	11:14 (23)	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:45 (28)	09:10		11:01 (23)
	16:02 26	12:41 (24)	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34 11	09:56 (28)	15:45	29	12:30 (24)
8	09:24	11:14 (23)	08:30		07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:43 (28)	09:12		11:02 (23)
	16:03 21	11:35 (23)	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32 14	09:57 (28)	15:45	30	12:31 (24)
9	09:23	11:15 (23)	08:27		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:42 (28)	09:14		11:03 (23)
	16:05 21	11:36 (23)	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30 17	09:59 (28)	15:44	30	12:32 (24)
10	09:22	11:15 (23)	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:42 (28)	09:15		11:03 (23)
	16:07 21	11:36 (23)	17:18		18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28 18	10:00 (28)	15:44	30	12:32 (24)
11	09:21	11:15 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:41 (28)	09:16		11:04 (23)
	16:09 22	11:37 (23)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26 19	10:00 (28)	15:43	30	12:33 (24)
12	09:20	11:15 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:41 (28)	09:18		11:04 (23)
	16:11 22	11:37 (23)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23 19	10:00 (28)	15:43	31	12:34 (24)
13	09:19	11:16 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:41 (28)	09:19		11:05 (23)
	16:13 22	11:38 (23)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21 20	10:01 (28)	15:42	31	12:35 (24)
14	09:17	11:16 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:42 (28)	09:20		11:06 (23)
	16:15 22	11:38 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19 19	10:01 (28)	15:42	30	12:35 (24)
15	09:16	11:16 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:41 (28)	09:21		11:06 (23)
	16:17 22	11:38 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17 20	10:01 (28)	15:42	31	12:36 (24)
16	09:15	11:16 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:42 (28)	09:22		11:08 (23)
	16:19 22	11:38 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15 19	10:01 (28)	15:42	30	12:37 (24)
17	09:13	11:18 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:43 (28)	09:23		11:09 (23)
	16:21 21	11:39 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13 26	11:08 (23)	15:42	30	12:38 (24)
18	09:12	11:18 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:43 (28)	09:24		11:08 (23)
	16:23 21	11:39 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11 29	11:10 (23)	15:42	30	12:37 (24)
19	09:10	10:13 (28)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:44 (28)	09:25		11:09 (23)
	16:25 27	11:39 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09 31	11:12 (23)	15:42	29	12:38 (24)
20	09:09	10:12 (28)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	09:45 (28)	09:26		11:10 (23)
	16:28 30	11:39 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08 32	11:13 (23)	15:43	30	12:39 (24)
21	09:07	10:11 (28)	07:57		06:39	06:10	04:58	04:27	05:01	06:09	07:17	08:25	08:39	09:46 (28)	09:26		11:11 (23)
	16:30 32	11:39 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06 32	11:14 (23)	15:43	29	12:40 (24)
22	09:05	10:10 (28)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	09:48 (28)	09:27		11:11 (23)
	16:32 32	11:38 (23)	17:48		18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:14	16:04 29	11:15 (23)	15:43	29	12:40 (24)
23	09:03	10:09 (28)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	09:49 (28)	09:27		11:11 (23)
	16:34 31	11:37 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02 27	11:15 (23)	15:44	30	12:40 (24)
24	09:02	10:09 (28)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:55 (23)	09:28		11:12 (23)
	16:37 29	11:36 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01 21	11:16 (23)	15:45	30	12:41 (24)
25	09:00	10:09 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:55 (23)	09:28		11:12 (23)
	16:39 26	11:34 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59 21	11:16 (23)	15:45	29	12:41 (24)
26	08:58	10:09 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:55 (23)	09:28		11:13 (23)
	16:41 19	10:28 (28)	17:57		19:03	21:14	22:20	22:51	22:14	20:57	19:27	17:04	15:58 22	11:17 (23)	15:46	30	12:42 (24)
27	08:56	10:09 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:55 (23)	09:28		11:13 (23)
	16:44 20	10:29 (28)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56 22	11:17 (23)	15:47	30	12:42 (24)
28	08:54	10:09 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:56 (23)	09:29		11:13 (23)
	16:46 19	10:28 (28)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55 22	11:18 (23)	15:48	31	12:43 (24)
29	08:52	10:09 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:56 (23)	09:29		11:13 (23)
	16:49 20	10:29 (28)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54 22	11:18 (23)	15:49	30	12:42 (24)
30	08:50	10:09 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:56 (23)	09:28		11:13 (23)
	16:51 19	10:28 (28)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52 22	11:18 (23)	15:50	31	12:43 (24)
31	08:48	10:10 (28)			07:10		04:41		05:22	06:31		07:49			09:28		11:14 (23)
	16:54 19	10:29 (28)			20:14		22:29		22:03	20:43		16:51			15:51	30	12:43 (24)
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case	764		67										541		888		
Sun reduction	0,50		0,50										0,50		0,50		
Oper. time red.	0,80		0,80										0,80		0,80		
Wind dir. red.	0,68		0,72										0,70		0,65		
Total reduction	0,27		0,29										0,28		0,26		
Total, real	208		19										151		231		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** X - Buevegen 2100

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January			February	March	April	May	June	July	August	September	October	November			December		
1	09:28		12:55 (12)	08:45	07:35	07:07	05:44	04:39	04:32	05:24	06:33	07:39	07:51			09:00		12:38 (12)
	15:52	16	13:11 (12)	16:56	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13	16:48			15:51	20	12:58 (12)
2	09:27		12:55 (12)	08:43	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41	07:54			09:01		12:39 (12)
	15:54	16	13:11 (12)	16:58	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10	16:46			15:50	20	12:59 (12)
3	09:27		12:55 (12)	08:41	07:30	07:01	05:38	04:37	04:34	05:28	06:37	07:44	07:56			09:03		12:40 (12)
	15:55	17	13:12 (12)	17:01	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07	16:44			15:49	20	13:00 (12)
4	09:26		12:55 (12)	08:39	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46	07:58			09:05		12:40 (12)
	15:57	17	13:12 (12)	17:03	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04	16:41			15:48	20	13:00 (12)
5	09:26		12:55 (12)	08:37	07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48	08:01			09:07		12:41 (12)
	15:58	18	13:13 (12)	17:06	18:14	20:26	21:35	22:36	22:46	21:51	20:28	19:01	16:39			15:47	19	13:00 (12)
6	09:25		12:55 (12)	08:34	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50	08:03			09:09		12:41 (12)
	16:00	19	13:14 (12)	17:08	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58	16:36			15:46	19	13:00 (12)
7	09:24		12:55 (12)	08:32	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53	08:06			09:10		12:42 (12)
	16:01	20	13:15 (12)	17:11	18:19	20:30	21:40	22:39	22:44	21:46	20:22	18:56	16:34			15:45	18	13:00 (12)
8	09:24		12:56 (12)	08:30	07:16	06:46	05:26	04:31	04:40	05:39	06:48	07:55	08:08			09:12		12:43 (12)
	16:03	19	13:15 (12)	17:13	18:21	20:33	21:42	22:40	22:43	21:44	20:19	18:53	16:32			15:44	18	13:01 (12)
9	09:23		12:55 (12)	08:27	07:13	06:44	05:24	04:31	04:41	05:41	06:51	07:57	08:10			09:13		12:43 (12)
	16:05	20	13:15 (12)	17:16	18:23	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30			15:44	17	13:00 (12)
10	09:22		12:56 (12)	08:25	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59	08:13			09:15		12:44 (12)
	16:07	20	13:16 (12)	17:18	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47	16:27			15:43	17	13:01 (12)
11	09:21		12:57 (12)	08:22	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15			09:16		12:45 (12)
	16:09	20	13:17 (12)	17:20	18:28	20:39	21:49	22:44	22:39	21:36	20:11	18:44	16:25			15:43	16	13:01 (12)
12	09:19		12:57 (12)	08:20	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04	08:18			09:17		12:45 (12)
	16:11	20	13:17 (12)	17:23	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23			15:42	16	13:01 (12)
13	09:18		12:57 (12)	08:17	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06	08:20			09:19		12:46 (12)
	16:12	20	13:17 (12)	17:25	18:33	20:44	21:53	22:46	22:36	21:31	20:05	18:39	16:21			15:42	16	13:02 (12)
14	09:17		12:58 (12)	08:15	06:58	06:29	05:12	04:28	04:49	05:53	07:02	08:09	08:22			09:20		12:47 (12)
	16:14	20	13:18 (12)	17:28	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36	16:19			15:42	14	13:01 (12)
15	09:16		12:58 (12)	08:12	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11	08:25			09:21		12:47 (12)
	16:17	20	13:18 (12)	17:30	18:37	20:49	21:57	22:47	22:34	21:26	19:59	18:33	16:17			15:42	14	13:01 (12)
16	09:14		12:58 (12)	08:10	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13	08:27			09:22		12:48 (12)
	16:19	20	13:18 (12)	17:33	18:40	20:51	22:00	22:48	22:32	21:23	19:56	18:30	16:15			15:42	13	13:01 (12)
17	09:13		12:59 (12)	08:07	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16	08:29			09:23		12:48 (12)
	16:21	19	13:18 (12)	17:35	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28	16:13			15:42	14	13:02 (12)
18	09:11		12:59 (12)	08:05	06:47	06:18	05:04	04:26	04:56	06:02	07:10	08:18	08:32			09:24		12:49 (12)
	16:23	19	13:18 (12)	17:38	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25	16:11			15:42	13	13:02 (12)
19	09:10		13:01 (12)	08:02	06:44	06:16	05:02	04:26	04:57	06:04	07:13	08:20	08:34		12:41 (12)	09:25		12:50 (12)
	16:25	18	13:19 (12)	17:40	18:47	20:58	22:06	22:49	22:27	21:15	19:48	18:22	16:09	9	12:50 (12)	15:42	13	13:03 (12)
20	09:08		13:02 (12)	07:59	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23	08:36		12:39 (12)	09:25		12:51 (12)
	16:27	16	13:18 (12)	17:43	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:20	16:07	12	12:51 (12)	15:42	12	13:03 (12)
21	09:07		13:02 (12)	07:57	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	08:38		12:38 (12)	09:26		12:51 (12)
	16:30	15	13:17 (12)	17:45	18:51	21:03	22:10	22:50	22:23	21:10	19:42	18:17	16:06	15	12:53 (12)	15:43	12	13:03 (12)
22	09:05		13:04 (12)	07:54	06:35	06:07	04:56	04:27	05:03	06:11	07:19	08:27	08:41		12:38 (12)	09:27		12:52 (12)
	16:32	12	13:16 (12)	17:48	18:54	21:05	22:12	22:50	22:22	21:07	19:39	18:14	16:04	16	12:54 (12)	15:43	12	13:04 (12)
23	09:03		13:06 (12)	07:51	06:33	06:05	04:54	04:27	05:05	06:13	07:21	08:30	08:43		12:37 (12)	09:27		12:52 (12)
	16:34	9	13:15 (12)	17:50	18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:12	16:02	18	12:55 (12)	15:44	12	13:04 (12)
24	09:01			07:49	06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45		12:38 (12)	09:28		12:52 (12)
	16:37			17:52	18:58	21:10	22:16	22:50	22:18	21:02	19:33	18:09	16:01	18	12:56 (12)	15:44	12	13:04 (12)
25	09:00			07:46	06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	08:47		12:37 (12)	09:28		12:53 (12)
	16:39			17:55	19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06	15:59	19	12:56 (12)	15:45	13	13:06 (12)
26	08:58			07:43	06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	08:49		12:37 (12)	09:28		12:53 (12)
	16:41			17:57	19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04	15:57	20	12:57 (12)	15:46	13	13:06 (12)
27	08:56			07:41	06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	08:52		12:37 (12)	09:28		12:54 (12)
	16:44			18:00	19:05	21:16	22:22	22:50	22:12	20:54	19:24	17:01	15:56	20	12:57 (12)	15:47	13	13:07 (12)
28	08:54			07:38	06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:42	08:54		12:37 (12)	09:28		12:53 (12)
	16:46			18:02	19:07	21:19	22:24	22:50	22:09	20:51	19:21	16:59	15:55	20	12:57 (12)	15:48	14	13:07 (12)
29	08:52				07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	08:56		12:38 (12)	09:28		12:53 (12)
	16:48				20:10	21:21	22:25	22:49	22:07	20:48	19:19	16:56	15:53	20	12:58 (12)	15:49	15	13:08 (12)
30	08:50				07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	08:58		12:38 (12)	09:28		12:54 (12)
	16:51				20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53	15:52	20	12:58 (12)	15:50	15	13:09 (12)
31	08:48				07:09		04:41		05:22	06:31		07:49				09:28		12:54 (12)
	16:53				20:14		22:29		22:03	20:42		16:51				15:51	15	13:09 (12)
Potential sun hours	221			260	365	432	521	547	546	478	386	319	236			199		
Total, worst case		410												207			475	
Sun reduction		0,50												0,50			0,50	
Oper. time red.		0,80												0,80			0,80	
Wind dir. red.		0,61												0,61			0,61	
Total reduction		0,24												0,24			0,24	
Total, real		99												50			115	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Y - Vaule 218

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October		November		December
1	09:28		08:45	13:54 (26)	07:35	07:06	05:44	04:39	04:32	05:24	06:33	07:39		07:51	14:48 (12)	08:59
	15:52		16:56 19	14:13 (26)	18:04	20:16	21:26	22:30	22:48	22:01	20:39	19:13		16:48 19	15:07 (12)	15:51
2	09:27		08:43	13:56 (26)	07:32	07:04	05:41	04:38	04:33	05:26	06:35	07:41		07:53	14:49 (12)	09:01
	15:54		16:58 16	14:12 (26)	18:07	20:19	21:28	22:32	22:48	21:58	20:37	19:10		16:46 17	15:06 (12)	15:50
3	09:27		08:41	13:58 (26)	07:29	07:01	05:38	04:37	04:34	05:28	06:37	07:44		07:56	14:49 (12)	09:03
	15:55		17:01 12	14:10 (26)	18:09	20:21	21:30	22:33	22:47	21:56	20:34	19:07		16:44 15	15:04 (12)	15:49
4	09:26		08:39	14:02 (26)	07:27	06:58	05:36	04:36	04:35	05:30	06:39	07:46		07:58	14:52 (12)	09:05
	15:57		17:03 5	14:07 (26)	18:12	20:23	21:33	22:35	22:46	21:54	20:31	19:04		16:41 10	15:02 (12)	15:48
5	09:26		08:37		07:24	06:55	05:33	04:34	04:36	05:33	06:42	07:48		08:01	14:56 (12)	09:07
	15:58		17:06		18:14	20:26	21:35	22:36	22:45	21:51	20:28	19:01		16:39 2	14:58 (12)	15:47
6	09:25		08:34	15:25 (12)	07:21	06:52	05:31	04:33	04:37	05:35	06:44	07:50		08:03		09:08
	16:00		17:08 4	15:29 (12)	18:16	20:28	21:37	22:38	22:45	21:49	20:25	18:58		16:36		15:46
7	09:24		08:32	15:22 (12)	07:18	06:49	05:29	04:32	04:38	05:37	06:46	07:53		08:06	13:31 (26)	09:10
	16:01		17:11 11	15:33 (12)	18:19	20:30	21:39	22:39	22:44	21:46	20:22	18:56		16:34 7	13:38 (26)	15:45
8	09:23		08:30	15:20 (12)	07:15	06:46	05:26	04:31	04:40	05:39	06:48	07:55		08:08	13:28 (26)	09:12
	16:03		17:13 15	15:35 (12)	18:21	20:32	21:42	22:40	22:43	21:44	20:19	18:53		16:32 13	13:41 (26)	15:44
9	09:23		08:27	15:19 (12)	07:13	06:44	05:24	04:31	04:41	05:41	06:50	07:57		08:10	13:27 (26)	09:13
	16:05		17:15 18	15:37 (12)	18:23	20:35	21:44	22:41	22:41	21:41	20:16	18:50		16:30 16	13:43 (26)	15:44
10	09:22		08:25	15:18 (12)	07:10	06:41	05:21	04:30	04:42	05:44	06:53	07:59		08:13	13:25 (26)	09:15
	16:07		17:18 19	15:37 (12)	18:26	20:37	21:46	22:43	22:40	21:39	20:14	18:47		16:27 19	13:44 (26)	15:43
11	09:20		08:22	15:17 (12)	07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02		08:15	13:24 (26)	09:16
	16:09		17:20 21	15:38 (12)	18:28	20:39	21:48	22:44	22:39	21:36	20:11	18:44		16:25 21	13:45 (26)	15:43
12	09:19		08:20	15:17 (12)	07:04	06:35	05:17	04:29	04:45	05:48	06:57	08:04		08:17	13:24 (26)	09:17
	16:10		17:23 22	15:39 (12)	18:30	20:42	21:51	22:45	22:38	21:34	20:08	18:41		16:23 22	13:46 (26)	15:42
13	09:18	13:53 (26)	08:17	15:17 (12)	07:01	06:32	05:15	04:28	04:47	05:50	06:59	08:06		08:20	13:23 (26)	09:19
	16:12 5	13:58 (26)	17:25 22	15:39 (12)	18:33	20:44	21:53	22:45	22:36	21:31	20:05	18:39		16:21 23	13:46 (26)	15:42
14	09:17	13:51 (26)	08:15	15:16 (12)	06:58	06:29	05:12	04:27	04:49	05:53	07:01	08:09		08:22	13:23 (26)	09:20
	16:14 9	14:00 (26)	17:28 23	15:39 (12)	18:35	20:46	21:55	22:46	22:35	21:29	20:02	18:36		16:19 24	13:47 (26)	15:42
15	09:16	13:50 (26)	08:12	15:17 (12)	06:56	06:27	05:10	04:27	04:50	05:55	07:04	08:11		08:25	11:07 (37)	09:21
	16:17 11	14:01 (26)	17:30 22	15:39 (12)	18:37	20:49	21:57	22:47	22:33	21:26	19:59	18:33		16:17 33	13:48 (26)	15:42
16	09:14	13:50 (26)	08:10	15:17 (12)	06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:13		08:27	11:06 (37)	09:22
	16:19 17	14:07 (26)	17:33 22	15:39 (12)	18:40	20:51	21:59	22:48	22:32	21:23	19:56	18:30		16:15 36	13:48 (26)	15:42
17	09:13	13:49 (26)	08:07	15:17 (12)	06:50	06:21	05:06	04:27	04:54	05:59	07:08	08:16		08:29	11:04 (37)	09:23
	16:21 21	14:10 (26)	17:35 21	15:38 (12)	18:42	20:53	22:02	22:48	22:30	21:21	19:53	18:28		16:13 40	13:48 (26)	15:42
18	09:11	11:38 (37)	08:05	15:18 (12)	06:47	06:18	05:04	04:26	04:56	06:01	07:10	08:18		08:32	11:03 (37)	09:24
	16:23 27	14:11 (26)	17:38 19	15:37 (12)	18:44	20:56	22:04	22:49	22:29	21:18	19:50	18:25		16:11 42	13:49 (26)	15:42
19	09:10	11:35 (37)	08:02	15:20 (12)	06:44	06:16	05:02	04:26	04:57	06:04	07:12	08:20		08:34	11:03 (37)	09:25
	16:25 32	14:12 (26)	17:40 17	15:37 (12)	18:47	20:58	22:06	22:49	22:27	21:15	19:47	18:22		16:09 44	13:49 (26)	15:42
20	09:08	11:32 (37)	07:59	15:21 (12)	06:41	06:13	05:00	04:26	04:59	06:06	07:15	08:23		08:36	11:02 (37)	09:25
	16:27 36	14:12 (26)	17:43 14	15:35 (12)	18:49	21:00	22:08	22:50	22:25	21:13	19:45	18:19		16:07 45	13:49 (26)	15:42
21	09:07	11:29 (37)	07:57	15:24 (12)	06:38	06:10	04:58	04:26	05:01	06:08	07:17	08:25	15:53 (12)	08:38	11:05 (37)	09:26
	16:30 42	14:13 (26)	17:45 8	15:32 (12)	18:51	21:02	22:10	22:50	22:23	21:10	19:42	18:17 10	16:03 (12)	16:06 42	13:49 (26)	15:43
22	09:05	11:27 (37)	07:54		06:35	06:07	04:56	04:27	05:03	06:10	07:19	08:27	15:51 (12)	08:41	11:08 (37)	09:27
	16:32 45	14:14 (26)	17:47		18:53	21:05	22:12	22:50	22:21	21:07	19:39	18:14 15	16:06 (12)	16:04 36	13:48 (26)	15:43
23	09:03	11:28 (37)	07:51		06:32	06:05	04:54	04:27	05:05	06:13	07:21	08:30	15:49 (12)	08:43	11:12 (37)	09:27
	16:34 44	14:14 (26)	17:50		18:56	21:07	22:14	22:50	22:20	21:05	19:36	18:11 17	16:06 (12)	16:02 32	13:49 (26)	15:44
24	09:01	11:29 (37)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:23	08:32	15:48 (12)	08:45	11:16 (37)	09:27
	16:36 42	14:15 (26)	17:52		18:58	21:09	22:16	22:50	22:18	21:02	19:33	18:09 19	16:07 (12)	16:01 28	13:49 (26)	15:44
25	08:59	11:31 (37)	07:46		06:27	05:59	04:50	04:28	05:09	06:17	07:26	07:34	14:48 (12)	08:47	13:27 (26)	09:28
	16:39 40	14:15 (26)	17:55		19:00	21:12	22:18	22:50	22:16	20:59	19:30	17:06 20	15:08 (12)	15:59 21	13:48 (26)	15:45
26	08:58	11:32 (37)	07:43		06:24	05:57	04:49	04:28	05:11	06:19	07:28	07:37	14:46 (12)	08:49	13:29 (26)	09:28
	16:41 37	14:15 (26)	17:57		19:03	21:14	22:20	22:50	22:14	20:56	19:27	17:04 22	15:08 (12)	15:57 17	13:46 (26)	15:46
27	08:56	11:34 (37)	07:41		06:21	05:54	04:47	04:29	05:13	06:22	07:30	07:39	14:46 (12)	08:51	13:29 (26)	09:28
	16:44 33	14:15 (26)	18:00		19:05	21:16	22:22	22:50	22:11	20:53	19:24	17:01 23	15:09 (12)	15:56 12	13:41 (26)	15:47
28	08:54	13:51 (26)	07:38		06:18	05:51	04:45	04:29	05:15	06:24	07:32	07:41	14:46 (12)	08:53	13:30 (26)	09:28
	16:46 24	14:15 (26)	18:02		19:07	21:19	22:23	22:50	22:09	20:51	19:21	16:58 22	15:08 (12)	15:55 9	13:39 (26)	15:47
29	08:52	13:51 (26)			07:15	05:49	04:44	04:30	05:17	06:26	07:35	07:44	14:46 (12)	08:55	13:35 (26)	09:28
	16:48 23	14:14 (26)			20:10	21:21	22:25	22:49	22:07	20:48	19:18	16:56 22	15:08 (12)	15:53 5	13:40 (26)	15:49
30	08:50	13:52 (26)			07:12	05:46	04:42	04:31	05:20	06:28	07:37	07:46	14:47 (12)	08:57		09:28
	16:51 22	14:14 (26)			20:12	21:23	22:27	22:49	22:05	20:45	19:16	16:53 21	15:08 (12)	15:52		15:50
31	08:48	13:54 (26)			07:09		04:41		05:22	06:31		07:49	14:47 (12)			09:28
	16:53 20	14:14 (26)			20:14		22:29		22:03	20:42		16:51 20	15:07 (12)			15:51
Potential sun hours	221		260		365	432	521	547	546	478	386	319		236		199
Total, worst case		530		330									211		650	
Sun reduction		0,50		0,50									0,50		0,50	
Oper. time red.		0,80		0,80									0,80		0,80	
Wind dir. red.		0,58		0,55									0,54		0,57	
Total reduction		0,23		0,22									0,22		0,23	
Total, real		122		72									46		148	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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+47 21 58 60 15
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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April		May	June
1	09:28		12:11 (32) | 08:45		10:15 (13) | 07:35		13:26 (26) | 07:07		18:42 (17) | 05:44	| 04:39
	15:52	47	14:26 (14) | 16:56	119	15:37 (35) | 18:04	35	17:05 (9) | 20:16	19	19:01 (17) | 21:26	| 22:30
2	09:27		12:11 (32) | 08:43		12:16 (32) | 07:32		15:45 (7) | 07:04		18:43 (17) | 05:41	| 04:38
	15:54	53	14:28 (14) | 16:58	114	15:38 (35) | 18:07	27	17:09 (9) | 20:19	16	18:59 (17) | 21:28	| 22:32
3	09:27		12:10 (32) | 08:41		12:17 (32) | 07:30		16:34 (12) | 07:01		18:46 (17) | 05:38	| 04:37
	15:55	58	14:29 (14) | 17:01	113	15:38 (35) | 18:09	33	17:12 (9) | 20:21	11	18:57 (17) | 21:30	| 22:33
4	09:26		12:10 (32) | 08:39		09:39 (37) | 07:27		16:31 (12) | 06:58			| 05:36	| 04:36
	15:57	61	14:29 (14) | 17:03	109	15:39 (35) | 18:12	43	17:15 (9) | 20:23			| 21:33	| 22:35
5	09:26		12:10 (32) | 08:36		09:39 (37) | 07:24		16:29 (12) | 06:55			| 05:34	| 04:35
	15:58	64	14:30 (14) | 17:06	105	15:39 (35) | 18:14	46	17:15 (9) | 20:26			| 21:35	| 22:36
6	09:25		12:09 (32) | 08:34		09:40 (37) | 07:21		16:26 (12) | 06:52			| 05:31	| 04:34
	16:00	70	14:31 (14) | 17:08	95	15:39 (35) | 18:16	49	17:15 (9) | 20:28			| 21:37	| 22:38
7	09:24		10:10 (13) | 08:32		09:40 (37) | 07:18		16:25 (12) | 06:49			| 05:29	| 04:33
	16:01	78	14:32 (14) | 17:11	96	15:39 (35) | 18:19	50	17:15 (9) | 20:30			| 21:39	| 22:39
8	09:23		10:10 (13) | 08:30		09:38 (37) | 07:15		16:23 (12) | 06:46			| 05:26	| 04:32
	16:03	84	14:33 (14) | 17:13	96	15:38 (35) | 18:21	52	17:15 (9) | 20:32			| 21:42	| 22:40
9	09:22		10:10 (13) | 08:27		09:36 (37) | 07:13		16:22 (12) | 06:44			| 05:24	| 04:31
	16:05	86	14:33 (14) | 17:16	98	15:38 (35) | 18:23	53	17:15 (9) | 20:35			| 21:44	| 22:41
10	09:21		10:11 (13) | 08:25		09:33 (37) | 07:10		16:20 (12) | 06:41			| 05:21	| 04:30
	16:07	91	14:34 (14) | 17:18	107	15:57 (7) | 18:26	54	17:14 (9) | 20:37			| 21:46	| 22:42
11	09:20		10:10 (13) | 08:22		09:29 (37) | 07:07		16:19 (12) | 06:38			| 05:19	| 04:29
	16:09	97	14:34 (14) | 17:20	114	16:00 (7) | 18:28	54	17:13 (9) | 20:39			| 21:48	| 22:44
12	09:19		10:09 (13) | 08:20		09:27 (37) | 07:04		16:18 (12) | 06:35			| 05:17	| 04:29
	16:11	102	14:35 (14) | 17:23	118	16:03 (7) | 18:30	54	17:12 (9) | 20:42			| 21:51	| 22:44
13	09:18		10:09 (13) | 08:17		09:24 (37) | 07:01		16:18 (12) | 06:32			| 05:15	| 04:28
	16:13	105	14:35 (14) | 17:25	118	16:04 (7) | 18:33	52	17:10 (9) | 20:44			| 21:53	| 22:45
14	09:17		10:10 (13) | 08:15		09:21 (37) | 06:58		16:17 (12) | 06:29			| 05:12	| 04:28
	16:15	107	14:36 (14) | 17:28	114	16:05 (7) | 18:35	51	17:08 (9) | 20:46			| 21:55	| 22:46
15	09:16		10:10 (13) | 08:12		09:18 (37) | 06:56		16:17 (12) | 06:27			| 05:10	| 04:27
	16:17	112	14:37 (14) | 17:30	120	16:07 (7) | 18:37	47	17:04 (9) | 20:49			| 21:57	| 22:47
16	09:14		10:02 (13) | 08:10		09:13 (37) | 06:53		16:17 (12) | 06:24			| 05:08	| 04:27
	16:19	119	14:37 (14) | 17:33	125	16:08 (7) | 18:40	46	17:03 (12) | 20:51			| 21:59	| 22:48
17	09:13		10:02 (13) | 08:07		09:13 (37) | 06:50		16:17 (12) | 06:21			| 05:06	| 04:27
	16:21	126	14:37 (14) | 17:35	123	16:08 (7) | 18:42	46	17:03 (12) | 20:53			| 22:02	| 22:48
18	09:11		10:02 (13) | 08:05		09:13 (37) | 06:47		16:16 (12) | 06:18			| 05:04	| 04:27
	16:23	127	14:37 (14) | 17:38	121	16:08 (7) | 18:44	46	17:02 (12) | 20:56			| 22:04	| 22:49
19	09:10		10:02 (13) | 08:02		09:15 (37) | 06:44		16:16 (12) | 06:16			| 05:02	| 04:26
	16:25	129	14:37 (14) | 17:40	118	16:09 (7) | 18:47	56	18:01 (17) | 20:58			| 22:06	| 22:49
20	09:08		10:02 (13) | 07:59		09:16 (37) | 06:41		16:16 (12) | 06:13			| 05:00	| 04:26
	16:27	130	14:37 (14) | 17:43	114	16:09 (7) | 18:49	60	18:03 (17) | 21:00			| 22:08	| 22:50
21	09:07		10:03 (13) | 07:57		09:17 (37) | 06:38		16:16 (12) | 06:10			| 04:58	| 04:27
	16:30	131	14:37 (14) | 17:45	110	16:09 (7) | 18:51	64	18:05 (17) | 21:02			| 22:10	| 22:50
22	09:05		10:03 (13) | 07:54		09:18 (37) | 06:35		16:17 (12) | 06:07			| 04:56	| 04:27
	16:32	129	14:36 (14) | 17:48	104	16:08 (7) | 18:54	63	18:05 (17) | 21:05			| 22:12	| 22:50
23	09:03		10:04 (13) | 07:51		09:20 (37) | 06:32		16:17 (12) | 06:05			| 04:54	| 04:27
	16:34	131	14:36 (14) | 17:50	95	16:08 (7) | 18:56	64	18:06 (17) | 21:07			| 22:14	| 22:50
24	09:01		10:04 (13) | 07:49		13:09 (26) | 06:30		16:18 (12) | 06:02			| 04:52	| 04:27
	16:37	128	14:35 (14) | 17:52	77	16:08 (7) | 18:58	64	18:06 (17) | 21:09			| 22:16	| 22:50
25	08:59		10:05 (13) | 07:46		13:11 (26) | 06:27		16:18 (12) | 05:59			| 04:50	| 04:28
	16:39	125	14:34 (14) | 17:55	71	16:07 (7) | 19:00	62	18:06 (17) | 21:12			| 22:18	| 22:50
26	08:58		10:05 (13) | 07:43		13:13 (26) | 06:24		16:20 (12) | 05:57			| 04:49	| 04:28
	16:41	124	15:28 (35) | 17:57	66	16:06 (7) | 19:03	61	18:07 (17) | 21:14			| 22:20	| 22:50
27	08:56		10:06 (13) | 07:41		13:16 (26) | 06:21		16:22 (12) | 05:54			| 04:47	| 04:29
	16:44	127	15:30 (35) | 18:00	58	16:05 (7) | 19:05	57	18:07 (17) | 21:16			| 22:22	| 22:50
28	08:54		10:07 (13) | 07:38		13:19 (26) | 06:18		16:23 (12) | 05:51			| 04:45	| 04:29
	16:46	130	15:33 (35) | 18:02	49	16:04 (7) | 19:07	54	18:06 (17) | 21:19			| 22:23	| 22:50
29	08:52		10:08 (13) |		| 07:15		17:26 (12) | 05:49			| 04:44	| 04:30
	16:48	131	15:35 (35) |		| 20:10	47	19:05 (17) | 21:21			| 22:25	| 22:49
30	08:50		10:09 (13) |		| 07:12		17:29 (12) | 05:46			| 04:42	| 04:31
	16:51	129	15:36 (35) |		| 20:12	38	19:04 (17) | 21:23			| 22:27	| 22:49
31	08:47		10:12 (13) |		| 07:09		18:41 (17) |			| 04:41	|
	16:53	126	15:37 (35) |		| 20:14	22	19:03 (17) |			| 22:29	|
Potential sun hours	221		| 260		| 365		| 432		| 521	| 547
Total, worst case	| 3257		| 2867		| 1550		| 46		|	|
Sun reduction	| 0,50		| 0,50		| 0,50		| 0,50		|	|
Oper. time red.	| 0,80		| 0,80		| 0,80		| 0,80		|	|
Wind dir. red.	| 0,60		| 0,59		| 0,58		| 0,62		|	|
Total reduction	| 0,24		| 0,24		| 0,23		| 0,25		|	|
Total, real	| 786		| 675		| 361		| 11		|	|

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

Shadow receptor: Z - Hytte, ikke ferdig bygd. Eiendom 57/3 - Bjerkreim kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September		October		November		December		
1	04:32	05:24	06:33		07:39		16:57 (12)	07:51	09:03 (37)	08:59	09:52 (13)
	22:48	22:01	20:39		19:13	53	17:50 (9)	16:49 107	15:26 (7)	15:51 96	14:16 (14)
2	04:33	05:26	06:35		07:41		16:58 (12)	07:53	09:06 (37)	09:01	09:53 (13)
	22:48	21:58	20:37		19:10	54	17:52 (9)	16:46 98	15:08 (35)	15:50 91	14:16 (14)
3	04:34	05:28	06:37		07:44		16:58 (12)	07:56	09:08 (37)	09:03	09:54 (13)
	22:47	21:56	20:34		19:07	54	17:52 (9)	16:44 96	15:08 (35)	15:49 88	14:17 (14)
4	04:35	05:30	06:39		07:46		16:58 (12)	07:58	09:10 (37)	09:05	09:54 (13)
	22:46	21:54	20:31		19:04	54	17:52 (9)	16:41 94	15:08 (35)	15:48 83	14:17 (14)
5	04:36	05:33	06:42		07:48		17:00 (12)	08:01	09:10 (37)	09:07	09:55 (13)
	22:45	21:51	20:28		19:01	52	17:52 (9)	16:39 95	15:09 (35)	15:47 77	14:17 (14)
6	04:37	05:35	06:44		07:50		17:00 (12)	08:03	09:10 (37)	09:08	09:57 (13)
	22:45	21:49	20:25		18:58	52	17:52 (9)	16:37 105	15:09 (35)	15:46 71	14:17 (14)
7	04:38	05:37	06:46		07:53		17:01 (12)	08:06	09:08 (37)	09:10	11:57 (32)
	22:44	21:46	20:22		18:56	50	17:51 (9)	16:34 111	15:09 (35)	15:45 64	14:17 (14)
8	04:40	05:39	06:48		07:55		17:03 (12)	08:08	11:48 (32)	09:12	11:57 (32)
	22:43	21:44	20:19		18:53	48	17:51 (9)	16:32 112	15:09 (35)	15:44 62	14:17 (14)
9	04:41	05:41	06:51	18:40 (17)	07:57		17:04 (12)	08:10	11:47 (32)	09:13	11:59 (32)
	22:41	21:41	20:16 10	18:50 (17)	18:50	46	17:50 (9)	16:30 113	15:09 (35)	15:44 57	14:17 (14)
10	04:42	05:44	06:53	18:37 (17)	07:59		17:06 (12)	08:13	09:45 (13)	09:15	12:00 (32)
	22:40	21:39	20:14 15	18:52 (17)	18:47	40	17:48 (9)	16:27 121	15:08 (35)	15:43 53	14:17 (14)
11	04:44	05:46	06:55	18:35 (17)	08:02		16:22 (7)	08:15	09:42 (13)	09:16	12:01 (32)
	22:39	21:36	20:11 19	18:54 (17)	18:44	36	17:45 (9)	16:25 127	15:08 (35)	15:43 47	14:16 (14)
12	04:45	05:48	06:57	18:34 (17)	08:04		16:18 (7)	08:17	09:41 (13)	09:17	12:03 (32)
	22:38	21:34	20:08 21	18:55 (17)	18:42	25	17:41 (9)	16:23 130	15:08 (35)	15:42 44	14:17 (14)
13	04:47	05:50	06:59	17:21 (12)	08:06		13:56 (26)	08:20	09:39 (13)	09:19	12:04 (32)
	22:36	21:31	20:05 37	18:55 (17)	18:39	42	17:38 (9)	16:21 131	15:06 (35)	15:42 39	14:17 (14)
14	04:49	05:53	07:02	17:17 (12)	08:09		13:50 (26)	08:22	09:39 (13)	09:20	12:07 (32)
	22:35	21:29	20:02 45	18:55 (17)	18:36	53	16:37 (7)	16:19 131	15:05 (35)	15:42 34	14:17 (14)
15	04:50	05:55	07:04	17:13 (12)	08:11		13:46 (26)	08:25	09:39 (13)	09:21	13:06 (26)
	22:33	21:26	19:59 52	18:55 (17)	18:33	62	16:37 (7)	16:17 128	15:03 (35)	15:42 26	14:16 (14)
16	04:52	05:57	07:06	17:11 (12)	08:13		13:44 (26)	08:27	09:39 (13)	09:22	13:08 (26)
	22:32	21:23	19:56 56	18:55 (17)	18:30	69	16:39 (7)	16:15 124	15:02 (35)	15:42 22	14:15 (14)
17	04:54	05:59	07:08	17:08 (12)	08:16		13:41 (26)	08:29	09:38 (13)	09:23	13:10 (26)
	22:30	21:21	19:53 59	18:54 (17)	18:28	75	16:39 (7)	16:13 125	14:07 (14)	15:42 18	14:15 (14)
18	04:56	06:02	07:10	17:07 (12)	08:18		09:55 (37)	08:32	09:38 (13)	09:24	13:12 (26)
	22:29	21:18	19:50 63	18:55 (17)	18:25	86	16:39 (7)	16:11 129	14:09 (14)	15:42 16	14:15 (14)
19	04:58	06:04	07:12	17:06 (12)	08:20		09:51 (37)	08:34	09:39 (13)	09:25	13:16 (3)
	22:27	21:15	19:47 63	18:54 (17)	18:22	98	16:39 (7)	16:09 131	14:11 (14)	15:42 11	14:15 (14)
20	04:59	06:06	07:15	17:04 (12)	08:23		09:49 (37)	08:36	09:38 (13)	09:25	13:16 (3)
	22:25	21:13	19:45 65	18:53 (17)	18:20	106	16:40 (7)	16:07 129	14:11 (14)	15:42 9	14:14 (14)
21	05:01	06:08	07:17	17:03 (12)	08:25		09:46 (37)	08:38	09:39 (13)	09:26	13:17 (3)
	22:23	21:10	19:42 64	18:51 (17)	18:17	113	16:39 (7)	16:06 131	14:13 (14)	15:43 9	14:15 (14)
22	05:03	06:11	07:19	17:01 (12)	08:27		09:45 (37)	08:41	09:38 (13)	09:26	13:18 (3)
	22:21	21:07	19:39 64	18:50 (17)	18:14	116	16:39 (7)	16:04 131	14:13 (14)	15:43 9	14:16 (14)
23	05:05	06:13	07:21	17:00 (12)	08:30		09:44 (37)	08:43	09:39 (13)	09:27	13:18 (3)
	22:19	21:05	19:36 62	18:48 (17)	18:12	119	16:38 (7)	16:02 128	14:14 (14)	15:44 9	14:16 (14)
24	05:07	06:15	07:24	17:00 (12)	08:32		09:43 (37)	08:45	09:39 (13)	09:27	13:18 (3)
	22:18	21:02	19:33 58	18:46 (17)	18:09	122	16:38 (7)	16:01 127	14:14 (14)	15:44 11	14:17 (14)
25	05:09	06:17	07:26	16:59 (12)	07:34		08:43 (37)	08:47	09:40 (13)	09:28	13:15 (26)
	22:16	20:59	19:30 46	17:45 (12)	17:06	123	15:38 (7)	15:59 124	14:15 (14)	15:45 14	14:17 (14)
26	05:11	06:19	07:28	16:58 (12)	07:37		08:44 (37)	08:49	09:40 (13)	09:28	13:14 (26)
	22:14	20:56	19:27 47	17:45 (12)	17:04	122	15:37 (7)	15:58 119	14:15 (14)	15:46 17	14:18 (14)
27	05:13	06:22	07:30	16:58 (12)	07:39		08:48 (37)	08:51	09:49 (13)	09:28	13:13 (26)
	22:11	20:53	19:24 46	17:44 (12)	17:01	118	15:36 (7)	15:56 112	14:16 (14)	15:47 20	14:19 (14)
28	05:15	06:24	07:32	16:58 (12)	07:41		08:51 (37)	08:53	09:49 (13)	09:28	13:12 (26)
	22:09	20:51	19:21 46	17:44 (12)	16:59	115	15:35 (7)	15:55 109	14:16 (14)	15:48 24	14:21 (14)
29	05:17	06:26	07:35	16:58 (12)	07:44		08:54 (37)	08:55	09:50 (13)	09:28	12:14 (32)
	22:07	20:48	19:19 50	17:48 (9)	16:56	119	15:34 (7)	15:53 106	14:16 (14)	15:49 31	14:23 (14)
30	05:20	06:28	07:37	16:57 (12)	07:46		08:57 (37)	08:57	09:50 (13)	09:28	12:13 (32)
	22:05	20:45	19:16 52	17:49 (9)	16:53	117	15:32 (7)	15:52 103	14:16 (14)	15:50 37	14:25 (14)
31	05:22	06:31			07:49		08:59 (37)			09:28	12:12 (32)
	22:03	20:42			16:51	115	15:29 (7)			15:51 41	14:25 (14)
Potential sun hours	546	478	386		319			236		199	
Total, worst case				1040		2454		3527		1230	
Sun reduction				0,50		0,50		0,50		0,50	
Oper. time red.				0,80		0,80		0,80		0,80	
Wind dir. red.				0,59		0,59		0,60		0,59	
Total reduction				0,24		0,24		0,24		0,24	
Total, real				245		577		846		289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AA - Heiavegen 543

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June		July		August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40		04:32	20:43 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30		22:48	1 20:44 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38		04:33		05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31		22:47		21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37		04:34		05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33		22:47		21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36		04:35		05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34		22:46		21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35		04:36		05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36		22:45		21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34		04:37		05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37		22:44		21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33		04:39		05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38		22:43		21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32		04:40		05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40		22:42		21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31		04:41		05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41		22:41		21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30		04:43		05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42		22:40		21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:39 (1)	04:44		05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	1 20:40 (1)	22:39		21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:40 (1)	04:46		05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	1 20:41 (1)	22:37		21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:39 (1)	04:47		05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	1 20:40 (1)	22:36		21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:40 (1)	04:49		05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	1 20:41 (1)	22:34		21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:40 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	2 20:42 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:40 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	2 20:42 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:40 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	2 20:42 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:41 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	2 20:43 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:41 (1)	04:58		06:04	07:12	08:20	08:33	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	2 20:43 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:41 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	2 20:43 (1)	22:25		21:12	19:44	18:20	16:07	15:43
21	09:06	07:56	06:38	06:10	04:58	04:27	20:41 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	2 20:43 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:41 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	2 20:43 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:42 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	2 20:44 (1)	22:19		21:04	19:36	18:12	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:42 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	2 20:44 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:42 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	2 20:44 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:42 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	2 20:44 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:42 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	2 20:44 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:43 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	1 20:44 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:43 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	2 20:45 (1)	22:07		20:48	19:18	16:56	15:54	15:49
30	08:49		07:12	05:46	04:42	04:31	20:43 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	22:48	1 20:44 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41			05:22		06:31		07:48		09:27
	16:53		20:14		22:28			22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547		545		478	386	319	236	200
Total, worst case						34		1						
Sun reduction						0,50		0,50						
Oper. time red.						0,80		0,80						
Wind dir. red.						0,74		0,74						
Total reduction						0,29		0,29						
Total, real						10		0						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AB - Heiavegen 541

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:27	08:45	07:35	07:06	05:44	04:40	20:27 (1)	04:32	20:33 (1)	05:24	06:33	07:39	07:51	08:59
	15:53	16:56	18:04	20:16	21:25	22:30	8 20:35 (1)	22:48	15 20:48 (1)	22:00	20:39	19:13	16:49	15:51
2	09:27	08:43	07:32	07:04	05:41	04:38	20:27 (1)	04:33	20:33 (1)	05:26	06:35	07:41	07:53	09:01
	15:54	16:58	18:07	20:19	21:28	22:31	11 20:38 (1)	22:47	15 20:48 (1)	21:58	20:36	19:10	16:46	15:50
3	09:26	08:41	07:29	07:01	05:39	04:37	20:27 (1)	04:34	20:33 (1)	05:28	06:37	07:43	07:56	09:03
	15:55	17:01	18:09	20:21	21:30	22:33	12 20:39 (1)	22:47	15 20:48 (1)	21:56	20:33	19:07	16:44	15:49
4	09:26	08:38	07:27	06:58	05:36	04:36	20:27 (1)	04:35	20:33 (1)	05:30	06:39	07:46	07:58	09:05
	15:57	17:03	18:11	20:23	21:32	22:34	12 20:39 (1)	22:46	14 20:47 (1)	21:53	20:31	19:04	16:41	15:48
5	09:25	08:36	07:24	06:55	05:34	04:35	20:27 (1)	04:36	20:33 (1)	05:33	06:42	07:48	08:00	09:06
	15:58	17:06	18:14	20:25	21:35	22:36	13 20:40 (1)	22:45	14 20:47 (1)	21:51	20:28	19:01	16:39	15:47
6	09:25	08:34	07:21	06:52	05:31	04:34	20:27 (1)	04:37	20:34 (1)	05:35	06:44	07:50	08:03	09:08
	16:00	17:08	18:16	20:28	21:37	22:37	13 20:40 (1)	22:44	13 20:47 (1)	21:48	20:25	18:58	16:37	15:46
7	09:24	08:32	07:18	06:49	05:29	04:33	20:28 (1)	04:39	20:34 (1)	05:37	06:46	07:52	08:05	09:10
	16:02	17:11	18:19	20:30	21:39	22:38	14 20:42 (1)	22:43	12 20:46 (1)	21:46	20:22	18:56	16:34	15:45
8	09:23	08:29	07:15	06:46	05:26	04:32	20:28 (1)	04:40	20:34 (1)	05:39	06:48	07:55	08:08	09:11
	16:03	17:13	18:21	20:32	21:41	22:40	14 20:42 (1)	22:42	12 20:46 (1)	21:44	20:19	18:53	16:32	15:45
9	09:22	08:27	07:12	06:44	05:24	04:31	20:28 (1)	04:41	20:35 (1)	05:41	06:50	07:57	08:10	09:13
	16:05	17:16	18:23	20:35	21:44	22:41	14 20:42 (1)	22:41	11 20:46 (1)	21:41	20:16	18:50	16:30	15:44
10	09:21	08:24	07:10	06:41	05:22	04:30	20:29 (1)	04:43	20:35 (1)	05:44	06:53	07:59	08:12	09:14
	16:07	17:18	18:26	20:37	21:46	22:42	14 20:43 (1)	22:40	11 20:46 (1)	21:39	20:13	18:47	16:27	15:43
11	09:20	08:22	07:07	06:38	05:19	04:29	20:28 (1)	04:44	20:35 (1)	05:46	06:55	08:01	08:15	09:16
	16:09	17:20	18:28	20:39	21:48	22:43	16 20:44 (1)	22:39	9 20:44 (1)	21:36	20:11	18:44	16:25	15:43
12	09:19	08:20	07:04	06:35	05:17	04:29	20:29 (1)	04:46	20:35 (1)	05:48	06:57	08:04	08:17	09:17
	16:11	17:23	18:30	20:41	21:50	22:44	16 20:45 (1)	22:37	4 20:39 (1)	21:34	20:08	18:41	16:23	15:43
13	09:18	08:17	07:01	06:32	05:15	04:28	20:29 (1)	04:47	20:35 (1)	05:50	06:59	08:06	08:20	09:18
	16:13	17:25	18:33	20:44	21:53	22:45	16 20:45 (1)	22:36	3 20:38 (1)	21:31	20:05	18:39	16:21	15:42
14	09:17	08:15	06:58	06:29	05:12	04:28	20:29 (1)	04:49	20:35 (1)	05:53	07:01	08:08	08:22	09:19
	16:15	17:28	18:35	20:46	21:55	22:46	17 20:46 (1)	22:34	2 20:37 (1)	21:28	20:02	18:36	16:19	15:42
15	09:15	08:12	06:55	06:27	05:10	04:27	20:30 (1)	04:51		05:55	07:04	08:11	08:24	09:20
	16:17	17:30	18:37	20:48	21:57	22:47	17 20:47 (1)	22:33		21:26	19:59	18:33	16:17	15:42
16	09:14	08:10	06:53	06:24	05:08	04:27	20:30 (1)	04:52		05:57	07:06	08:13	08:27	09:21
	16:19	17:33	18:40	20:51	21:59	22:47	17 20:47 (1)	22:31		21:23	19:56	18:30	16:15	15:42
17	09:12	08:07	06:50	06:21	05:06	04:27	20:30 (1)	04:54		05:59	07:08	08:15	08:29	09:22
	16:21	17:35	18:42	20:53	22:01	22:48	18 20:48 (1)	22:30		21:20	19:53	18:28	16:13	15:42
18	09:11	08:04	06:47	06:18	05:04	04:27	20:31 (1)	04:56		06:02	07:10	08:18	08:31	09:23
	16:23	17:38	18:44	20:55	22:03	22:48	17 20:48 (1)	22:28		21:18	19:50	18:25	16:11	15:42
19	09:09	08:02	06:44	06:16	05:02	04:27	20:31 (1)	04:58		06:04	07:12	08:20	08:34	09:24
	16:25	17:40	18:46	20:58	22:05	22:49	18 20:49 (1)	22:26		21:15	19:47	18:22	16:09	15:42
20	09:08	07:59	06:41	06:13	05:00	04:27	20:31 (1)	05:00		06:06	07:15	08:22	08:36	09:25
	16:27	17:43	18:49	21:00	22:07	22:49	18 20:49 (1)	22:25		21:12	19:44	18:19	16:07	15:42
21	09:06	07:56	06:38	06:10	04:58	04:27	20:31 (1)	05:01		06:08	07:17	08:25	08:38	09:25
	16:30	17:45	18:51	21:02	22:10	22:49	18 20:49 (1)	22:23		21:10	19:42	18:17	16:06	15:43
22	09:05	07:54	06:35	06:07	04:56	04:27	20:31 (1)	05:03		06:11	07:19	08:27	08:40	09:26
	16:32	17:47	18:53	21:05	22:12	22:50	18 20:49 (1)	22:21		21:07	19:39	18:14	16:04	15:43
23	09:03	07:51	06:32	06:05	04:54	04:27	20:31 (1)	05:05		06:13	07:21	08:29	08:42	09:27
	16:34	17:50	18:56	21:07	22:14	22:50	18 20:49 (1)	22:19		21:04	19:36	18:11	16:02	15:44
24	09:01	07:48	06:29	06:02	04:52	04:27	20:32 (1)	05:07		06:15	07:23	08:32	08:45	09:27
	16:37	17:52	18:58	21:09	22:15	22:50	17 20:49 (1)	22:17		21:02	19:33	18:09	16:01	15:44
25	08:59	07:46	06:27	05:59	04:51	04:28	20:32 (1)	05:09		06:17	07:26	07:34	08:47	09:27
	16:39	17:55	19:00	21:11	22:17	22:50	17 20:49 (1)	22:15		20:59	19:30	17:06	15:59	15:45
26	08:57	07:43	06:24	05:57	04:49	04:28	20:32 (1)	05:11		06:19	07:28	07:36	08:49	09:27
	16:41	17:57	19:03	21:14	22:19	22:50	18 20:50 (1)	22:13		20:56	19:27	17:04	15:58	15:46
27	08:55	07:40	06:21	05:54	04:47	04:29	20:32 (1)	05:13		06:22	07:30	07:39	08:51	09:28
	16:44	18:00	19:05	21:16	22:21	22:49	17 20:49 (1)	22:11		20:53	19:24	17:01	15:56	15:47
28	08:53	07:38	06:18	05:51	04:46	04:30	20:32 (1)	05:15		06:24	07:32	07:41	08:53	09:28
	16:46	18:02	19:07	21:18	22:23	22:49	17 20:49 (1)	22:09		20:50	19:21	16:59	15:55	15:48
29	08:51		07:15	05:49	04:44	04:30	20:33 (1)	05:18		06:26	07:34	07:44	08:55	09:28
	16:49		20:09	21:21	22:25	22:49	17 20:50 (1)	22:07		20:48	19:18	16:56	15:53	15:49
30	08:49		07:12	05:46	04:42	20:27 (1) 04:31	20:32 (1)	05:20		06:28	07:37	07:46	08:57	09:28
	16:51		20:12	21:23	22:26	2 20:29 (1) 22:48	17 20:49 (1)	22:05		20:45	19:16	16:53	15:52	15:50
31	08:47		07:09		04:41	20:27 (1)		05:22		06:31		07:48		09:27
	16:53		20:14		22:28	3 20:30 (1)		22:02		20:42		16:51		15:51
Potential sun hours	222	260	365	432	521	547	545		478	386	319	236	200
Total, worst case					5	469	150						
Sun reduction					0,50	0,50	0,50						
Oper. time red.					0,80	0,80	0,80						
Wind dir. red.					0,73	0,73	0,73						
Total reduction					0,29	0,29	0,29						
Total, real					1	138	44						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AC - Brusalivegen 201

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September		October		November	December
1	09:28	08:46		07:35		07:07	05:44	04:40	04:32	05:24	06:33		07:39	08:39 (82)	07:51	09:00
	15:53	16:56		18:05		20:17	21:26	22:30	22:48	22:01	20:40		19:13 22	09:01 (85)	16:49	15:52
2	09:27	08:43		07:33	08:13 (85)	07:04	05:42	04:39	04:33	05:27	06:35		07:42	08:36 (82)	07:54	09:01
	15:54	16:59		18:07 6	08:19 (85)	20:19	21:28	22:32	22:48	21:58	20:37		19:10 25	09:01 (85)	16:47	15:50
3	09:27	08:41		07:30	08:10 (85)	07:01	05:39	04:38	04:34	05:29	06:38		07:44	08:35 (82)	07:56	09:03
	15:56	17:01		18:10 12	08:22 (85)	20:21	21:30	22:33	22:47	21:56	20:34		19:07 26	09:01 (85)	16:44	15:49
4	09:26	08:39		07:27	08:07 (85)	06:58	05:36	04:36	04:35	05:31	06:40		07:46	08:34 (82)	07:59	09:05
	15:57	17:04		18:12 16	08:23 (85)	20:24	21:33	22:35	22:46	21:54	20:31		19:05 28	09:02 (85)	16:42	15:48
5	09:26	08:37		07:24	08:00 (82)	06:55	05:34	04:35	04:37	05:33	06:42		07:48	08:34 (82)	08:01	09:07
	15:59	17:06		18:14 24	08:24 (85)	20:26	21:35	22:36	22:45	21:51	20:28		19:02 28	09:02 (85)	16:39	15:47
6	09:25	08:34		07:21	07:58 (82)	06:53	05:32	04:34	04:38	05:35	06:44		07:51	08:33 (82)	08:03	09:08
	16:00	17:09		18:17 26	08:24 (85)	20:28	21:37	22:38	22:45	21:49	20:25		18:59 28	09:01 (85)	16:37	15:47
7	09:24	08:32		07:19	07:57 (82)	06:50	05:29	04:33	04:39	05:38	06:47		07:53	08:34 (82)	08:06	09:10
	16:02	17:11		18:19 28	08:25 (85)	20:30	21:40	22:39	22:44	21:47	20:23		18:56 27	09:01 (85)	16:35	15:46
8	09:23	08:30		07:16	07:56 (82)	06:47	05:27	04:32	04:40	05:40	06:49		07:55	08:35 (82)	08:08	09:12
	16:04	17:14		18:21 28	08:24 (85)	20:33	21:42	22:40	22:43	21:44	20:20		18:53 25	09:00 (85)	16:32	15:45
9	09:23	08:27		07:13	07:56 (82)	06:44	05:24	04:31	04:42	05:42	06:51		07:57	08:36 (82)	08:11	09:13
	16:06	17:16		18:24 28	08:24 (85)	20:35	21:44	22:41	22:41	21:42	20:17		18:50 22	08:58 (85)	16:30	15:44
10	09:22	08:25		07:10	07:56 (82)	06:41	05:22	04:31	04:43	05:44	06:53		08:00	08:43 (85)	08:13	09:15
	16:07	17:18		18:26 27	08:23 (85)	20:37	21:46	22:43	22:40	21:39	20:14		18:48 14	08:57 (85)	16:28	15:44
11	09:21	08:23		07:07	07:58 (82)	06:38	05:20	04:30	04:45	05:46	06:55		08:02	08:44 (85)	08:15	09:16
	16:09	17:21		18:28 26	08:24 (85)	20:40	21:49	22:44	22:39	21:37	20:11		18:45 10	08:54 (85)	16:26	15:43
12	09:19	08:20		07:04	07:59 (82)	06:36	05:17	04:29	04:46	05:49	06:58		08:04		08:18	09:17
	16:11	17:23		18:31 23	08:22 (85)	20:42	21:51	22:45	22:38	21:34	20:08		18:42		16:24	15:43
13	09:18	08:18		07:02	07:37 (81)	06:33	05:15	04:29	04:48	05:51	07:00	08:13 (84)	08:07		08:20	09:19
	16:13	17:26		18:33 20	08:21 (85)	20:44	21:53	22:45	22:36	21:31	20:05 8	08:21 (84)	18:39		16:22	15:43
14	09:17	08:15		06:59	07:35 (81)	06:30	05:13	04:28	04:49	05:53	07:02	08:10 (84)	08:09		08:22	09:20
	16:15	17:28		18:35 20	08:18 (85)	20:47	21:55	22:46	22:35	21:29	20:02 13	08:23 (84)	18:36		16:19	15:43
15	09:16	08:13		06:56	07:33 (81)	06:27	05:11	04:28	04:51	05:55	07:04	08:08 (84)	08:11		08:25	09:21
	16:17	17:31		18:38 14	08:14 (85)	20:49	21:57	22:47	22:33	21:26	19:59 16	08:24 (84)	18:34		16:17	15:42
16	09:14	08:10		06:53	07:32 (81)	06:24	05:09	04:28	04:53	05:58	07:06	08:08 (84)	08:13	09:01 (83)	08:27	09:22
	16:19	17:33		18:40 12	07:44 (81)	20:51	22:00	22:48	22:32	21:24	19:57 17	08:25 (84)	18:31 9	09:10 (83)	16:15	15:42
17	09:13	08:07		06:50	07:32 (81)	06:22	05:06	04:27	04:54	06:00	07:08	08:07 (84)	08:16	09:00 (83)	08:29	09:23
	16:21	17:36		18:42 12	07:44 (81)	20:53	22:02	22:48	22:30	21:21	19:54 18	08:25 (84)	18:28 12	09:12 (83)	16:13	15:42
18	09:12	08:05	08:36 (83)	06:47	07:32 (81)	06:19	05:04	04:27	04:56	06:02	07:11	08:06 (84)	08:18	08:59 (83)	08:32	09:24
	16:24	17:38 3	08:39 (83)	18:45 11	07:43 (81)	20:56	22:04	22:49	22:29	21:18	19:51 19	08:25 (84)	18:25 13	09:12 (83)	16:12	15:42
19	09:10	08:02	08:33 (83)	06:44	07:26 (84)	06:16	05:02	04:27	04:58	06:04	07:13	08:05 (84)	08:20	08:59 (83)	08:34	09:25
	16:26	17:41 7	08:40 (83)	18:47 16	07:42 (81)	20:58	22:06	22:49	22:27	21:16	19:48 19	08:24 (84)	18:23 14	09:13 (83)	16:10	15:43
20	09:08	08:00	08:30 (83)	06:42	07:23 (84)	06:13	05:00	04:27	05:00	06:07	07:15	08:05 (84)	08:23	08:58 (83)	08:36	09:25
	16:28	17:43 11	08:41 (83)	18:49 17	07:40 (81)	21:00	22:08	22:50	22:25	21:13	19:45 19	08:24 (84)	18:20 14	09:12 (83)	16:08	15:43
21	09:07	07:57	08:27 (83)	06:39	07:21 (84)	06:11	04:58	04:27	05:02	06:09	07:17	08:05 (84)	08:25	08:58 (83)	08:39	09:26
	16:30	17:46 14	08:41 (83)	18:52 15	07:36 (84)	21:03	22:10	22:50	22:23	21:10	19:42 17	08:22 (84)	18:17 14	09:12 (83)	16:06	15:43
22	09:05	07:54	08:27 (83)	06:36	07:20 (84)	06:08	04:56	04:27	05:04	06:11	07:19	08:06 (84)	08:27	09:01 (83)	08:41	09:27
	16:32	17:48 14	08:41 (83)	18:54 18	07:38 (84)	21:05	22:12	22:50	22:22	21:08	19:39 16	08:22 (84)	18:15 10	09:11 (83)	16:04	15:44
23	09:03	07:52	08:28 (83)	06:33	07:19 (84)	06:05	04:55	04:28	05:06	06:13	07:22	08:07 (84)	08:30	09:04 (83)	08:43	09:27
	16:35	17:50 13	08:41 (83)	18:56 19	07:38 (84)	21:07	22:14	22:50	22:20	21:05	19:36 17	08:24 (81)	18:12 6	09:10 (83)	16:03	15:44
24	09:01	07:49	08:28 (83)	06:30	07:19 (84)	06:02	04:53	04:28	05:08	06:15	07:24	08:09 (84)	08:32	09:06 (83)	08:45	09:27
	16:37	17:53 13	08:41 (83)	18:58 19	07:38 (84)	21:10	22:16	22:50	22:18	21:02	19:33 16	08:25 (81)	18:09 2	09:08 (83)	16:01	15:45
25	09:00	07:46	08:29 (83)	06:27	07:18 (84)	06:00	04:51	04:28	05:10	06:18	07:26	08:15 (81)	07:35		08:47	09:28
	16:39	17:55 10	08:39 (83)	19:01 19	07:37 (84)	21:12	22:18	22:50	22:16	20:59	19:30 11	08:26 (81)	17:07		16:00	15:46
26	08:58	07:44	08:30 (83)	06:24	07:18 (84)	05:57	04:49	04:29	05:12	06:20	07:28	08:14 (81)	07:37		08:49	09:28
	16:42	17:58 7	08:37 (83)	19:03 19	07:37 (84)	21:14	22:20	22:50	22:14	20:57	19:28 12	08:26 (81)	17:04		15:58	15:46
27	08:56	07:41		06:21	07:18 (84)	05:54	04:48	04:29	05:14	06:22	07:31	08:14 (81)	07:39		08:52	09:28
	16:44	18:00		19:05 18	07:36 (84)	21:17	22:22	22:50	22:12	20:54	19:25 12	08:26 (81)	17:02		15:57	15:47
28	08:54	07:38		06:18	07:18 (84)	05:52	04:46	04:30	05:16	06:24	07:33	08:14 (81)	07:42		08:54	09:28
	16:47	18:02		19:08 16	07:34 (84)	21:19	22:23	22:50	22:09	20:51	19:22 12	08:26 (81)	16:59		15:55	15:48
29	08:52			07:16	08:19 (84)	05:49	04:44	04:31	05:18	06:27	07:35	08:14 (81)	07:44		08:56	09:28
	16:49			20:10 14	08:33 (84)	21:21	22:25	22:49	22:07	20:48	19:19 19	08:57 (85)	16:56		15:54	15:49
30	08:50			07:13	08:21 (84)	05:47	04:43	04:32	05:20	06:29	07:37	08:15 (81)	07:47		08:58	09:28
	16:51			20:12 9	08:30 (84)	21:24	22:27	22:49	22:05	20:45	19:16 21	08:59 (85)	16:54		15:53	15:50
31	08:48			07:10			04:41		05:22	06:31			07:49			09:28
	16:54			20:14			22:29		22:03	20:43			16:51			15:51
Potential sun hours	222	260		365		432	521	547	545	478	386		319		236	200
Total, worst case			92		532							282		349		
Sun reduction			0,50		0,50							0,50		0,50		
Oper. time red.			0,80		0,80							0,80		0,80		
Wind dir. red.			0,73		0,70							0,69		0,72		
Total reduction			0,29		0,28							0,28		0,29		
Total, real			27		149							78		100		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April		May			June		
1	09:28	08:46		07:35	07:07		05:44		07:31 (38)	04:40		06:17 (36)
	15:53	16:56		18:05	20:17		21:26	31	08:02 (38)	22:30	23	06:40 (36)
2	09:27	08:43		07:33	07:04		05:42		07:32 (38)	04:39		06:16 (36)
	15:54	16:59		18:07	20:19		21:28	29	08:01 (38)	22:32	24	06:40 (36)
3	09:27	08:41		07:30	07:01		05:39		07:32 (38)	04:37		06:16 (36)
	15:56	17:01		18:10	20:21		21:31	27	07:59 (38)	22:34	25	06:41 (36)
4	09:26	08:39		07:27	06:58		05:36		07:34 (38)	04:36		06:16 (36)
	15:57	17:04		18:12	20:24		21:33	24	07:58 (38)	22:35	26	06:42 (36)
5	09:26	08:37		07:24	06:55		05:34		07:36 (38)	04:35		06:16 (36)
	15:59	17:06		18:14	20:26		21:35	20	07:56 (38)	22:36	27	06:43 (36)
6	09:25	08:34		07:21	06:53		05:32		07:38 (38)	04:34		06:16 (36)
	16:00	17:09		18:17	20:28		21:37	16	07:54 (38)	22:38	27	06:43 (36)
7	09:24	08:32		07:19	06:50		05:29		07:40 (38)	04:33		06:16 (36)
	16:02	17:11		18:19	20:31		21:40	10	07:50 (38)	22:39	27	06:43 (36)
8	09:24	08:30	09:03 (85)	07:16	06:47		05:27			04:32		06:15 (36)
	16:04	17:14	2 09:05 (85)	18:21	20:33		21:42			22:40	29	06:44 (36)
9	09:23	08:27	09:00 (85)	07:13	06:44		05:24			04:31		06:16 (36)
	16:06	17:16	7 09:07 (85)	18:24	20:35		21:44			22:42	29	06:45 (36)
10	09:22	08:25	08:58 (85)	07:10	06:41		07:48 (38)	05:22		04:31		06:15 (36)
	16:07	17:18	10 09:08 (85)	18:26	20:37	10	07:58 (38)	21:46		22:43	30	06:45 (36)
11	09:21	08:23	08:56 (85)	07:07	06:38		07:45 (38)	05:20		04:30		06:16 (36)
	16:09	17:21	13 09:09 (85)	18:28	20:40	17	08:02 (38)	21:49		22:44	29	06:45 (36)
12	09:20	08:20	08:55 (85)	07:04	06:36		07:41 (38)	05:17		04:29		06:15 (36)
	16:11	17:23	14 09:09 (85)	18:31	20:42	22	08:03 (38)	21:51		22:45	30	06:45 (36)
13	09:18	08:18	08:55 (85)	07:02	06:33		07:37 (38)	05:15		04:29		06:16 (36)
	16:13	17:26	14 09:09 (85)	18:33	20:44	27	08:04 (38)	21:53		22:46	30	06:46 (36)
14	09:17	08:15	08:56 (85)	06:59	06:30		07:35 (38)	05:13		04:28		06:16 (36)
	16:15	17:28	13 09:09 (85)	18:35	20:47	30	08:05 (38)	21:55		22:46	30	06:46 (36)
15	09:16	08:13	08:56 (85)	06:56	06:27		07:34 (38)	05:11		04:28		06:15 (36)
	16:17	17:31	13 09:09 (85)	18:38	20:49	33	08:07 (38)	21:57		22:47	31	06:46 (36)
16	09:14	08:10	08:56 (85)	06:53	06:24		07:33 (38)	05:09		04:28		06:16 (36)
	16:19	17:33	11 09:07 (85)	18:40	20:51	34	08:07 (38)	22:00		22:48	30	06:46 (36)
17	09:13	08:07	08:58 (85)	06:50	06:22		07:32 (38)	05:06		04:27		06:16 (36)
	16:21	17:36	7 09:05 (85)	18:42	20:54	35	08:07 (38)	22:02		22:48	31	06:47 (36)
18	09:12	08:05		06:47	06:19		07:31 (38)	05:04		04:27		06:16 (36)
	16:24	17:38		18:45	20:56	37	08:08 (38)	22:04		22:49	31	06:47 (36)
19	09:10	08:02		06:44	06:16		07:30 (38)	05:02		04:27		06:16 (36)
	16:26	17:41		18:47	20:58	38	08:08 (38)	22:06		22:49	31	06:47 (36)
20	09:08	08:00		06:42	06:13		07:30 (38)	05:00		04:27		06:16 (36)
	16:28	17:43		18:49	21:00	39	08:09 (38)	22:08		22:50	31	06:47 (36)
21	09:07	07:57		06:39	06:11		07:30 (38)	04:58		04:27		06:16 (36)
	16:30	17:46		18:52	21:03	38	08:08 (38)	22:10		22:50	31	06:47 (36)
22	09:05	07:54		06:36	06:08		07:29 (38)	04:56		04:27		06:17 (36)
	16:32	17:48		18:54	21:05	39	08:08 (38)	22:12		22:50	31	06:48 (36)
23	09:03	07:52		06:33	06:05		07:29 (38)	04:55		04:28		06:17 (36)
	16:35	17:50		18:56	21:07	39	08:08 (38)	22:14		22:50	31	06:48 (36)
24	09:02	07:49		06:30	06:02		07:29 (38)	04:53		04:28		06:17 (36)
	16:37	17:53		18:58	21:10	38	08:07 (38)	22:16		22:50	31	06:48 (36)
25	09:00	07:46		06:27	06:00		07:29 (38)	04:51		04:28		06:18 (36)
	16:39	17:55		19:01	21:12	38	08:07 (38)	22:18		22:50	31	06:49 (36)
26	08:58	07:44		06:24	05:57		07:29 (38)	04:49	06:24 (36)	04:29		06:18 (36)
	16:42	17:58		19:03	21:14	37	08:06 (38)	22:20	8 06:32 (36)	22:50	31	06:49 (36)
27	08:56	07:41		06:21	05:54		07:29 (38)	04:48	06:21 (36)	04:29		06:19 (36)
	16:44	18:00		19:05	21:17	37	08:06 (38)	22:22	13 06:34 (36)	22:50	30	06:49 (36)
28	08:54	07:38		06:18	05:52		07:29 (38)	04:46	06:20 (36)	04:30		06:18 (36)
	16:47	18:02		19:08	21:19	36	08:05 (38)	22:24	16 06:36 (36)	22:50	31	06:49 (36)
29	08:52			07:16	05:49		07:30 (38)	04:44	06:19 (36)	04:31		06:19 (36)
	16:49			20:10	21:21	34	08:04 (38)	22:25	18 06:37 (36)	22:49	30	06:49 (36)
30	08:50			07:13	05:47		07:30 (38)	04:43	06:19 (36)	04:31		06:19 (36)
	16:51			20:12	21:24	33	08:03 (38)	22:27	20 06:39 (36)	22:49	30	06:49 (36)
31	08:48			07:10				04:41	06:17 (36)			
	16:54			20:14				22:29	22 06:39 (36)			
Potential sun hours	221	260		365	432			521		547		
Total, worst case			104			691			254		878	
Sun reduction			0,50			0,50			0,50		0,50	
Oper. time red.			0,80			0,80			0,80		0,80	
Wind dir. red.			0,74			0,65			0,62		0,58	
Total reduction			0,29			0,26			0,25		0,23	
Total, real			31			178			63		204	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AD - Eiendom 121/8, Hå kommune

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September		October		November		December
1	04:32	06:20 (36)	05:24		06:33	07:44 (38)	07:39		07:51	08:28 (85)	09:00
	22:48 30	06:50 (36)	22:01		20:40 17	08:01 (38)	19:13		16:49 9	08:37 (85)	15:51
2	04:33	06:20 (36)	05:27		06:35	07:47 (38)	07:42		07:54	08:30 (85)	09:01
	22:48 30	06:50 (36)	21:58		20:37 10	07:57 (38)	19:10		16:47 6	08:36 (85)	15:50
3	04:34	06:20 (36)	05:29		06:38		07:44		07:56	08:33 (85)	09:03
	22:47 29	06:49 (36)	21:56		20:34		19:07		16:44 1	08:34 (85)	15:49
4	04:35	06:20 (36)	05:31		06:40		07:46		07:59		09:05
	22:46 29	06:49 (36)	21:54		20:31		19:05		16:42		15:48
5	04:36	06:21 (36)	05:33		06:42		07:48		08:01		09:07
	22:46 28	06:49 (36)	21:51		20:28		19:02		16:39		15:47
6	04:38	06:21 (36)	05:35	07:49 (38)	06:44		07:51		08:03		09:09
	22:45 28	06:49 (36)	21:49 13	08:02 (38)	20:25		18:59		16:37		15:47
7	04:39	06:23 (36)	05:38	07:46 (38)	06:47		07:53		08:06		09:10
	22:44 27	06:50 (36)	21:47 18	08:04 (38)	20:23		18:56		16:35		15:46
8	04:40	06:23 (36)	05:40	07:44 (38)	06:49		07:55		08:08		09:12
	22:43 26	06:49 (36)	21:44 22	08:06 (38)	20:20		18:53		16:32		15:45
9	04:42	06:23 (36)	05:42	07:43 (38)	06:51		07:57		08:11		09:13
	22:42 26	06:49 (36)	21:42 25	08:08 (38)	20:17		18:50		16:30		15:44
10	04:43	06:24 (36)	05:44	07:41 (38)	06:53		08:00		08:13		09:15
	22:40 24	06:48 (36)	21:39 28	08:09 (38)	20:14		18:48		16:28		15:44
11	04:45	06:25 (36)	05:46	07:40 (38)	06:55		08:02		08:15		09:16
	22:39 23	06:48 (36)	21:37 30	08:10 (38)	20:11		18:45		16:26		15:43
12	04:46	06:25 (36)	05:49	07:39 (38)	06:58		08:04		08:18		09:17
	22:38 23	06:48 (36)	21:34 32	08:11 (38)	20:08		18:42		16:24		15:43
13	04:48	06:26 (36)	05:51	07:38 (38)	07:00		08:07		08:20		09:19
	22:36 21	06:47 (36)	21:32 33	08:11 (38)	20:05		18:39		16:22		15:43
14	04:49	06:28 (36)	05:53	07:37 (38)	07:02		08:09		08:22		09:20
	22:35 18	06:46 (36)	21:29 35	08:12 (38)	20:02		18:36		16:19		15:43
15	04:51	06:28 (36)	05:55	07:36 (38)	07:04		08:11		08:25		09:21
	22:34 17	06:45 (36)	21:26 36	08:12 (38)	19:59		18:34		16:17		15:42
16	04:53	06:30 (36)	05:58	07:36 (38)	07:06		08:14		08:27		09:22
	22:32 14	06:44 (36)	21:24 37	08:13 (38)	19:57		18:31		16:15		15:42
17	04:54	06:31 (36)	06:00	07:35 (38)	07:09		08:16		08:29		09:23
	22:30 11	06:42 (36)	21:21 38	08:13 (38)	19:54		18:28		16:13		15:42
18	04:56	06:35 (36)	06:02	07:36 (38)	07:11		08:18		08:32		09:24
	22:29 5	06:40 (36)	21:18 38	08:14 (38)	19:51		18:25		16:12		15:42
19	04:58		06:04	07:35 (38)	07:13		08:21		08:34		09:25
	22:27		21:16 39	08:14 (38)	19:48		18:23		16:10		15:43
20	05:00		06:07	07:35 (38)	07:15		08:23		08:36		09:25
	22:25		21:13 38	08:13 (38)	19:45		18:20		16:08		15:43
21	05:02		06:09	07:34 (38)	07:17		08:25		08:39		09:26
	22:23		21:10 39	08:13 (38)	19:42		18:17		16:06		15:43
22	05:04		06:11	07:34 (38)	07:20		08:28		08:41		09:27
	22:22		21:08 39	08:13 (38)	19:39		18:15		16:04		15:44
23	05:06		06:13	07:34 (38)	07:22		08:30		08:43		09:27
	22:20		21:05 38	08:12 (38)	19:36		18:12		16:03		15:44
24	05:08		06:15	07:34 (38)	07:24		08:32	09:30 (85)	08:45		09:28
	22:18		21:02 37	08:11 (38)	19:33		18:09 3	09:33 (85)	16:01		15:45
25	05:10		06:18	07:34 (38)	07:26		07:35	08:28 (85)	08:47		09:28
	22:16		20:59 37	08:11 (38)	19:30		17:07 8	08:36 (85)	16:00		15:46
26	05:12		06:20	07:34 (38)	07:28		07:37	08:27 (85)	08:50		09:28
	22:14		20:57 36	08:10 (38)	19:28		17:04 11	08:38 (85)	15:58		15:46
27	05:14		06:22	07:35 (38)	07:31		07:39	08:25 (85)	08:52		09:28
	22:12		20:54 34	08:09 (38)	19:25		17:02 13	08:38 (85)	15:57		15:47
28	05:16		06:24	07:35 (38)	07:33		07:42	08:25 (85)	08:54		09:28
	22:10		20:51 32	08:07 (38)	19:22		16:59 14	08:39 (85)	15:55		15:48
29	05:18		06:27	07:36 (38)	07:35		07:44	08:24 (85)	08:56		09:28
	22:07		20:48 30	08:06 (38)	19:19		16:56 14	08:38 (85)	15:54		15:49
30	05:20		06:29	07:38 (38)	07:37		07:47	08:25 (85)	08:58		09:28
	22:05		20:45 27	08:05 (38)	19:16		16:54 13	08:38 (85)	15:53		15:50
31	05:22		06:31	07:41 (38)			07:49	08:26 (85)			09:28
	22:03		20:43 22	08:03 (38)			16:51 12	08:38 (85)			15:51
Potential sun hours	545		478		386		319		236		200
Total, worst case	409		833		27		88		16		
Sun reduction	0,50		0,50		0,50		0,50		0,50		
Oper. time red.	0,80		0,80		0,80		0,80		0,80		
Wind dir. red.	0,58		0,65		0,65		0,74		0,74		
Total reduction	0,23		0,26		0,26		0,29		0,29		
Total, real	95		215		7		26		5		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April		May			June		
1	09:28		08:46			07:35		08:16 (85)	07:07		05:44			04:40		06:01 (38)
	15:53		16:56			18:05	15	08:31 (85)	20:17		21:26			22:30	34	06:35 (38)
2	09:27		08:43			07:33		08:17 (85)	07:04		05:42			04:39		06:01 (38)
	15:54		16:59			18:07	13	08:30 (85)	20:19		21:28			22:32	35	06:36 (38)
3	09:27		08:41			07:30		08:18 (85)	07:01		05:39			04:38		06:01 (38)
	15:56		17:01			18:10	10	08:28 (85)	20:21		21:30			22:33	35	06:36 (38)
4	09:26		08:39			07:27		08:20 (85)	06:58		05:37			04:36		06:00 (38)
	15:57		17:04			18:12	5	08:25 (85)	20:24		21:33			22:35	36	06:36 (38)
5	09:26		08:37			07:24			06:55		05:34			04:35		06:01 (38)
	15:59		17:06			18:14			20:26		21:35			22:36	36	06:37 (38)
6	09:25		08:34			07:21			06:53		05:32			04:34		06:01 (38)
	16:00		17:09			18:17			20:28		21:37			22:38	36	06:37 (38)
7	09:24		08:32			07:19			06:50		05:29			04:33		06:01 (38)
	16:02		17:11			18:19			20:31		21:40			22:39	36	06:37 (38)
8	09:24		08:30			07:16		07:46 (84)	06:47		05:27			04:32		06:01 (38)
	16:04		17:14			18:21	7	07:53 (84)	20:33		21:42			22:40	36	06:37 (38)
9	09:23		08:27			07:13		07:44 (84)	06:44		05:24			04:31		06:02 (38)
	16:06		17:16			18:24	10	07:54 (84)	20:35		21:44			22:41	36	06:38 (38)
10	09:22		08:25			07:10		07:43 (84)	06:41		05:22			04:31		06:01 (38)
	16:07		17:19			18:26	13	07:56 (84)	20:37		21:46			22:43	37	06:38 (38)
11	09:21		08:23			07:07		07:42 (84)	06:38		05:20			04:30		06:02 (38)
	16:09		17:21			18:28	14	07:56 (84)	20:40		21:49			22:44	37	06:39 (38)
12	09:20		08:20			07:04		07:42 (84)	06:36		05:17			04:29		06:02 (38)
	16:11		17:23			18:31	14	07:56 (84)	20:42		21:51			22:45	36	06:38 (38)
13	09:18		08:18			07:02		07:41 (84)	06:33		05:15			04:29		06:02 (38)
	16:13		17:26			18:33	15	07:56 (84)	20:44		21:53			22:46	37	06:39 (38)
14	09:17		08:15			06:59		07:42 (84)	06:30		05:13			04:28		06:03 (38)
	16:15		17:28			18:35	13	07:55 (84)	20:47		21:55			22:46	36	06:39 (38)
15	09:16		08:13			06:56		07:42 (84)	06:27		05:11			04:28		06:02 (38)
	16:17		17:31			18:38	11	07:53 (84)	20:49		21:57			22:47	37	06:39 (38)
16	09:14		08:10			06:53		07:44 (84)	06:24		05:09			04:28		06:02 (38)
	16:19		17:33			18:40	7	07:51 (84)	20:51		22:00			22:48	37	06:39 (38)
17	09:13		08:07			06:50			06:22		05:06		06:12 (38)	04:27		06:03 (38)
	16:21		17:36			18:42			20:54		22:02	10	06:22 (38)	22:48	37	06:40 (38)
18	09:12		08:05			06:47			06:19		05:04		06:11 (38)	04:27		06:03 (38)
	16:24		17:38			18:45			20:56		22:04	14	06:25 (38)	22:49	37	06:40 (38)
19	09:10		08:02			06:44			06:16		05:02		06:09 (38)	04:27		06:03 (38)
	16:26		17:41			18:47			20:58		22:06	18	06:27 (38)	22:49	37	06:40 (38)
20	09:08		08:00			06:42			06:13		05:00		06:08 (38)	04:27		06:03 (38)
	16:28		17:43			18:49			21:00		22:08	20	06:28 (38)	22:50	37	06:40 (38)
21	09:07		07:57			06:39			06:11		04:58		06:06 (38)	04:27		06:03 (38)
	16:30		17:46			18:52			21:03		22:10	23	06:29 (38)	22:50	37	06:40 (38)
22	09:05		07:54			06:36			06:08		04:56		06:05 (38)	04:27		06:04 (38)
	16:32		17:48			18:54			21:05		22:12	25	06:30 (38)	22:50	37	06:41 (38)
23	09:03		07:52		08:21 (85)	06:33			06:05		04:55		06:03 (38)	04:28		06:04 (38)
	16:35		17:50	8	08:29 (85)	18:56			21:07		22:14	28	06:31 (38)	22:50	37	06:41 (38)
24	09:02		07:49		08:18 (85)	06:30			06:02		04:53		06:03 (38)	04:28		06:04 (38)
	16:37		17:53	12	08:30 (85)	18:58			21:10		22:16	29	06:32 (38)	22:50	37	06:41 (38)
25	09:00		07:46		08:17 (85)	06:27			06:00		04:51		06:02 (38)	04:28		06:05 (38)
	16:39		17:55	14	08:31 (85)	19:01			21:12		22:18	30	06:32 (38)	22:50	37	06:42 (38)
26	08:58		07:44		08:16 (85)	06:24			05:57		04:49		06:02 (38)	04:29		06:05 (38)
	16:42		17:58	15	08:31 (85)	19:03			21:14		22:20	31	06:33 (38)	22:50	36	06:41 (38)
27	08:56		07:41		08:15 (85)	06:21			05:54		04:48		06:01 (38)	04:29		06:05 (38)
	16:44		18:00	16	08:31 (85)	19:05			21:17		22:22	32	06:33 (38)	22:50	37	06:42 (38)
28	08:54		07:38		08:15 (85)	06:18			05:52		04:46		06:01 (38)	04:30		06:05 (38)
	16:47		18:02	15	08:30 (85)	19:08			21:19		22:24	33	06:34 (38)	22:50	37	06:42 (38)
29	08:52					07:16			05:49		04:44		06:01 (38)	04:31		06:05 (38)
	16:49					20:10			21:21		22:25	34	06:35 (38)	22:49	37	06:42 (38)
30	08:50					07:13			05:47		04:43		06:01 (38)	04:32		06:06 (38)
	16:51					20:12			21:24		22:27	34	06:35 (38)	22:49	37	06:43 (38)
31	08:48					07:10					04:41		06:01 (38)			
	16:54					20:14					22:29	34	06:35 (38)			
Potential sun hours	221		260			365			432		521			547		
Total, worst case				80			147					395			1094	
Sun reduction				0,50			0,50					0,50			0,50	
Oper. time red.				0,80			0,80					0,80			0,80	
Wind dir. red.				0,72			0,71					0,58			0,58	
Total reduction				0,29			0,28					0,23			0,23	
Total, real				23			42					91			252	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AE - Brusalivegen 217

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August	September			October			November	December
1	04:32		06:06 (38)	05:24	06:33			07:39		08:21 (84)	07:51	09:00
	22:48	37	06:43 (38)	22:01	20:40			19:13	14	08:35 (84)	16:49	15:52
2	04:33		06:07 (38)	05:27	06:35			07:42		08:20 (84)	07:54	09:01
	22:48	36	06:43 (38)	21:58	20:37			19:10	15	08:35 (84)	16:47	15:50
3	04:34		06:06 (38)	05:29	06:38			07:44		08:20 (84)	07:56	09:03
	22:47	37	06:43 (38)	21:56	20:34			19:07	13	08:33 (84)	16:44	15:49
4	04:35		06:06 (38)	05:31	06:40			07:46		08:21 (84)	07:59	09:05
	22:46	37	06:43 (38)	21:54	20:31			19:05	12	08:33 (84)	16:42	15:48
5	04:37		06:06 (38)	05:33	06:42			07:48		08:22 (84)	08:01	09:07
	22:46	37	06:43 (38)	21:51	20:28			19:02	9	08:31 (84)	16:39	15:47
6	04:38		06:08 (38)	05:35	06:44			07:51			08:03	09:09
	22:45	36	06:44 (38)	21:49	20:25			18:59			16:37	15:47
7	04:39		06:08 (38)	05:38	06:47			07:53			08:06	09:10
	22:44	36	06:44 (38)	21:47	20:23			18:56			16:35	15:46
8	04:40		06:08 (38)	05:40	06:49			07:55			08:08	09:12
	22:43	36	06:44 (38)	21:44	20:20			18:53			16:32	15:45
9	04:42		06:08 (38)	05:42	06:51			07:57			08:11	09:13
	22:42	36	06:44 (38)	21:42	20:17			18:50			16:30	15:44
10	04:43		06:08 (38)	05:44	06:53			08:00		08:54 (85)	08:13	09:15
	22:40	35	06:43 (38)	21:39	20:14			18:48	7	09:01 (85)	16:28	15:44
11	04:45		06:09 (38)	05:46	06:55			08:02		08:51 (85)	08:15	09:16
	22:39	35	06:44 (38)	21:37	20:11			18:45	11	09:02 (85)	16:26	15:43
12	04:46		06:09 (38)	05:49	06:58			08:04		08:49 (85)	08:18	09:17
	22:38	35	06:44 (38)	21:34	20:08			18:42	14	09:03 (85)	16:24	15:43
13	04:48		06:09 (38)	05:51	07:00			08:07		08:49 (85)	08:20	09:19
	22:36	34	06:43 (38)	21:31	20:05			18:39	15	09:04 (85)	16:22	15:43
14	04:49		06:10 (38)	05:53	07:02			08:09		08:48 (85)	08:22	09:20
	22:35	33	06:43 (38)	21:29	20:02			18:36	15	09:03 (85)	16:19	15:43
15	04:51		06:10 (38)	05:55	07:04			08:11		08:48 (85)	08:25	09:21
	22:34	33	06:43 (38)	21:26	19:59			18:34	16	09:04 (85)	16:17	15:42
16	04:53		06:11 (38)	05:58	07:06			08:14		08:48 (85)	08:27	09:22
	22:32	32	06:43 (38)	21:24	19:57			18:31	15	09:03 (85)	16:15	15:42
17	04:54		06:11 (38)	06:00	07:09			08:16		08:49 (85)	08:29	09:23
	22:30	31	06:42 (38)	21:21	19:54			18:28	13	09:02 (85)	16:14	15:42
18	04:56		06:12 (38)	06:02	07:11			08:18		08:50 (85)	08:32	09:24
	22:29	30	06:42 (38)	21:18	19:51			18:25	11	09:01 (85)	16:12	15:42
19	04:58		06:13 (38)	06:04	07:13			08:20		08:53 (85)	08:34	09:25
	22:27	29	06:42 (38)	21:16	19:48			18:23	6	08:59 (85)	16:10	15:43
20	05:00		06:13 (38)	06:07	07:15			08:23			08:36	09:25
	22:25	28	06:41 (38)	21:13	19:45			18:20			16:08	15:43
21	05:02		06:14 (38)	06:09	07:17			08:25			08:39	09:26
	22:23	27	06:41 (38)	21:10	19:42			18:17			16:06	15:43
22	05:04		06:16 (38)	06:11	07:20			08:28			08:41	09:27
	22:22	24	06:40 (38)	21:08	19:39			18:15			16:04	15:44
23	05:06		06:17 (38)	06:13	07:22			08:30			08:43	09:27
	22:20	21	06:38 (38)	21:05	19:36			18:12			16:03	15:44
24	05:08		06:18 (38)	06:15	07:24			08:32			08:45	09:28
	22:18	19	06:37 (38)	21:02	19:33			18:09			16:01	15:45
25	05:10		06:20 (38)	06:18	07:26			07:35			08:47	09:28
	22:16	16	06:36 (38)	20:59	19:30			17:07			16:00	15:46
26	05:12		06:22 (38)	06:20	07:28			07:37			08:49	09:28
	22:14	12	06:34 (38)	20:57	19:28			17:04			15:58	15:46
27	05:14		06:25 (38)	06:22	07:31		08:27 (84)	07:39			08:52	09:28
	22:12	6	06:31 (38)	20:54	19:25	5	08:32 (84)	17:02			15:57	15:47
28	05:16			06:24	07:33		08:24 (84)	07:42			08:54	09:28
	22:10			20:51	19:22	10	08:34 (84)	16:59			15:55	15:48
29	05:18			06:27	07:35		08:22 (84)	07:44			08:56	09:28
	22:07			20:48	19:19	12	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29	07:37		08:21 (84)	07:47			08:58	09:28
	22:05			20:45	19:16	14	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31				07:49				09:28
	22:03			20:43				16:51				15:51
Potential sun hours	545			478	386			319			236	200
Total, worst case		808				41			186			
Sun reduction		0,50				0,50			0,50			
Oper. time red.		0,80				0,80			0,80			
Wind dir. red.		0,58				0,70			0,72			
Total reduction		0,23				0,28			0,29			
Total, real		186				11			53			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February			March			April		May			June		
1	09:28		08:46			07:35		08:18 (85)	07:07		05:44			04:40		06:18 (38)
	15:53		16:56			18:05	13	08:31 (85)	20:17		21:26			22:30	28	06:46 (38)
2	09:27		08:43			07:33		08:19 (85)	07:04		05:42			04:39		06:18 (38)
	15:54		16:59			18:07	10	08:29 (85)	20:19		21:28			22:32	28	06:46 (38)
3	09:27		08:41			07:30		08:21 (85)	07:01		05:39			04:38		06:17 (38)
	15:56		17:01			18:10	5	08:26 (85)	20:21		21:31			22:33	29	06:46 (38)
4	09:26		08:39			07:27			06:58		05:37			04:36		06:16 (38)
	15:57		17:04			18:12			20:24		21:33			22:35	30	06:46 (38)
5	09:26		08:37			07:24			06:55		05:34			04:35		06:16 (38)
	15:59		17:06			18:14			20:26		21:35			22:36	31	06:47 (38)
6	09:25		08:34			07:21			06:53		05:32			04:34		06:15 (38)
	16:00		17:09			18:17			20:28		21:37			22:38	32	06:47 (38)
7	09:24		08:32			07:19		07:48 (84)	06:50		05:29			04:33		06:14 (38)
	16:02		17:11			18:19	6	07:54 (84)	20:31		21:40			22:39	32	06:46 (38)
8	09:24		08:30			07:16		07:46 (84)	06:47		05:27			04:32		06:13 (38)
	16:04		17:14			18:21	10	07:56 (84)	20:33		21:42			22:40	33	06:46 (38)
9	09:23		08:27			07:13		07:44 (84)	06:44		05:24			04:31		06:14 (38)
	16:06		17:16			18:24	13	07:57 (84)	20:35		21:44			22:41	33	06:47 (38)
10	09:22		08:25			07:10		07:44 (84)	06:41		05:22			04:31		06:13 (38)
	16:07		17:19			18:26	14	07:58 (84)	20:37		21:46			22:43	33	06:46 (38)
11	09:21		08:23			07:07		07:44 (84)	06:38		05:20			04:30		06:14 (38)
	16:09		17:21			18:28	14	07:58 (84)	20:40		21:49			22:44	33	06:47 (38)
12	09:20		08:20			07:04		07:44 (84)	06:36		05:17			04:29		06:14 (38)
	16:11		17:23			18:31	13	07:57 (84)	20:42		21:51			22:45	32	06:46 (38)
13	09:18		08:18			07:02		07:44 (84)	06:33		05:15			04:29		06:14 (38)
	16:13		17:26			18:33	12	07:56 (84)	20:44		21:53			22:46	33	06:47 (38)
14	09:17		08:15			06:59		07:45 (84)	06:30		05:13			04:28		06:15 (38)
	16:15		17:28			18:35	10	07:55 (84)	20:47		21:55			22:46	32	06:47 (38)
15	09:16		08:13			06:56		07:46 (84)	06:27		05:11			04:28		06:15 (38)
	16:17		17:31			18:38	6	07:52 (84)	20:49		21:57			22:47	32	06:47 (38)
16	09:14		08:10			06:53			06:24		05:09		06:39 (38)	04:28		06:15 (38)
	16:19		17:33			18:40			20:51		22:00	2	06:41 (38)	22:48	32	06:47 (38)
17	09:13		08:07			06:50			06:22		05:06		06:37 (38)	04:27		06:15 (38)
	16:21		17:36			18:42			20:54		22:02	4	06:41 (38)	22:48	32	06:47 (38)
18	09:12		08:05			06:47			06:19		05:04		06:36 (38)	04:27		06:16 (38)
	16:24		17:38			18:45			20:56		22:04	7	06:43 (38)	22:49	31	06:47 (38)
19	09:10		08:02			06:44			06:16		05:02		06:35 (38)	04:27		06:16 (38)
	16:26		17:41			18:47			20:58		22:06	8	06:43 (38)	22:49	31	06:47 (38)
20	09:08		08:00			06:42			06:13		05:00		06:33 (38)	04:27		06:16 (38)
	16:28		17:43			18:49			21:00		22:08	10	06:43 (38)	22:50	31	06:47 (38)
21	09:07		07:57			06:39			06:11		04:58		06:31 (38)	04:27		06:16 (38)
	16:30		17:46			18:52			21:03		22:10	12	06:43 (38)	22:50	31	06:47 (38)
22	09:05		07:54		08:23 (85)	06:36			06:08		04:56		06:30 (38)	04:27		06:17 (38)
	16:32		17:48	5	08:28 (85)	18:54			21:05		22:12	14	06:44 (38)	22:50	31	06:48 (38)
23	09:03		07:52		08:21 (85)	06:33			06:05		04:55		06:29 (38)	04:28		06:17 (38)
	16:35		17:50	10	08:31 (85)	18:56			21:07		22:14	15	06:44 (38)	22:50	31	06:48 (38)
24	09:02		07:49		08:18 (85)	06:30			06:02		04:53		06:28 (38)	04:28		06:17 (38)
	16:37		17:53	13	08:31 (85)	18:58			21:10		22:16	17	06:45 (38)	22:50	31	06:48 (38)
25	09:00		07:46		08:17 (85)	06:27			06:00		04:51		06:26 (38)	04:28		06:18 (38)
	16:39		17:55	15	08:32 (85)	19:01			21:12		22:18	19	06:45 (38)	22:50	31	06:49 (38)
26	08:58		07:44		08:17 (85)	06:24			05:57		04:49		06:25 (38)	04:29		06:17 (38)
	16:42		17:58	15	08:32 (85)	19:03			21:14		22:20	20	06:45 (38)	22:50	32	06:49 (38)
27	08:56		07:41		08:17 (85)	06:21			05:54		04:48		06:23 (38)	04:29		06:18 (38)
	16:44		18:00	14	08:31 (85)	19:05			21:17		22:22	22	06:45 (38)	22:50	32	06:50 (38)
28	08:54		07:38		08:17 (85)	06:18			05:52		04:46		06:23 (38)	04:30		06:17 (38)
	16:47		18:02	14	08:31 (85)	19:08			21:19		22:24	22	06:45 (38)	22:50	32	06:49 (38)
29	08:52					07:16			05:49		04:44		06:22 (38)	04:31		06:18 (38)
	16:49					20:10			21:21		22:25	24	06:46 (38)	22:49	32	06:50 (38)
30	08:50					07:13			05:47		04:43		06:21 (38)	04:32		06:18 (38)
	16:51					20:12			21:24		22:27	25	06:46 (38)	22:49	33	06:51 (38)
31	08:48					07:10					04:41		06:19 (38)			
	16:54					20:14					22:29	26	06:45 (38)			
Potential sun hours	221		260			365			432		521			547		
Total, worst case				86			126					247			944	
Sun reduction				0,50			0,50					0,50			0,50	
Oper. time red.				0,80			0,80					0,80			0,80	
Wind dir. red.				0,73			0,71					0,58			0,58	
Total reduction				0,29			0,28					0,23			0,23	
Total, real				25			36					58			220	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AF - Brusalivegen 215

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July			August		September			October			November	December
1	04:32		06:18 (38)	05:24		06:33			07:39		08:23 (84)	07:51	09:00
	22:48	33	06:51 (38)	22:01		20:40			19:13	13	08:36 (84)	16:49	15:52
2	04:33		06:19 (38)	05:27		06:35			07:42		08:22 (84)	07:54	09:01
	22:48	33	06:52 (38)	21:58		20:37			19:10	14	08:36 (84)	16:47	15:50
3	04:34		06:18 (38)	05:29		06:38			07:44		08:21 (84)	07:56	09:03
	22:47	33	06:51 (38)	21:56		20:34			19:07	14	08:35 (84)	16:44	15:49
4	04:35		06:18 (38)	05:31		06:40			07:46		08:22 (84)	07:59	09:05
	22:46	33	06:51 (38)	21:54		20:31			19:05	13	08:35 (84)	16:42	15:48
5	04:37		06:19 (38)	05:33		06:42			07:48		08:22 (84)	08:01	09:07
	22:46	33	06:52 (38)	21:51		20:28			19:02	12	08:34 (84)	16:39	15:47
6	04:38		06:21 (38)	05:35		06:44			07:51		08:23 (84)	08:03	09:09
	22:45	32	06:53 (38)	21:49		20:25			18:59	9	08:32 (84)	16:37	15:47
7	04:39		06:22 (38)	05:38		06:47			07:53			08:06	09:10
	22:44	31	06:53 (38)	21:47		20:23			18:56			16:35	15:46
8	04:40		06:23 (38)	05:40		06:49			07:55			08:08	09:12
	22:43	30	06:53 (38)	21:44		20:20			18:53			16:32	15:45
9	04:42		06:24 (38)	05:42		06:51			07:57			08:11	09:13
	22:42	29	06:53 (38)	21:42		20:17			18:50			16:30	15:44
10	04:43		06:25 (38)	05:44		06:53			08:00			08:13	09:15
	22:40	28	06:53 (38)	21:39		20:14			18:48			16:28	15:44
11	04:45		06:26 (38)	05:46		06:55			08:02		08:54 (85)	08:15	09:16
	22:39	28	06:54 (38)	21:37		20:11			18:45	7	09:01 (85)	16:26	15:43
12	04:46		06:27 (38)	05:49		06:58			08:04		08:51 (85)	08:18	09:17
	22:38	27	06:54 (38)	21:34		20:08			18:42	12	09:03 (85)	16:24	15:43
13	04:48		06:28 (38)	05:51		07:00			08:07		08:51 (85)	08:20	09:19
	22:36	26	06:54 (38)	21:32		20:05			18:39	13	09:04 (85)	16:22	15:43
14	04:49		06:30 (38)	05:53		07:02			08:09		08:49 (85)	08:22	09:20
	22:35	24	06:54 (38)	21:29		20:02			18:36	15	09:04 (85)	16:19	15:43
15	04:51		06:31 (38)	05:55		07:04			08:11		08:49 (85)	08:25	09:21
	22:34	23	06:54 (38)	21:26		19:59			18:34	15	09:04 (85)	16:17	15:42
16	04:53		06:33 (38)	05:58		07:06			08:14		08:49 (85)	08:27	09:22
	22:32	22	06:55 (38)	21:24		19:57			18:31	15	09:04 (85)	16:15	15:42
17	04:54		06:33 (38)	06:00		07:09			08:16		08:50 (85)	08:29	09:23
	22:30	21	06:54 (38)	21:21		19:54			18:28	14	09:04 (85)	16:14	15:42
18	04:56		06:35 (38)	06:02		07:11			08:18		08:50 (85)	08:32	09:24
	22:29	20	06:55 (38)	21:18		19:51			18:25	12	09:02 (85)	16:12	15:42
19	04:58		06:37 (38)	06:04		07:13			08:21		08:53 (85)	08:34	09:25
	22:27	18	06:55 (38)	21:16		19:48			18:23	8	09:01 (85)	16:10	15:43
20	05:00		06:38 (38)	06:07		07:15			08:23		08:55 (85)	08:36	09:25
	22:25	16	06:54 (38)	21:13		19:45			18:20	3	08:58 (85)	16:08	15:43
21	05:02		06:39 (38)	06:09		07:17			08:25			08:39	09:26
	22:23	15	06:54 (38)	21:10		19:42			18:17			16:06	15:43
22	05:04		06:41 (38)	06:11		07:20			08:28			08:41	09:27
	22:22	13	06:54 (38)	21:08		19:39			18:15			16:04	15:44
23	05:06		06:42 (38)	06:13		07:22			08:30			08:43	09:27
	22:20	11	06:53 (38)	21:05		19:36			18:12			16:03	15:44
24	05:08		06:44 (38)	06:15		07:24			08:32			08:45	09:28
	22:18	9	06:53 (38)	21:02		19:33			18:09			16:01	15:45
25	05:10		06:45 (38)	06:18		07:26			07:35			08:47	09:28
	22:16	8	06:53 (38)	20:59		19:30			17:07			16:00	15:46
26	05:12		06:47 (38)	06:20		07:28			07:37			08:49	09:28
	22:14	6	06:53 (38)	20:57		19:28			17:04			15:58	15:46
27	05:14		06:49 (38)	06:22		07:31			07:39			08:52	09:28
	22:12	3	06:52 (38)	20:54		19:25			17:02			15:57	15:47
28	05:16		06:51 (38)	06:24		07:33		08:29 (84)	07:42			08:54	09:28
	22:10	1	06:52 (38)	20:51		19:22	3	08:32 (84)	16:59			15:55	15:48
29	05:18			06:27		07:35		08:25 (84)	07:44			08:56	09:28
	22:07			20:48		19:19	9	08:34 (84)	16:56			15:54	15:49
30	05:20			06:29		07:37		08:23 (84)	07:47			08:58	09:28
	22:05			20:45		19:16	12	08:35 (84)	16:54			15:53	15:50
31	05:22			06:31					07:49				09:28
	22:03			20:43					16:51				15:51
Potential sun hours	545			478		386			319			236	200
Total, worst case		606					24			189			
Sun reduction		0,50					0,50			0,50			
Oper. time red.		0,80					0,80			0,80			
Wind dir. red.		0,58					0,70			0,72			
Total reduction		0,23					0,28			0,29			
Total, real		141					7			54			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May		June	
1	09:28	08:46		07:35	08:11 (84)	07:07	05:44	07:08 (38)	04:40	06:45 (38)
	15:53	16:56		18:05	6 08:17 (84)	20:17	21:26	1 07:09 (38)	22:30	32 07:17 (38)
2	09:27	08:43		07:33	08:08 (84)	07:04	05:42	07:06 (38)	04:39	06:46 (38)
	15:54	16:59		18:07	11 08:19 (84)	20:19	21:28	6 07:12 (38)	22:32	31 07:17 (38)
3	09:27	08:41		07:30	08:06 (84)	07:01	05:39	07:04 (38)	04:38	06:46 (38)
	15:56	17:01		18:10	13 08:19 (84)	20:21	21:31	9 07:13 (38)	22:33	31 07:17 (38)
4	09:26	08:39		07:27	08:05 (84)	06:58	05:37	07:02 (38)	04:36	06:47 (38)
	15:57	17:04		18:12	14 08:19 (84)	20:24	21:33	13 07:15 (38)	22:35	29 07:16 (38)
5	09:26	08:37		07:24	08:05 (84)	06:55	05:34	07:00 (38)	04:35	06:48 (38)
	15:59	17:06		18:14	14 08:19 (84)	20:26	21:35	16 07:16 (38)	22:36	29 07:17 (38)
6	09:25	08:34		07:21	08:05 (84)	06:53	05:32	06:58 (38)	04:34	06:49 (38)
	16:00	17:09		18:17	13 08:18 (84)	20:28	21:37	19 07:17 (38)	22:38	27 07:16 (38)
7	09:24	08:32		07:19	08:05 (84)	06:50	05:29	06:55 (38)	04:33	06:49 (38)
	16:02	17:11		18:19	12 08:17 (84)	20:31	21:40	22 07:17 (38)	22:39	27 07:16 (38)
8	09:24	08:30		07:16	08:06 (84)	06:47	05:27	06:54 (38)	04:32	06:49 (38)
	16:04	17:14		18:21	10 08:16 (84)	20:33	21:42	24 07:18 (38)	22:40	26 07:15 (38)
9	09:23	08:27		07:13	08:08 (84)	06:44	05:24	06:52 (38)	04:31	06:50 (38)
	16:06	17:16		18:24	5 08:13 (84)	20:35	21:44	27 07:19 (38)	22:42	26 07:16 (38)
10	09:22	08:25		07:10		06:41	05:22	06:50 (38)	04:31	06:51 (38)
	16:07	17:18		18:26		20:37	21:46	29 07:19 (38)	22:43	24 07:15 (38)
11	09:21	08:23		07:07		06:38	05:20	06:48 (38)	04:30	06:52 (38)
	16:09	17:21		18:28		20:40	21:49	32 07:20 (38)	22:44	23 07:15 (38)
12	09:20	08:20		07:04		06:36	05:17	06:46 (38)	04:29	06:52 (38)
	16:11	17:23		18:31		20:42	21:51	34 07:20 (38)	22:45	22 07:14 (38)
13	09:18	08:18		07:02		06:33	05:15	06:45 (38)	04:29	06:53 (38)
	16:13	17:26		18:33		20:44	21:53	35 07:20 (38)	22:46	21 07:14 (38)
14	09:17	08:15		06:59		06:30	05:13	06:43 (38)	04:28	06:53 (38)
	16:15	17:28		18:35		20:47	21:55	37 07:20 (38)	22:46	22 07:15 (38)
15	09:16	08:13	08:44 (85)	06:56		06:27	05:11	06:41 (38)	04:28	06:53 (38)
	16:17	17:31	6 08:50 (85)	18:38		20:49	21:57	39 07:20 (38)	22:47	21 07:14 (38)
16	09:14	08:10	08:42 (85)	06:53		06:24	05:09	06:41 (38)	04:28	06:54 (38)
	16:19	17:33	10 08:52 (85)	18:40		20:51	22:00	39 07:20 (38)	22:48	20 07:14 (38)
17	09:13	08:07	08:40 (85)	06:50		06:22	05:06	06:40 (38)	04:27	06:54 (38)
	16:21	17:36	13 08:53 (85)	18:42		20:54	22:02	40 07:20 (38)	22:48	20 07:14 (38)
18	09:12	08:05	08:40 (85)	06:47		06:19	05:04	06:41 (38)	04:27	06:55 (38)
	16:24	17:38	14 08:54 (85)	18:45		20:56	22:04	40 07:21 (38)	22:49	19 07:14 (38)
19	09:10	08:02	08:39 (85)	06:44		06:16	05:02	06:41 (38)	04:27	06:55 (38)
	16:26	17:41	15 08:54 (85)	18:47		20:58	22:06	40 07:21 (38)	22:49	19 07:14 (38)
20	09:08	08:00	08:39 (85)	06:42		06:13	05:00	06:41 (38)	04:27	06:55 (38)
	16:28	17:43	15 08:54 (85)	18:49		21:00	22:08	39 07:20 (38)	22:50	19 07:14 (38)
21	09:07	07:57	08:39 (85)	06:39		06:11	04:58	06:41 (38)	04:27	06:55 (38)
	16:30	17:46	14 08:53 (85)	18:52		21:03	22:10	39 07:20 (38)	22:50	19 07:14 (38)
22	09:05	07:54	08:39 (85)	06:36		06:08	04:56	06:41 (38)	04:27	06:56 (38)
	16:32	17:48	13 08:52 (85)	18:54		21:05	22:12	39 07:20 (38)	22:50	19 07:15 (38)
23	09:03	07:52	08:41 (85)	06:33		06:05	04:55	06:41 (38)	04:28	06:56 (38)
	16:35	17:50	11 08:52 (85)	18:56		21:07	22:14	39 07:20 (38)	22:50	19 07:15 (38)
24	09:02	07:49	08:42 (85)	06:30		06:02	04:53	06:42 (38)	04:28	06:56 (38)
	16:37	17:53	8 08:50 (85)	18:58		21:10	22:16	38 07:20 (38)	22:50	19 07:15 (38)
25	09:00	07:46		06:27		06:00	04:51	06:42 (38)	04:28	06:57 (38)
	16:39	17:55		19:01		21:12	22:18	37 07:19 (38)	22:50	19 07:16 (38)
26	08:58	07:44		06:24		05:57	04:49	06:43 (38)	04:29	06:56 (38)
	16:42	17:58		19:03		21:14	22:20	37 07:20 (38)	22:50	20 07:16 (38)
27	08:56	07:41		06:21		05:54	04:48	06:43 (38)	04:29	06:56 (38)
	16:44	18:00		19:05		21:17	22:22	36 07:19 (38)	22:50	21 07:17 (38)
28	08:54	07:38		06:18		05:52	04:46	06:43 (38)	04:30	06:56 (38)
	16:47	18:02		19:08		21:19	22:24	36 07:19 (38)	22:50	21 07:17 (38)
29	08:52			07:16		05:49	04:44	06:44 (38)	04:31	06:56 (38)
	16:49			20:10		21:21	22:25	35 07:19 (38)	22:49	21 07:17 (38)
30	08:50			07:13		05:47	04:43	06:45 (38)	04:32	06:56 (38)
	16:51			20:12		21:24	22:27	34 07:19 (38)	22:49	22 07:18 (38)
31	08:48			07:10			04:41	06:44 (38)		
	16:54			20:14			22:29	34 07:18 (38)		
Potential sun hours	221	260		365		432	521		547	
Total, worst case			119		98			945		688
Sun reduction			0,50		0,50			0,50		0,50
Oper. time red.			0,80		0,80			0,80		0,80
Wind dir. red.			0,74		0,72			0,59		0,59
Total reduction			0,29		0,29			0,24		0,24
Total, real			35		28			224		163

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AG - Brusalivegen 219

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September	October		November	December
1	04:32	06:56 (38)	05:24	06:57 (38)	06:33	07:39		07:51	09:00
	22:48	23 07:19 (38)	22:01	33 07:30 (38)	20:40	19:13		16:49	15:52
2	04:33	06:56 (38)	05:27	06:59 (38)	06:35	07:42		07:54	09:01
	22:48	24 07:20 (38)	21:58	31 07:30 (38)	20:37	19:10		16:47	15:50
3	04:34	06:55 (38)	05:29	07:01 (38)	06:38	07:44		07:56	09:03
	22:47	25 07:20 (38)	21:56	28 07:29 (38)	20:34	19:07		16:44	15:49
4	04:35	06:55 (38)	05:31	07:03 (38)	06:40	07:46		07:59	09:05
	22:46	25 07:20 (38)	21:54	26 07:29 (38)	20:31	19:05		16:42	15:48
5	04:37	06:54 (38)	05:33	07:05 (38)	06:42	07:48	08:44 (84)	08:01	09:07
	22:46	27 07:21 (38)	21:51	23 07:28 (38)	20:28	19:02	8 08:52 (84)	16:39	15:47
6	04:38	06:55 (38)	05:35	07:06 (38)	06:44	07:51	08:42 (84)	08:03	09:09
	22:45	28 07:23 (38)	21:49	21 07:27 (38)	20:25	18:59	11 08:53 (84)	16:37	15:47
7	04:39	06:55 (38)	05:38	07:08 (38)	06:47	07:53	08:41 (84)	08:06	09:10
	22:44	28 07:23 (38)	21:47	18 07:26 (38)	20:23	18:56	13 08:54 (84)	16:35	15:46
8	04:40	06:54 (38)	05:40	07:10 (38)	06:49	07:55	08:40 (84)	08:08	09:12
	22:43	30 07:24 (38)	21:44	15 07:25 (38)	20:20	18:53	14 08:54 (84)	16:32	15:45
9	04:42	06:54 (38)	05:42	07:12 (38)	06:51	07:57	08:39 (84)	08:11	09:13
	22:42	30 07:24 (38)	21:42	12 07:24 (38)	20:17	18:50	15 08:54 (84)	16:30	15:44
10	04:43	06:53 (38)	05:44	07:13 (38)	06:53	08:00	08:40 (84)	08:13	09:15
	22:40	31 07:24 (38)	21:39	9 07:22 (38)	20:14	18:48	14 08:54 (84)	16:28	15:44
11	04:45	06:54 (38)	05:46	07:15 (38)	06:55	08:02	08:40 (84)	08:15	09:16
	22:39	32 07:26 (38)	21:37	5 07:20 (38)	20:11	18:45	13 08:53 (84)	16:26	15:43
12	04:46	06:53 (38)	05:49		06:58	08:04	08:42 (84)	08:18	09:17
	22:38	33 07:26 (38)	21:34		20:08	18:42	9 08:51 (84)	16:24	15:43
13	04:48	06:53 (38)	05:51		07:00	08:07	08:45 (84)	08:20	09:19
	22:36	33 07:26 (38)	21:32		20:05	18:39	4 08:49 (84)	16:22	15:43
14	04:49	06:53 (38)	05:53		07:02	08:09		08:22	09:20
	22:35	34 07:27 (38)	21:29		20:02	18:36		16:19	15:43
15	04:51	06:52 (38)	05:55		07:04	08:11		08:25	09:21
	22:34	35 07:27 (38)	21:26		19:59	18:34		16:17	15:42
16	04:53	06:52 (38)	05:58		07:06	08:14		08:27	09:22
	22:32	36 07:28 (38)	21:24		19:57	18:31		16:15	15:42
17	04:54	06:52 (38)	06:00		07:09	08:16	09:17 (85)	08:29	09:23
	22:30	36 07:28 (38)	21:21		19:54	18:28	2 09:19 (85)	16:13	15:42
18	04:56	06:52 (38)	06:02		07:11	08:18	09:13 (85)	08:32	09:24
	22:29	37 07:29 (38)	21:18		19:51	18:25	9 09:22 (85)	16:12	15:42
19	04:58	06:52 (38)	06:04		07:13	08:21	09:12 (85)	08:34	09:25
	22:27	38 07:30 (38)	21:16		19:48	18:23	12 09:24 (85)	16:10	15:43
20	05:00	06:51 (38)	06:07		07:15	08:23	09:10 (85)	08:36	09:25
	22:25	38 07:29 (38)	21:13		19:45	18:20	14 09:24 (85)	16:08	15:43
21	05:02	06:51 (38)	06:09		07:17	08:25	09:10 (85)	08:39	09:26
	22:23	39 07:30 (38)	21:10		19:42	18:17	15 09:25 (85)	16:06	15:43
22	05:04	06:52 (38)	06:11		07:19	08:28	09:09 (85)	08:41	09:27
	22:22	39 07:31 (38)	21:08		19:39	18:15	15 09:24 (85)	16:04	15:44
23	05:06	06:51 (38)	06:13		07:22	08:30	09:09 (85)	08:43	09:27
	22:20	39 07:30 (38)	21:05		19:36	18:12	15 09:24 (85)	16:03	15:44
24	05:08	06:51 (38)	06:15		07:24	08:32	09:09 (85)	08:45	09:28
	22:18	40 07:31 (38)	21:02		19:33	18:09	14 09:23 (85)	16:01	15:45
25	05:10	06:51 (38)	06:18		07:26	07:35	08:10 (85)	08:47	09:28
	22:16	40 07:31 (38)	20:59		19:30	17:07	13 08:23 (85)	16:00	15:46
26	05:12	06:51 (38)	06:20		07:28	07:37	08:13 (85)	08:49	09:28
	22:14	40 07:31 (38)	20:57		19:28	17:04	9 08:22 (85)	15:58	15:46
27	05:14	06:52 (38)	06:22		07:31	07:39	08:14 (85)	08:52	09:28
	22:12	39 07:31 (38)	20:54		19:25	17:02	5 08:19 (85)	15:57	15:47
28	05:16	06:52 (38)	06:24		07:33	07:42		08:54	09:28
	22:10	39 07:31 (38)	20:51		19:22	16:59		15:55	15:48
29	05:18	06:52 (38)	06:27		07:35	07:44		08:56	09:28
	22:07	38 07:30 (38)	20:48		19:19	16:56		15:54	15:49
30	05:20	06:54 (38)	06:29		07:37	07:47		08:58	09:28
	22:05	36 07:30 (38)	20:45		19:16	16:54		15:53	15:50
31	05:22	06:55 (38)	06:31			07:49			09:28
	22:03	35 07:30 (38)	20:43			16:51			15:51
Potential sun hours	545		478		386	319		236	200
Total, worst case		1047		221			224		
Sun reduction		0,50		0,50			0,50		
Oper. time red.		0,80		0,80			0,80		
Wind dir. red.		0,59		0,59			0,73		
Total reduction		0,24		0,24			0,29		
Total, real		248		52			65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June
1	09:28	08:46		07:35		08:22 (22)	07:07	05:44	04:40
	15:53	16:56		18:05	23	08:45 (22)	20:17	21:26	22:31
2	09:28	08:44		07:33		08:21 (22)	07:04	05:41	04:39
	15:54	16:59		18:07	24	08:45 (22)	20:19	21:28	22:32
3	09:27	08:41		07:30		08:21 (22)	07:01	05:39	04:37
	15:56	17:01		18:10	24	08:45 (22)	20:21	21:31	22:34
4	09:27	08:39		07:27		08:20 (22)	06:58	05:36	04:36
	15:57	17:04		18:12	25	08:45 (22)	20:24	21:33	22:35
5	09:26	08:37		07:24		08:20 (22)	06:55	05:34	04:35
	15:59	17:06		18:14	24	08:44 (22)	20:26	21:35	22:37
6	09:25	08:35		07:22		08:20 (22)	06:53	05:31	04:34
	16:00	17:09		18:17	24	08:44 (22)	20:28	21:38	22:38
7	09:25	08:32		07:19		08:20 (22)	06:50	05:29	04:33
	16:02	17:11		18:19	23	08:43 (22)	20:31	21:40	22:39
8	09:24	08:30		07:16		08:21 (22)	06:47	05:27	04:32
	16:04	17:13		18:21	20	08:41 (22)	20:33	21:42	22:41
9	09:23	08:28	09:21 (2)	07:13		08:22 (22)	06:44	05:24	04:31
	16:05	17:16	2 09:23 (2)	18:24	19	08:41 (22)	20:35	21:44	22:42
10	09:22	08:25	09:18 (2)	07:10		08:24 (22)	06:41	05:22	04:30
	16:07	17:18	10 09:28 (2)	18:26	15	08:39 (22)	20:38	21:47	22:43
11	09:21	08:23	09:16 (2)	07:07		08:26 (22)	06:38	05:20	04:30
	16:09	17:21	13 09:29 (2)	18:28	10	08:36 (22)	20:40	21:49	22:44
12	09:20	08:20	09:14 (2)	07:05			06:36	05:17	04:29
	16:11	17:23	16 09:30 (2)	18:31			20:42	21:51	22:45
13	09:19	08:18	09:13 (2)	07:02			06:33	05:15	04:29
	16:13	17:26	17 09:30 (2)	18:33			20:44	21:53	22:46
14	09:17	08:15	09:13 (2)	06:59		07:37 (24)	06:30	05:13	04:28
	16:15	17:28	19 09:32 (2)	18:35	4	07:41 (24)	20:47	21:55	22:47
15	09:16	08:13	09:13 (2)	06:56		07:33 (24)	06:27	05:11	04:28
	16:17	17:31	19 09:32 (2)	18:38	11	07:44 (24)	20:49	21:58	22:47
16	09:15	08:10	09:12 (2)	06:53		07:31 (24)	06:24	05:08	04:27
	16:19	17:33	19 09:31 (2)	18:40	15	07:46 (24)	20:51	22:00	22:48
17	09:13	08:08	09:13 (2)	06:50		07:30 (24)	06:22	05:06	04:27
	16:21	17:36	19 09:32 (2)	18:42	16	07:46 (24)	20:54	22:02	22:49
18	09:12	08:05	09:13 (2)	06:47		07:29 (24)	06:19	05:04	04:27
	16:23	17:38	18 09:31 (2)	18:45	18	07:47 (24)	20:56	22:04	22:49
19	09:10	08:02	09:14 (2)	06:44		07:28 (24)	06:16	05:02	04:27
	16:26	17:41	16 09:30 (2)	18:47	19	07:47 (24)	20:58	22:06	22:50
20	09:09	08:00	09:14 (2)	06:42		07:27 (24)	06:13	05:00	04:27
	16:28	17:43	15 09:29 (2)	18:49	19	07:46 (24)	21:01	22:08	22:50
21	09:07	07:57	09:15 (2)	06:39		07:28 (24)	06:11	04:58	04:27
	16:30	17:46	12 09:27 (2)	18:52	19	07:47 (24)	21:03	22:10	22:50
22	09:05	07:54	09:19 (2)	06:36		07:28 (24)	06:08	04:56	04:27
	16:32	17:48	6 09:25 (2)	18:54	18	07:46 (24)	21:05	22:12	22:50
23	09:04	07:52		06:33		07:28 (24)	06:05	04:54	04:27
	16:35	17:50		18:56	17	07:45 (24)	21:08	22:14	22:51
24	09:02	07:49	08:32 (22)	06:30		07:29 (24)	06:02	04:53	04:28
	16:37	17:53	3 08:35 (22)	18:59	14	07:43 (24)	21:10	22:16	22:51
25	09:00	07:46	08:28 (22)	06:27		07:31 (24)	06:00	04:51	04:28
	16:39	17:55	12 08:40 (22)	19:01	10	07:41 (24)	21:12	22:18	22:51
26	08:58	07:44	08:25 (22)	06:24			05:57	04:49	04:29
	16:42	17:58	16 08:41 (22)	19:03			21:14	22:20	22:50
27	08:56	07:41	08:23 (22)	06:21			05:54	04:47	04:29
	16:44	18:00	19 08:42 (22)	19:05			21:17	22:22	22:50
28	08:54	07:38	08:23 (22)	06:18			05:52	04:46	04:30
	16:46	18:02	21 08:44 (22)	19:08			21:19	22:24	22:50
29	08:52			07:16			05:49	04:44	04:31
	16:49			20:10			21:21	22:26	22:50
30	08:50			07:13			05:47	04:43	04:31
	16:51			20:12			21:24	22:27	22:49
31	08:48			07:10				04:41	
	16:54			20:15				22:29	
Potential sun hours	221	260		365			432	521	547
Total, worst case			272		411				
Sun reduction			0,50		0,50				
Oper. time red.			0,80		0,80				
Wind dir. red.			0,73		0,71				
Total reduction			0,29		0,28				
Total, real			80		117				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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NO-0276 Oslo
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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AH - Buevegen 1463

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July		August		September			October			November			December	
1	04:32		05:24		06:33			07:40			07:52		08:47 (2)	09:00	
	22:49		22:01		20:40			19:13			16:49	9	08:56 (2)	15:51	
2	04:33		05:26		06:35			07:42		09:06 (22)	07:54			09:02	
	22:48		21:59		20:37			19:10	6	09:12 (22)	16:46			15:50	
3	04:34		05:29		06:38			07:44		09:02 (22)	07:56			09:04	
	22:47		21:56		20:34			19:07	13	09:15 (22)	16:44			15:49	
4	04:35		05:31		06:40			07:46		09:00 (22)	07:59			09:05	
	22:47		21:54		20:31			19:05	17	09:17 (22)	16:42			15:48	
5	04:36		05:33		06:42			07:48		08:58 (22)	08:01			09:07	
	22:46		21:52		20:28			19:02	20	09:18 (22)	16:39			15:47	
6	04:38		05:35		06:44			07:51		08:57 (22)	08:04			09:09	
	22:45		21:49		20:26			18:59	22	09:19 (22)	16:37			15:46	
7	04:39		05:37		06:47			07:53		08:57 (22)	08:06			09:10	
	22:44		21:47		20:23			18:56	23	09:20 (22)	16:35			15:46	
8	04:40		05:40		06:49			07:55		08:55 (22)	08:08			09:12	
	22:43		21:44		20:20			18:53	24	09:19 (22)	16:32			15:45	
9	04:41		05:42		06:51			07:58		08:55 (22)	08:11			09:14	
	22:42		21:42		20:17			18:50	24	09:19 (22)	16:30			15:44	
10	04:43		05:44		06:53			08:00		08:55 (22)	08:13			09:15	
	22:41		21:39		20:14			18:48	24	09:19 (22)	16:28			15:44	
11	04:44		05:46		06:55			08:02		08:54 (22)	08:16			09:16	
	22:39		21:37		20:11			18:45	25	09:19 (22)	16:26			15:43	
12	04:46		05:49		06:58			08:04		08:55 (22)	08:18			09:18	
	22:38		21:34		20:08			18:42	23	09:18 (22)	16:24			15:43	
13	04:48		05:51		07:00			08:07		08:55 (22)	08:20			09:19	
	22:37		21:32		20:05			18:39	22	09:17 (22)	16:21			15:43	
14	04:49		05:53		07:02			08:09		08:55 (22)	08:23			09:20	
	22:35		21:29		20:02			18:36	21	09:16 (22)	16:19			15:42	
15	04:51		05:55		07:04			08:11		08:57 (22)	08:25			09:21	
	22:34		21:26		20:00			18:34	18	09:15 (22)	16:17			15:42	
16	04:53		05:58		07:06			08:14		08:58 (22)	08:27			09:22	
	22:32		21:24		19:57			18:31	15	09:13 (22)	16:15			15:42	
17	04:54		06:00		07:09			08:16		09:01 (22)	08:30			09:23	
	22:31		21:21		19:54			18:28	10	09:11 (22)	16:13			15:42	
18	04:56		06:02		07:11		08:19 (24)	08:18			08:32			09:24	
	22:29		21:19		19:51	9	08:28 (24)	18:25			16:11			15:42	
19	04:58		06:04		07:13		08:16 (24)	08:21			08:34			09:25	
	22:27		21:16		19:48	13	08:29 (24)	18:23			16:10			15:43	
20	05:00		06:06		07:15		08:14 (24)	08:23		09:48 (2)	08:37			09:26	
	22:25		21:13		19:45	16	08:30 (24)	18:20	9	09:57 (2)	16:08			15:43	
21	05:02		06:09		07:17		08:14 (24)	08:25		09:46 (2)	08:39			09:26	
	22:24		21:10		19:42	17	08:31 (24)	18:17	13	09:59 (2)	16:06			15:43	
22	05:04		06:11		07:20		08:13 (24)	08:28		09:44 (2)	08:41			09:27	
	22:22		21:08		19:39	18	08:31 (24)	18:15	16	10:00 (2)	16:04			15:44	
23	05:06		06:13		07:22		08:12 (24)	08:30		09:44 (2)	08:43			09:27	
	22:20		21:05		19:36	19	08:31 (24)	18:12	17	10:01 (2)	16:03			15:44	
24	05:08		06:15		07:24		08:12 (24)	08:32		09:42 (2)	08:45			09:28	
	22:18		21:02		19:33	19	08:31 (24)	18:09	19	10:01 (2)	16:01			15:45	
25	05:10		06:18		07:26		08:11 (24)	07:35		08:42 (2)	08:48			09:28	
	22:16		20:59		19:31	19	08:30 (24)	17:07	19	09:01 (2)	15:59			15:45	
26	05:12		06:20		07:28		08:12 (24)	07:37		08:43 (2)	08:50			09:28	
	22:14		20:57		19:28	17	08:29 (24)	17:04	19	09:02 (2)	15:58			15:46	
27	05:14		06:22		07:31		08:13 (24)	07:40		08:42 (2)	08:52			09:28	
	22:12		20:54		19:25	15	08:28 (24)	17:02	19	09:01 (2)	15:57			15:47	
28	05:16		06:24		07:33		08:14 (24)	07:42		08:43 (2)	08:54			09:29	
	22:10		20:51		19:22	12	08:26 (24)	16:59	18	09:01 (2)	15:55			15:48	
29	05:18		06:27		07:35		08:15 (24)	07:44		08:44 (2)	08:56			09:29	
	22:08		20:48		19:19	8	08:23 (24)	16:56	17	09:01 (2)	15:54			15:49	
30	05:20		06:29		07:37			07:47		08:44 (2)	08:58			09:28	
	22:05		20:45		19:16			16:54	15	08:59 (2)	15:53			15:50	
31	05:22		06:31					07:49		08:45 (2)				09:28	
	22:03		20:43					16:51	13	08:58 (2)				15:51	
Potential sun hours	545		478		386			319			236			200	
Total, worst case						182			501			9			
Sun reduction						0,50			0,50			0,50			
Oper. time red.						0,80			0,80			0,80			
Wind dir. red.						0,70			0,73			0,74			
Total reduction						0,28			0,29			0,29			
Total, real						51			146			3			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AI - Buevegen 1288

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
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+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AJ - Buevegen 1272

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
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13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:06	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
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Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AK - Buevegen 1461

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:35	08:24 (22)	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05 23	08:47 (22)	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	08:23 (22)	07:04	05:41	04:39	04:33	05:26	06:35	07:42	07:54	09:02
	15:54	16:59	18:07 24	08:47 (22)	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	15:50
3	09:27	08:41	07:30	08:23 (22)	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10 24	08:47 (22)	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	15:49
4	09:27	08:39	07:27	08:23 (22)	06:58	05:36	04:36	04:35	05:31	06:40	07:46 09:05 (22)	07:59	09:05
	15:57	17:04	18:12 23	08:46 (22)	20:24	21:33	22:35	22:47	21:54	20:31	19:05 11 09:16 (22)	16:42	15:48
5	09:26	08:37	07:24	08:23 (22)	06:55	05:34	04:35	04:36	05:33	06:42	07:48 09:02 (22)	08:01	09:07
	15:59	17:06	18:14 22	08:45 (22)	20:26	21:35	22:37	22:46	21:52	20:28	19:02 16 09:18 (22)	16:39	15:47
6	09:25	08:35	07:22	08:23 (22)	06:53	05:31	04:34	04:38	05:35	06:44	07:51 09:00 (22)	08:04	09:09
	16:00	17:09	18:17 22	08:45 (22)	20:28	21:38	22:38	22:45	21:49	20:26	18:59 19 09:19 (22)	16:37	15:46
7	09:25	08:32	07:19	08:24 (22)	06:50	05:29	04:33	04:39	05:37	06:47	07:53 09:00 (22)	08:06	09:10
	16:02	17:11	18:19 19	08:43 (22)	20:31	21:40	22:39	22:44	21:47	20:23	18:56 20 09:20 (22)	16:35	15:46
8	09:24	08:30	07:16	08:24 (22)	06:47	05:27	04:32	04:40	05:40	06:49	07:55 08:58 (22)	08:08	09:12
	16:04	17:13	18:21 18	08:42 (22)	20:33	21:42	22:41	22:43	21:44	20:20	18:53 23 09:21 (22)	16:32	15:45
9	09:23	08:28	07:13	08:27 (22)	06:44	05:24	04:31	04:41	05:42	06:51	07:58 08:57 (22)	08:11	09:14
	16:05	17:16	18:24 13	08:40 (22)	20:35	21:44	22:42	22:42	21:42	20:17	18:50 23 09:20 (22)	16:30	15:44
10	09:22	08:25	07:10	08:30 (22)	06:41	05:22	04:30	04:43	05:44	06:53	08:00 08:57 (22)	08:13	09:15
	16:07	17:18	18:26 7	08:37 (22)	20:38	21:47	22:43	22:41	21:39	20:14	18:48 24 09:21 (22)	16:28	15:44
11	09:21	08:23	07:07		06:38	05:20	04:30	04:44	05:46	06:55	08:02 08:57 (22)	08:16	09:16
	16:09	17:21	18:28		20:40	21:49	22:44	22:39	21:37	20:11	18:45 23 09:20 (22)	16:26	15:43
12	09:20	08:20	07:05		06:36	05:17	04:29	04:46	05:49	06:58	08:04 08:57 (22)	08:18	09:18
	16:11	17:23	18:31		20:42	21:51	22:45	22:38	21:34	20:08	18:42 24 09:21 (22)	16:24	15:43
13	09:19	08:18	07:02	07:40 (24)	06:33	05:15	04:29	04:48	05:51	07:00	08:07 08:57 (22)	08:20	09:19
	16:13	17:26	18:33 5	07:45 (24)	20:44	21:53	22:46	22:37	21:32	20:05	18:39 23 09:20 (22)	16:21	15:43
14	09:17	08:15	06:59	07:36 (24)	06:30	05:13	04:28	04:49	05:53	07:02	08:09 08:57 (22)	08:23	09:20
	16:15	17:28	18:35 11	07:47 (24)	20:47	21:55	22:47	22:35	21:29	20:02	18:36 21 09:18 (22)	16:19	15:42
15	09:16	08:13	06:56	07:34 (24)	06:27	05:11	04:28	04:51	05:55	07:04	08:11 08:58 (22)	08:25	09:21
	16:17	17:31	18:38 15	07:49 (24)	20:49	21:58	22:47	22:34	21:26	20:00	18:34 20 09:18 (22)	16:17	15:42
16	09:15	08:10	06:53	07:33 (24)	06:24	05:08	04:27	04:53	05:58	07:06	08:14 08:58 (22)	08:27	09:22
	16:19	17:33	18:40 16	07:49 (24)	20:51	22:00	22:48	22:32	21:24	19:57	18:31 18 09:16 (22)	16:15	15:42
17	09:13	08:08	06:50	07:32 (24)	06:22	05:06	04:27	04:54	06:00	07:09	08:16 09:00 (22)	08:30	09:23
	16:21	17:36	18:42 18	07:50 (24)	20:54	22:02	22:49	22:31	21:21	19:54	18:28 15 09:15 (22)	16:13	15:42
18	09:12	08:05	06:47	07:31 (24)	06:19	05:04	04:27	04:56	06:02	07:11	08:18 09:02 (22)	08:32	09:24
	16:23	17:38	18:45 19	07:50 (24)	20:56	22:04	22:49	22:29	21:19	19:51	18:25 10 09:12 (22)	16:11	15:42
19	09:10	08:02	06:44	07:31 (24)	06:16	05:02	04:27	04:58	06:04	07:13 08:22 (24)	08:21	08:34	09:25
	16:26	17:41	18:47 18	07:49 (24)	20:58	22:06	22:50	22:27	21:16	19:48 7 08:29 (24)	18:23	16:10	15:43
20	09:09	08:00	06:42	07:30 (24)	06:13	05:00	04:27	05:00	06:06	07:15 08:19 (24)	08:23	08:37	09:26
	16:28	17:43	18:49 19	07:49 (24)	21:01	22:08	22:50	22:25	21:13	19:45 12 08:31 (24)	18:20	16:08	15:43
21	09:07	07:57	06:39	07:32 (24)	06:11	04:58	04:27	05:02	06:09	07:17 08:18 (24)	08:25	08:39	09:26
	16:30	17:46	18:52 17	07:49 (24)	21:03	22:10	22:50	22:24	21:10	19:42 15 08:33 (24)	18:17	16:06	15:43
22	09:05	07:54	06:36	07:32 (24)	06:08	04:56	04:27	05:04	06:11	07:20 08:16 (24)	08:28	08:41	09:27
	16:32	17:48	18:54 15	07:47 (24)	21:05	22:12	22:50	22:22	21:08	19:39 17 08:33 (24)	18:15	16:04	15:44
23	09:04	07:52	06:33	07:33 (24)	06:05	04:54	04:27	05:06	06:13	07:22 08:15 (24)	08:30	08:43	09:27
	16:35	17:50	18:56 13	07:46 (24)	21:08	22:14	22:51	22:20	21:05	19:36 18 08:33 (24)	18:12	16:03	15:44
24	09:02	07:49 08:30 (22)	06:30	07:35 (24)	06:02	04:53	04:28	05:08	06:15	07:24 08:14 (24)	08:32	08:45	09:28
	16:37	17:53 12 08:42 (22)	18:59 8	07:43 (24)	21:10	22:16	22:51	22:18	21:02	19:33 19 08:33 (24)	18:09	16:01	15:45
25	09:00	07:46 08:28 (22)	06:27		06:00	04:51	04:28	05:10	06:18	07:26 08:14 (24)	07:35	08:48	09:28
	16:39	17:55 15 08:43 (22)	19:01		21:12	22:18	22:51	22:16	20:59	19:31 18 08:32 (24)	17:07	15:59	15:45
26	08:58	07:44 08:26 (22)	06:24		05:57	04:49	04:29	05:12	06:20	07:28 08:14 (24)	07:37	08:50	09:28
	16:42	17:58 19 08:45 (22)	19:03		21:14	22:20	22:50	22:14	20:57	19:28 19 08:33 (24)	17:04	15:58	15:46
27	08:56	07:41 08:25 (22)	06:21		05:54	04:47	04:29	05:14	06:22	07:31 08:14 (24)	07:40	08:52	09:28
	16:44	18:00 20 08:45 (22)	19:05		21:17	22:22	22:50	22:12	20:54	19:25 18 08:32 (24)	17:02	15:57	15:47
28	08:54	07:38 08:25 (22)	06:18		05:52	04:46	04:30	05:16	06:24	07:33 08:15 (24)	07:42	08:54	09:29
	16:46	18:02 22 08:47 (22)	19:08		21:19	22:24	22:50	22:10	20:51	19:22 15 08:30 (24)	16:59	15:55	15:48
29	08:52		07:16		05:49	04:44	04:31	05:18	06:27	07:35 08:15 (24)	07:44	08:56	09:29
	16:49		20:10		21:21	22:26	22:50	22:08	20:48	19:19 13 08:28 (24)	16:56	15:54	15:49
30	08:50		07:13		05:47	04:43	04:31	05:20	06:29	07:37 08:18 (24)	07:47	08:58	09:28
	16:51		20:12		21:24	22:27	22:49	22:05	20:45	19:16 8 08:26 (24)	16:54	15:53	15:50
31	08:48		07:10			04:41		05:22	06:31		07:49		09:28
	16:54		20:15			22:29		22:03	20:43		16:51		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200	
Total, worst case		88	369						179	290			
Sun reduction		0,50	0,50						0,50	0,50			
Oper. time red.		0,80	0,80						0,80	0,80			
Wind dir. red.		0,73	0,71						0,70	0,73			
Total reduction		0,29	0,29						0,28	0,29			
Total, real		26	105						50	84			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AL - Buevegen 1270

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:37	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:18	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:16	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:40	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:29	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:25	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
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30	08:50		07:13	05:47	04:43	04:32	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:52
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AM - Buevegen 1290

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
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12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
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14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
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	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AN - Buevegen 1292

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AO - Buevegen 1343

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

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	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
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	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
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9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AP - Buevegen 1496

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November	December
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	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54	09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56	09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59	09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:49		08:01	09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39	15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:38	05:35	06:44	07:51		08:04	09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37	15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06	09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35	15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08	09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32	15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11	09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30	15:44
10	09:22	08:25		07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13	09:15
	16:07	17:18		18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28	15:44
11	09:21	08:23	09:07 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16	09:16
	16:09	17:21	7 09:14 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26	15:43
12	09:20	08:20	09:04 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18	09:18
	16:11	17:23	12 09:16 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24	15:43
13	09:19	08:18	09:03 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20	09:19
	16:13	17:26	16 09:19 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21	15:43
14	09:17	08:15	09:02 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23	09:20
	16:15	17:28	17 09:19 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19	15:42
15	09:16	08:13	09:01 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25	09:21
	16:17	17:31	19 09:20 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17	15:42
16	09:15	08:10	09:00 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27	09:22
	16:19	17:33	20 09:20 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15	15:42
17	09:13	08:08	09:01 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30	09:23
	16:21	17:36	20 09:21 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13	15:42
18	09:12	08:05	09:00 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:36 (22)	08:32	09:24
	16:23	17:38	21 09:21 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	10 09:46 (22)	16:11	15:42
19	09:10	08:02	09:00 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:34 (22)	08:34	09:25
	16:26	17:41	20 09:20 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	14 09:48 (22)	16:10	15:42
20	09:09	08:00	09:00 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:32 (22)	08:37	09:26
	16:28	17:43	19 09:19 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	17 09:49 (22)	16:08	15:43
21	09:07	07:57	09:01 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:32 (22)	08:39	09:26
	16:30	17:46	17 09:18 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:50 (22)	16:06	15:43
22	09:05	07:55	09:02 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:30 (22)	08:41	09:27
	16:32	17:48	16 09:18 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	20 09:50 (22)	16:04	15:44
23	09:04	07:52	09:04 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:30 (22)	08:43	09:27
	16:35	17:50	12 09:16 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:50 (22)	16:03	15:44
24	09:02	07:49	09:06 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:31 (22)	08:45	09:28
	16:37	17:53	7 09:13 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	20 09:51 (22)	16:01	15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:30 (22)	08:48	09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	20 08:50 (22)	15:59	15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:31 (22)	08:50	09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	19 08:50 (22)	15:58	15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:30 (22)	08:52	09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	19 08:49 (22)	15:57	15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:31 (22)	08:54	09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	17 08:48 (22)	15:55	15:48
29	08:52			07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:33 (22)	08:56	09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15 08:48 (22)	15:54	15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:34 (22)	08:58	09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	11 08:45 (22)	15:53	15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:37 (22)		09:28
	16:54			20:15		22:29		22:03	20:43		16:51	6 08:43 (22)		15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236	199
Total, worst case			223									226		
Sun reduction			0,50									0,50		
Oper. time red.			0,80									0,80		
Wind dir. red.			0,74									0,74		
Total reduction			0,29									0,29		
Total, real			66									67		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AQ - Buevegen 1500

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April	May	June	July	August	September	October		November		December
1	09:28	08:46		09:41 (22)		08:28 (24)	07:07	05:44	04:40	04:32	05:24	06:33	07:39		07:52		09:00 (22)	09:00
	15:53	16:56	3	09:44 (22)	19	08:47 (24)	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	24	09:24 (22)	15:51
2	09:28	08:44		09:37 (22)		08:27 (24)	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:01 (22)	09:02
	15:54	16:59	10	09:47 (22)	20	08:47 (24)	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46	23	09:24 (22)	15:50
3	09:27	08:41		09:35 (22)		08:27 (24)	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:01 (22)	09:04
	15:56	17:01	15	09:50 (22)	20	08:47 (24)	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44	23	09:24 (22)	15:49
4	09:27	08:39		09:34 (22)		08:27 (24)	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:02 (22)	09:05
	15:57	17:04	17	09:51 (22)	19	08:46 (24)	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42	22	09:24 (22)	15:48
5	09:26	08:37		09:33 (22)		08:28 (24)	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:02 (22)	09:07
	15:59	17:06	20	09:53 (22)	17	08:45 (24)	20:26	21:35	22:37	22:46	21:52	20:28	19:02	3	09:14 (24)	21	09:23 (22)	15:47
6	09:25	08:35		09:32 (22)		08:28 (24)	06:53	05:31	04:34	04:37	05:35	06:44	07:51		09:06 (24)		09:03 (22)	09:09
	16:00	17:08	21	09:53 (22)	16	08:44 (24)	20:28	21:38	22:38	22:45	21:49	20:26	18:59	11	09:17 (24)	19	09:22 (22)	15:46
7	09:25	08:32		09:31 (22)		08:29 (24)	06:50	05:29	04:33	04:39	05:37	06:47	07:53		09:05 (24)		09:05 (22)	09:10
	16:02	17:11	22	09:53 (22)	13	08:42 (24)	20:31	21:40	22:39	22:44	21:47	20:23	18:56	15	09:20 (24)	17	09:22 (22)	15:46
8	09:24	08:30		09:32 (22)		08:31 (24)	06:47	05:27	04:32	04:40	05:40	06:49	07:55		09:03 (24)		09:05 (22)	09:12
	16:04	17:13	22	09:54 (22)	8	08:39 (24)	20:33	21:42	22:41	22:43	21:44	20:20	18:53	17	09:20 (24)	15	09:20 (22)	15:45
9	09:23	08:28		09:31 (22)			06:44	05:24	04:31	04:41	05:42	06:51	07:58		09:02 (24)		09:08 (22)	09:14
	16:05	17:16	23	09:54 (22)			20:35	21:44	22:42	22:42	21:42	20:17	18:50	18	09:20 (24)	10	09:18 (22)	15:44
10	09:22	08:25		09:32 (22)			06:41	05:22	04:30	04:43	05:44	06:53	08:00		09:02 (24)		09:13 (22)	09:15
	16:07	17:18	23	09:55 (22)			20:38	21:47	22:43	22:41	21:39	20:14	18:48	19	09:21 (24)	1	09:14 (22)	15:44
11	09:21	08:23		09:31 (22)			06:38	05:20	04:30	04:44	05:46	06:55	08:02		09:01 (24)			09:16
	16:09	17:21	24	09:55 (22)			20:40	21:49	22:44	22:39	21:37	20:11	18:45	20	09:21 (24)			15:43
12	09:20	08:20		09:31 (22)			06:36	05:17	04:29	04:46	05:49	06:58	08:04		09:01 (24)			09:18
	16:11	17:23	23	09:54 (22)			20:42	21:51	22:45	22:38	21:34	20:08	18:42	20	09:21 (24)			15:43
13	09:19	08:18		09:31 (22)			06:33	05:15	04:28	04:47	05:51	07:00	08:07		09:01 (24)			09:19
	16:13	17:26	23	09:54 (22)			20:44	21:53	22:46	22:37	21:32	20:05	18:39	19	09:20 (24)			15:43
14	09:17	08:15		09:33 (22)			06:30	05:13	04:28	04:49	05:53	07:02	08:09		09:01 (24)			09:20
	16:15	17:28	21	09:54 (22)			20:47	21:55	22:47	22:35	21:29	20:02	18:36	18	09:19 (24)			15:42
15	09:16	08:13		09:33 (22)			06:27	05:11	04:28	04:51	05:55	07:04	08:11		09:02 (24)			09:21
	16:17	17:31	20	09:53 (22)			20:49	21:58	22:47	22:34	21:26	20:00	18:34	16	09:18 (24)			15:42
16	09:15	08:10		09:34 (22)			06:24	05:08	04:27	04:53	05:57	07:06	08:14		09:03 (24)			09:22
	16:19	17:33	17	09:51 (22)			20:51	22:00	22:48	22:32	21:24	19:57	18:31	13	09:16 (24)			15:42
17	09:13	08:08		09:36 (22)			06:22	05:06	04:27	04:54	06:00	07:09	08:16		09:05 (24)			09:23
	16:21	17:36	14	09:50 (22)			20:54	22:02	22:49	22:31	21:21	19:54	18:28	10	09:15 (24)			15:42
18	09:12	08:05		09:39 (22)			06:19	05:04	04:27	04:56	06:02	07:11	08:18					09:24
	16:23	17:38	8	09:47 (22)			20:56	22:04	22:49	22:29	21:19	19:51	18:25					15:42
19	09:10	08:02			06:44		06:16	05:02	04:27	04:58	06:04	07:13	08:21					09:25
	16:26	17:41			18:47		20:58	22:06	22:50	22:27	21:16	19:48	18:23					15:42
20	09:09	08:00			06:42		06:13	05:00	04:27	05:00	06:06	07:15	08:23					09:26
	16:28	17:43			18:49		21:01	22:08	22:50	22:25	21:13	19:45	18:20					15:43
21	09:07	07:57			06:39		06:10	04:58	04:27	05:02	06:09	07:17	08:25					09:26
	16:30	17:45			18:52		21:03	22:10	22:50	22:24	21:10	19:42	18:17					15:43
22	09:05	07:54			06:36		06:08	04:56	04:27	05:04	06:11	07:20	08:28					09:27
	16:32	17:48			18:54		21:05	22:12	22:51	22:22	21:08	19:39	18:15					15:44
23	09:04	07:52			06:33		06:05	04:54	04:27	05:06	06:13	07:22	08:30					09:27
	16:35	17:50			18:56		21:08	22:14	22:51	22:20	21:05	19:36	18:12					15:44
24	09:02	07:49		08:36 (24)	06:30		06:02	04:53	04:28	05:08	06:15	07:24	08:32		10:07 (22)		08:45	09:28
	16:37	17:53	5	08:41 (24)	18:59		21:10	22:16	22:51	22:18	21:02	19:33	18:09	10	10:17 (22)		16:01	15:45
25	09:00	07:46		08:32 (24)	06:27		06:00	04:51	04:28	05:10	06:18	07:26	07:35		09:05 (22)		08:48	09:28
	16:39	17:55	12	08:44 (24)	19:01		21:12	22:18	22:51	22:16	20:59	19:30	17:07	15	09:20 (22)		15:59	15:45
26	08:58	07:44		08:30 (24)	06:24		05:57	04:49	04:29	05:12	06:20	07:28	07:37		09:04 (22)		08:50	09:28
	16:42	17:58	15	08:45 (24)	19:03		21:14	22:20	22:51	22:14	20:57	19:28	17:04	18	09:22 (22)		15:58	15:46
27	08:56	07:41		08:29 (24)	06:21		05:54	04:47	04:29	05:14	06:22	07:31	07:40		09:02 (22)		08:52	09:28
	16:44	18:00	17	08:46 (24)	19:05		21:17	22:22	22:50	22:12	20:54	19:25	17:02	20	09:22 (22)		15:56	15:47
28	08:54	07:38		08:29 (24)	06:18		05:52	04:46	04:30	05:16	06:24	07:33	07:42		09:02 (22)		08:54	09:29
	16:46	18:02	18	08:47 (24)	19:08		21:19	22:24	22:50	22:10	20:51	19:22	16:59	21	09:23 (22)		15:55	15:48
29	08:52				07:16		05:49	04:44	04:30	05:18	06:27	07:35	07:44		09:02 (22)		08:56	09:29
	16:49				20:10		21:21	22:26	22:50	22:08	20:48	19:19	16:56	22	09:24 (22)		15:54	15:49
30	08:50				07:13		05:47	04:43	04:31	05:20	06:29	07:37	07:47		09:01 (22)		08:58	09:28
	16:51				20:12		21:24	22:27	22:49	22:05	20:45	19:16	16:54	23	09:24 (22)		15:53	15:50
31	08:48				07:10			04:41		05:22	06:31		07:49		09:01 (22)			09:28
	16:54				20:15			22:29		22:03	20:43		16:51	23	09:24 (22)			15:51
Potential sun hours	221	260			365		432	521	547	546	478	386	319			236		199
Total, worst case			393		132									351		175		
Sun reduction			0,50		0,50									0,50		0,50		
Oper. time red.			0,80		0,80									0,80		0,80		
Wind dir. red.			0,73		0,73									0,73		0,73		
Total reduction			0,29		0,29									0,29		0,29		
Total, real			114		38									102		51		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March		April	May	June
1	09:28		08:46	09:41 (22)	07:35	08:31 (24)	07:07	05:44	04:40
	15:53		16:56	14 09:55 (22)	18:05	20 08:51 (24)	20:17	21:26	22:31
2	09:28		08:44	09:40 (22)	07:33	08:31 (24)	07:04	05:41	04:39
	15:54		16:59	16 09:56 (22)	18:07	20 08:51 (24)	20:19	21:28	22:32
3	09:27		08:41	09:39 (22)	07:30	08:31 (24)	07:01	05:39	04:37
	15:56		17:01	19 09:58 (22)	18:10	19 08:50 (24)	20:21	21:31	22:34
4	09:27		08:39	09:38 (22)	07:27	08:31 (24)	06:58	05:36	04:36
	15:57		17:04	20 09:58 (22)	18:12	19 08:50 (24)	20:24	21:33	22:35
5	09:26		08:37	09:38 (22)	07:24	08:32 (24)	06:55	05:34	04:35
	15:59		17:06	22 10:00 (22)	18:14	16 08:48 (24)	20:26	21:35	22:37
6	09:25		08:35	09:37 (22)	07:22	08:33 (24)	06:53	05:31	04:34
	16:00		17:08	23 10:00 (22)	18:17	14 08:47 (24)	20:28	21:38	22:38
7	09:25		08:32	09:36 (22)	07:19	08:35 (24)	06:50	05:29	04:33
	16:02		17:11	24 10:00 (22)	18:19	9 08:44 (24)	20:31	21:40	22:39
8	09:24		08:30	09:37 (22)	07:16		06:47	05:27	04:32
	16:04		17:13	24 10:01 (22)	18:21		20:33	21:42	22:41
9	09:23		08:28	09:36 (22)	07:13		06:44	05:24	04:31
	16:05		17:16	24 10:00 (22)	18:24		20:35	21:44	22:42
10	09:22		08:25	09:37 (22)	07:10		06:41	05:22	04:30
	16:07		17:18	24 10:01 (22)	18:26		20:38	21:47	22:43
11	09:21		08:23	09:37 (22)	07:07		06:38	05:20	04:30
	16:09		17:21	23 10:00 (22)	18:28		20:40	21:49	22:44
12	09:20		08:20	09:37 (22)	07:05		06:36	05:17	04:29
	16:11		17:23	23 10:00 (22)	18:31		20:42	21:51	22:45
13	09:19		08:18	09:38 (22)	07:02		06:33	05:15	04:28
	16:13		17:26	21 09:59 (22)	18:33		20:44	21:53	22:46
14	09:17		08:15	09:39 (22)	06:59		06:30	05:13	04:28
	16:15		17:28	20 09:59 (22)	18:35		20:47	21:55	22:47
15	09:16		08:13	09:40 (22)	06:56		06:27	05:11	04:28
	16:17		17:31	17 09:57 (22)	18:38		20:49	21:58	22:47
16	09:15		08:10	09:42 (22)	06:53		06:24	05:08	04:27
	16:19		17:33	13 09:55 (22)	18:40		20:51	22:00	22:48
17	09:13		08:08	09:45 (22)	06:50		06:21	05:06	04:27
	16:21		17:36	8 09:53 (22)	18:42		20:54	22:02	22:49
18	09:12		08:05		06:47		06:19	05:04	04:27
	16:23		17:38		18:45		20:56	22:04	22:49
19	09:10		08:02		06:44		06:16	05:02	04:27
	16:26		17:41		18:47		20:58	22:06	22:50
20	09:09		08:00		06:42		06:13	05:00	04:27
	16:28		17:43		18:49		21:01	22:08	22:50
21	09:07		07:57		06:39		06:10	04:58	04:27
	16:30		17:45		18:52		21:03	22:10	22:50
22	09:05		07:54		06:36		06:08	04:56	04:27
	16:32		17:48		18:54		21:05	22:12	22:51
23	09:04		07:52	08:40 (24)	06:33		06:05	04:54	04:27
	16:35		17:50	5 08:45 (24)	18:56		21:08	22:14	22:51
24	09:02		07:49	08:36 (24)	06:30		06:02	04:53	04:28
	16:37		17:53	12 08:48 (24)	18:59		21:10	22:16	22:51
25	09:00		07:46	08:34 (24)	06:27		06:00	04:51	04:28
	16:39		17:55	15 08:49 (24)	19:01		21:12	22:18	22:51
26	08:58		07:44	08:33 (24)	06:24		05:57	04:49	04:29
	16:42		17:58	17 08:50 (24)	19:03		21:14	22:20	22:51
27	08:56		07:41	08:32 (24)	06:21		05:54	04:47	04:29
	16:44		18:00	18 08:50 (24)	19:05		21:17	22:22	22:50
28	08:54		07:38	08:32 (24)	06:18		05:52	04:46	04:30
	16:46		18:02	19 08:51 (24)	19:08		21:19	22:24	22:50
29	08:52				07:16		05:49	04:44	04:30
	16:49				20:10		21:21	22:26	22:50
30	08:50				07:13		05:47	04:43	04:31
	16:51				20:12		21:24	22:27	22:49
31	08:48	09:43 (22)			07:10			04:41	
	16:54	9 09:52 (22)			20:15			22:29	
Potential sun hours	221		260		365		432	521	547
Total, worst case		9		421		117			
Sun reduction		0,50		0,50		0,50			
Oper. time red.		0,80		0,80		0,80			
Wind dir. red.		0,72		0,73		0,73			
Total reduction		0,29		0,29		0,29			
Total, real		3		122		34			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AR - Buevegen 1502

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August	September	October			November			December
1	04:32	05:24	06:33	07:39			07:51		09:06 (22)	09:00
	22:49	22:01	20:40	19:13			16:49	24	09:30 (22)	15:51
2	04:33	05:26	06:35	07:42			07:54		09:06 (22)	09:02
	22:48	21:59	20:37	19:10			16:46	24	09:30 (22)	15:50
3	04:34	05:29	06:38	07:44			07:56		09:06 (22)	09:04
	22:47	21:56	20:34	19:07			16:44	24	09:30 (22)	15:49
4	04:35	05:31	06:40	07:46			07:59		09:07 (22)	09:05
	22:47	21:54	20:31	19:05			16:42	23	09:30 (22)	15:48
5	04:36	05:33	06:42	07:48			08:01		09:07 (22)	09:07
	22:46	21:52	20:28	19:02			16:39	22	09:29 (22)	15:47
6	04:37	05:35	06:44	07:51		09:12 (24)	08:04		09:08 (22)	09:09
	22:45	21:49	20:26	18:59	7	09:19 (24)	16:37	21	09:29 (22)	15:46
7	04:39	05:37	06:47	07:53		09:10 (24)	08:06		09:09 (22)	09:10
	22:44	21:47	20:23	18:56	12	09:22 (24)	16:35	20	09:29 (22)	15:46
8	04:40	05:40	06:49	07:55		09:08 (24)	08:08		09:09 (22)	09:12
	22:43	21:44	20:20	18:53	15	09:23 (24)	16:32	18	09:27 (22)	15:45
9	04:41	05:42	06:51	07:58		09:06 (24)	08:11		09:10 (22)	09:14
	22:42	21:42	20:17	18:50	18	09:24 (24)	16:30	17	09:27 (22)	15:44
10	04:43	05:44	06:53	08:00		09:06 (24)	08:13		09:12 (22)	09:15
	22:41	21:39	20:14	18:48	19	09:25 (24)	16:28	13	09:25 (22)	15:44
11	04:44	05:46	06:55	08:02		09:05 (24)	08:16		09:14 (22)	09:16
	22:39	21:37	20:11	18:45	19	09:24 (24)	16:26	9	09:23 (22)	15:43
12	04:46	05:49	06:58	08:04		09:05 (24)	08:18			09:18
	22:38	21:34	20:08	18:42	20	09:25 (24)	16:24			15:43
13	04:47	05:51	07:00	08:07		09:04 (24)	08:20			09:19
	22:37	21:32	20:05	18:39	20	09:24 (24)	16:21			15:43
14	04:49	05:53	07:02	08:09		09:04 (24)	08:23			09:20
	22:35	21:29	20:02	18:36	19	09:23 (24)	16:19			15:42
15	04:51	05:55	07:04	08:11		09:05 (24)	08:25			09:21
	22:34	21:26	20:00	18:34	18	09:23 (24)	16:17			15:42
16	04:53	05:57	07:06	08:14		09:05 (24)	08:27			09:22
	22:32	21:24	19:57	18:31	16	09:21 (24)	16:15			15:42
17	04:54	06:00	07:09	08:16		09:07 (24)	08:30			09:23
	22:31	21:21	19:54	18:28	14	09:21 (24)	16:13			15:42
18	04:56	06:02	07:11	08:18		09:08 (24)	08:32			09:24
	22:29	21:19	19:51	18:25	10	09:18 (24)	16:11			15:42
19	04:58	06:04	07:13	08:21			08:34			09:25
	22:27	21:16	19:48	18:23			16:10			15:42
20	05:00	06:06	07:15	08:23			08:37			09:26
	22:25	21:13	19:45	18:20			16:08			15:43
21	05:02	06:09	07:17	08:25			08:39			09:26
	22:24	21:10	19:42	18:17			16:06			15:43
22	05:04	06:11	07:20	08:28			08:41			09:27
	22:22	21:08	19:39	18:15			16:04			15:44
23	05:06	06:13	07:22	08:30			08:43			09:27
	22:20	21:05	19:36	18:12			16:03			15:44
24	05:08	06:15	07:24	08:32			08:45			09:28
	22:18	21:02	19:33	18:09			16:01			15:45
25	05:10	06:18	07:26	07:35		09:13 (22)	08:48			09:28
	22:16	20:59	19:30	17:07	10	09:23 (22)	15:59			15:45
26	05:12	06:20	07:28	07:37		09:11 (22)	08:50			09:28
	22:14	20:57	19:28	17:04	15	09:26 (22)	15:58			15:46
27	05:14	06:22	07:31	07:40		09:09 (22)	08:52			09:28
	22:12	20:54	19:25	17:01	18	09:27 (22)	15:56			15:47
28	05:16	06:24	07:33	07:42		09:08 (22)	08:54			09:29
	22:10	20:51	19:22	16:59	20	09:28 (22)	15:55			15:48
29	05:18	06:27	07:35	07:44		09:08 (22)	08:56			09:29
	22:08	20:48	19:19	16:56	21	09:29 (22)	15:54			15:49
30	05:20	06:29	07:37	07:47		09:07 (22)	08:58			09:28
	22:05	20:45	19:16	16:54	22	09:29 (22)	15:53			15:50
31	05:22	06:31		07:49		09:07 (22)				09:28
	22:03	20:43		16:51	23	09:30 (22)				15:51
Potential sun hours	546	478	386	319			236			199
Total, worst case					336			215		
Sun reduction					0,50			0,50		
Oper. time red.					0,80			0,80		
Wind dir. red.					0,73			0,72		
Total reduction					0,29			0,29		
Total, real					98			62		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AS - Buevegen 1286

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:52
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:42	07:30	07:01	05:39	04:38	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:29	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:11
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:33	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:51	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:08	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:05	08:18	09:18
	16:11	17:24	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:37	16:20	15:43
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:28	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:26	16:12	15:42
19	09:10	08:03	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:11	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:33	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:51	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:03	04:53	04:28	05:08	06:16	07:24	08:32	08:46	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:34	18:09	16:01	15:45
25	09:00	07:47	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:06	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:22	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:29
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AT - Buevegen 1498

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March	April	May	June	July	August	September	October		November		December
1	09:28	08:46		07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:40		07:52	08:41 (22)	09:00
	15:53	16:56		18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13		16:49	7 08:48 (22)	15:51
2	09:28	08:44		07:33	07:04	05:41	04:39	04:33	05:26	06:35	07:42		07:54		09:02
	15:54	16:59		18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10		16:46		15:50
3	09:27	08:41		07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44		07:56		09:04
	15:56	17:01		18:10	20:21	21:31	22:34	22:47	21:56	20:34	19:07		16:44		15:49
4	09:27	08:39		07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46		07:59		09:05
	15:57	17:04		18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05		16:42		15:48
5	09:26	08:37		07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48		08:01		09:07
	15:59	17:06		18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02		16:39		15:47
6	09:25	08:35		07:22	06:53	05:31	04:34	04:37	05:35	06:44	07:51		08:04		09:09
	16:00	17:09		18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59		16:37		15:46
7	09:25	08:32		07:19	06:50	05:29	04:33	04:39	05:37	06:47	07:53		08:06		09:10
	16:02	17:11		18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56		16:35		15:46
8	09:24	08:30		07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55		08:08		09:12
	16:04	17:13		18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53		16:32		15:45
9	09:23	08:28		07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:58		08:11		09:14
	16:05	17:16		18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50		16:30		15:44
10	09:22	08:25	09:11 (22)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00		08:13		09:15
	16:07	17:18	8 09:19 (22)	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48		16:28		15:44
11	09:21	08:23	09:09 (22)	07:07	06:38	05:20	04:30	04:44	05:46	06:55	08:02		08:16		09:16
	16:09	17:21	12 09:21 (22)	18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45		16:26		15:43
12	09:20	08:20	09:07 (22)	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04		08:18		09:18
	16:11	17:23	15 09:22 (22)	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42		16:24		15:43
13	09:19	08:18	09:06 (22)	07:02	06:33	05:15	04:28	04:48	05:51	07:00	08:07		08:20		09:19
	16:13	17:26	18 09:24 (22)	18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39		16:21		15:43
14	09:17	08:15	09:05 (22)	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09		08:23		09:20
	16:15	17:28	20 09:25 (22)	18:35	20:47	21:56	22:47	22:35	21:29	20:02	18:36		16:19		15:42
15	09:16	08:13	09:05 (22)	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11		08:25		09:21
	16:17	17:31	20 09:25 (22)	18:38	20:49	21:58	22:47	22:34	21:26	20:00	18:34		16:17		15:42
16	09:15	08:10	09:04 (22)	06:53	06:24	05:08	04:27	04:53	05:58	07:06	08:14		08:27		09:22
	16:19	17:33	21 09:25 (22)	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31		16:15		15:42
17	09:13	08:08	09:05 (22)	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16		08:30		09:23
	16:21	17:36	21 09:26 (22)	18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28		16:13		15:42
18	09:12	08:05	09:05 (22)	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	09:42 (22)	08:32		09:24
	16:23	17:38	20 09:25 (22)	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	7 09:49 (22)	16:11		15:42
19	09:10	08:02	09:05 (22)	06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	09:39 (22)	08:34		09:25
	16:26	17:41	20 09:25 (22)	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	13 09:52 (22)	16:10		15:42
20	09:09	08:00	09:05 (22)	06:42	06:13	05:00	04:27	05:00	06:06	07:15	08:23	09:37 (22)	08:37		09:26
	16:28	17:43	19 09:24 (22)	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16 09:53 (22)	16:08		15:43
21	09:07	07:57	09:05 (22)	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	09:36 (22)	08:39		09:26
	16:30	17:46	18 09:23 (22)	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	18 09:54 (22)	16:06		15:43
22	09:05	07:54	09:07 (22)	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	09:35 (22)	08:41		09:27
	16:32	17:48	15 09:22 (22)	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	19 09:54 (22)	16:04		15:44
23	09:04	07:52	09:09 (22)	06:33	06:05	04:54	04:27	05:06	06:13	07:22	08:30	09:35 (22)	08:43		09:27
	16:35	17:50	11 09:20 (22)	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	20 09:55 (22)	16:03		15:44
24	09:02	07:49	09:13 (22)	06:30	06:02	04:53	04:28	05:08	06:15	07:24	08:32	09:34 (22)	08:45		09:28
	16:37	17:53	3 09:16 (22)	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	21 09:55 (22)	16:01		15:45
25	09:00	07:46		06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:34 (22)	08:48		09:28
	16:39	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:31	17:07	21 08:55 (22)	15:59		15:45
26	08:58	07:44		06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:34 (22)	08:50		09:28
	16:42	17:58		19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	21 08:55 (22)	15:58		15:46
27	08:56	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:31	07:40	08:34 (22)	08:52		09:29
	16:44	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	20 08:54 (22)	15:57		15:47
28	08:54	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:35 (22)	08:54		09:29
	16:46	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	19 08:54 (22)	15:55		15:48
29	08:52			07:16	05:49	04:44	04:30	05:18	06:27	07:35	07:44	08:36 (22)	08:56		09:29
	16:49			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	17 08:53 (22)	15:54		15:49
30	08:50			07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:36 (22)	08:58		09:28
	16:51			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	16 08:52 (22)	15:53		15:50
31	08:48			07:10		04:41		05:22	06:31		07:49	08:38 (22)			09:28
	16:54			20:15		22:29		22:03	20:43		16:51	12 08:50 (22)			15:51
Potential sun hours	221	260		365	432	521	547	546	478	386	319		236		199
Total, worst case			241									240		7	
Sun reduction			0,50									0,50		0,50	
Oper. time red.			0,80									0,80		0,80	
Wind dir. red.			0,74									0,74		0,74	
Total reduction			0,29									0,29		0,29	
Total, real			71									71		2	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:
Moifjellet og Mellomstrand vrk

Licensed user:
Multiconsult Norge AS
Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AU - Buevegen 1340

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February	March	April	May	June	July	August	September	October	November	December
1	09:28	08:46	07:36	07:07	05:44	04:40	04:32	05:24	06:33	07:40	07:52	09:00
	15:53	16:56	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	15:51
2	09:28	08:44	07:33	07:04	05:42	04:39	04:33	05:27	06:36	07:42	07:54	09:02
	15:54	16:59	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:47	15:50
3	09:27	08:41	07:30	07:01	05:39	04:37	04:34	05:29	06:38	07:44	07:56	09:04
	15:56	17:01	18:10	20:22	21:31	22:34	22:47	21:56	20:34	19:08	16:44	15:49
4	09:27	08:39	07:27	06:58	05:37	04:36	04:35	05:31	06:40	07:46	07:59	09:05
	15:57	17:04	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:05	16:42	15:48
5	09:26	08:37	07:24	06:56	05:34	04:35	04:36	05:33	06:42	07:49	08:01	09:07
	15:59	17:06	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	15:47
6	09:25	08:35	07:22	06:53	05:32	04:34	04:38	05:35	06:44	07:51	08:04	09:09
	16:00	17:09	18:17	20:28	21:38	22:38	22:45	21:49	20:26	18:59	16:37	15:47
7	09:25	08:32	07:19	06:50	05:29	04:33	04:39	05:38	06:47	07:53	08:06	09:10
	16:02	17:11	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:35	15:46
8	09:24	08:30	07:16	06:47	05:27	04:32	04:40	05:40	06:49	07:55	08:08	09:12
	16:04	17:14	18:22	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	15:45
9	09:23	08:28	07:13	06:44	05:24	04:31	04:42	05:42	06:51	07:58	08:11	09:14
	16:06	17:16	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	15:44
10	09:22	08:25	07:10	06:41	05:22	04:31	04:43	05:44	06:53	08:00	08:13	09:15
	16:07	17:19	18:26	20:38	21:47	22:43	22:41	21:39	20:14	18:48	16:28	15:44
11	09:21	08:23	07:07	06:38	05:20	04:30	04:45	05:46	06:55	08:02	08:16	09:16
	16:09	17:21	18:29	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	15:43
12	09:20	08:20	07:05	06:36	05:17	04:29	04:46	05:49	06:58	08:04	08:18	09:18
	16:11	17:23	18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:24	15:43
13	09:19	08:18	07:02	06:33	05:15	04:29	04:48	05:51	07:00	08:07	08:20	09:19
	16:13	17:26	18:33	20:45	21:53	22:46	22:37	21:32	20:05	18:39	16:22	15:43
14	09:17	08:15	06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:20
	16:15	17:28	18:36	20:47	21:56	22:47	22:35	21:29	20:03	18:36	16:19	15:42
15	09:16	08:13	06:56	06:27	05:11	04:28	04:51	05:55	07:04	08:11	08:25	09:21
	16:17	17:31	18:38	20:49	21:58	22:47	22:34	21:27	20:00	18:34	16:17	15:42
16	09:15	08:10	06:53	06:24	05:09	04:27	04:53	05:58	07:06	08:14	08:27	09:22
	16:19	17:33	18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	15:42
17	09:13	08:08	06:50	06:22	05:06	04:27	04:54	06:00	07:09	08:16	08:30	09:23
	16:21	17:36	18:43	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:14	15:42
18	09:12	08:05	06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	09:24
	16:24	17:38	18:45	20:56	22:04	22:49	22:29	21:19	19:51	18:25	16:12	15:42
19	09:10	08:02	06:45	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	09:25
	16:26	17:41	18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:10	15:43
20	09:09	08:00	06:42	06:13	05:00	04:27	05:00	06:07	07:15	08:23	08:37	09:26
	16:28	17:43	18:49	21:01	22:08	22:50	22:26	21:13	19:45	18:20	16:08	15:43
21	09:07	07:57	06:39	06:11	04:58	04:27	05:02	06:09	07:17	08:25	08:39	09:26
	16:30	17:46	18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	15:43
22	09:05	07:55	06:36	06:08	04:56	04:27	05:04	06:11	07:20	08:28	08:41	09:27
	16:32	17:48	18:54	21:05	22:12	22:51	22:22	21:08	19:39	18:15	16:04	15:44
23	09:04	07:52	06:33	06:05	04:55	04:28	05:06	06:13	07:22	08:30	08:43	09:27
	16:35	17:50	18:56	21:08	22:14	22:51	22:20	21:05	19:36	18:12	16:03	15:44
24	09:02	07:49	06:30	06:02	04:53	04:28	05:08	06:16	07:24	08:32	08:45	09:28
	16:37	17:53	18:59	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	15:45
25	09:00	07:46	06:27	06:00	04:51	04:28	05:10	06:18	07:26	07:35	08:48	09:28
	16:39	17:55	19:01	21:12	22:18	22:51	22:16	21:00	19:31	17:07	16:00	15:46
26	08:58	07:44	06:24	05:57	04:49	04:29	05:12	06:20	07:28	07:37	08:50	09:28
	16:42	17:58	19:03	21:15	22:20	22:51	22:14	20:57	19:28	17:04	15:58	15:46
27	08:56	07:41	06:21	05:55	04:48	04:29	05:14	06:22	07:31	07:40	08:52	09:29
	16:44	18:00	19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:02	15:57	15:47
28	08:54	07:38	06:19	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	09:29
	16:47	18:03	19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	15:48
29	08:52		07:16	05:49	04:44	04:31	05:18	06:27	07:35	07:44	08:56	09:29
	16:49		20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:57	15:54	15:49
30	08:50		07:13	05:47	04:43	04:31	05:20	06:29	07:37	07:47	08:58	09:28
	16:51		20:12	21:24	22:27	22:49	22:05	20:46	19:16	16:54	15:53	15:50
31	08:48		07:10		04:41		05:22	06:31		07:49		09:28
	16:54		20:15		22:29		22:03	20:43		16:52		15:51
Potential sun hours	221	260	365	432	521	547	545	478	386	319	236	200
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Project:

Moifjellet og Mellomstrand vrk

Licensed user:

Multiconsult Norge AS

Nedre Skøyen vei 2 .
NO-0276 Oslo
+47 21 58 60 15
Martine / martine.bjugg@multiconsult.no

Calculated:

19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AV - Osland 85

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January		February		March	April	May	June	July	August	September	October	November		December		
1	09:28	12:21 (24)	08:46	10:00 (28)	07:35	07:07	05:44	04:40	04:32	05:24	06:33	07:39	07:51	09:36 (28)	09:00	10:51 (23)	
	15:53	20 12:41 (24)	16:56	20 10:20 (28)	18:05	20:17	21:26	22:31	22:49	22:01	20:40	19:13	16:49	6 09:42 (28)	15:51	28 12:23 (24)	
2	09:28	12:22 (24)	08:44	09:59 (28)	07:33	07:04	05:41	04:38	04:33	05:26	06:35	07:42	07:54	09:34 (28)	09:02	10:51 (23)	
	15:54	19 12:41 (24)	16:58	21 10:20 (28)	18:07	20:19	21:28	22:32	22:48	21:59	20:37	19:10	16:46	11 09:45 (28)	15:50	30 12:24 (24)	
3	09:27	12:22 (24)	08:41	10:00 (28)	07:30	07:01	05:39	04:37	04:34	05:28	06:38	07:44	07:56	09:33 (28)	09:04	10:52 (23)	
	15:55	19 12:41 (24)	17:01	20 10:20 (28)	18:09	20:21	21:31	22:34	22:47	21:56	20:34	19:07	16:44	14 09:47 (28)	15:49	29 12:25 (24)	
4	09:27	11:12 (23)	08:39	10:00 (28)	07:27	06:58	05:36	04:36	04:35	05:31	06:40	07:46	07:59	09:31 (28)	09:05	10:53 (23)	
	15:57	22 12:41 (24)	17:03	20 10:20 (28)	18:12	20:24	21:33	22:35	22:47	21:54	20:31	19:04	16:41	17 09:48 (28)	15:48	30 12:26 (24)	
5	09:26	11:11 (23)	08:37	10:01 (28)	07:24	06:55	05:34	04:35	04:36	05:33	06:42	07:48	08:01	09:31 (28)	09:07	10:54 (23)	
	15:58	26 12:42 (24)	17:06	19 10:20 (28)	18:14	20:26	21:35	22:37	22:46	21:52	20:28	19:02	16:39	18 09:49 (28)	15:47	29 12:27 (24)	
6	09:25	11:10 (23)	08:35	10:01 (28)	07:21	06:52	05:31	04:34	04:37	05:35	06:44	07:51	08:03	09:30 (28)	09:09	10:56 (23)	
	16:00	28 12:42 (24)	17:08	18 10:19 (28)	18:17	20:28	21:37	22:38	22:45	21:49	20:25	18:59	16:37	20 09:50 (28)	15:46	28 12:28 (24)	
7	09:25	11:09 (23)	08:32	10:01 (28)	07:19	06:50	05:29	04:33	04:39	05:37	06:46	07:53	08:06	09:30 (28)	09:10	10:58 (23)	
	16:02	29 12:42 (24)	17:11	17 10:18 (28)	18:19	20:31	21:40	22:39	22:44	21:47	20:23	18:56	16:34	20 09:50 (28)	15:45	26 12:29 (24)	
8	09:24	11:09 (23)	08:30	10:03 (28)	07:16	06:47	05:26	04:32	04:40	05:39	06:49	07:55	08:08	09:30 (28)	09:12	11:00 (23)	
	16:03	30 12:42 (24)	17:13	15 10:18 (28)	18:21	20:33	21:42	22:41	22:43	21:44	20:20	18:53	16:32	20 09:50 (28)	15:45	23 12:30 (24)	
9	09:23	11:09 (23)	08:27	10:04 (28)	07:13	06:44	05:24	04:31	04:41	05:42	06:51	07:57	08:11	09:30 (28)	09:13	12:11 (24)	
	16:05	30 12:42 (24)	17:16	12 10:16 (28)	18:24	20:35	21:44	22:42	22:42	21:42	20:17	18:50	16:30	20 09:50 (28)	15:44	19 12:30 (24)	
10	09:22	11:08 (23)	08:25	10:07 (28)	07:10	06:41	05:22	04:30	04:43	05:44	06:53	08:00	08:13	09:31 (28)	09:15	12:11 (24)	
	16:07	30 12:41 (24)	17:18	5 10:12 (28)	18:26	20:37	21:47	22:43	22:41	21:39	20:14	18:47	16:28	20 09:51 (28)	15:44	19 12:30 (24)	
11	09:21	11:09 (23)	08:23		07:07	06:38	05:19	04:29	04:44	05:46	06:55	08:02	08:15	09:30 (28)	09:16	12:11 (24)	
	16:09	28 12:41 (24)	17:21		18:28	20:40	21:49	22:44	22:39	21:37	20:11	18:45	16:26	20 09:50 (28)	15:43	20 12:31 (24)	
12	09:20	11:08 (23)	08:20		07:04	06:35	05:17	04:29	04:46	05:48	06:57	08:04	08:18	09:31 (28)	09:18	12:11 (24)	
	16:11	27 12:40 (24)	17:23		18:31	20:42	21:51	22:45	22:38	21:34	20:08	18:42	16:23	27 10:58 (23)	15:43	20 12:31 (24)	
13	09:19	11:08 (23)	08:18		07:02	06:33	05:15	04:28	04:47	05:51	07:00	08:07	08:20	09:32 (28)	09:19	12:12 (24)	
	16:13	25 12:39 (24)	17:26		18:33	20:44	21:53	22:46	22:37	21:32	20:05	18:39	16:21	31 11:01 (23)	15:42	21 12:33 (24)	
14	09:17	11:08 (23)	08:15		06:59	06:30	05:13	04:28	04:49	05:53	07:02	08:09	08:23	09:33 (28)	09:20	12:12 (24)	
	16:15	20 11:28 (23)	17:28		18:35	20:47	21:55	22:47	22:35	21:29	20:02	18:36	16:19	32 11:03 (23)	15:42	21 12:33 (24)	
15	09:16	11:08 (23)	08:13		06:56	06:27	05:10	04:27	04:51	05:55	07:04	08:11	08:25	09:34 (28)	09:21	12:12 (24)	
	16:17	21 11:29 (23)	17:31		18:38	20:49	21:58	22:47	22:34	21:26	19:59	18:33	16:17	31 11:03 (23)	15:42	21 12:33 (24)	
16	09:15	11:08 (23)	08:10		06:53	06:24	05:08	04:27	04:52	05:57	07:06	08:14	08:27	09:36 (28)	09:22	12:13 (24)	
	16:19	21 11:29 (23)	17:33		18:40	20:51	22:00	22:48	22:32	21:24	19:57	18:31	16:15	31 11:05 (23)	15:42	20 12:33 (24)	
17	09:13	11:09 (23)	08:08		06:50	06:21	05:06	04:27	04:54	06:00	07:08	08:16	08:30	09:38 (28)	09:23	12:14 (24)	
	16:21	22 11:31 (23)	17:36		18:42	20:54	22:02	22:49	22:31	21:21	19:54	18:28	16:13	28 11:06 (23)	15:42	21 12:35 (24)	
18	09:12	11:09 (23)	08:05		06:47	06:19	05:04	04:27	04:56	06:02	07:11	08:18	08:32	10:44 (23)	09:24	12:14 (24)	
	16:23	22 11:31 (23)	17:38		18:45	20:56	22:04	22:49	22:29	21:18	19:51	18:25	16:11	22 11:06 (23)	15:42	21 12:35 (24)	
19	09:10	11:09 (23)	08:02		06:44	06:16	05:02	04:27	04:58	06:04	07:13	08:21	08:34	10:45 (23)	09:25	12:14 (24)	
	16:25	22 11:31 (23)	17:40		18:47	20:58	22:06	22:50	22:27	21:16	19:48	18:23	16:09	22 11:07 (23)	15:42	21 12:35 (24)	
20	09:09	11:09 (23)	08:00		06:41	06:13	05:00	04:27	05:00	06:06	07:15	08:23	08:36	10:45 (23)	09:26	12:15 (24)	
	16:28	23 11:32 (23)	17:43		18:49	21:01	22:08	22:50	22:25	21:13	19:45	18:20	16:08	22 11:07 (23)	15:43	21 12:36 (24)	
21	09:07	11:09 (23)	07:57		06:39	06:10	04:58	04:27	05:02	06:09	07:17	08:25	08:39	10:45 (23)	09:26	12:16 (24)	
	16:30	23 11:32 (23)	17:45		18:52	21:03	22:10	22:50	22:24	21:10	19:42	18:17	16:06	22 11:07 (23)	15:43	21 12:37 (24)	
22	09:05	11:10 (23)	07:54		06:36	06:08	04:56	04:27	05:03	06:11	07:19	08:28	08:41	10:45 (23)	09:27	12:16 (24)	
	16:32	22 11:32 (23)	17:48		18:54	21:05	22:12	22:50	22:22	21:08	19:39	18:14	16:04	23 11:08 (23)	15:43	21 12:37 (24)	
23	09:03	11:10 (23)	07:52		06:33	06:05	04:54	04:27	05:05	06:13	07:22	08:30	08:43	10:45 (23)	09:27	12:16 (24)	
	16:34	22 11:32 (23)	17:50		18:56	21:07	22:14	22:51	22:20	21:05	19:36	18:12	16:02	23 11:08 (23)	15:44	21 12:37 (24)	
24	09:02	11:10 (23)	07:49		06:30	06:02	04:52	04:27	05:07	06:15	07:24	08:32	08:45	10:46 (23)	09:28	12:17 (24)	
	16:37	22 11:32 (23)	17:53		18:58	21:10	22:16	22:51	22:18	21:02	19:33	18:09	16:01	22 11:08 (23)	15:45	21 12:38 (24)	
25	09:00	10:04 (28)	07:46		06:27	06:00	04:51	04:28	05:09	06:17	07:26	07:35	08:48	10:46 (23)	09:28	12:17 (24)	
	16:39	28 11:32 (23)	17:55		19:01	21:12	22:18	22:51	22:16	20:59	19:30	17:07	15:59	22 11:08 (23)	15:45	21 12:38 (24)	
26	08:58	10:03 (28)	07:44		06:24	05:57	04:49	04:28	05:11	06:20	07:28	07:37	08:50	10:47 (23)	09:28	12:18 (24)	
	16:42	31 11:32 (23)	17:57		19:03	21:14	22:20	22:50	22:14	20:57	19:27	17:04	15:58	21 11:08 (23)	15:46	21 12:39 (24)	
27	08:56	10:02 (28)	07:41		06:21	05:54	04:47	04:29	05:14	06:22	07:30	07:39	08:52	10:47 (23)	09:28	12:18 (24)	
	16:44	31 11:31 (23)	18:00		19:05	21:17	22:22	22:50	22:12	20:54	19:25	17:01	15:56	21 11:08 (23)	15:47	21 12:39 (24)	
28	08:54	10:00 (28)	07:38		06:18	05:52	04:46	04:30	05:16	06:24	07:33	07:42	08:54	10:48 (23)	09:29	12:19 (24)	
	16:46	32 11:30 (23)	18:02		19:08	21:19	22:24	22:50	22:10	20:51	19:22	16:59	15:55	21 11:09 (23)	15:48	21 12:40 (24)	
29	08:52	10:00 (28)			07:15	05:49	04:44	04:30	05:18	06:26	07:35	07:44	08:56	10:49 (23)	09:29	12:19 (24)	
	16:49	31 11:29 (23)			20:10	21:21	22:26	22:50	22:08	20:48	19:19	16:56	15:54	22 12:18 (24)	15:49	21 12:40 (24)	
30	08:50	09:59 (28)			07:13	05:46	04:43	04:31	05:20	06:29	07:37	07:47	08:58	10:49 (23)	09:28	12:20 (24)	
	16:51	27 11:26 (23)			20:12	21:24	22:27	22:49	22:05	20:45	19:16	16:54	15:52	28 12:21 (24)	15:50	20 12:40 (24)	
31	08:48	09:59 (28)			07:10		04:41		05:22	06:31		07:49			09:28	12:21 (24)	
	16:54	20 10:19 (28)			20:14		22:29		22:03	20:43		16:51			15:51	20 12:41 (24)	
Potential sun hours	221		260		365	432	521	547	546	478	386	319	236		199		
Total, worst case		773		167										657		697	
Sun reduction		0,50		0,50										0,50		0,50	
Oper. time red.		0,80		0,80										0,80		0,80	
Wind dir. red.		0,67		0,72										0,70		0,64	
Total reduction		0,27		0,29										0,28		0,25	
Total, real		208		48										183		177	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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Martine / martine.bjugg@multiconsult.no

Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06		05:44	04:40
	15:53	16:56		18:04		20:16		21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58	19:38 (63)	05:36	04:36
	15:57	17:03		18:12		20:23	2 19:40 (63)	21:32	22:34
5	09:25	08:36		07:24		06:55	19:34 (63)	05:34	04:35
	15:58	17:06		18:14		20:25	8 19:42 (63)	21:35	22:36
6	09:25	08:34		07:21		06:52	19:32 (63)	05:31	04:34
	16:00	17:08		18:16		20:28	11 19:43 (63)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:31 (63)	05:29	04:33
	16:02	17:11		18:19		20:30	12 19:43 (63)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:31 (63)	05:26	04:32
	16:03	17:13		18:21		20:32	13 19:44 (63)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:31 (63)	05:24	04:31
	16:05	17:16		18:23		20:35	12 19:43 (63)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:31 (63)	05:22	04:30
	16:07	17:18		18:26		20:37	11 19:42 (63)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:32 (63)	05:19	04:30
	16:09	17:21		18:28		20:39	8 19:40 (63)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:34 (63)	05:17	04:29
	16:11	17:23		18:30		20:42	4 19:38 (63)	21:50	22:44
13	09:18	08:17		07:01		06:32		05:15	04:28
	16:13	17:25		18:33		20:44		21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27	19:48 (62)	05:10	04:27
	16:17	17:30		18:37		20:48	9 19:57 (62)	21:57	22:47
16	09:14	08:10	16:48 (66)	06:53		06:24	19:47 (62)	05:08	04:27
	16:19	17:33	1 16:49 (66)	18:40		20:51	13 20:00 (62)	21:59	22:47
17	09:13	08:07	16:44 (66)	06:50		06:21	19:45 (62)	05:06	04:27
	16:21	17:35	8 16:52 (66)	18:42		20:53	15 20:00 (62)	22:01	22:48
18	09:11	08:04	16:42 (66)	06:47		06:18	19:44 (62)	05:04	04:27
	16:23	17:38	12 16:54 (66)	18:44		20:55	16 20:00 (62)	22:03	22:48
19	09:09	08:02	16:41 (66)	06:44		06:16	19:44 (62)	05:02	04:27
	16:25	17:40	13 16:54 (66)	18:47		20:58	17 20:01 (62)	22:05	22:49
20	09:08	07:59	16:42 (66)	06:41		06:13	19:43 (62)	05:00	04:27
	16:28	17:43	13 16:55 (66)	18:49		21:00	18 20:01 (62)	22:08	22:49
21	09:06	07:57	16:41 (66)	06:38	18:02 (65)	06:10	19:42 (62)	04:58	04:27
	16:30	17:45	14 16:55 (66)	18:51	2 18:04 (65)	21:02	18 20:00 (62)	22:10	22:49
22	09:05	07:54	16:41 (66)	06:35	17:58 (65)	06:07	19:43 (62)	04:56	04:27
	16:32	17:48	13 16:54 (66)	18:53	9 18:07 (65)	21:05	17 20:00 (62)	22:12	22:50
23	09:03	07:51	16:42 (66)	06:32	17:56 (65)	06:05	19:43 (62)	04:54	04:27
	16:34	17:50	11 16:53 (66)	18:56	12 18:08 (65)	21:07	16 19:59 (62)	22:14	22:50
24	09:01	07:49	16:43 (66)	06:30	17:55 (65)	06:02	19:44 (62)	04:52	04:28
	16:37	17:52	9 16:52 (66)	18:58	14 18:09 (65)	21:09	15 19:59 (62)	22:16	22:50
25	08:59	07:46	16:45 (66)	06:27	17:54 (65)	05:59	19:45 (62)	04:51	04:28
	16:39	17:55	4 16:49 (66)	19:00	15 18:09 (65)	21:12	12 19:57 (62)	22:17	22:50
26	08:57	07:43		06:24	17:53 (65)	05:57	19:47 (62)	04:49	04:28
	16:41	17:57		19:03	15 18:08 (65)	21:14	8 19:55 (62)	22:19	22:50
27	08:55	07:40		06:21	17:54 (65)	05:54		04:47	04:29
	16:44	18:00		19:05	15 18:09 (65)	21:16		22:21	22:49
28	08:53	07:38		06:18	17:55 (65)	05:51		04:46	04:30
	16:46	18:02		19:07	13 18:08 (65)	21:18		22:23	22:49
29	08:51			07:15	18:55 (65)	05:49		04:44	04:30
	16:49			20:09	11 19:06 (65)	21:21		22:25	22:49
30	08:49			07:12	18:57 (65)	05:46		04:43	04:31
	16:51			20:12	6 19:03 (65)	21:23		22:26	22:48
31	08:47			07:09				04:41	
	16:53			20:14				22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			98		112		255		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,62		0,69		
Total reduction			0,23		0,25		0,27		
Total, real			22		28		70		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AW - Laksesvela 60

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August			September			October			November	December
1	04:32	05:24			06:33		19:31 (63)	07:39			07:51	08:59
	22:48	22:00			20:39	8	19:39 (63)	19:13			16:49	15:51
2	04:33	05:26			06:35		19:29 (63)	07:41			07:53	09:01
	22:47	21:58			20:36	11	19:40 (63)	19:10			16:46	15:50
3	04:34	05:28			06:37		19:29 (63)	07:43			07:56	09:03
	22:47	21:56			20:34	12	19:41 (63)	19:07			16:44	15:49
4	04:35	05:31			06:39		19:28 (63)	07:46			07:58	09:05
	22:46	21:53			20:31	13	19:41 (63)	19:04			16:41	15:48
5	04:36	05:33			06:42		19:28 (63)	07:48			08:00	09:06
	22:45	21:51			20:28	12	19:40 (63)	19:01			16:39	15:47
6	04:37	05:35			06:44		19:28 (63)	07:50			08:03	09:08
	22:44	21:48			20:25	11	19:39 (63)	18:58			16:37	15:46
7	04:39	05:37			06:46		19:29 (63)	07:52			08:05	09:10
	22:43	21:46			20:22	8	19:37 (63)	18:56			16:34	15:45
8	04:40	05:39			06:48		19:31 (63)	07:55			08:08	09:11
	22:42	21:44			20:19	3	19:34 (63)	18:53			16:32	15:45
9	04:41	05:42			06:50			07:57			08:10	09:13
	22:41	21:41			20:16			18:50			16:30	15:44
10	04:43	05:44			06:53			07:59			08:12	09:14
	22:40	21:39			20:13			18:47			16:28	15:44
11	04:44	05:46			06:55			08:02			08:15	09:16
	22:39	21:36			20:11			18:44			16:25	15:43
12	04:46	05:48			06:57			08:04			08:17	09:17
	22:37	21:34			20:08			18:42			16:23	15:43
13	04:47	05:50			06:59		18:49 (65)	08:06			08:20	09:18
	22:36	21:31			20:05	5	18:54 (65)	18:39			16:21	15:42
14	04:49	05:53			07:01		18:46 (65)	08:08			08:22	09:19
	22:34	21:28			20:02	10	18:56 (65)	18:36			16:19	15:42
15	04:51	05:55			07:04		18:44 (65)	08:11			08:24	09:20
	22:33	21:26			19:59	13	18:57 (65)	18:33			16:17	15:42
16	04:52	05:57		19:56 (62)	07:06		18:43 (65)	08:13			08:27	09:21
	22:31	21:23	4	20:00 (62)	19:56	14	18:57 (65)	18:30			16:15	15:42
17	04:54	05:59		19:53 (62)	07:08		18:42 (65)	08:15		17:16 (66)	08:29	09:22
	22:30	21:21	9	20:02 (62)	19:53	15	18:57 (65)	18:28	6	17:22 (66)	16:13	15:42
18	04:56	06:02		19:51 (62)	07:10		18:41 (65)	08:18		17:14 (66)	08:31	09:23
	22:28	21:18	13	20:04 (62)	19:50	15	18:56 (65)	18:25	10	17:24 (66)	16:11	15:42
19	04:58	06:04		19:49 (62)	07:12		18:42 (65)	08:20		17:13 (66)	08:34	09:24
	22:26	21:15	15	20:04 (62)	19:47	14	18:56 (65)	18:22	12	17:25 (66)	16:09	15:42
20	05:00	06:06		19:48 (62)	07:15		18:42 (65)	08:22		17:12 (66)	08:36	09:25
	22:25	21:12	17	20:05 (62)	19:44	13	18:55 (65)	18:20	14	17:26 (66)	16:08	15:43
21	05:01	06:08		19:48 (62)	07:17		18:43 (65)	08:25		17:12 (66)	08:38	09:26
	22:23	21:10	17	20:05 (62)	19:42	10	18:53 (65)	18:17	13	17:25 (66)	16:06	15:43
22	05:03	06:11		19:47 (62)	07:19		18:45 (65)	08:27		17:12 (66)	08:40	09:26
	22:21	21:07	18	20:05 (62)	19:39	5	18:50 (65)	18:14	13	17:25 (66)	16:04	15:43
23	05:05	06:13		19:48 (62)	07:21			08:29		17:12 (66)	08:43	09:27
	22:19	21:04	18	20:06 (62)	19:36			18:12	12	17:24 (66)	16:02	15:44
24	05:07	06:15		19:48 (62)	07:23			08:32		17:13 (66)	08:45	09:27
	22:17	21:02	17	20:05 (62)	19:33			18:09	10	17:23 (66)	16:01	15:45
25	05:09	06:17		19:48 (62)	07:26			07:34		16:14 (66)	08:47	09:27
	22:15	20:59	16	20:04 (62)	19:30			17:06	7	16:21 (66)	15:59	15:45
26	05:11	06:20		19:48 (62)	07:28			07:37			08:49	09:28
	22:13	20:56	15	20:03 (62)	19:27			17:04			15:58	15:46
27	05:13	06:22		19:49 (62)	07:30			07:39			08:51	09:28
	22:11	20:53	12	20:01 (62)	19:24			17:01			15:56	15:47
28	05:16	06:24		19:50 (62)	07:32			07:41			08:53	09:28
	22:09	20:50	9	19:59 (62)	19:21			16:59			15:55	15:48
29	05:18	06:26			07:35			07:44			08:55	09:28
	22:07	20:48			19:18			16:56			15:54	15:49
30	05:20	06:28			07:37			07:46			08:57	09:28
	22:05	20:45			19:16			16:54			15:52	15:50
31	05:22	06:31		19:33 (63)				07:48				09:27
	22:02	20:42	5	19:38 (63)				16:51				15:51
Potential sun hours	545	478			386			319			236	200
Total, worst case			185			192			97			
Sun reduction			0,50			0,50			0,50			
Oper. time red.			0,80			0,80			0,80			
Wind dir. red.			0,69			0,65			0,57			
Total reduction			0,28			0,26			0,23			
Total, real			51			49			22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	January	February		March		April		May	June
1	09:27	08:45		07:35		07:06	19:00 (65)	05:44	04:40
	15:53	16:56		18:04		20:16	4 19:04 (65)	21:25	22:30
2	09:27	08:43		07:32		07:04		05:41	04:38
	15:54	16:58		18:07		20:19		21:28	22:31
3	09:26	08:41		07:29		07:01		05:39	04:37
	15:55	17:01		18:09		20:21		21:30	22:33
4	09:26	08:39		07:27		06:58		05:36	04:36
	15:57	17:03		18:12		20:23		21:32	22:34
5	09:25	08:36		07:24		06:55		05:34	04:35
	15:58	17:06		18:14		20:25		21:35	22:36
6	09:25	08:34		07:21		06:52	19:37 (63)	05:31	04:34
	16:00	17:08		18:16		20:28	6 19:43 (63)	21:37	22:37
7	09:24	08:32		07:18		06:49	19:35 (63)	05:29	04:33
	16:02	17:11		18:19		20:30	10 19:45 (63)	21:39	22:39
8	09:23	08:29		07:15		06:46	19:34 (63)	05:26	04:32
	16:03	17:13		18:21		20:32	12 19:46 (63)	21:41	22:40
9	09:22	08:27		07:13		06:44	19:33 (63)	05:24	04:31
	16:05	17:16		18:23		20:35	13 19:46 (63)	21:44	22:41
10	09:21	08:24		07:10		06:41	19:33 (63)	05:22	04:30
	16:07	17:18		18:26		20:37	12 19:45 (63)	21:46	22:42
11	09:20	08:22		07:07		06:38	19:33 (63)	05:19	04:30
	16:09	17:21		18:28		20:39	11 19:44 (63)	21:48	22:43
12	09:19	08:20		07:04		06:35	19:33 (63)	05:17	04:29
	16:11	17:23		18:30		20:42	10 19:43 (63)	21:50	22:44
13	09:18	08:17		07:01		06:32	19:35 (63)	05:15	04:28
	16:13	17:25		18:33		20:44	7 19:42 (63)	21:53	22:45
14	09:17	08:15		06:58		06:29		05:13	04:28
	16:15	17:28		18:35		20:46		21:55	22:46
15	09:15	08:12		06:55		06:27		05:10	04:27
	16:17	17:30		18:37		20:48		21:57	22:47
16	09:14	08:10		06:53		06:24		05:08	04:27
	16:19	17:33		18:40		20:51		21:59	22:47
17	09:13	08:07		06:50		06:21	19:53 (62)	05:06	04:27
	16:21	17:35		18:42		20:53	8 20:01 (62)	22:01	22:48
18	09:11	08:04	16:45 (66)	06:47		06:18	19:50 (62)	05:04	04:27
	16:23	17:38	8 16:53 (66)	18:44		20:55	12 20:02 (62)	22:03	22:48
19	09:09	08:02	16:43 (66)	06:44		06:16	19:49 (62)	05:02	04:27
	16:25	17:40	12 16:55 (66)	18:47		20:58	15 20:04 (62)	22:05	22:49
20	09:08	07:59	16:43 (66)	06:41		06:13	19:48 (62)	05:00	04:27
	16:28	17:43	13 16:56 (66)	18:49		21:00	16 20:04 (62)	22:08	22:49
21	09:06	07:57	16:43 (66)	06:38		06:10	19:46 (62)	04:58	04:27
	16:30	17:45	13 16:56 (66)	18:51		21:02	18 20:04 (62)	22:10	22:49
22	09:05	07:54	16:42 (66)	06:35		06:07	19:47 (62)	04:56	04:27
	16:32	17:48	14 16:56 (66)	18:53		21:05	17 20:04 (62)	22:12	22:50
23	09:03	07:51	16:42 (66)	06:32	18:01 (65)	06:05	19:46 (62)	04:54	04:27
	16:34	17:50	13 16:55 (66)	18:56	7 18:08 (65)	21:07	18 20:04 (62)	22:14	22:50
24	09:01	07:49	16:43 (66)	06:30	17:59 (65)	06:02	19:46 (62)	04:52	04:28
	16:37	17:52	11 16:54 (66)	18:58	11 18:10 (65)	21:09	18 20:04 (62)	22:16	22:50
25	08:59	07:46	16:44 (66)	06:27	17:57 (65)	05:59	19:46 (62)	04:51	04:28
	16:39	17:55	9 16:53 (66)	19:00	14 18:11 (65)	21:12	17 20:03 (62)	22:17	22:50
26	08:57	07:43	16:47 (66)	06:24	17:56 (65)	05:57	19:47 (62)	04:49	04:28
	16:41	17:57	4 16:51 (66)	19:03	15 18:11 (65)	21:14	16 20:03 (62)	22:19	22:50
27	08:55	07:40		06:21	17:56 (65)	05:54	19:47 (62)	04:47	04:29
	16:44	18:00		19:05	16 18:12 (65)	21:16	14 20:01 (62)	22:21	22:49
28	08:53	07:38		06:18	17:56 (65)	05:51	19:49 (62)	04:46	04:30
	16:46	18:02		19:07	15 18:11 (65)	21:18	11 20:00 (62)	22:23	22:49
29	08:51			07:15	18:56 (65)	05:49	19:50 (62)	04:44	04:30
	16:49			20:09	14 19:10 (65)	21:21	7 19:57 (62)	22:25	22:49
30	08:49			07:12	18:56 (65)	05:46		04:43	04:31
	16:51			20:12	13 19:09 (65)	21:23		22:26	22:48
31	08:47			07:09	18:57 (65)			04:41	
	16:53			20:14	10 19:07 (65)			22:28	
Potential sun hours	222	260		365		432		521	547
Total, worst case			97		115		272		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,57		0,63		0,69		
Total reduction			0,23		0,25		0,28		
Total, real			22		29		75		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
19.11.2025 15:20/4.2.271

SHADOW - Calendar

Calculation: Moifjellet med eksisterende vkv - real case - mottakere **Shadow receptor:** AX - Laksesvela 58

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
644	231	315	644	959	714	721	455	378	420	574	938	6 993

	July	August		September		October		November	December
1	04:32	05:24		06:33	19:32 (63)	07:39		07:51	08:59
	22:48	22:00		20:39	11 19:43 (63)	19:13		16:49	15:51
2	04:33	05:26		06:35	19:31 (63)	07:41		07:53	09:01
	22:47	21:58		20:36	12 19:43 (63)	19:10		16:46	15:50
3	04:34	05:28		06:37	19:31 (63)	07:43		07:56	09:03
	22:47	21:56		20:34	13 19:44 (63)	19:07		16:44	15:49
4	04:35	05:31		06:39	19:31 (63)	07:46		07:58	09:05
	22:46	21:53		20:31	12 19:43 (63)	19:04		16:41	15:48
5	04:36	05:33		06:42	19:32 (63)	07:48		08:00	09:06
	22:45	21:51		20:28	10 19:42 (63)	19:01		16:39	15:47
6	04:37	05:35		06:44	19:33 (63)	07:50		08:03	09:08
	22:44	21:48		20:25	7 19:40 (63)	18:58		16:37	15:46
7	04:39	05:37		06:46		07:52		08:05	09:10
	22:43	21:46		20:22		18:56		16:34	15:45
8	04:40	05:39		06:48		07:55		08:08	09:11
	22:42	21:44		20:19		18:53		16:32	15:45
9	04:41	05:42		06:50		07:57		08:10	09:13
	22:41	21:41		20:16		18:50		16:30	15:44
10	04:43	05:44		06:53		07:59		08:12	09:14
	22:40	21:39		20:13		18:47		16:28	15:44
11	04:44	05:46		06:55	18:54 (65)	08:02		08:15	09:16
	22:39	21:36		20:11	1 18:55 (65)	18:44		16:25	15:43
12	04:46	05:48		06:57	18:50 (65)	08:04		08:17	09:17
	22:37	21:34		20:08	9 18:59 (65)	18:42		16:23	15:43
13	04:47	05:50		06:59	18:48 (65)	08:06		08:20	09:18
	22:36	21:31		20:05	12 19:00 (65)	18:39		16:21	15:42
14	04:49	05:53	19:58 (62)	07:01	18:47 (65)	08:08		08:22	09:19
	22:34	21:28	8 20:06 (62)	20:02	14 19:01 (65)	18:36		16:19	15:42
15	04:51	05:55	19:56 (62)	07:04	18:46 (65)	08:11		08:24	09:20
	22:33	21:26	12 20:08 (62)	19:59	15 19:01 (65)	18:33		16:17	15:42
16	04:52	05:57	19:54 (62)	07:06	18:45 (65)	08:13	17:18 (66)	08:27	09:21
	22:31	21:23	15 20:09 (62)	19:56	15 19:00 (65)	18:30	7 17:25 (66)	16:15	15:42
17	04:54	05:59	19:53 (62)	07:08	18:45 (65)	08:15	17:15 (66)	08:29	09:22
	22:30	21:21	16 20:09 (62)	19:53	14 18:59 (65)	18:28	11 17:26 (66)	16:13	15:42
18	04:56	06:02	19:52 (62)	07:10	18:45 (65)	08:18	17:14 (66)	08:31	09:23
	22:28	21:18	18 20:10 (62)	19:50	13 18:58 (65)	18:25	13 17:27 (66)	16:11	15:42
19	04:58	06:04	19:52 (62)	07:12	18:46 (65)	08:20	17:13 (66)	08:34	09:24
	22:26	21:15	18 20:10 (62)	19:47	12 18:58 (65)	18:22	14 17:27 (66)	16:09	15:42
20	05:00	06:06	19:51 (62)	07:15	18:47 (65)	08:22	17:13 (66)	08:36	09:25
	22:25	21:12	18 20:09 (62)	19:44	8 18:55 (65)	18:20	14 17:27 (66)	16:08	15:43
21	05:01	06:08	19:51 (62)	07:17		08:25	17:13 (66)	08:38	09:26
	22:23	21:10	18 20:09 (62)	19:42		18:17	13 17:26 (66)	16:06	15:43
22	05:03	06:11	19:51 (62)	07:19		08:27	17:14 (66)	08:40	09:26
	22:21	21:07	17 20:08 (62)	19:39		18:14	12 17:26 (66)	16:04	15:43
23	05:05	06:13	19:52 (62)	07:21		08:29	17:14 (66)	08:43	09:27
	22:19	21:04	17 20:09 (62)	19:36		18:12	10 17:24 (66)	16:02	15:44
24	05:07	06:15	19:53 (62)	07:23		08:32	17:16 (66)	08:45	09:27
	22:17	21:02	14 20:07 (62)	19:33		18:09	7 17:23 (66)	16:01	15:45
25	05:09	06:17	19:54 (62)	07:26		07:34		08:47	09:27
	22:15	20:59	12 20:06 (62)	19:30		17:06		15:59	15:45
26	05:11	06:20	19:56 (62)	07:28		07:37		08:49	09:28
	22:13	20:56	7 20:03 (62)	19:27		17:04		15:58	15:46
27	05:13	06:22		07:30		07:39		08:51	09:28
	22:11	20:53		19:24		17:01		15:56	15:47
28	05:16	06:24		07:32		07:41		08:53	09:28
	22:09	20:50		19:21		16:59		15:55	15:48
29	05:18	06:26		07:35		07:44		08:55	09:28
	22:07	20:48		19:18		16:56		15:54	15:49
30	05:20	06:28	19:35 (63)	07:37		07:46		08:57	09:28
	22:05	20:45	7 19:42 (63)	19:16		16:54		15:52	15:50
31	05:22	06:31	19:33 (63)			07:48			09:27
	22:02	20:42	10 19:43 (63)			16:51			15:51
Potential sun hours	545	478		386		319		236	200
Total, worst case			207		178		101		
Sun reduction			0,50		0,50		0,50		
Oper. time red.			0,80		0,80		0,80		
Wind dir. red.			0,69		0,65		0,57		
Total reduction			0,28		0,26		0,23		
Total, real			57		46		23		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Vedlegg 8.2

Grafisk Moifjellet vindkraftverk

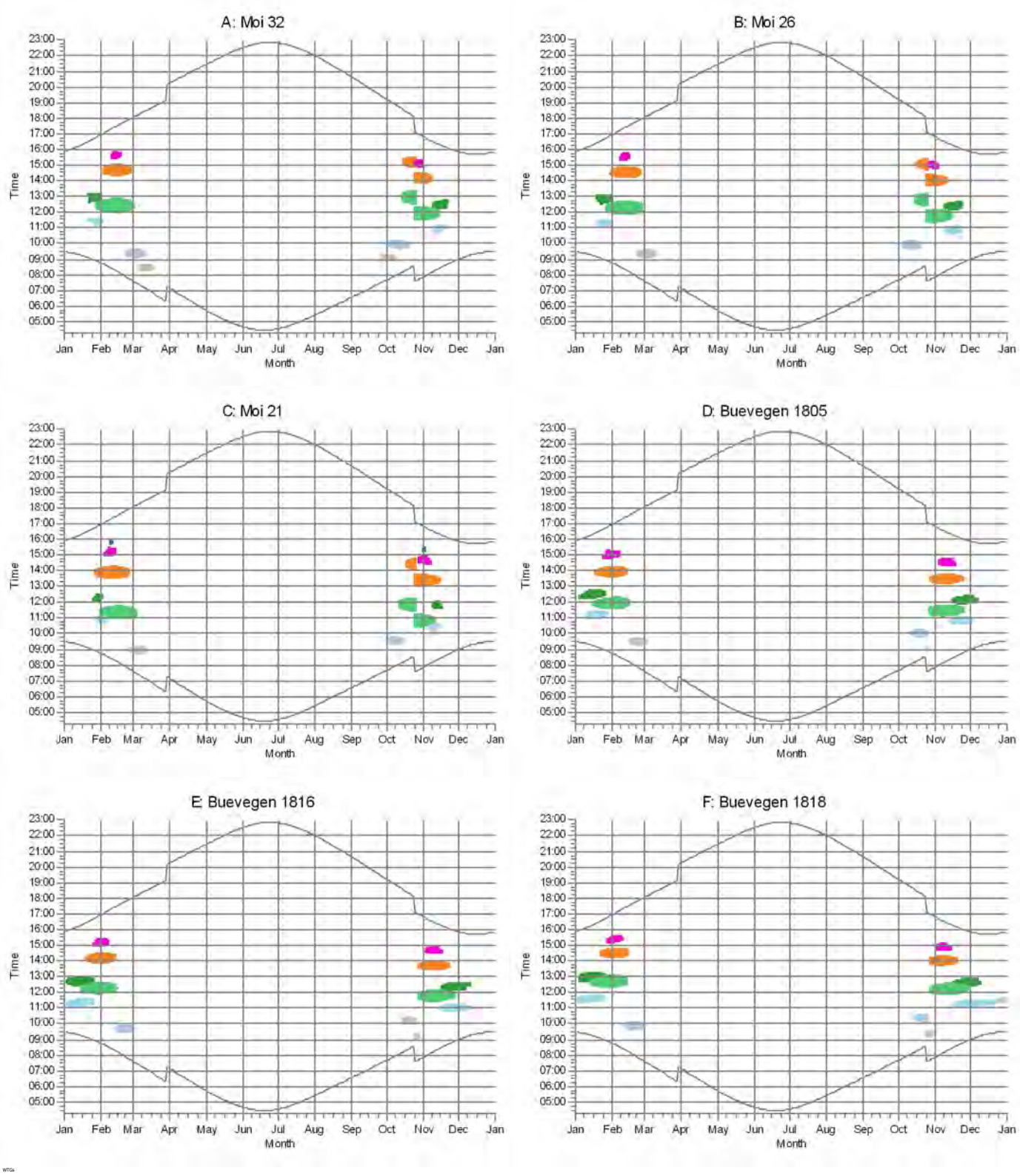
Med nærliggende - realistic case

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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere

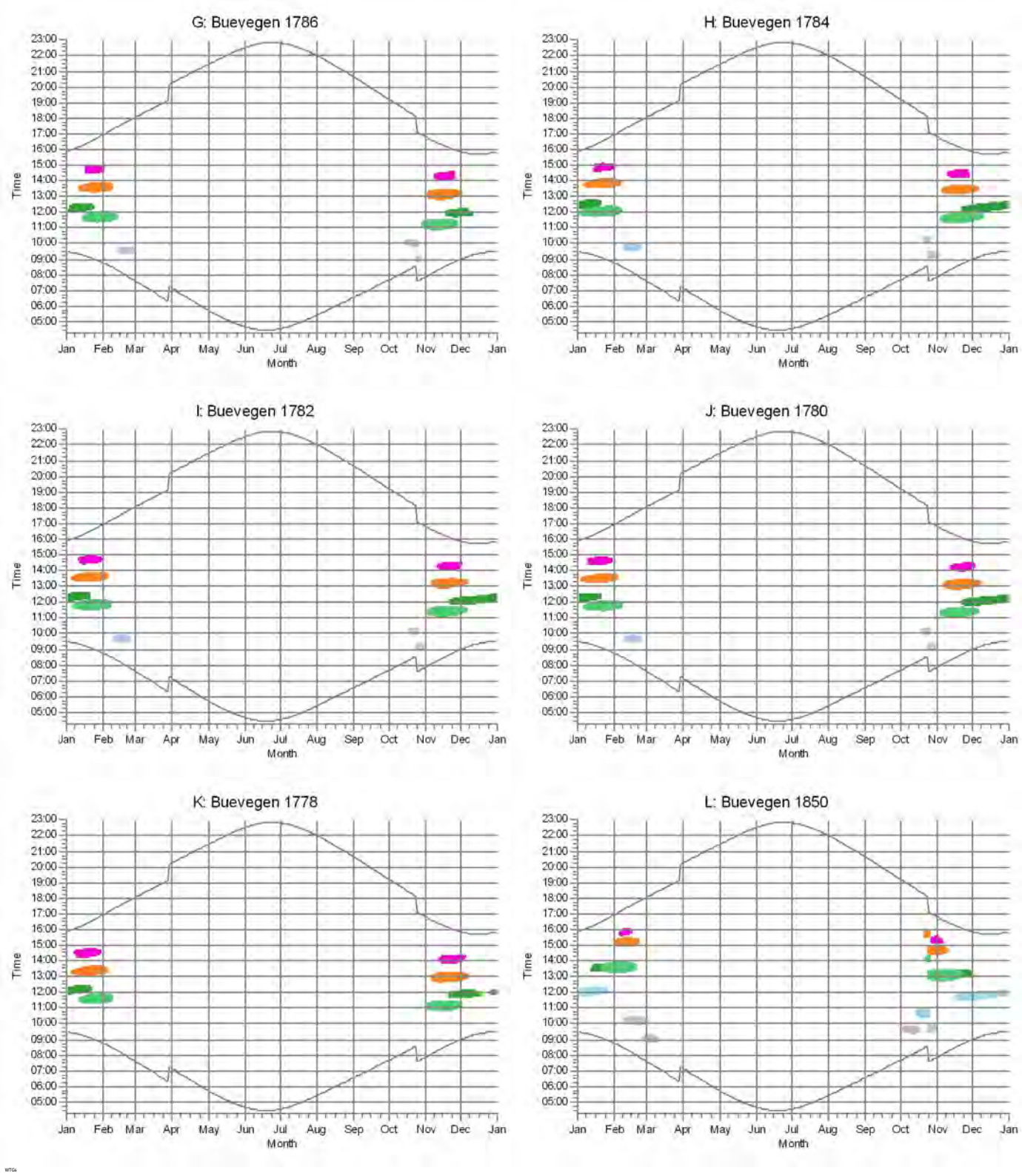


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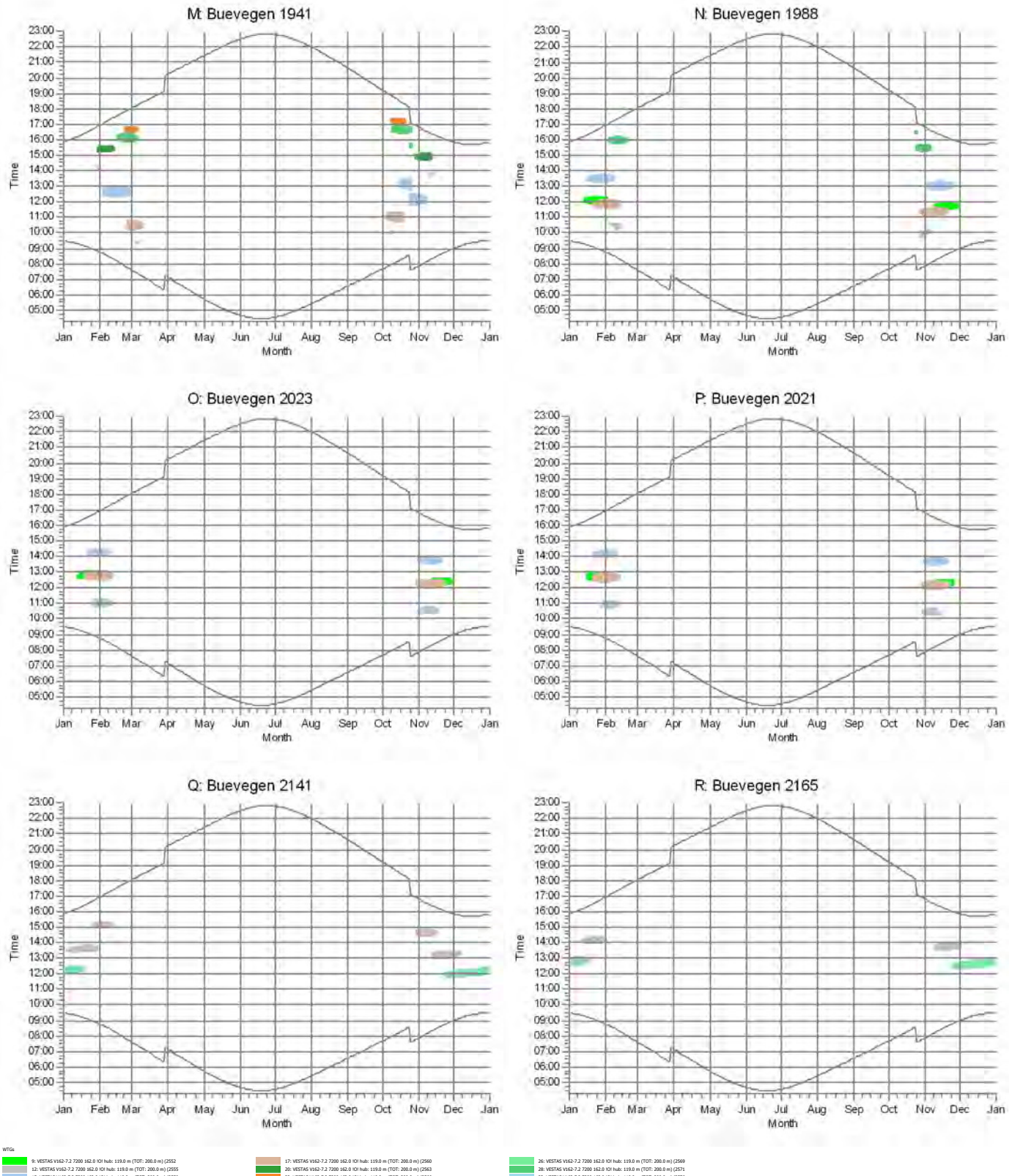


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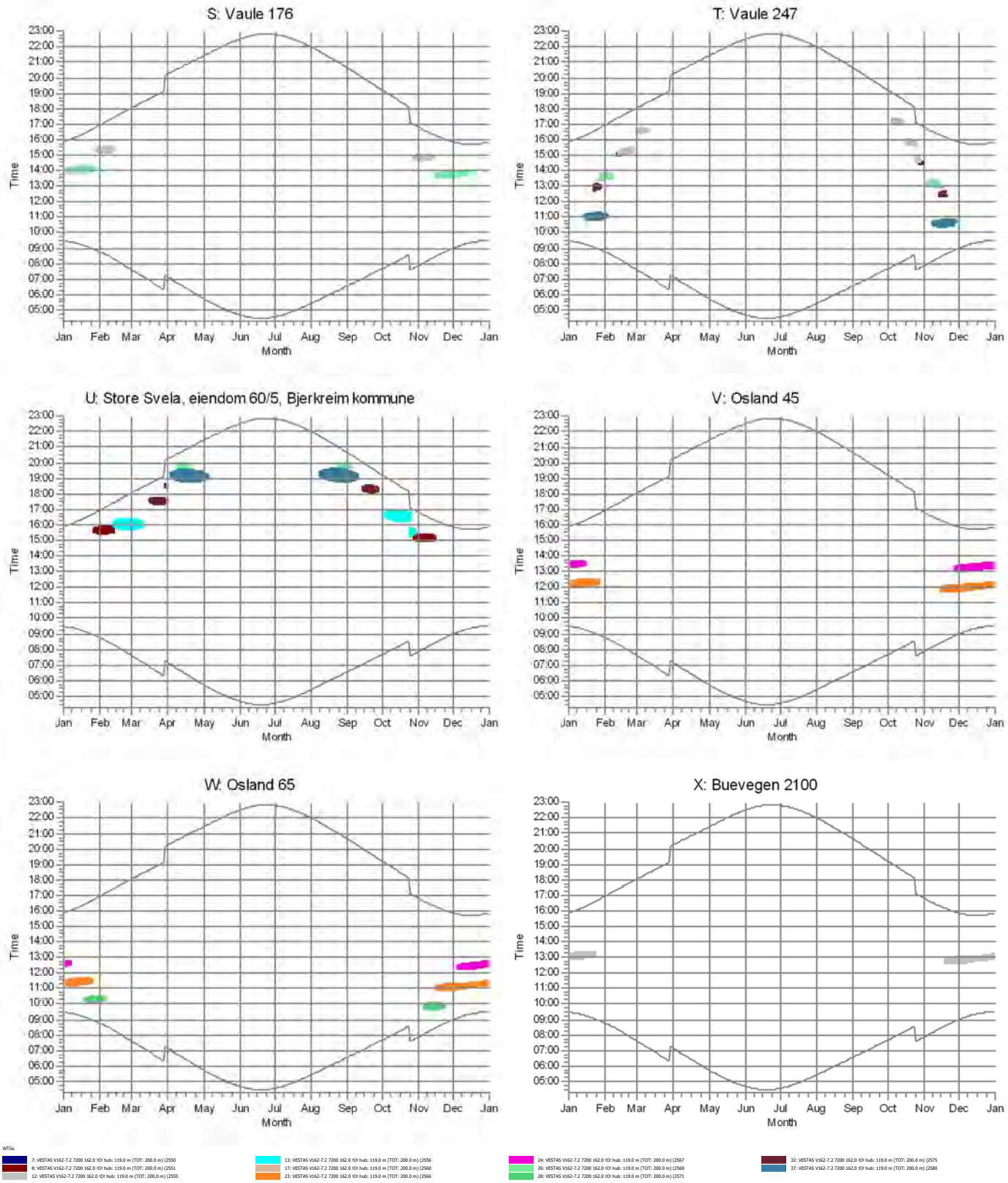


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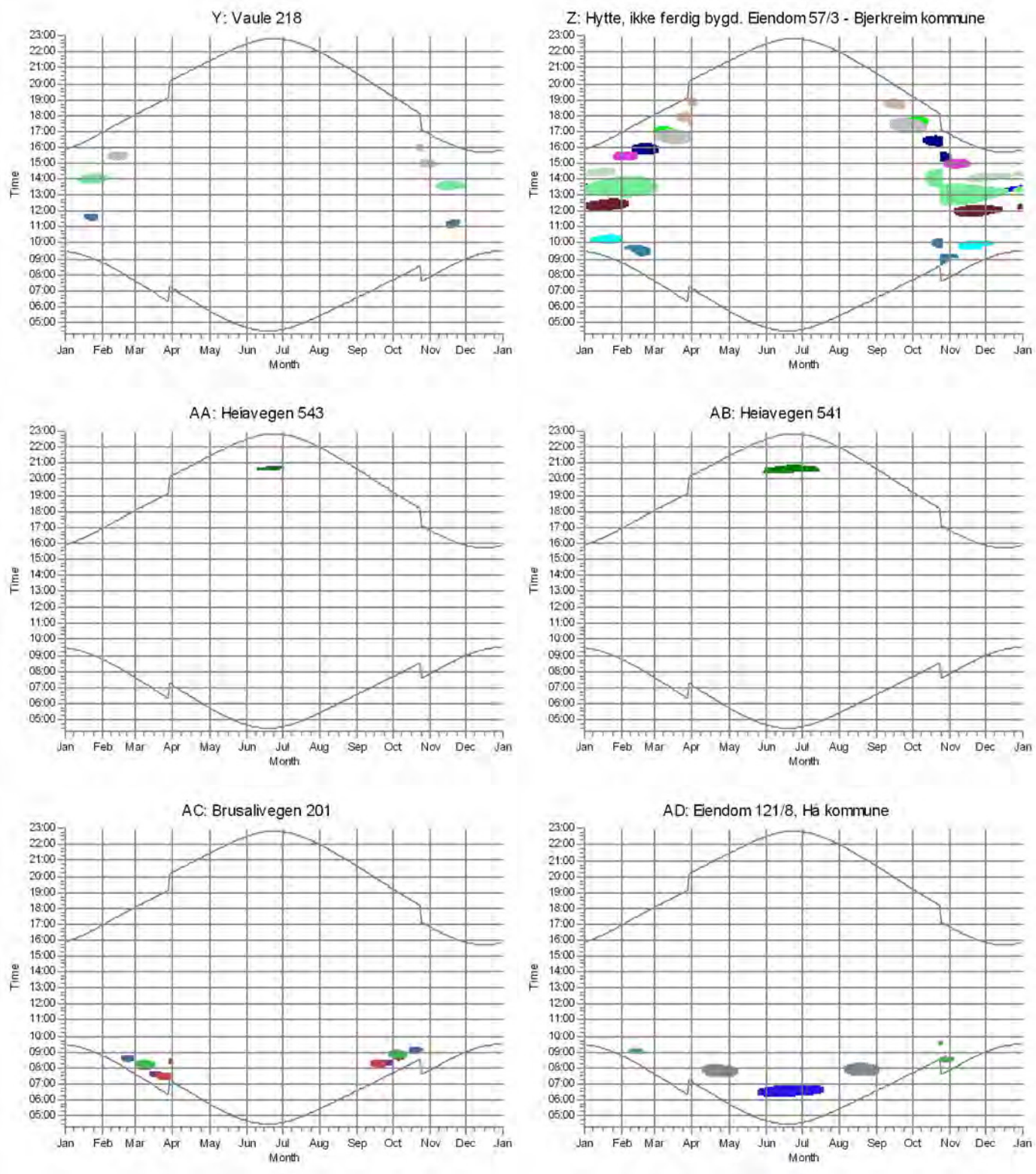


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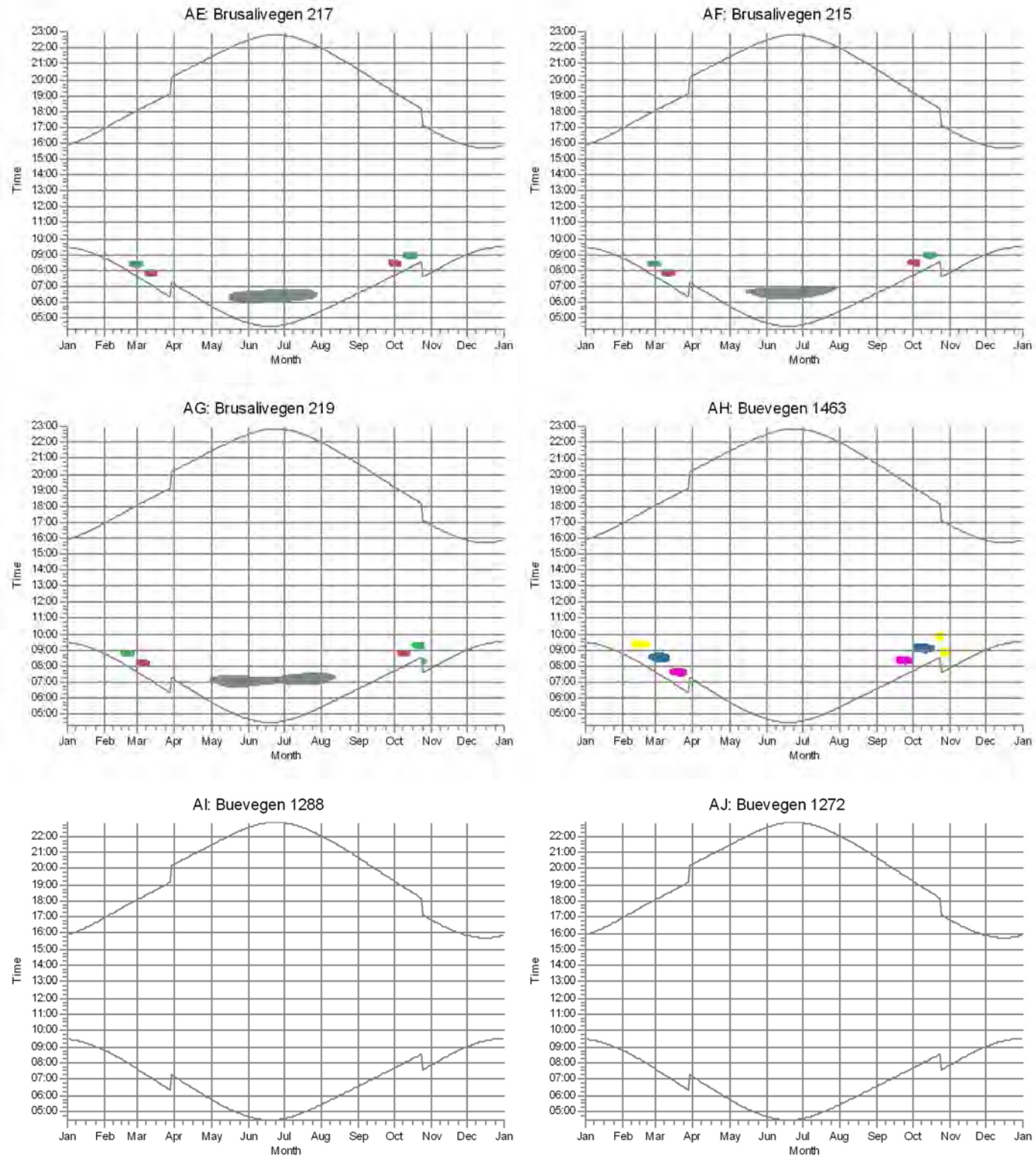


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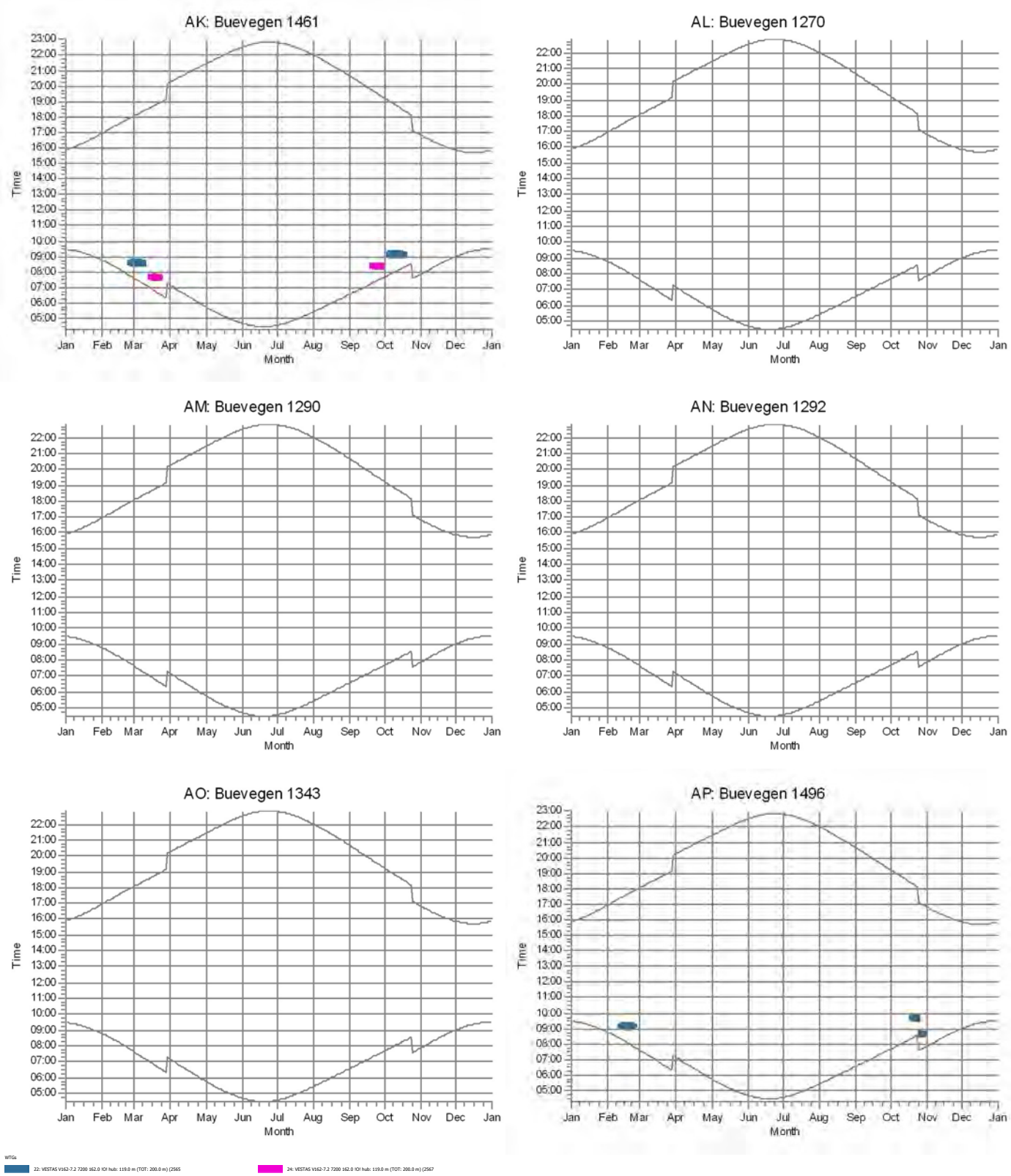


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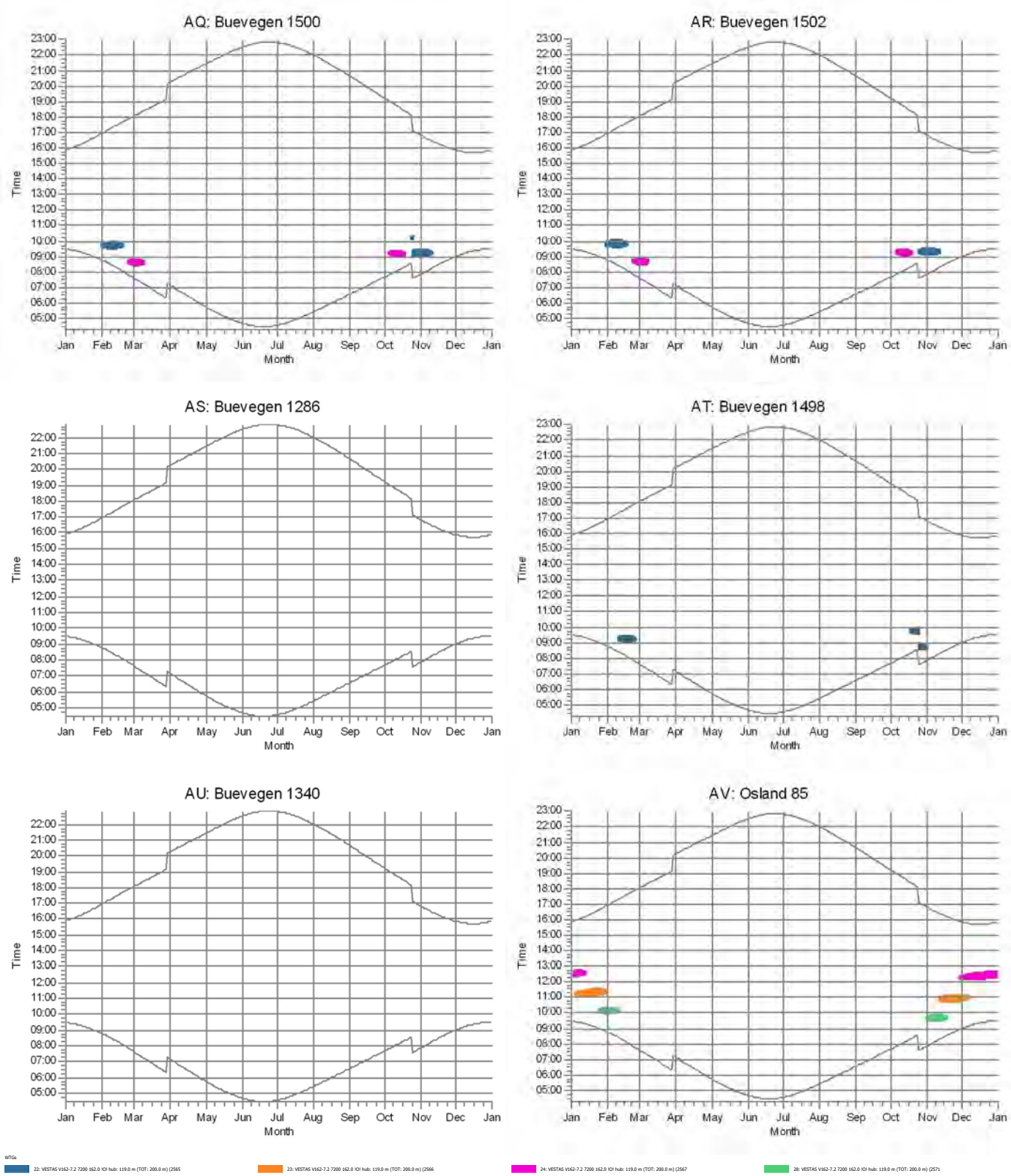


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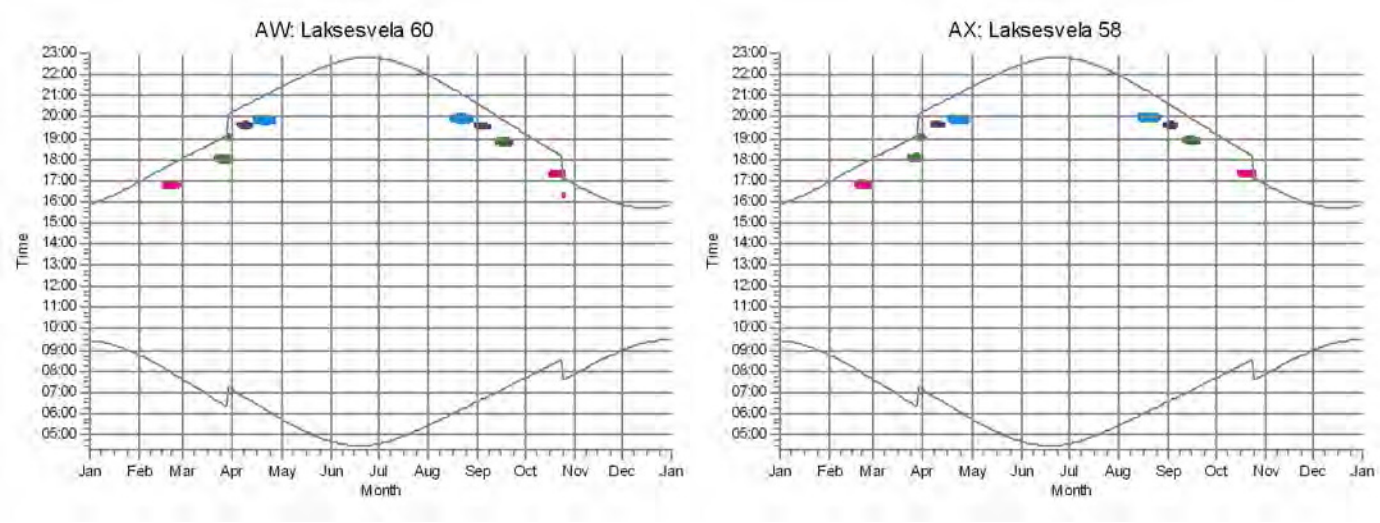


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SHADOW - Calendar, graphical

Calculation: Moifjellet med eksisterende vkv - real case - mottakere



WTGs

62: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (24)
63: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (25)
65: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (27)
66: Siemens Gamesa SG 5.0-132 MkII 5000 132.0 IOI hub: 125,0 m (TOT: 191,0 m) (28)

Fagrapport:

Lokalt og regionalt næringsliv

Rapport

Moifjellet & Mellomstrand vindkraftverk

OPPDRAGSGIVER

Statkraft Vind Utvikling DA

EMNE

Delrapport lokalt og regionalt næringsliv

DATO / REVISJON: 19. mars 2026 / 002

DOKUMENTKODE: 10265688-01-NÆR-RAP-001



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Rapport

OPPDRAG	Moifjellet & Mellomstrand vindkraftverk	DOKUMENTKODE	10265688-01-NÆR-RAP-001
EMNE	Delrapport lokalt og regionalt næringsliv	TILGJENGELIGHET	
OPPDRAGSGIVER	Statkraft Vind Utvikling DA	OPPDRAGSLEDER	Håvard Finanger
KONTAKTPERSON	Kristin Serck-Hanssen	UTARBEIDET AV	Hilde Eide, Ingar Flatlandsmo

02	19.03.2026	Revidert andre utkast- avbøtende tiltak og sammendrag	HE		HF
01	26.02.2026	Revidert utkast	HE		HF
00	15.01.2026	Første utkast	HE	IF	HF
REV.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV

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Sammendrag

Denne konsekvensutredningen omfatter utbygging av Moifjellet og Mellomstrand vindkraftverk og vurderer to alternative utbyggingsløsninger. Alternativ 1 omfatter en samlet utbygging av Moifjellet vindkraftverk i Bjerkreim kommune og Mellomstrand vindkraftverk i Time kommune, med adkomstvei fra Mellomstrand i Time kommune. Alternativ 2 omfatter utbygging av Moifjellet vindkraftverk alene, lokalisert i Bjerkreim kommune, med adkomstvei vest for Moi. Konsekvensene er utredet i henhold til planprogram fastsatt av Bjerkreim og Time kommune, samt utredningsprogram fastsatt av NVE. Dette omfatter i hovedsak å beskrive forventet behov for varer, tjenester og arbeidsplasser i anleggs- og driftsfasen, samt vurdere hvordan vindkraftverket kan påvirke lokalt og regionalt næringsliv, reiseliv, sysselsetting og verdiskaping.

Lokalt og regional næringsliv

Utbyggingen av Moifjellet og Mellomstrand vindkraftverk vil utløse betydelig etterspørsel etter bygge- og anleggstjenester, teknisk kompetanse og støttefunksjoner i anleggsfasen. Det finnes en etablert og erfaren regional leverandørbase i Rogaland innen grunnarbeid, infrastruktur, transport, mekaniske tjenester og tekniske entrepriser som har hatt sentrale roller i tidligere vindkraftutbygginger i Bjerkreim og på Høg-Jæren. Mer spesialiserte oppgaver, særlig knyttet til turbinmontasje og elektrotekniske arbeider, vil primært utføres av nasjonale eller internasjonale leverandører. På bakgrunn av dette vurderes virkningene til å være liten positiv (+) for regionalt næringsliv og sysselsetting for begge alternativene.

Det finnes lokal kapasitet, spesielt i Time kommune, til å påta seg arbeider knyttet til utbygging. Med dette grunnlaget anslås konsekvensene å være middels positive (++) for lokalt næringsliv og sysselsetting i Time og Bjerkreim for alternativ 1 og 2. Det er knyttet betydelig usikkerhet til anslagene for verdiskaping og sysselsetting særlig i anleggsfasen, ettersom disse blant annet avhenger av mobilisering av lokalt og regionalt næringsliv, kontraktsstrategi og endelige utbyggingsløsninger.

I driftsfasen vurderes verdiskaping og sysselsettingseffektene å være begrensede, men stabile, knyttet til drift og vedlikehold av anlegget. De direkte konsekvensene i drift vurderes å ha en liten positiv konsekvens (+), sett opp mot eksisterende arbeidskapasitet, for Bjerkreim kommune, ubetydelig (0) konsekvens i Time kommune og ubetydelig (0) konsekvens i regionalt for begge alternativene.

Kommuneøkonomi

Tiltaket vil gi økte kommunale inntekter fra produksjonsavgift og eiendomsskatt. Virkningen på kommuneøkonomien i Bjerkreim, sett i sammenheng med netto kommunale driftsutgifter for 2024, vurderes som svært stor positiv (++++) i driftsfasen for begge alternativene. Alternativ 1 vurderes å ha en liten positiv (+) konsekvens for Time kommunes økonomi. For alternativ 2 vil det ikke tilkomme inntekter til Time kommune, siden tiltaket i dette alternativet er avgrenset til Bjerkreim.

Statkraft har i forbindelse med planprosessen fremmet et forslag til Bjerkreim kommune om å etablere et lokalt fond. Fondsmidlene er tenkt å komme lag, foreninger og andre lokale aktører til gode. Statkraft har som intensjon å etablere et fond med de samme prinsippene også for innbyggerne i Time kommune.

Reiseliv

Reiselivsnæringen i Bjerkreim er av begrenset absolutt størrelse sammenlignet med regionen for øvrig, men har opplevd betydelig vekst de siste årene, selv med dagens vindkraftverk. Kommunen har i økende grad markedsført og satset på næringen gjennom Destinasjon Bjerkreim, med naturbaserte opplevelser og friluftslokaliteter som viktigste attraksjonsverdier. Vindkraftverkene har vært en del av landskapet i flere år, og turister som besøker området er allerede vant til at slike inngrep finnes i landskapet. Dette kan indikere en viss robusthet i reiselivsnæringen.

Det er dog viktig å presisere at de planlagte vindkraftverkene vil berøre naturområder som i dag er viktig friluftsområder og som blant annet markedsføres gjennom Destinasjon Bjerkreim. Tiltaket innebærer en betydelig utvidelse av det samlede vindkraftarealet og vil bidra til ytterligere visuell påvirkning i områder som allerede er berørt av vindkraft. Dette gjør det usikkert om den robustheten reiselivet hittil har vist vil opprettholdes over tid. Selv om planområdene ikke har mange kommersielle reiselivsaktører i umiddelbar nærhet i dag, er friluftslivet en forutsetning for den naturbaserte reiselivsprofilen og videreutvikling av denne, for kommunen og de få reiselivaktørene i nærheten av tiltaket.

På bakgrunn av dette, vurderes tiltaket å kunne medføre en liten negativ konsekvens (–) for reiselivet i Bjerkreim kommune i anleggs- og driftsfase for begge alternativer. Reiselivstilbudet i Time kommune er større, men primært konsentrert rundt Bryne-området og ligger i betydelig avstand fra planområdene. Det vurderes derfor som lite sannsynlig at tiltakene vil medføre merkbare økonomiske virkninger for reiselivsnæringen i Time. Tiltaket vurderes ikke å gi konsekvenser av betydning for det regionale reiselivet i verken anleggs- eller driftsfase for begge alternativene, da sentrale reiselivslokalitetene i Rogaland lokalisert langt unna tiltaksområdet. De er viktig å bemerke at faktiske konsekvensene for reiselivet kan først måles når næringen opplever økonomiske tap, enten gjennom færre turister eller lavere betalingsvilje.

Tabellen nedenfor sammenfatter konsekvensene for lokal og regionalt næringsliv og sysselsetting, kommuneøkonomi og reiseliv i anleggsfasen og driftsfasen.

Tabell 0-1 Oppsummering av konsekvenser for lokal og regional sysselsetting, kommuneøkonomi og reiseliv for alternativ 1 og 2

	Alt. 1		**Alt. 2**	
Næringsliv og sysselsetting	**Anleggsfasen**	**Driftsfasen**	**Anleggsfasen**	**Driftsfasen**
Bjerkreim kommune	Middels positiv (++)	Liten positiv (+)	Middels positiv (++)	Liten positiv (+)
Time kommune	Middels positiv (++)	Ubetydelig (0)	Middels positiv (++)	Ubetydelig (0)
Rogaland fylke	Liten positiv (+)	Ubetydelig (0)	Liten positiv (+)	Ubetydelig (0)
Kommuneøkonomi				
Bjerkreim kommune	Ikke vurdert	Svært stor positiv (++++)	Ikke vurdert	Svært stor positiv (++++)
Time kommune	Ikke vurdert	Liten positiv (+)	Ikke gjeldende	Ikke gjeldende
Reiseliv				
Bjerkreim kommune	Noe negativ (-)	Noe negativ (-)	Noe negativ (-)	Noe negativ (-)
Time kommune	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)
Rogaland fylke	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)

1 Innledning

Multiconsult er engasjert av Statkraft for å utarbeide en konsekvensutredning av Mellomstrand og Moifjellet vindkraftverk, i tråd med planprogram og utredningsprogrammet som er fastsatt av henholdsvis NVE, Time kommune og Bjerkreim kommune. Denne rapporten vurderer hvordan tiltaket kan påvirke det lokale og regionale næringslivet, inkludert reiseliv, både i anleggsfasen og driftsfasen. Det legges til grunn at Mellomstrand vindkraftverk ikke vil bli realisert uten Moifjellet vindkraftverk, mens Moifjellet kan realiseres uavhengig av Mellomstrand. For å få fram samlete virkninger av et Moifjellet og Mellomstrand vindkraftverk, er det derfor konsekvensutredet som ett samlet utbyggingsalternativ. Utredningen omfatter dermed to alternativer: ett alternativ som omfatter en samlet utbygging av Moifjellet og Mellomstrand og ett alternativ som kun omfatter Moifjellet vindkraftverk. For alternativet med kun Moifjellet foreligger det en tidligere konsekvensutredning. Denne fagrapporten bygger på et oppdatert og delvis nytt datagrunnlag, ettersom influensområdet er utvidet til også å omfatte Time kommune sammenlignet med grunnlaget for den tidligere utredningen.

Konsekvensutredningen for fagtemaet næringsliv og samfunnsinteresser består av to deler;

- I kapittel 3 gis en samlet utredning av det lokale og regionale næringslivet, inkludert metode- og datagrunnlag, nøkkeltall for kommunene, vurdering av 0-alternativet og en analyse av prosjektets virkninger for verdiskaping, sysselsetting og kommuneøkonomi, samt behov for avbøtende og oppfølgende tiltak.
- I kapittel 4 følger utredningen av lokalt og regionalt reiseliv. Her presenteres metodikk, datagrunnlag, verdivurderinger og kriterier for konsekvensvurdering, etterfulgt av en områdebeskrivelse og vurdering av tiltakets påvirkning på reiselivsaktører, attraksjoner og reiselivets økonomiske betydning.

1.1 Bakgrunn for prosjektet

Norges vassdrags- og energidirektorat (NVE) forventer i sin langsiktige kraftmarkedsanalyse (LA25) en økning av kraftforbruket i Norge fram mot 2050 på 56 TWh eller ca. 42 %. Dette er noe lavere enn Norges vassdrags- og energidirektorat (NVE) forventet i LA23 (omtalt i tidligere KU for Moifjellet), som følge av usikkerhet om utviklingen i ny norsk industri. Det økte forbruket forventes dekt hovedsakelig av havvind og vindkraft på land, der sistnevnte forventes å vokse med om lag 17 TWh i Norge fram mot 2050.

Det ble i 2005 meldt oppstart for et «Moi-/Laksesvelafjellet vindkraftverk» med et planområde på 11,9 km^2. NVE ga konsesjon i 2009, i en felles behandling av sju vindkraftsøknader i samme region. Av de øvrige fikk tre konsesjon og tre fikk avslag. For Moi-/Laksesvelafjellet vindkraftverk reduserte NVE planområdet og maksimal installert effekt ift. konsesjonssøknaden, og ga vilkår om bl.a. for- og etterundersøkelser for hubro og trekkende rovfugl. Det var omsøkt inntil 180 MW for 57 vindturbiner, NVE reduserte til 150 MW, tilsvarende 47–48 vindturbiner.

NVEs konsesjonsvedtak i 2009 ble påklaget for alle de sju vindkraftverkene. I juli 2012, etter klagebehandling, valgte Olje- og energidepartementet (OED) å ikke gi konsesjon til Moi-/Laksesvelafjellet vindkraftverk.

Statkraft mener at et Moifjellet og Mellomstrand vindkraftverk vil ha store fordeler sett fra et teknisk-økonomisk ståsted, og kan gi et samfunnsmessig viktig bidrag til å dekke opp noe av behovet for mer fornybar kraft i Norge og Europa. Samtidig vil flere forhold som trekkes fram i begrunnelsen for avslaget i 2012 fortsatt gjelde. Statkraft har på grunnlag av ny kunnskap siden 2012, og en ny konsekvensutredning,

forsøkt å finne en oppdatert utbyggingsløsning der fordelene klart overstiger ulempene, slik at planmyndigheten stadfester en områderegulering og konsesjonsmyndigheten innvilger konsesjon.

En positiv holdning fra kommuner og grunneiere står sentralt når Statkraft nå velger å søke på nytt om et vindkraftverk på Moifjellet og Mellomstrand.

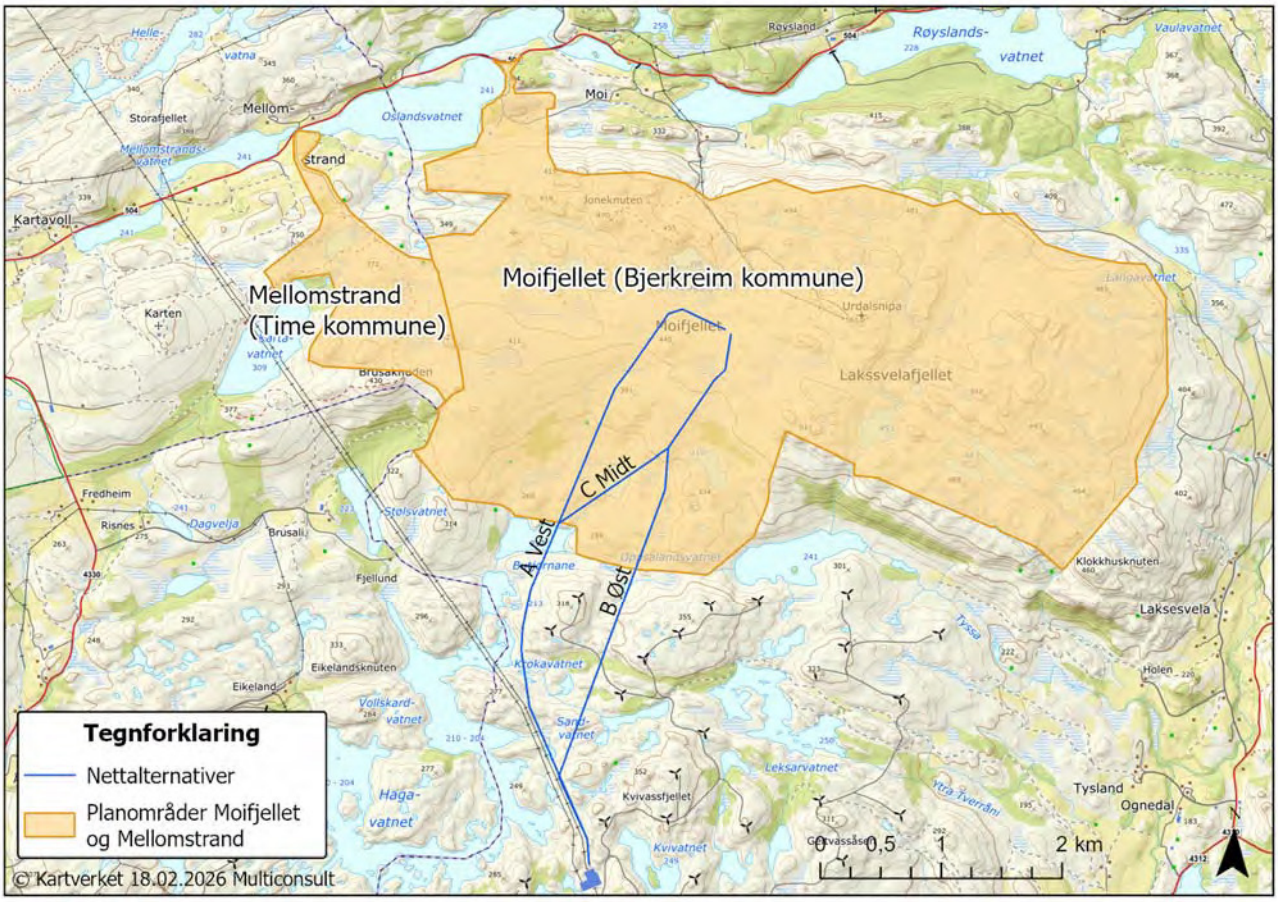
I forbindelse med konsesjonssøknaden for Moi–Laksesvelafjellet vindkraftverk vurderte NVE de lokale og regionale virkningene slik: «Tiltaket vil ha en positiv økonomisk virkning for Bjerkreim kommune, og for lokale og regionale bedrifter. Bygging, drift og vedlikehold av tiltaket vil bidra til økt sysselsetting og kjøp av varer og tjenester lokalt og regionalt».

1.2 Prosjektmål

Målet med prosjektet er å øke fornybar energiproduksjon i Norge samtidig som miljøkonsekvensene reduseres til et minimum..

1.3 Planområdet

De to tilliggende planområdene ligger i henholdsvis Bjerkreim kommune (Moifjellet) og i Time kommune (Mellomstrand), med hver sin prosess for områderegulering etter plan- og bygningsloven.



Figur 1-1: Planområder for Moifjellet og Mellomstrand vindkraftverk. Omsøkte alternativer for nettilknytning mot Bjerkreim transformatorstasjon i sør er vist til orientering.

2 Tiltaksbeskrivelse og alternativer

2.1 Føringer og planer for området

2.1.1 Kommuneplan

Gjeldende plan i Bjerkreim kommune er i hovedsak kommuneplanens arealdel 2014–2016, vedtatt 23.9.2015, mens gjeldende plan i Time kommune i hovedsak er kommuneplanens arealdel 2018–2030, vedtatt 15.6.2021. Det meste av arealet i begge kommuner er utlagt til landbruks-, natur- og friluftsformål samt reindrift (LNFR-område, men ikke reindrift i området). Arealformål bruk og vern av sjø og vassdrag samt råstoffutvinning inngår også. Deler inngår i hensynssoner for drikkevann (Hagavatnet med nedbørfelt i sørvestre del av planområdet), vassdrag, skredfare, kulturminner og høyspenningsanlegg.

2.1.2 Gjeldende reguleringsplaner

Nordvestre del av planområdet i Time kommune er i berøring med reguleringsplanene «Masseuttak ved Oslandsvatnet» vedtatt 14.12.2004 og «Detaljregulering for fv. 504 Buevegen, Osland–Skrettingland vedtatt 3.10.2023. For førstnevnte er masseuttaket utført og avsluttet.

På nordsida av fjellet i Bjerkreim kommune omfatter planområdet hele gjeldende reguleringsplan «Moi brudd og massetak» vedtatt 27.11.2006 og oppdatert 18.1.2024. Her ligger et steinbrudd drevet av Risa AS hvor det produseres pukk og grus. Vest og sør i det regulerte området er det et avsluttet uttak av sand og grus som dels er i bruk til jordbruk og dels av bedriften Archer AS som produserer sprengstoffprodukter til offshore oljeindustri.

Se nærmere omtale i fagutredning mineralressurser vedrørende steinbrudd og mineralressurser.

2.2 Dagens miljøtilstand og nullalternativet (alternativ 0)

Nullalternativet er sammenligningsgrunnlaget for konsekvensutredningen, og er forventet situasjon i influensområdet i sammenligningsåret dersom tiltaket ikke blir gjennomført. Sammenligningsåret er året tiltaket kan være realisert, iht. tidsplanen er dette i 2030. Nullalternativet inkluderer nåværende miljøtilstand samt vedtatte planer for området som det er grunn til å tro vil bli gjennomført fram til sammenligningsåret.

Moifjellet og Mellomstrand vindkraftverk ligger inn mot møtepunktet mellom Bjerkreim kommune i øst, Time kommune i nordvest og Hå kommune i sørvest. Området inngår i Høg-Jæren, de høyereliggende (over ca. 120 moh.) heiområdene med mye nakent fjell og sparsomt morenedekke like øst for det flate Låg-Jæren, Norges største lavslette med mektig morenedekke og intensiv landbruksdrift. Planområdet og landskapet rundt er preget av relativt fattige lyngheier med småskala jordbruksarealer i dalene. Bebyggelsen består av spredte gårder av varierende størrelse og mindre tettsteder. E39 går øst for planområdet. En 300 kV og en 132 kV kraftledning går parallelt vest for planområdet. I sør ligger Bjerkreim vindpark søndre klynge med 70 vindturbiner, i nord Stigafjellet vindkraftverk med 7 vindturbiner og Måkaknuten vindkraftverk med 22 vindturbiner, i vest Høg-Jæren vindkraftverk med 32 vindturbiner. Moifjellet er høyere enn det nærmeste omlandet, særlig mot Mellomstrand og Låg-Jæren i vest og sør, og man må ca. 15 km mot øst og nord før fjellene blir enda høyere. Bjerkreimsenderen på Urdalsnipa, sentralt og høyeste punkt (561 moh.) i planområdet, er synlig fra et stort omland. Fjellet er preget av langsgående, knudrete rygger fra sørøst mot nordvest, mest markert i øst, med et titalls mindre vatn spredd utover. Sørvestre del av planområdet inkluderer et lavereliggende areal omkring 300 moh. mellom Moifjellet og Bjerkreim vindpark søndre klynge. Planområdet i Time kommune går fra lyngkledde hauger omkring 400 moh. i sørøst til jordbruksarealer ned mot Mælandsvatnet (241 moh.) og fv. 504 i nordvest. Fra fylkesveien går det en landbruksvei oppover i planområdet. Med unntak av vei og kraftledning til senderen på

Urdalsnipa er det lite inngrep i høyereliggende deler av planområdet. Avstander til veier og kraftledninger mv. gjør at det er et gjenværende INON-område sone 2 (1–3 km fra tyngre inngrep) på 3,65 km^2 sør for Urdalsnipa, hovedsakelig mot sørvest.

Utover reguleringsplaner beskrevet i 2.1.2 er det ikke vedtatte eller andre forslag til planer for nye utbygginger i planområdet. Omkring planområdet er det i Bjerkreim kommune utlagt arealer til framtidig næringsvirksomhet og til nåværende og framtidig, offentlig eller privat tjenesteyting nord for Røyslandsvatnet. I Time kommune er det et par reguleringsplaner for massetak ved Kartavoll, og det er gitt byggetillatelse til en skulptur (MUTE) på Karten. I Hå kommune er det ikke nærliggende reguleringsplaner eller utbyggingsformål i arealdelen (utenom areal for Bjerkreim vindpark).

Det er såpass kort tid fram til 2030 at det ikke forventes merkbare endringer i området som følge av klimaendringer. Det forventes fram til sammenligningsåret 2030 at fv. 504 oppgraderes iht. vedtatt detaljregulering, at steinbruddet i «Moi brudd og massetak» blir noe utviklet iht. sin detaljregulering og at skulpturen MUTE er satt opp på Karten, men ellers ikke særlige endringer innenfor eller inntil planområdet. Nullalternativet settes på denne bakgrunn til likt med dagens miljøtilstand, med tillegg av disse tiltakene.

2.3 Alternativer som utredes

Det er to alternativer for Moifjellet og Mellomstrand vindkraftverk:

1. Alternativ 1 Moifjellet og Mellomstrand vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune og planområdet for Mellomstrand i Time kommune, med adkomstvei fra Mellomstrand i Time kommune.
2. Alternativ 2 Moifjellet vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune, med adkomstvei vest for Moi i Bjerkreim kommune.

Alternativene som utredes framkommer av kartene i figur 2-1 og figur 2-2.

Konsekvensene av alternativ 1 synliggjør sumvirkningene av Moifjellet og Mellomstrand vindkraftverk. Differansen mellom de to alternativene gir tilleggsvirkningene Mellomstrand vindkraftverk tilfører det allerede omsøkte Moifjellet vindkraftverk.

Det er utarbeidet en utredningsløsning for utbygging etter alternativ 1 og alternativ 2 som er grunnlaget for konsekvensutredningen, og som beskriver en realistisk, teknisk gjennomførbar utbygging basert på tilgjengelig teknologi i dag. Utredningsløsningen inkluderer turbinposisjoner, sjablongmessige (ikke tilpassete) kranoppstillingsplasser, planlagte veilinjer, samt mulige/foreløpige plasseringer av transformatorstasjon, driftsbygg, massetak og rigg-/lagerområder.

Det presiseres at nettilknytningen med sine tre alternative framføringer ikke inngår i tiltaket som konsekvensutredes, da denne er omsøkt i en separat nettkonsesjonssøknad.

2.3.1 Alternativ 1 Moifjellet og Mellomstrand vindkraftverk

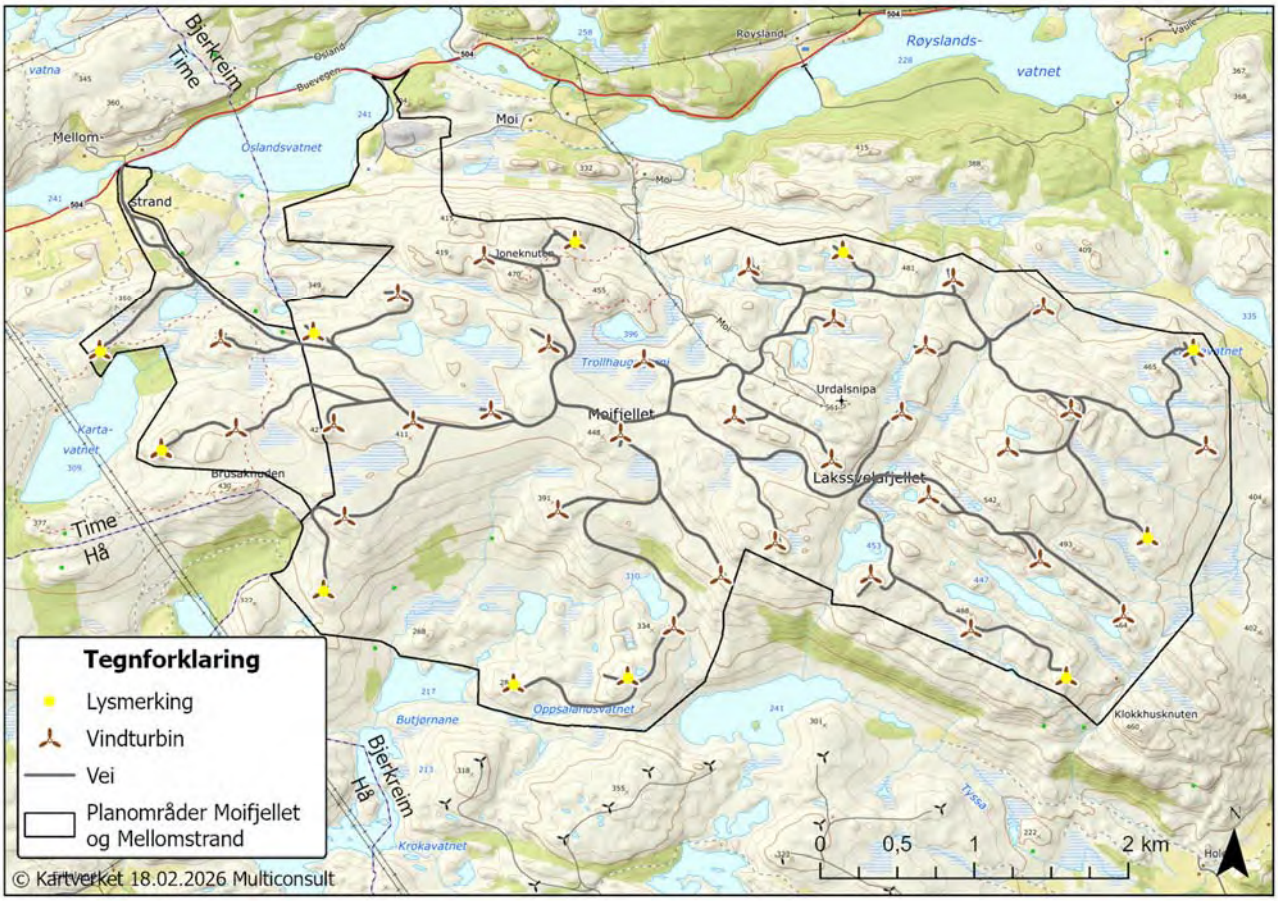
Moifjellet og Mellomstrand vindkraftverk omfatter et todelt planområde på totalt 17,5 km^2, bestående av planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune på 16,0 km^2, og planområdet for områderegulering av Mellomstrand vindkraftverk i Time kommune på 1,4 km^2. Planområdene ligger i Rogaland fylke.

Lokasjonen er valgt på bakgrunn av særdeles gode vindforhold, ledig kapasitet i strømnettet, korte avstander til ilandføringssted, offentlig vei og tilknytningspunkt til kraftnettet, samt moderat terrengkompleksitet. Det ligger eksisterende vindkraftverk mot nord, sør og vest.

Utredningsløsningen som ligger til grunn for konsekvensutredningen omfatter:

- Adkomstvei i Time kommune, fra fv. 504 øst for Mælandsvatnet og til internveinett vest for Legetjørn, med midlertidig rigg- og lagerområde langs denne. De første ca. 0,8 km vil gå gjennom innmark, mens øvre del vil være en ny vei i utmark. Det vurderes to ulike, alternative traséer for adkomstveien:
    - i: Fortsette rett fram i ny trasé fra sving ved landbruksbygg, for så å dreie tilbake inn på eksisterende vei før plantefelt med sitkagran. Total lengde 2,1 km.
    - ii: Følge eksisterende vei så langt denne går. Total lengde 2,1 km.
- Internveier med ca. 33 km i Bjerkreim kommune og 3 km i Time kommune (inkl. tilknytning til internvei i Bjerkreim)
- 42 vindturbiner med opptil 200 m totalhøyde, med fundamenter og kranoppstillingsplasser
- Jordkabler i internveier fra vindturbiner fram til ny Moifjellet transformatorstasjon
- Sentral transformatorstasjon på Moifjellet
- To alternative plasseringer for driftsbygg:
    - Langs adkomstvei i Mellomstrand / Time kommune
    - Sentralt oppe på Moifjellet, øst på Botnabringane
- Masseuttak/steinbrudd for veier og plasser

Totalt berørt areal (inkludert adkomstvei) før istandsetting er 1055–1140 dekar. Etter istandsetting er det anslått til 310–360 dekar permanent areal. Av dette omfatter Mellomstrand vindkraftverk 122–130 dekar før istandsetting og 32–38 dekar etter istandsetting.



Figur 2-1: Alternativ 1 Moifjellet og Mellomstrand vindkraftverk. Forventet perimeter hinderlysmerking er vist.

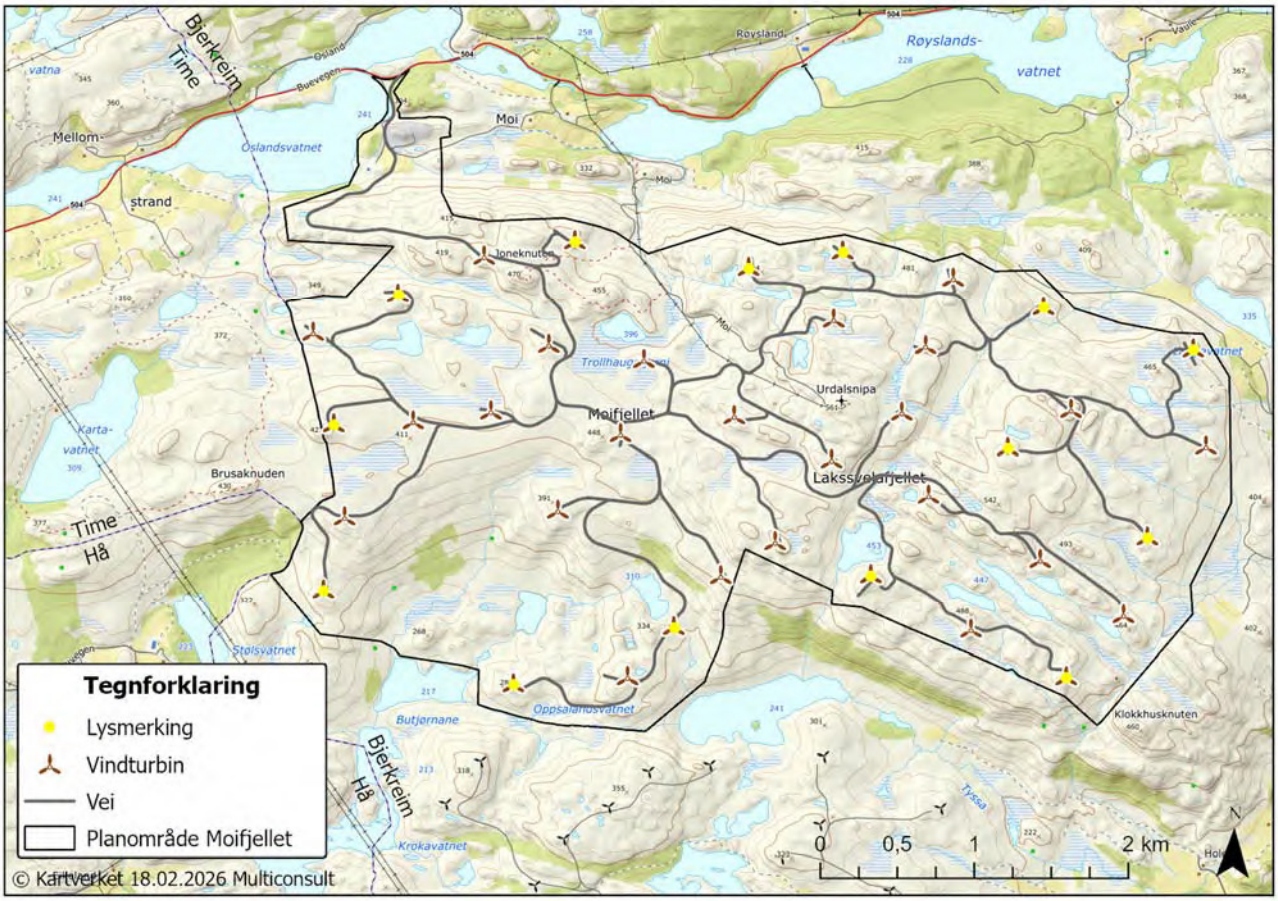
2.3.2 Alternativ 2 Moifjellet vindkraftverk

Moifjellet vindkraftverk omfatter et planområde for områderegulering på totalt 16,0 km^2 i Bjerkreim kommune, Rogaland fylke. Lokasjonen er valgt på bakgrunn av særdeles gode vindforhold, ledig kapasitet i strømnettet korte avstander til ilandføringssted, offentlig vei og tilknytningspunkt til kraftnettet, samt moderat terrengkompleksitet. Det ligger eksisterende vindkraftverk mot nord, sør og vest.

Utredningsløsningen som ligger til grunn for konsekvensutredningen omfatter:

- Adkomstvei i Bjerkreim kommune, fra fv. 504 øst for Oslandsvatnet. Omkring 350 m vil kunne følge dagens vei inn til «Moi brudd og massetak», like øst for Oslandsvatnet, hvor det også er aktuelt å plassere midlertidig rigg- og lagerområde. Total lengde vil bli ca. 2,6 km fram til internveinettet.
- Internveier ca. 33 km
- 38 vindturbiner med opptil 200 m totalhøyde, med fundamenter og kranoppstillingsplasser
- Jordkabler i internveier fra vindturbiner fram til ny Moifjellet transformatorstasjon
- Sentral transformatorstasjon på Moifjellet, mellom Svarteknut og Knudane
- Sentralt driftsbygg på Moifjellet, øst på Botnabringane
- Masseuttak/steinbrudd for veier og plasser

Totalt berørt areal (inkludert adkomstvei) før istandsetting er ca. 1050 dekar. Etter istandsetting er det anslått til ca. 370 dekar permanent areal (ca. 2,2 % av planområdet).



Figur 2-2: Alternativ 2 Moifjellet vindkraftverk. Forventet perimeter hinderlysmerking er vist.

2.3.3 Andre vurderte alternativer

Se konsesjonssøknaden for Moifjellet vindkraftverk for nærmere omtale av skrinlagte, tidligere alternativer for adkomstvei.

2.3.4 Anleggsgjennomføring

Anleggsperioden er beregnet til to år. Det første året vil benyttes til etablering av veier, kranoppstillingsplasser og fundamenter, det andre året til turbinmontasje, idriftsettelse, testing og istandsetting. Etablering av transformatorstasjon og luftledning vil skje parallelt med annet anleggsarbeid, og er beskrevet i separat konsesjonssøknad for nettanlegg.

Midlertidig riggområde og midlertidig lagerområde for turbinkomponenter vil fortrinnsvis bli plassert ved adkomstveien, grå arealer vil bli benyttet så langt det er mulig. Midlertidig brakkerigg for personell vil avklares nærmere som del av anskaffelsesprosessen og i dialog med aktuelle leverandører.

2.4 Utredningskrav

Konsekvenser for alle fagtemaene utredes i henhold til planprogram og utredningsprogrammet som er fastsatt av henholdsvis NVE, Bjerkreim og Time kommune. Utredningskrav som er gjeldende for fagtema lokalt og regionalt næringsliv er fastsatt planprogrammet, og supplerende krav stipulert utredningsprogrammet. Tabell 2-1 presenterer utredningskravene.

Tabell 2-1 Utredningskrav for temaet lokalt og regionalt næringsliv

Dokument	Beskrivelse	Metode
Vedtatt planprogram Bjerkreim kommune 14.05.2024	Tiltakshaver skal beskrive antatt behov for varer og tjenester, herunder nye arbeidsplasser, lokalt og regionalt i anleggs- og driftsfasen. Reiselivsnæringen i influensområdet skal beskrives, og det skal vurderes hvordan tiltaket kan påvirke lokalt og regionalt næringsliv, herunder reiselivsnæringen og sysselsetting og verdiskaping.	Lokale og regionale myndigheter og lokalt/regionalt næringsliv skal kontaktes for informasjon om dagens situasjon og planlagte aktiviteter/utbygginger. Videre skal utredningen basere seg på erfaringer fra norske vindkraftverk i drift.
Vedtatt planprogram Time kommune datert 19.06.2025	• Beskrive antatt behov for varer og tjenester, herunder nye arbeidsplasser, lokalt og regionalt i anleggs- og driftsfase. • Beskrive reiselivsnæringen i influensområdet. • Vurdere hvordan tiltaket kan påvirke lokalt og regionalt næringsliv, herunder reiselivsnæringen og sysselsetting og verdiskaping.	Lokale og regionale myndigheter og lokalt/regionalt næringsliv skal kontaktes for informasjon om dagens situasjon og planlagte aktiviteter/utbygginger.
Utredningsprogram Mellomstrand vindkraftverk. Datert 30.10.25	NVE fastsetter med dette utredningsprogram for Mellomstrand vindkraftverk. NVEs fastsatte utredningsprogram består av kapittel 5 i Statkrafts forslag til plan- og utredningsprogram av 20. mai 2025, som vedtatt av Time kommune.	
Utredningsprogram Moifjellet vindkraftverk. Datert 26.07.24	Tiltakshaver skal: • Beskrive antatt behov for varer og tjenester, herunder nye arbeidsplasser, lokalt og regionalt i anleggs- og driftsfasen. • Vurdere hvordan tiltaket kan påvirke lokalt og regionalt næringsliv, herunder sysselsetting og verdiskaping. • Beskrive reiselivsnæringen i influensområdet, og vise viktige attraksjoner/områder for reiselivet på kart. • Vurdere hvordan tiltaket kan påvirke lokalt og regionalt reiseliv og turisme.	Lokale og regionale myndigheter og lokalt/regionalt næringsliv skal kontaktes for informasjon om dagens situasjon og planlagte aktiviteter/utbygginger. Der reiselivet er knyttet til landskap, friluftsliv, kulturminner, naturmangfold osv., skal utredningen bygge på informasjon fra de respektive temautredningene.

	• Beskrive hvordan tiltaket kan påvirke kommuneøkonomien gjennom eiendomsskatt, produksjonsavgift og naturressursskatt. • Beskrive hvordan tiltaket vil kunne påvirke eiendomsverdi i influensområdet	

Det er her viktig å presisere at tiltakets eventuelle påvirkning på eiendomsverdien i influensområdet ikke utredes av Multiconsult og er dermed ikke en del av denne rapporten. Kravet om utredning av naturressurskatt er ikke lenger gjeldende for vindkraft på land, jamført Prop 2 LS (2023-2024), og følgelig ikke vurdert.

Besvarelse av utredningskrav

Utredningsprogrammet for fagtemaet lokalt og regionalt næringsliv, inkludert reiseliv og kommuneøkonomi, er besvart gjennom en samlet vurdering av tiltakets virkninger i anleggs- og driftsfasen. Utredningen omfatter vurderinger av antatt behov for varer og tjenester, sysselsetting og verdiskaping lokalt og regionalt, samt kommunale inntekter knyttet til eiendomsskatt og produksjonsavgift. Reiselivsnæringen i influensområdet er beskrevet, herunder sentrale reiselivsaktører/attraksjoner, som også er vist på kart. Vurderingene bygger på tilgjengelig informasjon, statistikk og etterprøvingsstudier, samt dialog med lokale og regionale myndigheter og nærings- og reiselivsaktører. Der reiselivet er knyttet til landskap, friluftsliv, natur- og kulturverdier, er vurderingene sett i sammenheng med relevante temautredninger. Utredningen er gjennomført i tråd med kravene i fastsatt planprogram og utredningsprogram.

3 Lokalt og regionalt næringsliv

3.1 Metode og datagrunnlag

Denne delen av utredningen er basert på en forenklet prosedyre egnet for de samfunnsmessige vurderingene. Sysselsetting, næringsliv, tjenestetilbud og kommuneøkonomi i Time og Bjerkreim kommune beskrives først kort. Deretter følger en vurdering av prosjektets mulige virkninger på disse størrelsene i anleggs- og driftsfasen. I den grad det finnes faglig belegg og datagrunnlag for det vil virkningene tallfestes.

Verdiskaping på regionalt og lokalt nivå i anleggsfasen knytter seg til den delen av prosjektets samlede investeringskostnader som tilfaller regionale og lokale aktører gjennom kontrakter for produksjon, bygge- og anleggsarbeider samt leveranser av varer og tjenester. Dette omfatter både direkte kontrakter med regionale og lokale leverandører, og lokale og regionale leveranser til nasjonale og internasjonale hovedleverandører. Forventet størrelse på lokal verdiskaping estimeres ved overføring av tall fra tilsvarende vindkraftutbygginger, korrigert for størrelse og struktur i lokalt næringsliv, samt ledig kapasitet i den lokale økonomien.

Videre estimeres forventede inntektsstrømmer til kommunen basert på vindkraftverkets produksjon og verdi som presentert i tiltaksbeskrivelsen i henhold til gjeldende regler og praksis. Dette inkluderer primært eiendomsskatt og produksjonsavgift. Grunnrenteskatt ble innført for konsesjonspliktige vindkraftverk på land fra og med inntektsåret 2024 og vil være gjeldende for Mellomstrand og Moifjellet vindkraftverk. Grunnrenteskatten fordeles mellom statlig og kommunal sektor etter nøklene i rammetilskuddet til kommunene, og går dermed ikke direkte til vertskommunene[1]. Derfor er ikke konsekvens av grunnrenteskatt på de berørte kommunenes økonomi vurdert.

De samlede indirekte konsekvensene av utbyggingen av Mellomstrand og Moifjellet kraftverk knyttet til økt krafttilgang, kraftforsyningssikkerhet og overordnede samfunnsøkonomiske aspekter (reduserte tap i nettet, innvirkning på kraftpriser etc.) utredes ikke i denne rapporten. Her vurderes, i tråd med kravene i utredningsprogrammet, bare mulige lokale og regionale effekter av utbyggingen som beskrevet i tiltaksbeskrivelsen.

Virkninger for landbruk inngår ikke i denne fagutredningen, for å unngå dobbelttelling, men behandles i en egen fagrapport som vurderer tiltakets påvirkning på landbruk i influensområdet. Landbruk omtales her kun der det er nødvendig for å gi kontekst for næringslivet i influensområdet og i forbindelse med grunneierkompensasjon.

3.1.1 Influensområdet

Planområdet er det samme for alle fagtema. Området der virkninger forventes å kunne opptre utgjør influensområdet for det aktuelle fagtemaet. For dette fagtemaet opereres det med to geografiske nivåer – lokalt og regionalt. Det lokale influensområdet omfatter de kommunene der tiltaket er lokalisert eller har direkte tilknytning.

For kommuneøkonomi avgrenses influensområdet administrativt til de kommunene som direkte berøres av tiltaket gjennom skatteinntekter.

- For alternativ 1 omfatter influensområdet Bjerkreim og Time kommuner.
- For alternativ 2 omfatter influensområdet Bjerkreim kommune.

[1] (Finansdepartementet, 2023)

For lokalt næringsliv og reiseliv omfatter dette Bjerkreim og Time kommune for alternativ 1. For alternativ 2 er dette primært Bjerkreim kommune, men Time kommune inngår likevel i det lokale influensområdet for næringsliv og reiseliv, da virkninger av etterspørsel etter varer og tjenester samt reiselivsstrømmer ikke begrenses av kommunegrenser.

På regionalt nivå defineres influensområdet som Rogaland fylke. Dette omfatter dermed tilgrensende kommuner som Gjesdal, Hå og Eigersund, som kan forventes å oppleve virkninger knyttet til næringsliv og sysselsetting. På regionalt nivå vurderes kun virkninger for næringsliv, reiseliv og sysselsetting.

3.1.2 Vurdering av mulige virkninger

Vurdering av virkninger er, der det er faglig belegg for det gjort på kvalitativt grunnlag etter konsulentens skjønn. Der det er faglig forsvarlig å kvantifisere forventede virkninger har tabellen under tjent som veiledende i vurderingene.

Tabell 3-1 Kriterier for konsekvensvurdering av tema næringsliv og samfunnsinteresser. Farger samsvarer med skala for konsekvenssetting iht. M-1941 (Miljødirektoratet, 2025).

Vurdering	Kriterium (omtrentlig)	Symbol/farge
Svært stor positiv konsekvens	> 10 prosent av dagens verdi	++++
Stor positiv konsekvens	+ 5-10 prosent av dagens verdi	+++
Middels positiv konsekvens	+ 1-5 prosent av dagens verdi	++
Liten positiv konsekvens	+ 0,5-1 prosent av dagens verdi	+
Ubetydelig / ingen konsekvens	-0,5-0,5 prosent av dagens verdi	0
Liten negativ konsekvens	-0,5-1 prosent av dagens verdi	-
Middels negativ konsekvens	- 1-5 prosent av dagens verdi	- -
Stor negativ konsekvens	-5-10 prosent av dagens verdi	---
Svært stor negativ konsekvens	< -10 prosent av dagens verdi	----

3.1.3 Datagrunnlag

Vurderingene i denne rapporten baserer seg, i tillegg til konsulentens erfaring, på datagrunnlaget som presentert i det følgende. Konsulterte interessenter i kildeoversikten representerer de interessentene som har ønsket å gi innspill til utredningen, og ikke den fullstendige listen over interessenter som har blitt kontaktet.

Tabell 3-2 Oversikt over hovedgrunnlag for datakilder.

#	Kilde	Datatype
1	Årsmelding og regnskap for Bjerkreim og Time kommune	Årsrapport inkl. driftsregnskap
2	Samfunnsmessige virkninger av vindkraftverk. En etterprøving av fire vindkraftverk. Norconsult & Agenda Kaupang, 2016.	Erfaringstall for lokal og regional verdiskaping fra norske vindkraftverk.
4	Norges vassdrags- og energidirektorat	Informasjon og litteraturgjennomgang om verdiskapning forbundet med vindkraftutbygging.

#	Kilde	Datatype
5	www.ssb.no	Diverse nøkkeltall for sysselsetting og kommuneøkonomi i det lokale og regionale influensområdet.
6	www.nav.no	Arbeidsmarkedsstatistikk for kommunene og Rogaland fylke.
7	Utredningsgruppen i Multiconsult	Erfaringer og lokalkunnskap Diverse kart og arealplaner for kommunene
8	Intervju og innspill: - Per epost fra Bjerkreim Næringsforening 19.08.2024 - Digitalt møte med New Kaupang 05.06.2024 - Per epost fra kommunikasjonssjef i Time kommune 08.10.2025 - Per telefon fra kulturkontoret i Bjerkreim kommune 28.08.2024 - Per epost fra næringsutvikler i Bjerkreim kommune 16.01.2026	Bakgrunnsinformasjon om lokalt og regionalt næringsliv

3.2 Nøkkeltall for kommunene

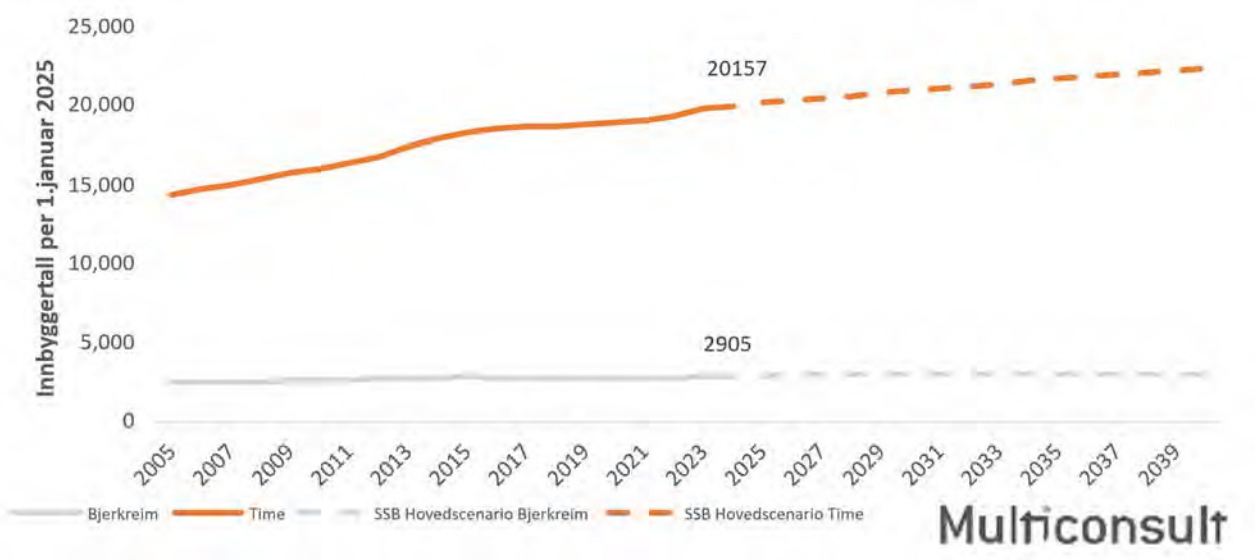
Dette avsnittet presenterer kort nøkkelinformasjon om Bjerkreim kommune, samt en sammenligning av utvalgte nøkkeltall på kommunalt, regionalt og nasjonalt nivå.

3.2.1 Innbyggertall

Bjerkreim kommune hadde et samlet innbyggertall på 2 905 innbyggere per 2025, som illustrert i Figur 3-1. Dette er en netto økning på 322 innbyggere, tilsvarende 12 prosent, de siste 15 årene. I sitt hovedscenario for befolkningsframskrivinger mot 2040 forventer SSB at befolkningstallet i Bjerkreim vil fortsette å øke til 3 038 personer, en økning på 5 prosent fra dagens nivå. Det er en netto innflytting til kommunen, hovedsakelig flyktninger fra Ukraina[2].

Time kommune hadde i 2025 et innbyggertall på 20 157 personer. Kommunen har hatt en sterk befolkningsvekst de siste 15 årene, med en økning på 4 080 innbyggere, tilsvarende 25 prosent. Fram mot 2040 ventes befolkningen å fortsette å øke, men i et mer moderat tempo enn tidligere. Innbyggertallet anslås til 22 401 personer i 2040, noe som tilsvarer en vekst på rundt 11 prosent fra dagens nivå.

[2] (Bjerkreim kommune, 2023)



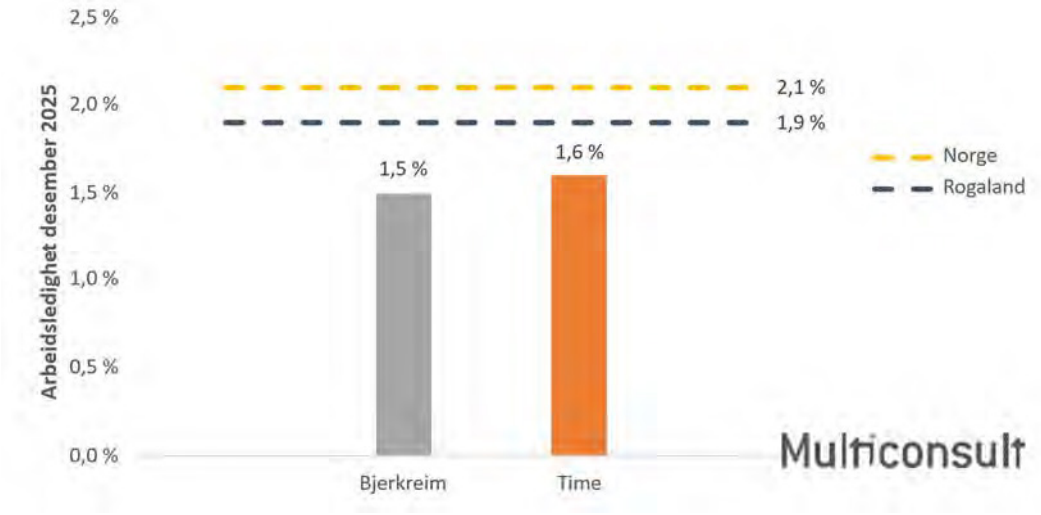
Figur 3-1. Innbyggertall i influensområdene per 1. januar 2025, og SSB sin framskrivning mot 2040[3].

Demografiske prognoser viser en betydelig økning i andelen eldre innbyggere i begge kommunene. I 2025 utgjorde personer over 67 år om lag 16 prosent av befolkningen i Bjerkreim og 14 prosent i Time. Framskrivninger indikerer at gjennomsnittsalderen vil stige, og andelen eldre forventes å øke til over 23 prosent i Bjerkreim og 20 prosent i Time innen 2040. Dette vil dette medføre reduksjon i arbeidsstyrken i kommunen, med tilhørende nedgang i skatteinngangen og økninger i kostnader knyttet til eldreomsorg.

3.2.2 Næringsliv og sysselsetting

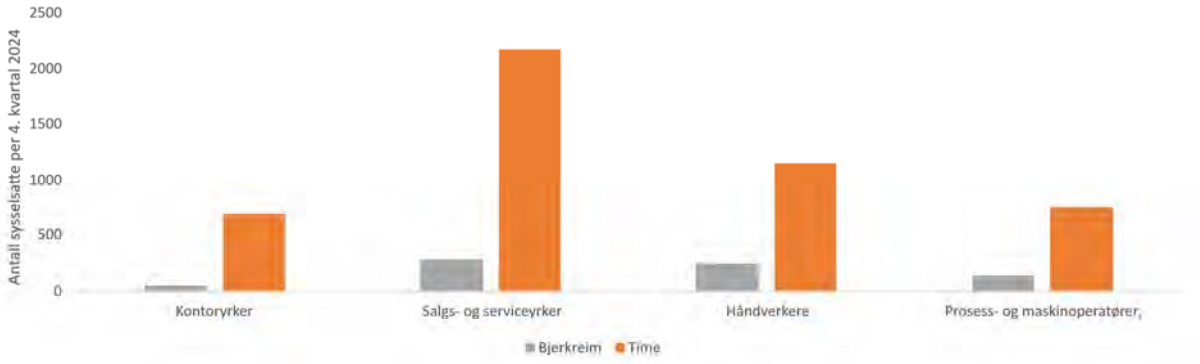
Både Bjerkreim og Time kommune har en lavere arbeidsledighet enn resten av fylket og landet, på henholdsvis 1,5 og 1,6 prosent av arbeidsstyrken, som illustrert i Figur 3-2. Arbeidsmarkedet holder seg relativt stabilt, med en høy andel av befolkningen i arbeid. Selv om forskjellige indikatorer på arbeidsledighet kan gi noe varierende bilder, er det liten tvil om at ledigheten er lav historisk sett. Dette antyder at det lokale og regionale næringslivet under normale forhold kan ha begrenset kapasitet til å absorbere en betydelig og vedvarende økning i etterspørsel. Det er likevel verdt å merke seg at det regionale arbeidsmarkedet er spesielt utsatt dersom aktivitetsnivået i oljeindustrien skulle gå ned. I 2014 resulterte fallende oljepriser og investeringer til nedgangskonjunktur i landet generelt, med en spesielt kraftig økning i antall arbeidsledige i oljenæringen i Rogaland[4]. I senere år har den norske olje- og gassindustrien fått ny vind i seilene, med høyt investeringsnivå som bidrar positivt til sysselsetting og økonomisk vekst også i Rogaland[5]. Samtidig er det verdt å merke seg at en økende etterspørsel etter arbeidskraft fra oljeindustrien reduserer arbeidskraftreserven, noe som potensielt kan fortrenge tilgang til nødvendig kompetanse og arbeidskraft i andre sektorer i regionen[6].

[3] SSB tabell 07459 og 14288, hentet januar 2025
[4] (Inger Cathrine Kann et al., 2018)
[5] (Ståle Mæland, 2023)
[6] (Ketil Barkved, pers.mmd)



Figur 3-2.Registrert arbeidsledighet per desember 2025 i Bjerkreim, Time, Rogaland fylke og Norge[7]

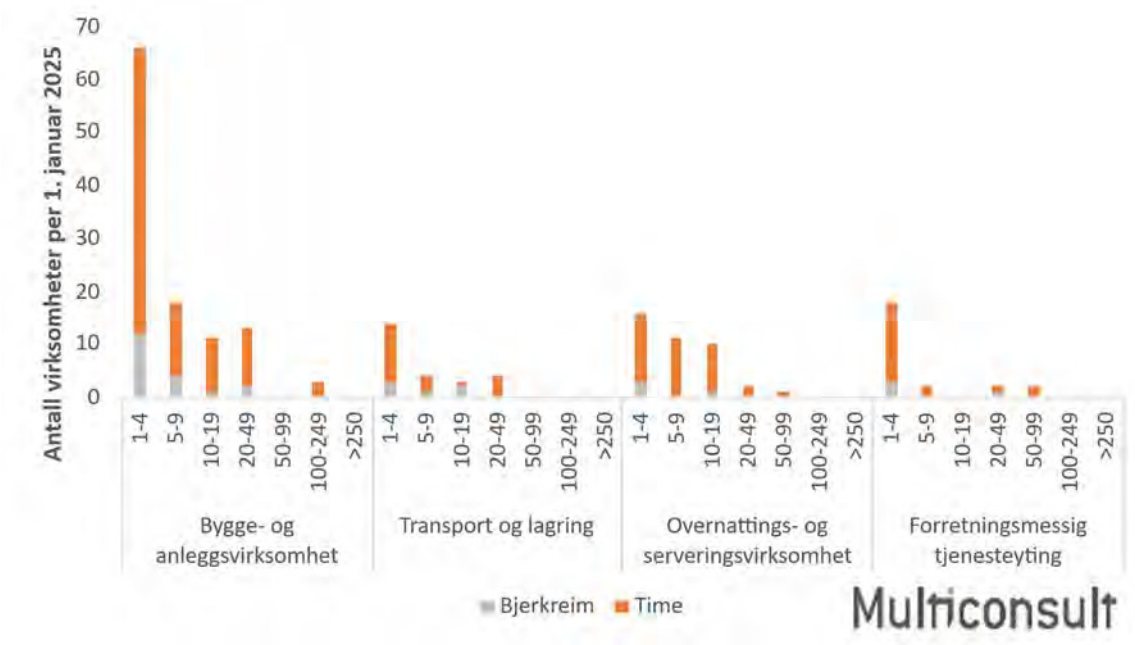
I tillegg til den generelle ledige kapasiteten i økonomien er det interessant å studere strukturen i den eksisterende arbeidsstyrken, som presentert i figuren under. Her fremgår det at Bjerkreim kommune har 381 ansatte i sekundærnæringene[8] omtrent 24 prosent av de sysselsatte i kommunen. Time kommune, med et langt høyere befolkningstall, har et høyere antall ansatte i disse næringene, totalt 1 912 sysselsatte. Sysselsettingen i disse næringene gir en indikasjon på tilgjengelig kompetanse lokalt som kan benyttes i forbindelse med tiltaket. Det finnes kapasitet til å påta seg arbeid knyttet til utbyggingen av tiltaket lokalt, men at dette vil avhenge av prosjektets omfang og krav til spesialisert kompetanse.



Figur 3-3. Lønnstakere etter relevante yrkestype i det lokale influensområdet per fjerde kvartal 2024[9]

Både Bjerkreim og Time kommune er tradisjonelle landbrukskommuner, der verdiskaping i primær- og sekundærnæringer utgjør en viktig del av den økonomiske aktiviteten. Time kommune er en av de mest jordbruksintensive kommunene i Norge, da om lag 46 prosent av det totale arealet benyttes til jordbruk[10]. Figur 3-4viser antall virksomheter i næringer som vil være spesielt relevant for prosjektet, sortert etter størrelse.

[7] (NAV,2024)
[8] Omfatter håndverkere, prosess- og maskinoperatører, transportarbeidere, m.m
[9] SSB tabell 11619, hentet desember 2025
[10] http://bondebladet.no/jordbruk-og-husdyr-i-time-birkenes-og-steinkjer-slik-skiller-kommunene-seg-ut/s/5-150-122853



Figur 3-4. Antall virksomheter per 1.januar 2025, etter antall ansatte, i nøkkelnæringer[11]

Det finnes flere små og mellomstore entreprenørbedrifter innen bygg- og anleggsvirksomhet i Bjerkreim kommune. Et lokalt selskap har blant annet levert grus til Bjerkreim vindkraftverk. Produksjons- og entreprenørbedrifter innen bygg og anlegg baserer imidlertid en stor del av sitt forretningsgrunnlag på oppdrag og aktiviteter utenfor kommunen. Videre har en internasjonal vindturbinleverandør etablert et servicesenter i Bjerkreim kommune, og sysselsetter om lag 10–15 personer[12]. Virksomheten er knyttet til drift og vedlikehold av vindkraftverk i regionen der selskapet har levert turbiner.

Time kommune har, også som følge av et betydelig høyere folketall enn Bjerkreim, et mer omfattende næringsliv målt i antall virksomheter. Figuren viser at kommunen har et betydelig antall foretak innen bygge- og anleggsvirksomhet, hovedsakelig små og mellomstore bedrifter, men også enkelte større virksomheter sammenlignet med Bjerkreim. Dette indikerer en bredere lokal og regional kapasitet innen entreprenør- og anleggsrelatert virksomhet. Det finnes allerede en virksomhet lokalisert i Time som har levert strømforsyning til fugleradaren for de omsøkte tiltakene, basert på en løsning som kombinerer solceller, batteri og dieselaggregat.

Olje- og gassindustrien er en hjørnesteinsnæring i regionen, og har vært sentral for både regional og nasjonal verdiskapning. Oljeselskapene har bidratt til å utvikle en sterk leverandørindustri, spesielt innenfor engineering-, maritim-, mekanisk- og elektroindustri, med tilhørende økonomisk vekst og skatteinntekter. Rogaland er også en av de største jordbruksfylkene i Norge[13].

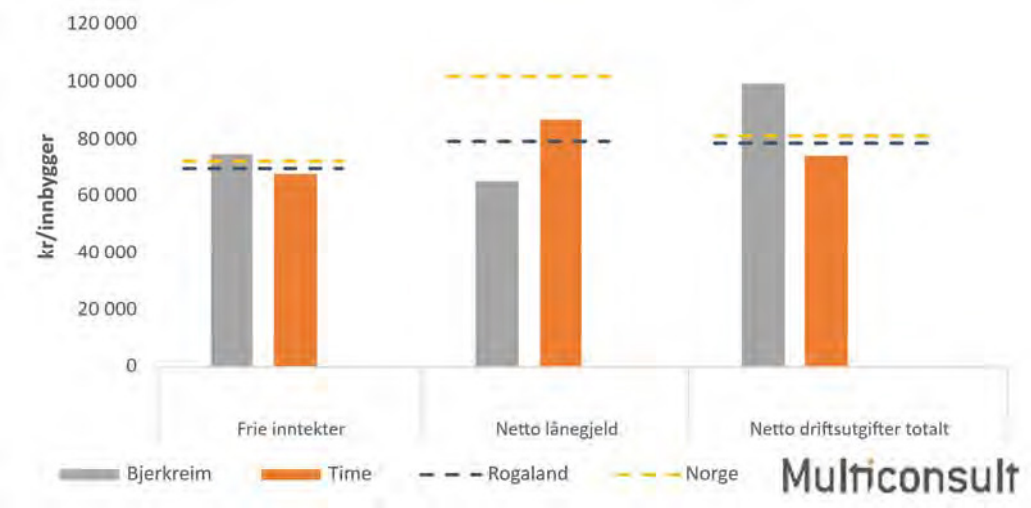
Regionalt er det erfaring og kompetanse knyttet til utbygging av vindkraftverk i Sør-Rogaland, herunder i Bjerkreim og Time. Flere regionale entreprenører har deltatt i tidligere vindkraftutbygginger og har relevant erfaring innen grunn- og anleggsarbeider, byggeledelse og tekniske leveranser. I forbindelse med utbyggingen av Bjerkreim vindkraftverk var Novaform AS (Sandnes kommune) engasjert av Siemens

[11] SSB tabell 10309, hentet januar 2025
[12] (Søndeland, 2020)
[13] (Bondelaget, u.d.).

Gamesa Renewable Energy AS med ansvar for oppfølging av byggeprosessen[14]. Videre hadde Stangeland Maskin AS (Sola kommune) flere store leveranser til en rekke vindkraftprosjekter i regionen, herunder Bjerkreim, Høg-Jæren og Måkaknuten vindkraftverk[15]. Risa (Hå kommune) har tilsvarende erfaring fra vindkraftprosjekter og leverer blant annet grunnarbeider og infrastruktur ved utbygging til Høg-Jæren vindpark[16].Samlet sett viser dette at det finnes etablert regional kapasitet og erfaring som kan være relevant for gjennomføring av nye tiltak.

3.2.3 Kommuneøkonomi og tjenestetilbud

Bjerkreim har, som en liten kommune, høyere driftskostnader per innbygger enn Rogaland fylke og landet for øvrig, som illustrert i Figur 3-5. Time kommune har til sammenligning lavere driftsutgifter enn både fylket og landet.



Figur 3-5.Utvalgte nøkkeldata for kommuneøkonomi i influensområdet. Gjennomsnitt for Rogaland og Norge er inkludert[17]

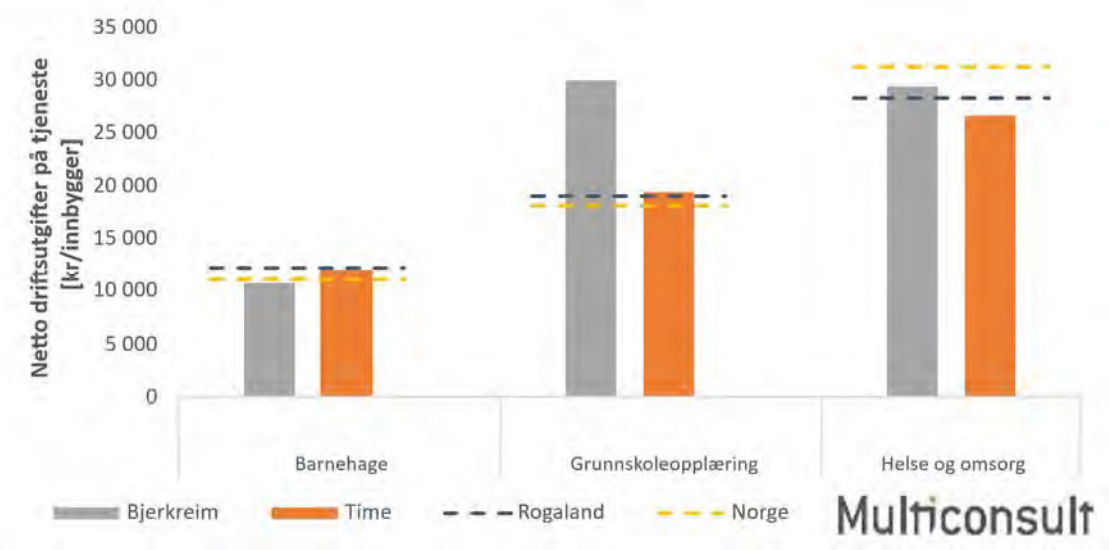
Bjerkreim kommune har relativt høye driftskostnader per innbygger, noe som delvis kompenseres gjennom inntektssystemet for kommunene, blant annet via distriktstilskudd. I kombinasjon med skatteinntekter fra eksisterende kraftverk bidrar dette til at kommunen har frie inntekter per innbygger som ligger over gjennomsnittet for både Rogaland fylke og landet som helhet. Bjerkreim kommune har videre lavere netto lånegjeld per innbygger enn både fylkes- og landsgjennomsnittet, og har hatt positive driftsresultater de siste årene. I 2024 utgjorde netto driftsresultat om lag 5,5 prosent av driftsinntektene, noe som er godt over anbefalt nivå fra Teknisk beregningsutvalg for kommunal og fylkeskommunal økonomi (TBU).

Time kommune har til sammenligning frie inntekter per innbygger noe under fylkes- og landsgjennomsnittet. Kommunen har høyere netto lånegjeld per innbygger enn Bjerkreim og ligger også over fylkesgjennomsnittet. Time kommune hadde et negativt driftsresultat i 2024, med et netto driftsresultat på om lag -0,48 prosent av driftsinntektene. Dette er under anbefalt nivå fra TBU, som tilsier

[14] https://novaform.no/referanse/bjerkreim-vindpark/
[15] (Søndeland, 2020)
[16] https://risa.no/referanse/hog-jaeren-vindpark/
[17] SSB tabell 12137 hentet oktober 2025

at netto driftsresultat over tid bør utgjøre om lag 1,75 prosent av driftsinntektene for å sikre tilstrekkelig økonomisk handlingsrom[18].

Bjerkreim kommune har, som det fremgår av figuren under, høyere kostnader per innbygger på grunnskoleopplæring enn Time, Rogaland fylke og landet for øvrig. Det er ventet at utgifter til helse og omsorg i begge kommunene vil øke de kommende tiårene som en konsekvens av den demografiske utviklingen omtalt i 3.2.1.



Figur 3-6. Kostnader for utvalgte kommunale tjenesteområder som prosent av totale netto drifts-utgifter i 2024. Gjennomsnitt for Rogaland og Norge er inkludert[19]

3.3 0-alternativ

0-alternativet utgjør referansealternativet i verdiskapingsdelen av utredningen, og representerer forventet utvikling dersom tiltaket ikke gjennomføres. Dette forstås i praksis som at Moifjellet og Mellomstrand vindkraftverk ikke bygges.

Med en sterk olje- og gassindustri vil den fremtidige utviklingen i det regionale næringslivet, i tillegg til befolkningsutviklingen, i stor grad avhenge av oljepris og -investeringer, samt temperaturen i nasjonal og internasjonal økonomi. Det regionale arbeidsmarkedet er, som nevnt over, spesielt utsatt for nedgang i oljeindustrien. Klimaloven fremsetter at Norge skal bli et lavutslippssamfunn i 2050, med en 90 til 95 prosent reduksjon i klimagassutslipp[20], og regionale utviklingstrekk for Rogaland predikerer at fylket et det eneste i landet som vil oppleve en nedgang i bruttoprodukt i perioden 2018 til 2050[21]. Samlet sett kan dette peke mot et større omstillingsbehov for lokalt næringsliv sammenlignet med andre deler av landet.

Hovedscenarioet i SSB sine befolkningsprognose viser at innbyggertallet i Bjerkreim og Time kommune ventes å øke mot 2040, mens befolkningen gradvis vil bli eldre. For kommunene vil disse demografiske endringene medføre økte driftsutgifter knyttet til helse og omsorg, kombinert med reduserte inntekter som følge av en redusert arbeidsstyrke (relativt sett). På sikt vil en slik utvikling kunne medføre reduksjoner i

[18] https://www.ssb.no/offentlig-sektor/kommunale-finanser/statistikk/kommuneregnskap/artikler/ytterligere-nedgang-i-netto-driftsresultat
[19] SSB tabell 12362 hentet oktober 2025
[20] (Lovdata, 2021)
[21] (Rogaland fylkeskommune, 2022).

tjenestetilbudet. Samtidig kan et økende innbyggertall i kommunene og fylket generelt føre til økt økonomisk aktivitet som igjen resulterer i økende etterspørsel og tilgang på arbeidskraft for lokalt næringsliv.

3.4 Virkningene for lokal og regional verdiskapning

I dette avsnittet studeres mulige virkninger av tiltaket på lokalt næringsliv i influensområdet gitt den utbyggingen som er presentert i tiltaksbeskrivelsen. Det skilles mellom anleggs- og driftsfasen.

3.4.1 Lokal og regional sysselsetting i anleggsfasen

Norconsult og Agenda Kaupang gjennomførte i 2016 et studium av samfunnsvirkningene av norske vindkraftverk[22]. Her ble utbygde vindkraftverk etterprøvd for å etablere hvilken andel av verdiskapingen i utbyggingsfasen som hadde tilfalt nasjonale, regionale, og lokale aktører. Tallene viser at mens den nasjonale og regionale andelen er forholdsvis lik uavhengig av geografisk plassering og størrelse, vil den lokale andelen av verdiskapingen variere sterkt, primært avhengig av kompetanse og kapasitet i det lokale næringslivet. Studiet konkluderte med at regional og lokal verdiskapning er størst der en regional hovedentreprenør velges til bygge- og anleggsarbeidene i vindkraftverket, og benytter seg av lokale underleverandører[23]. Tabellen nedenfor gjengir hovedtallene for hvert av prosjektene i studiet.

Tabell 3-3 Beregnet norsk, regional og lokal verdiskaping i prosent av totalinvesteringen i et utvalg av vindkraftverk. Tabell hentet fra Agenda Kaupang og Norconsult, 2016

Vindkraftverk	Oppstartsår	Antall turbiner	Installert effekt (MW)	Nasjonal andel verdiskapning	Regional andel verdiskapning	Lokal andel verdiskapning
Midtfjellet vindkraftverk	2013	44	149,6	32 %	12 %	11 %
Ytre Vikna vindkrafverk	2012	17	39,1	36 %	30 %	14 %
Bessakerfjellet	2008	25	57,5	21 %	17 %	12 %
Kjøllefjord	2006	17	39,1	26 %	9 %	4 %
Smøla 2	2005	48	110	21 %	7 %	2 %
Hitra	2004	24	55,2	25 %	17 %	5 %

Investeringskostnadene står for rundt to tredjedeler av totalkostnaden. Vindturbiner, som primært importeres fra utenlandske leverandører, utgjør en stor andel av investeringskostnad[24]. Norconsult og Agenda Kapuang fant imidlertid i sin etterprøvingsstudie at denne andelen ble redusert fra 75 til 60 prosent av investeringskostnaden i perioden fra 2002 til 2013 [25]. Den nasjonale andelen av totalinvesteringen økte over samme periode. Dette skyldtes ikke nødvendigvis en nedgang i turbinkostnadene, men heller at kostnadene til bygge- og anleggsarbeider og elektrotekniske installasjoner i vindkraftverkene økte over perioden. Dette har også påvirket den regionale og lokale verdiskapingen i utbyggingsprosjektene, som viser en økning over tid[26]. For begge alternativene i denne utredningen utgjør Engineering, Procurement,

[22] (Riise, E. et al., 2016)
[23] (Riise, E. et al., 2016)
[24] Grønn omstilling og landbasert vindkraft iNorge – En studie av verdiskaping og samfunnsøkonomi, Thema Consulting Group, 2019
[25] (*Verdiskapning - NVE*, u.å.)
[26] (Riise, E. et al., 2016)

Construction, Installation (EPCI) kontrakten rundt 67 prosent av den totale investeringen. Disse tilfaller i hovedsak utenlandske turbinleverandører, men deler av entreprenørarbeidet kan likevel tilfalle lokalt/regionalt næringsliv. Erfaringen fra tidligere norske vindkraftutbygginger viser at det kan forventes en viss sysselsetting og verdiskapingseffekter lokalt og regionalt, særlig i forbindelse med:

- Fundamentering og grunnarbeid
- Bygging av adkomstveier, oppstillingsplasser, servicebygg, grøfter, etc.
- Gravearbeid knyttet til legging av jordkabler
- Steinbearbeiding og knusing
- Transporttjenester
- Fiberskjøting og kabelkobling
- Øvrige bygg- og anleggsarbeider
- Overnattings- og servicetjenester

Det er begrenset overnattingskapasitet i nærheten av tiltakene, spesielt i Bjerkreim kommune. Samtidig finnes det større overnattingskapasitet i Bryne (Time kommune) som også har blitt benyttet i tidligere vindkraftutbygginger i området[27]. Innkvartering av anleggspersonell vil avklares som del av anskaffelsesprosessen og i dialog med aktuelle leverandører, med sikte på hensiktsmessig lokalisering nær eksisterende service- og handelstilbud slik at lokale næringslivet kan ta mest mulig del av verdiskapingen.

Når denne konsekvensutredningen utarbeides foreligger et samlet kostnadsestimat på rundt 4,5 milliarder kroner for utbyggingen for alternativ 1 og 3,9 milliarder for alternativ 2. Det er forbundet betydelig usikkerhet med anslagene for lokal og regional verdiskaping, ettersom disse i stor grad vil avhenge av forhold som lokal og regional kapasitet, tilgjengelig kompetanse, prosjektgjennomføring og valg av kontraktstrategi. I en sterkt forenklet tilnærming, og med utgangspunkt i erfaringstall fra de nyere vindkraftutbyggingene som er analysert i studien fra Agenda Kaupang og Norconsult, kan regional verdiskaping estimeres til rundt 15-25 prosent av totalkostnaden og 5-10 prosent være lokalt[28]. Videre anslår Norconsult/Agenda Kaupang at rundt hver tredje krone investert i vindkraft tilfaller norsk næringsliv. Overført til de foreliggende kostnadsestimatene tilsvarer dette en samlet nasjonal verdiskaping i størrelsesorden 1,3–1,5 mrd. kroner for henholdsvis alternativ 1 og alternativ 2.

Tabell 3-4 Estimert verdiskaping lokalt og regionalt i anleggsfasen for alternativ 1 og 2

Alt.	Investeringskostnad	Lokal verdiskaping (5-10 %)	Regional verdiskaping (15-25 %)
Alternativ 1	4,5 mrd. kr	220 – 450 mill.kr	670 - 1 100 mill.kr
Alternativ 2	3,9 mrd. kr	195 – 390 mill.kr	580 – 975 mill.kr

Ved utbyggingen av Bjerkreim vindkraftverk (ca. 294 MW) var det en regional entreprenør som hadde ansvar for deler av grunn- og infrastrukturarbeidene, med en samlet kontraktsverdi på om lag 400 MNOK[29]. Lignende arbeider på andre vindkraftverk har gitt et gjennomsnittlig sysselsettingsnivå på rundt 65 årsverk hos entreprenør, i tillegg til bruk av underentreprenører. Erfaringene fra Høg-Jæren vindkraftverk (80 MW), som utløste investeringer på over 1,1 mrd. kroner, viser at vindkraftutbygging har gitt betydelige ringvirkninger for regionale entreprenører samt service- og overnattingsbedrifter, særlig i Time-regionen. Samlet sett tilsier disse erfaringene at Moifjellet og Mellomstrand vindkraftverk, som har et høyere samlet

[27] (Søndeland, 2020)
[28] Basert på ny informasjon om anleggsfasen har den lokale og regionale verdiskapingsandelen blitt justert fra det som foreligger i KU Moifjellet
[29] (Søndeland, 2020)

investeringsomfang, kan gi tilsvarende og potensielt større, regionale verdiskapingseffekter. Dette forutsetter imidlertid at prosjektets gjennomføring legger til rette for bruk av regional og lokal kapasitet, og at slik kapasitet faktisk er tilgjengelig i anleggsperioden.

Da det ikke foreligger prosjektspesifikke estimater for antall sysselsatte i anleggsfasen for noen av alternativene, er det gjennomført et forenklet og indikativt estimat. Behovet for arbeidskraft i anleggsfasen vurderes samlet sett å være av tilnærmet samme størrelsesorden for begge alternativer. Ifølge siste tilgjengelig bygg- og anleggsstatistikk fra SSB omsetter næringen rundt 2,8 millioner kr for hvert årsverk[30]. Fordi de store investeringskomponentene, som turbiner og kabler, forventes å bli produsert utenfor regionen kan dette tallet være en tilnærming også for den lokale og regionale omsettingen i byggefasen. Med utgangspunkt i Tabell 3-4 vil det tilsvare rundt 70-140 årsverk lokalt og 200-270 årsverk regionalt over anleggsperioden for begge alternativene[31]. Til sammenligning ble det i konsesjonssøknaden for Øyfjellet vindkraftverk, Norges største vindkraftverk, anslått om lag 1 600 årsverk totalt uten videre fordeling lokalt/regionalt over anleggsfasen som var anslått til å vare over fire år[32]. Dette anslaget var basert på en forenklet nøkkelfaktor på 0,4 årsverk per million kroner investert, slik det også ble lagt til grunn i søknaden for Andøymyran vindkraftverk. Det understrekes at disse tallene ikke er etterprøvd, og at sysselsettingseffektene i praksis vil avhenge av kontraktsfordeling, fremdrift og i hvilken grad lokal og regional kapasitet faktisk benyttes.

Bjerkreim kommune

I henhold til tidligere presenterte nøkkeltall fra kommunene, er det bare 381 sysselsatte i sekundærnæringen i Bjerkreim. Selv om enkelte lokale bygg- og anleggsselskaper potensielt kan påta seg noen av de etterspurte arbeidene, vil næringslivet i Bjerkreim, gitt dagens kapasitet og aktivitetsnivå, realistisk sett ta en lavere andel av verdiskapningen og sysselsettingen enn estimatene over. Bjerkreim næringsforening understreker også dette poenget når de påpeker at bedrifter må vurdere hvorvidt de kan involvere seg uten å belaste sin vanlige drift og eksisterende kundemasse, som de også vil være avhengige av på lang sikt. Dette indikerer at selv om prosjektet gir muligheter for lokal deltakelse, er disse begrenset av størrelsen på det lokale arbeidsmarkedet og kapasiteten i det eksisterende næringslivet. Bjerkreim næringsforeningen samarbeider med Statkraft for å aktivere lokalt arbeidsliv i Bjerkreim, blant annet gjennom informasjonsmøter om etterspurte arbeider og opprettelse av en aktørdatabase[33].

Time kommune

Time kommune har til sammenligning større kapasitet til å levere etterspurte tjenester, med om lag 1 912 sysselsatte i relevante håndverks- og anleggsrelaterte yrker. Det finnes lokal kapasitet til å påta seg arbeid knyttet til utbygging, men det vil avhenge av prosjektets omfang og krav til spesialisert kompetanse.

Med dette grunnlaget anslås konsekvensene å være middels positive (++) for lokalt næringsliv i Time og Bjerkreim for alternativ 1 og 2.

Konsekvensene for det regionale næringslivet vurderes som liten positiv (+) for begge tiltakene, da regionale entreprenører har kompetanse og erfaring til å påta seg arbeider. Det er ventet at omkringliggende kommuner vil kunne absorbere noe av etterspørselen etter arbeidskraft.

[30] SSB tabell 12817: Foreløpige tall for antall foretak, sysselsatte og omsetning, etter næring (SN2007), statistikkvariabel og år
[31] Basert på ny informasjon om anleggsfasen har den lokale og regionale sysselsettingsestimatet blitt justert fra det som foreligger i KU Moifjellet
[32] Fra konsesjonsøknad Øyfjellet
[33] (Prosjektleder Andreas Stokke, pers. mmd)

3.4.2 Lokal og regional sysselsetting i driftsfasen

I driftsfasen av Moifjellet og Mellomstrand vindkraftverk forventes det en mer begrenset verdiskaping på lokalt og regionalt nivå, knyttet til drift og vedlikehold av vindturbinene og tilhørende infrastruktur. Drifts- og vedlikeholdsleder, teknikere og spesialteknikere vil være basert i driftsbygget ved vindkraftverket. Statkraft anslår at drift av vindkraftverket vil gi omtrent syv heltidsstillinger for å håndtere daglig tilsyn, utføre oppgraderinger, planlagt og ikke-planlagt vedlikehold, samt administrasjon av lagerbeholdningen[34]. En internasjonal vindturbinleverandør har allerede etablert en driftssentral i Bjerkreim kommune som betjener flere vindkraftverk i området. Periodisk vedlikehold kan i tillegg gi etterspørsel etter lokale tjenester som transport, vedlikehold av veier (både sommer og vinter), oppfølging av miljøprogrammer, rengjøring, avfallshåndtering, mekaniske, elektriske serviceoppgaver og andre lokale tjenestekjøp. Ettersom Bjerkreim kommune har færre sysselsatte enn Time kommune, vil arbeidsplasser i driftsfasen få relativt større betydning her. Driftsbygget vil enten lokaliseres i Time kommune ved Mellomstrand eller lokaliseres på Moifjellet i Bjerkreim kommune.

Med dette vurderes de direkte konsekvensene i drift å ha en *liten positiv konsekvens (+),* sett opp mot eksisterende arbeidskapasitet, for Bjerkreim kommune, *ubetydelig (0)* konsekvens i Time kommune og *ubetydelig (0)* konsekvens i Rogaland fylke for begge alternativene.

3.4.3 Kompensasjon til grunneiere og andre rettighetshavere

Landbruk er som tidligere nevnt en viktig næring både lokalt og regionalt. Det henvises her til fagrapporten om landbruk for vurderinger av tiltakets påvirkning på landbruk i influensområdet.

Statkrafts planlagte utbygging av Mellomstrand og Moifjellet vindkraftverk omfatter kompensasjonsavtaler med berørte grunneiere. Siden hoveddelen av planområdene for de foreslåtte alternativene ligger i Bjerkreim kommune, vil kompensasjon til grunneiere og tilhørende økonomiske ringvirkninger i hovedsak tilfalle denne kommunen, med mer begrensede effekter i Time kommune. For grunneiere som driver landbruk kan kompensasjonen bidra til å opprettholde eller videreutvikle driften. Avtalene er konfidensielle og regulerer kompensasjonen, som typisk tilpasses hvert enkelt tilfelle avhengig av grunneierens areal og eventuelle direkte konsekvenser av utbyggingen.

3.5 Virkninger på kommunens økonomi

Et vindkraftprosjekt kan prinsipielt påvirke kommuneøkonomien på følgende måter:

- Direkte skatte- og avgiftsinntekter: Kommunen vil kunne motta direkte inntekter fra skatter og avgifter pålagt kraftverkene.
- Indirekte skatteinntekter: Prosjektet kan gi indirekte skatteinntekter gjennom ringvirkninger i lokalsamfunnet knyttet til utbyggingens etterspørsel etter lokale varer og tjenester. Dette omfatter også inntekter til grunneiere og økte skatteinntekter som følge av kommunens etterspørsel etter tjenester som finansieres av kraftverkinntektene.
- Eventuelle negative økonomiske effekter: Prosjektet kan ha en negativ innvirkning på kommuneøkonomien hvis andre næringer, som landbruk og reiseliv, påvirkes negativt, eller hvis sosiale forhold svekkes, noe som kan øke kommunens sosialutgifter.

[34] (*Moifjellet vindkraftpark | Statkraft*, u.å.)

- Endringer i statlige overføringer: Det nye inntektsgrunnlaget kan påvirke statlige overføringer til kommunen, som tilpasser seg gjennom inntektsutjevningen.
- Medeierskap i kraftselskap: Kommunen kan også få inntekter fra sin eventuelle eierandel i kraftselskapet, som gir en andel av kraftverksprofitten.
- Avsetning til lokale formål: Regjeringen har besluttet å sette av 0,2 øre per kWh av total vindkraftproduksjon til tiltak som skal ivareta lokal natur, reindrift og andre aktiviteter påvirket av arealbruken. Effektene av denne ordningen vil bli konkretisert i det reviderte statsbudsjettet for 2024[35].

Bjerkreim er i dag den tredje største vindkraftkommunen i Norge, med en årlig normalproduksjon på 1 137 GWh. Dette utgjør rundt 6,8 % av landets totale vindkraftproduksjon (målt i 2020) [36]. Disse kraftverkene gir betydelige inntekter til kommunen. Moifjellet vindkraftverk vil ha en total installert effekt inntil 260 MW og årlig produksjon omkring 850 GWh. Hvis vedtatt vil Moifjellet vindkraftverk bli det tredje største vindkraftverket i Norge etter installert effekt, i henhold til NVE sin database over utbygde vindkraftverk[37].

For Time vil Mellomstrand vindkraftverk, med to til fire nye vindturbiner, kunne gi et tilskudd på om lag 100 GWh vindkraftproduksjon i kommunen. Kommunen er allerede vertskap for vindkraftanlegg og er ventet å motta om lag 2,7 millioner kroner i produksjonsavgift fra eksisterende vindkraftverk i 2026[38].

3.5.1 Eiendomsskatt

Eiendomsskatt er en kommunal inntektskilde som tilfaller vertskommunen. Kommunestyret har myndighet til å beslutte om vindkraftanlegg skal omfattes av eiendomsskatt, og til å fastsette en sats innenfor en lovbestemt grense på inntil sju promille[39]. Bjerkreim kommune har vedtatt en eiendomsskattesats på sju promille for vindkraftverk. Dette gir årlige inntekter på rundt 25 millioner kroner fra eksisterende vindkraftverk[40]. Tilsvarende har Time kommune en sats på fem promille, som resulterer i skatteinntekter fra eksisterende vindkraftverk på 1,8 millioner årlig.

Grunnlaget for eiendomsskatten på vindkraftverk baseres på markedsverdien av anlegget, definert etter anleggets tekniske verdi og avkastningsverdi, jamført Eiendomsskatteloven (1975). Den tekniske verdien beregnes med utgangspunkt i gjenanskaffelseskostnader etter fradrag for slitasje, alder og eventuelle teknologiske avvik. I praksis foreskriver Eiendomsskatteloven (1975) §8 A-3 at gjenanskaffelseskostnadene antas lik investeringskostnadene for år 1, og retaksering foretas hvert tiende år. Avkastningsverdien kan benyttes der denne anses som en mer presis refleksjon av anleggets faktiske markedsverdi[41].

Det er ikke mulig å gjøre detaljerte beregninger av skatteprovenyet fra eiendomsskatt på det nåværende tidspunkt, ettersom en taksering av Moifjellet og Mellomstrand vindkraftverk ikke foreligger. Potensielle inntekter fra eiendomsskatten kan grovt estimeres ut fra anleggets totale investeringskostnader som tilhører den aktuelle kommunen. I den videre analysen er beregningsgrunnlaget for investeringskostnadene derfor basert på de foreløpige kostnadsestimatene på 4,5 milliarder kroner for alternativ 1 og 3,9 milliarder

[36] (Bjerkreim kommune, 2023)
[37] (*Data for utbygde vindkraftverk i Norge - NVE*, u.å.)
[38] https://pub.framsikt.net/2026/time/bm-2026-ok_plan#/generic/summary/budsum?scrollTo=BudSum-BudgetSummary
[39] (NVE, 2022).
[40] (Bjerkreim kommune, 2023)
[41] (Lovdata, u.å.)

for alternativ 2, og det er lagt til grunn en teknisk levetid på 30 år[42]. Teknisk verdi er beregnet for hver retaksering ved å dele gjenanskaffelsesverdi på levetiden multiplisert med gjenstående levetid.

For Bjerkreim, med en eiendomsskattesats på 7 promille på vindkraftverk, vil dette genere årlige inntekter på 27 millioner kroner i driftsfasen frem til første retaksering av vindkraftverket, for både alternativ 1 og 2.

Tabell 3-5 Estimat for teknisk verdi av vindkraftverket og årlig eiendomsskatt til Bjerkreim kommune for alternativ 1 og 2 (reelle kroner).

År	Teknisk verdi (MNOK)	Årlig eiendomsskatt (MNOK)
1 til 10	3 900	27,3
11 til 20 (1. retaksering)	2 600	18,2
21 til 30 (2. retaksering)	1 300	9,1

For Time kommune er det lagt til grunn at kun den delen av investeringen som knytter seg til de 2–4 vindturbinene som er foreslått lokalisert i kommunen utgjør grunnlaget for beregning av eiendomsskatt. Denne delen av investeringen er anslått til om lag 611 millioner kroner. Med dagens eiendomsskattesats på 5 promille på vindkraftverk vil dette genere årlige inntekter fra eiendomsskatt på 3 millioner kroner i driftsfasen frem til første retaksering av vindkraftverket.

Tabell 3-6 Estimat for teknisk verdi av vindkraftverket og årlig eiendomsskatt til Time kommune for alternativ 1(reelle kroner).

År	Teknisk verdi (MNOK)	Årlig eiendomsskatt (MNOK)
1 til 10	611	3,1
11 til 20 (1. retaksering)	407	2,0
21 til 30 (2. retaksering)	204	1,0

Videre vil betalbar eiendomsskatt i byggeperioden være avhengig av fordelingen av investeringene over byggeårene. Selv om eiendomsskatten vil være gjeldende i anleggsfasen (ettersom kraftverket bygges ut) er det ikke gjort noen eksplisitt beregning av dette.

3.5.2 Produksjonsavgift

Som en del av statsbudsjettet for 2022 vedtok Stortinget å innføre en særavgift på landbasert vindkraftproduksjon, først fastsatt til ett øre per produsert kWh[43]. Fra 2026 ligger denne produksjonsavgiften på 2,42 øre per kWh for konsesjonspliktige vindkraftanlegg[44]. Avgiften tilfaller i dag staten, men det er besluttet at inntektene fra avgiften vil bli omfordelt i sin helhet til vertskommunene som en del av statens incentivordning for vindkraftutbygging[45].

Moifjellet vindkraftverk, med en midlere årsproduksjon på 850 GWh iht. utredningsløsningen, med nyeste vedtatt avgiftssats på 2,42 øre per kWh, vil gi inntjeninger på 20,6 millioner kroner det første produksjonsåret til Bjerkreim kommune. Mellomstrand, med en midlere årsproduksjon rundt 100 GWh vil gi 2,4 millioner kroner det første produksjonsåret. Når en hensyntar en degraderingsrate for slitasje på

[42] (Norges vassdrags- og energidirektorat, 2024)
[43] (Finansdepartementet, 2023)
[44] (Norges vassdrags- og energidirektorat, 2025)
[45] (Finansdepartementet, 2023)

0,15% per år[46], reduseres disse inntektene noe over vindkraftverkets levetid. Dette er oppsummert i *Tabell 3-7* og *Tabell 3-8*.

Det er verdt å merke seg at dette representerer et utfallsrom for anslåtte inntjeninger og vil måtte justeres når de endelige utbyggingsplanene og faktiske produksjonstall er tilgjengelige.

Etablering av Moifjellet og Mellomstrand vindkraftverk kan medføre noe redusert energiproduksjon ved nærliggende vindkraftverk som følge av noe vaketap, med en tilhørende reduksjon i kommunale inntekter fra produksjonsavgiften. Disse virkningene inngår ikke i denne fagrapporten og er ikke forsøkt kvantifisert. Samtidig vil produksjonsavgiften fra de planlagte tiltakene kunne gi en betydelig økning i kommunenes samlede inntekter fra produksjonsavgiften sammenlignet med dagens nivå i Bjerkreim og Time kommuner.

3.5.3 Oppsummering

Tabellen under oppsummerer de estimerte direkte virkningene på kommunenes økonomi, herunder eiendomsskatt og produksjonsavgift. Kompensasjonstiltak og andre inntjeninger er her utelatt, ettersom de er innrettet til lokale formål i kommunen eller vertskommunen.

Alternativ 1

Tabell 3-7 Estimat av direkte årlige kommunale skatteinntekter fra det omsøkte tiltaket (avrundet) til Time kommune (fra alt. 1)

År	Midlere årsproduksjon*	Eiendomsskatt (millioner kroner)	Produksjonsavgift (millioner kroner)	Totale direkte skatteinntekter til kommunen (millioner kroner)	Netto kommunale driftsutgifter 2024 (millioner kroner)	Andel av netto driftskostnader
1 til 10	99 GWh/år	3,1	2,4	4,94	1490	0,4%
11 til 20 (1. retaksering)	98 GWh/år	2,0	2,4	3,89	1490	0,3%
21 til 30 (2. retaksering)	96 GWh/år	1,0	2,3	2,85	1490	0,2%

*antatt en årlig degraderingsrate på 0.15 prosent over levetiden i tråd med LCOE beregningene til NVE[47]. Tallene representerer gjennomsnittlig midlere årsproduksjon per 10-årsperiode.

Alternativ 2

Tabell 3-8 Estimat av direkte årlige kommunale skatteinntekter fra det omsøkte tiltaket (avrundet) til Bjerkreim kommune (fra alt. 1 og 2)

År	Midlere årsproduksjon*	Eiendomsskatt (millioner kroner)	Produksjonsavgift (millioner kroner)	Totale direkte skatteinntekter til kommunen (millioner kroner)	Netto kommunale driftsutgifter 2024 (millioner kroner)	Andel av netto driftskostnader
1 til 10	844 GWh/år	27,3	20,4	47,7	288	17 %
11 til 20 (1. retaksering)	832 GWh/år	18,2	20,1	38,3	288	13 %
21 til 30 (2. retaksering)	819 GWh/år	9,1	19,8	28,9	288	10 %

*antatt en årlig degraderingsrate på 0.15 prosent over levetiden i tråd med LCOE beregningene til NVE[48]. Tallene representerer gjennomsnittlig midlere årsproduksjon per 10-årsperiode.

[46] Lik degraderingsrate brukt i LCOE-beregninger til NVE
[47] (Norges vassdrags-og energidirektorat, 2024)
[48] (Norges vassdrags-og energidirektorat, 2024)

I henhold til kriteriene i Tabell 3-1 og sett opp mot netto kommunale driftsutgifter for 2024, vurderes både alternativ 1 og 2 å ha svært stor positiv betydning (++++) for kommuneøkonomien i Bjerkreim i driftsfasen. For Time kommune vurderes alternativ 1 å ha en liten positiv effekt (+).

Det er viktig å bemerke at inntekter fra eiendomsskatt også vil påløpe i anleggsfasen, men det er ikke gjort noen beregninger av dette. Estimatene som er lagt til grunn for disse vurderingene baserer seg på investeringskostnader og produksjonsdata som er tilgjengelige på nåværende tidspunkt og bør re-estimeres ved eventuelle endringer.

Vindkraftprosjekter gir også opphav til indirekte skatteinntekter gjennom tilknyttet lokal næringsaktivitet, men disse effektene anses ofte som begrensede og usikre i tidlig prosjektfase. De er derfor ikke inkludert i de kvantitative vurderingene.

3.6 Avbøtende tiltak

Det kan det være formålstjenlig å gjennomføre målrettede, avbøtende tiltak for å kompensere berørte parter, fremme lokal og regional sysselsetting, tilpasse kompetansehevende initiativer, og legge til rette for synergier mellom vindkraftverket og nærliggende næringer. Det vises til fagrapporten for landbruk for avbøtende tiltak relatert til landbruksnæringen.

Økonomisk kompensasjon

I forbindelse med revidert nasjonalbudsjett for 2024 besluttet regjeringen å avsette 0,2 øre/kWh av vindkraftproduksjonen til lokale formål som ivaretar interesser innenfor natur, reindrift og andre aktiviteter som påvirkes direkte av utbyggingen i vertskommuner og nabokommuner [49].

For Bjerkreim kommune, hvor utbyggingen ikke får negative konsekvenser for reindrift, vil 0,2 øre per kWh går til natur- og friluftslivsformål. En midlere årsproduksjon på 850 GWh vil kunne gi årlige tilskudd på 1,7 MNOK. For Time kommune vil Mellomstrand vindkraftverk, med en midlere årsproduksjon på 100 GWh, kunne gi et årlig tilskudd på om lag 200 000 kr.

Lokalt fond

Statkraft har i forbindelse med planprosessen fremmet et forslag til Bjerkreim kommune om å etablere et lokalt fond[50]. Dette vil komme i tillegg til, og skal ikke forveksles med, de lovpålagte ordningene. Statkraft anerkjenner i sitt innspill at en utbygging kan ha negative virkninger for innbyggere i Bjerkreim kommune som bor i nærheten av eller bruker planområdet, og viser til at det er en intensjon at virksomheten skal bidra til positiv lokal utvikling.

Fondsmidlene skal etter forslaget kunne tildeles etter søknad til bærekraftige og allmennyttige lokale formål, og er tenkt å komme lag, foreninger og andre aktører til gode. Fondet skal reguleres av egne vedtekter og forvaltes av et fondsstyre med helt eller hovedsakelig lokale representanter. Deler av fondsmidlene kan dersom dette besluttes av fondsstyre, og etter forhåndsbestemte objektive kriterier (fastsatt i vedtektene), øremerkes til avbøtende tiltak og tildeles som kompensasjon til eiendommer som er mest påvirket av Moifjellet vindkraftverk. Slik kompensasjon vil i tilfelle komme i tillegg til eventuelle lovbestemte rettigheter som slike eiendommer vil måtte ha rett på, for eksempel på grunn av støy.

[49] (Energidepartementet, 2024)
[50] https://www.bjerkreim.kommune.no/api/presentation/v2/nye-innsyn/filer/v-d4ef0f37__573e__4fd7__af59__255bcd530468-404547_1_A!d-2024036442!ox4LjA?pid=1

Moifjellet & Mellomstrand vindkraftverk

Det lokale fondet vil kunne få en årlig fondsavsetning på 29 500 kr/MW installert effekt + 10 000 kr/ MW ved høye oppnådde strømpriser gjennom driftsåret. Avsetningene til fondet vil gjøres årlig og etterskuddsvis.

Statkraft har som intensjon å etablere et lokalt fond med de samme prinsippene også for Time kommune.

Dette vil også komme i tillegg til, og skal ikke forveksles med, de lovpålagte ordningene. Utover de avbøtende og kompenserende tiltakene som er omtalt over, er det ikke foreslått ytterligere avbøtende tiltak innenfor dette fagtemaet.

3.7 Oppfølgende undersøkelser

Et pågående samarbeid mellom tiltakshaver, kommunene og Bjerkreim næringsforening kan legge til rette for å integrere overnevnte og andre tiltak, og tilrettelegger for at lokale interesser blir ivaretatt. For å sikre en kontinuerlig integrering av lokalt næringsliv anbefales det at vindkraftverket, hvis utbygd, overvåker og evaluerer den lokaløkonomiske påvirkningen regelmessig. En dynamisk og tilpasset oppfølging kan gi grunnlag for justering av tiltakene basert på faktiske resultater, noe som styrker prosjektets legitimitet og forankring i lokalsamfunnet. Utover dette er det ikke forslått noen oppfølgende undersøkelser.

3.8 Usikkerhet

Det er knyttet betydelig usikkerhet til beregningene av nasjonal, regional og lokal andel av verdiskapingen i anleggsfasen og driftsfasen. Omfanget av faktisk verdiskaping vil blant annet avhenge av i hvilken grad lokalt og regionalt næringsliv mobiliseres i prosjektgjennomføringen. Vurderingene av verdiskapingseffekter bygger på erfaringer og etterundersøkelser fra tidligere vindkraftutbygginger. Disse resultatene er imidlertid ikke direkte sammenlignbare, ettersom de refererte prosjektene i hovedsak ble realisert for mer enn ti år siden, og rammebetingelser, kostnadsnivå og markedsforhold har endret seg over tid.

Sysselsettingsanslagene for begge utbyggingsalternativene i anleggsfasen er forbundet med særlig stor usikkerhet. Det foreligger ikke informasjon om forventet bemanning i anleggsfasen, og anslagene er derfor basert på samlede investeringskostnader og nasjonale gjennomsnittstall fra bygg- og anleggsstatistikk. Dette innebærer usikkerhet knyttet til både totalt sysselsettingsomfang og til hvor stor andel av sysselsettingen som faktisk kan tilfalle lokale og regionale aktører.

Skatteinntektene fra eiendomsskatt kan heller ikke beregnes nøyaktig på nåværende tidspunkt, da takseringsgrunnlaget ennå ikke foreligger.

4 Reiseliv

4.1 Metode og datagrunnlag

Det foreligger lite etablert metodikk[51] og ingen veileder for konsekvensutredning av reiseliv. Temaet er heller ikke omfattet av Miljødirektoratets veileder M-1941[52]. Reiseliv utredes derfor med en metode utviklet av Multiconsult, som blant annet bygger på konsekvensviften i M-1941. I tråd med utredningskravene presentert i kapittel 2.4 vil utredningen av reiselivet, både lokalt og regionalt, bygge på informasjon fra sammenfallende fagrapporter, blant annet landskap, friluftsliv, kulturminner og naturmangfold.

For definisjon av influensområdet vises det til kapittel 3.1.1.

4.1.1 Definisjon

Denne utredningen følger NVE sin definisjon av reiseliv: «Med begrepet reiseliv mener vi her den økonomiske siden ved turisme, som er knyttet til salg av varer og tjenester til folk på reise. Reiselivsnæringen brukes ofte som en samlebetegnelse for fem ulike bransjer: Overnatting, servering, transport, opplevelser og formidling. Bransjen er preget av mange små aktører. Reiselivsbedriftene har til felles at de på ulike måter leverer tjenester til turister.»[53].

4.1.2 Avgrensning mot andre fagtema

I en konsekvensutredning skal konsekvenser telles kun én gang. Dette kapittelet beskriver hvordan virkningene for reiseliv avgrenses fra nærliggende fagtemaer i tråd med prinsippene for grensesetting i M-1941. Der reiselivet er knyttet til landskap, friluftsliv, kulturminner og naturmangfold, bygger utredningen på informasjon fra de respektive temautredningene, i tråd med utredningsprogrammets krav.

Friluftsliv

Friluftsliv utredes som et eget fagtema og omfatter bruk, opplevelseskvaliteter og tilrettelegging i områder som benyttes til rekreasjon. For reiseliv vurderes friluftsliv kun der aktivitetene har økonomisk betydning gjennom at de inngår i reiselivsprodukter eller påvirker etterspørselen etter tjenester fra reiselivsbedrifter, eksempelvis guidede turer, naturopplevelser eller aktivitetsbaserte tilbud. Vurderinger av bruksverdi, tilgjengelighet og opplevelseskvaliteter gjøres i sin helhet under fagtema friluftsliv. Funn fra temaet friluftsliv gjengis her som en del av informasjonsgrunnlaget for temaet reiseliv.

Naturmangfold

Naturmangfold utredes som eget fagtema og omfatter arter, naturtyper og økologiske funksjoner. I reiselivsvurderingen inngår naturmangfold kun der det har betydning for reiselivets tjenestetilbud, for eksempel der naturverdier fungerer som attraksjoner eller del av et opplevelsestilbud.

Støy

For reiseliv vurderes støy kun der det kan føre til å svekke reiselivstilbudet og inntekstgrunnlaget til reiselivsaktører.

[51] (Øystein Aas et al., 2006)
[52] (Miljødirektoratet, 2025)
[53] (Norges vassdrags- og energidirektorat, 2022)

Landskap

Landskap vurderes som eget fagtema. I reiselivsvurderingen omtales landskap kun som del av opplevelsesgrunnlaget for turister, i den grad det påvirker attraktivitet, besøksstrømmer eller tilbud fra reiselivsbedrifter

Kulturmiljø

Kulturminner og kulturmiljø utredes som eget fagtema. Reiseliv omtaler kun vurderinger knyttet til kulturmiljøets betydning som opplevelseskvalitet, attraksjon eller del av reiselivsproduktet.

4.2 Datagrunnlag

Utredningen er basert på foreliggende informasjon som i hovedsak er hentet fra kildene i tabellen under. Konsulterte interessenter i kildeoversikten representerer de interessentene som har gitt innspill til utredningen, og ikke den fullstendige listen over interessenter som har blitt kontaktet.

Tabell 4-1 Oversikt over datakilder reiseliv

#	Kilde	Datatype
1	Reiselivaktører	Kommunikasjon med redaktør i Visit Jæren per epost datert 09.10.2025 Intervju med Backyard Camps per telefon 25.02.2026
2	Time kommune	Kommunen sine hjemmesider og innspill fra representant fra Time kommune per epost datert 08.10.2025
3	Bjerkreim kommune	Kommunen sine hjemmesider, Destinasjon Bjerkreim og intervju med kommunens kulturkontor
4	www.ssb.no	Diverse nøkkeltall om lokale fritidsboliger, sysselsetting og bedrifter
5	NHO reiseliv og Menon Economics	Statistikk for lokal og regional verdiskapning og sysselsetting
6	Asplan Viak og Innovasjon Norge	Statistikk for lokal og regional verdiskapning og sysselsetting
7	Norges vassdrags-og energidirektorat	Informasjon om reiseliv og vindkraft
8	Litteraturstudie	Tourism and onshore wind turbines- literature review. Edita Tverijonaite & Anna Dóra Sæþórsdóttir, 2023 Samfunnsmessige virkninger av vindkraftverk. En etterprøving av fire vindkraftverk. Norconsult & Agenda Kaupang, 2016.

4.3 Verdikriterier

Kriterier for verdsetting av reiseliv

Verdien av reiselivet i området vurderes etter kriteriene vist i Tabell 4-2, som skiller mellom nasjonal, regional og lokal betydning basert på reiselivsproduktenes attraktivitet og tilstedeværelse av besøkende. Det foreligger ikke anerkjent metodikk eller egen veileder for utredning av reiseliv i vindkraftsaker. Verdisettingen er derfor basert på prinsipper fra veiledere for små vannkraftverk, med kriterier utledet fra

tabell 7 i Energidepartementets retningslinjer for små vannkraftverk, som anses egnet for vurdering av berørte reiselivsområder[54].

Tabell 4-2 Verdikriterier for temaet reiseliv

Verdi	Kriterier
Stor/svært stor	Flere og ulike næringsaktører. Mange markeder og segmenter til stede, både nasjonale og utenlandske besøkende. Attraksjoner og næringsaktører av nasjonal betydning. Næring av stor betydning for kommunene i området. Områder som er vesentlige forivaretakelsen av det norske reiselivsproduktet, og nasjonalt viktige reiselivsdestinasjon er hvor landskapet eller naturen er en vesentlig del av attraksjonen.
Middels	Signifikant næring med flere bedrifter. Varierte markeder med ulike attraksjoner. Hovedsakelig hjemmemarkedet. Områder som er vesentlige for ivaretakelsen av det regionale eller lokale reiselivsproduktet, og regionalt og lokalt viktige reiselivsdestinasjoner hvor landskapet eller naturen er en vesentlig del av attraksjonen
Liten	Lite utviklet næring med enkeltbedrifter som kan ha en viss lokal betydning. Hovedsakelig regionale markeder. Andrereiselivsdestinasjoner hvor landskap eller natur er en vesentlig del av attraksjonen
Uten betydning	Ingen reiselivsnæring og ingen turister.

4.4 Kriterier for å vurdere påvirkning og konsekvens

Der det er faglige forutsetninger for å kvantifisere forventede virkninger har Tabell 4-3 tjent som veiledende i vurderingene. Vurdering av virkninger er, der det er faglig belegg for det, gjort på kvalitativt grunnlag etter konsulentens skjønn.

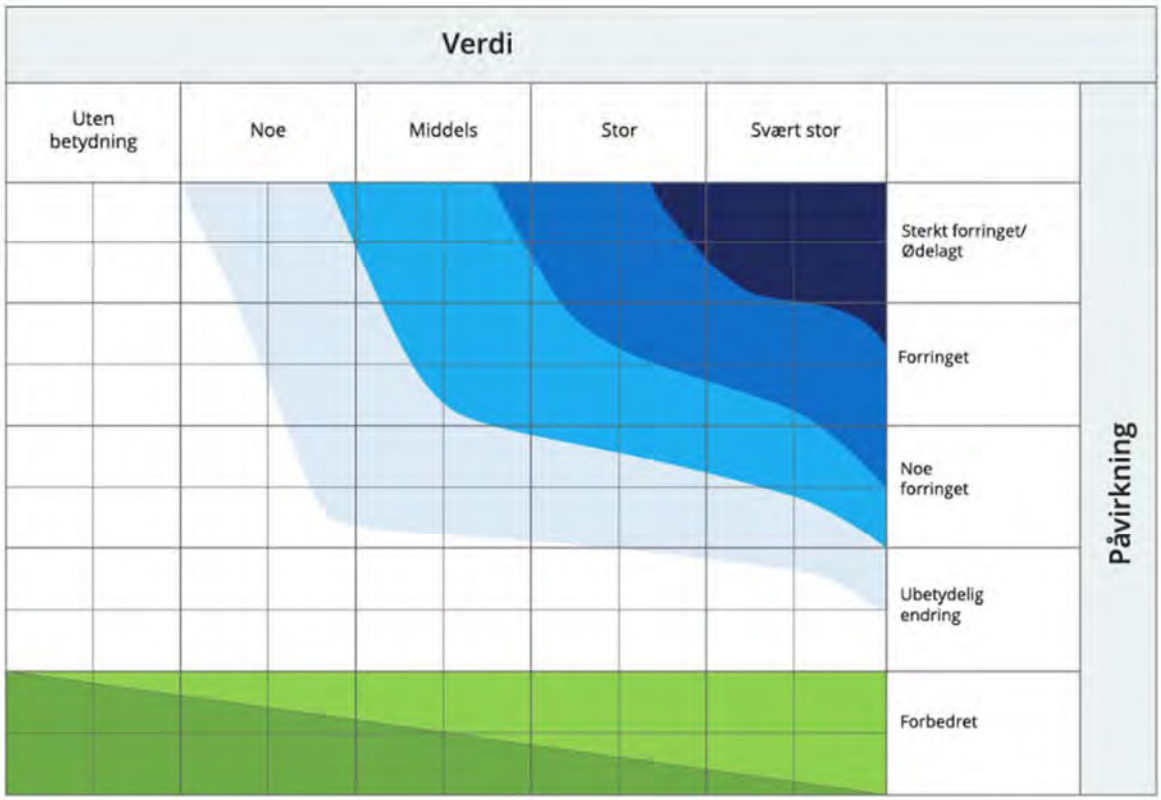
Tabell 4-3.Påvirkningskriterier for tema reiseliv.

Virkning	Kriterier
Ødelagt/sterkt forringet	Tiltaket vil i stor grad redusere mulighetene for vekst og utvikling innen næringen.
Forringet	Skadevirkningene er merkbare og betydelige, men først og fremst for deler av området eller en gren av næringen, mens andre i mindre grad påvirkes negativ.
Noe forringet	Tiltaket vil ha mindre, oftest lokale og avgrensede skadevirkninger for næringen.
Ubetydelig endring	Tiltaket har ingen/ubetydelige virkninger på dagens eller fremtidig aktivitet.
Noe forbedret	Tiltaket vil ha små positive virkninger for dagens eller framtidig aktivitet i området.

[54] (Olje- og energidepartementet, 2007)

Vesentlig forbedret	Tiltaket vil ha middels positive virkninger for dagens eller framtidig aktiviteter i området.
Sterkt forbedret	Tiltaket vil ha store positive virkninger for dagens eller framtidig aktivitet i området.

Konsekvenser av tiltaket er utledet ved å sammenholde verdi mot påvirkning i *Figur 4-1*.



Figur 4-1 Konsekvensvifte iht. M-1941 (Miljødirektoratet, 2025).

4.5 Områdebeskrivelse og verdivurdering

4.5.1 Reiselivsaktører og attraksjoner

Regionalt reiseliv

Reiselivet i Rogaland fylke er preget av varierte attraksjoner som trekker både nasjonale og internasjonale besøkende. Blant de mest populære attraksjonene er det ikoniske fjordlandskapet, særlig Lysefjorden med Preikestolen og Kjerag, som er blant Norges mest besøkte naturseverdigheter. Stavanger tiltrekker seg også mange besøkende med sitt rike kulturliv og historiske betydning. Kulturhistoriske steder som Avaldsnes og Hafrsfjord formidler Rogalands vikinghistorie og fremheves som nasjonale kulturarvsteder, mens fornøyelsesparken Kongeparken i Gjesdal utvider tilbudet til familier og barn. Stavangerregionen har i tillegg en sterk mat- og restaurantprofil, med Michelin-stjerner, festivaler og et rikt lokalmatmiljø.

Rogaland fylkeskommune har vedtatt og innarbeidet regional reiselivsstrategi (2024) i Utviklingsplanen 2025–2028 og i Nærings- og innovasjonsstrategien[55]. Strategien vektlegger bærekraftig utvikling, sesongforlengelse og utnyttelse av lokale fortrinn for å styrke Rogaland som helårsdestinasjon.

[55] (Rogaland Fylkeskommune, 2025)

Fylkeskommunen legger vekt på samarbeid mellom kommuner og næringslivet for å støtte gründere i sektoren og tilpasse seg de nye behovene som oppsto etter pandemien. Reiselivsnæringen regionalt markedsfører på flere plattformer, blant annet Region Stavanger og reiselivssatsing «Edge og Norway» [56]. Denne markedsføringen omfatter også kommunene i planområdene, herunder Bjerkreim og Time kommune.

Lokalt reiseliv

Natur og tilgang til friluftsområder er noe av de viktigste attraksjonsverdiene influensområdet. En rekke av de lokalitetene som er sentrale for reiselivet i området, og markedsført blant annet gjennom Destinasjon Bjerkreim, er samtidig kartlagt og verdivurdert som viktige eller svært viktige friluftslivsområder i konsekvensutredningen for friluftsliv[57]. De mest sentrale lokalitetene i og nær planområdene er:

Moifjellet og Urdalsnipa (FL1): Moifjellet er et etablert utfartsområde for lokale og regionale besøkende i Sør-Rogaland. Området er kjent gjennom Bjerkreimssenderen som er godt synlig fra lang avstand. Det er tilrettelagt med gruslagt bilvei opp til Urdalsnipa, parkeringsplass og informasjonstavle. Veien benyttes daglig av turgåere, og turområdet er del av kommunens friluftslivssatsing. Delområdet er i friluftsliv-KUen vurdert å ha stor verdi.

Brusaknuden og Karten (FL2): Karten og Brusaknuden er de høyeste toppene på Jæren og utgjør et aktivt og populært turområde som tiltrekker seg besøkende både lokalt, regionalt og nasjonalt. Det er tilrettelagt med stor parkeringsplass, skilting og graderte turruter. Time kommune har innvilget byggetillatelse for skulpturen MUTE på Karten (kunstner Pøbel), som etter ferdigstillelse vil styrke områdets attraksjonskraft ytterligere. Brusaknuden og Karten er med i Time kommunes «Ti turar i Time». Delområdet er i friluftsliv-KUen vurdert å ha stor verdi.

Fiskeplassene langs fv. 504 (FL4): Langs fylkesvei 504 er det en sammenhengende fiskesone med 15 vann over ca. 30 km strandlinje. Fiskesonen er godt tilrettelagt med parkeringsplasser og tilgjengelighet for ulike brukergrupper. I 2025 ble det solgt ca. 16 744 dagskort, noe som er en markert vekst fra 7 522 dagskort da salget startet i 1997. Deler av fiskesonen ligger innenfor eller nær planområdet til Mellomstrand i Time kommune.

Magma Geopark (UNESCO): Planområdet for Moifjellet inngår i Magma Geopark, en av UNESCOs globale geoparker. Geoparkens nærmeste lokaliteter til planområdet er Storrsheia og Solbjørgnipa (ca. 3 km nordøst og øst for planområdet). Geoparken er et viktig element i kommunens reiselivsprofil.

Synesvarden (FL7) og Sikvalandsheia (FL11): I Time kommune er Synesvarden og Sikvalandsheia viktige friluftslivsområder med merkede turstier og parkering. Synesvarden (359 moh.) inngår i et landskapsvernområde og er et tilgjengelig og mye besøkt turområde. Disse områdene ligger i noe avstand fra planområdene og påvirkes i mindre grad direkte av tiltaket.

Hetlandsskogen (FL14): I Bjerkreim er Hetlandsskogen et tilrettelagt friluftslivsområde med ca. 10 000 mål skog og utmark, merkede turstier, fiskemuligheter og aktiviteter tilpasset ulike brukergrupper, inkludert universelt utformede løyper.

Felles for de ovennevnte områdene er at de kombinerer naturbaserte opplevelser som gjør dem attraktive for turister og besøkende utenfra. Det er denne sammenhengen mellom friluftslivsverdi og

[56] (*Stavanger-regionen - Fjord Norway*, u.å.)
[57] Dokumentkode: 10265688-01-RIM-RAP

reiselivsverdi som danner grunnlaget for at tiltakets påvirkning på friluftslivet er relevant også for vurderingen av reiselivet.

Reiseliv i Bjerkreim

Bjerkreim har en liten reiselivsnæring som fokuserer i hovedsak på naturopplevelser, inkludert friluftsliv i det varierte landskapet som byr på turmuligheter med merkede stier, fiske og rekreasjonsområder. Ørsdalsvatnet, Gloppedalsura, Stavtjørn og Bjerkreimselva er flagget som spesielt viktige området av kommunen[58] Det finnes noen aktører som tilbyr overnatting, aktiviteter og matservering, men for mange av disse er turisme en tilleggsnæring. Kommunen støtter opp om lokal reiselivsnæringen gjennom Destinasjon Bjerkreim, som fungerer som et markedsføringsverktøy for lokale bedrifter. Bjerkreim kommune betaler medlemsavgiften for aktører som vil markedsføre seg gjennom denne portalen[59]. På Destinasjon Bjerkreim sine sider er det en oversikt over reiselivstilbudet i Bjerkreim kommune, inkludert gåturer, badeplasser, aktiviteter, overnatting, lokalmat og teltplasser. Store deler av dette tilbudet har blitt sammenfattet i Tabell 4-4.

Det er opprettet en deltidsstilling for å drive Destinasjon Bjerkreim, samt en samarbeidsgruppe i kommunen som jobber med utvikling av reiselivet. Dette er den største reiselivssatsingen kommunen har gjennomført til nå[60], med særlig fokus på naturen og friluftsliv som attraksjonsverdi. Det finnes kulturmiljø av regional interesse i Bjerkreim kommune, herunder Åsentunet, Hovland og Gudlen, Gloppedalsura og Kvitlen-Brattebø. Flere lokaliteter i Bjerkreim kommune inngår også i Magma UNESCO Global Geopark, som er et område fordelt på fem kommuner med en geologi som er av internasjonal betydning[61]. Bjerkreim kommune er, sammen med de andre kommuner i Dalane og Rogaland fylkeskommune, aksjonærer i Magma Geopark, og arbeider med å utvikle nye turistprodukter og det tilbudet til lokalbefolkningen [62]. Det henvises til fagrapportene om kulturminner og kulturmiljø og friluftsliv for videre beskrivelser.

Tabell 4-4 Oversikt over aktører og attraksjoner i Bjerkreim[63]

Aktør/Attraksjon	Beskrivelse
Friluftsaktiviteter	- Fjellturer - Klatring - Kanopadling - Elvepadling i Bjerkreimsvassdraget - Stand-up padling på Stavtjørn - Vikeså Frisbeegolfbane - Rulleskiløype på Vikeså stadion - Alpinanlegget ved Stavtjørn - Fiske i Bjerkreimselva, viktig lakseelv - Via Ferrata i Gloppedasura - Båttur med M/K Ørsdal på Ørsdalsvannet
Magma UNESCO Global Geopark	Lokaliteter i Bjerkreim som inngår i Magma Geopark.

[58] (Anette Olden Nedrebø, pers.medd).
[59] (Anette Olden Nedrebø, pers.medd).
[60] (Annette Olden Nedrebø, 2019)
[61] («Hva er en UNESCO Geopark?», u.å.)
[62] (Nedrebø, 2019)

Aktør/Attraksjon	Beskrivelse
	- Vinjakula - Gloppedalsura - Storrsheia - Solbjørgnipa - Odlanshølen - Ørsdalen og Gudlen - Austdalen
Bjerkreim Kirke	En historisk kirke fra 1835 som er kjent for sin arkitektur og som et kulturminne
Lokal matprodusenter	Lokale produsenter som tilbyr gårdsbesøk, matopplevelser og produkter fra gårdene i Bjerkreim, med fokus på kortreist mat: - Nyyyt på Røysland gård - Bageriet Byrkjedalstunet - Fladene Gard - Myksvoll Mikrobrenneri
Vikeså turistkontor	Turistinformasjon ved Vikeså veiservice ved E39.
FN-Parken på Vikeså	Minnesmerke over soldatene fra Rogaland som falt under tjenestegjøring for FN
Trygve Bjerkhreim-museet	Privateid museum om Trygve Bjerkreim, en av Norges store salmediktere
Kløgetvedttunet	Museum om lokal bondekultur fra 1800-tallet og frem til 1960
Ørsdalen Gruver	Guidet tur i nedlagte Ørsdalen Gruve fra 2.verdenskrig
Ranch Lauperrak	Ranch og gårdsbruk som tilbyr turer
Overnattingsmuligheter	Veen Gardscamping og Stavtjørn camping Lunden hytter Hustotoft hytteutleie Backyard camps – uteleie av hytter ca. 4 km fra Moifjellet Eikeland gard- feriehus/leiligheter

Reiseliv i Time

Reiselivet i Time kommune markedsføres hovedsakelig gjennom Visit Jæren, som profilerer regionens samlede tilbud. I tillegg profileres Bryne gjennom Fjord Norway og Edge of Norway. I Bryne ligger også de fleste kartlagte reiselivsaktørene (se Figur 4-2). Gatekunstneren Pøbel har bidratt til byens kunstprofil med verk som «The Lovers» og et stort veggmaleri av fotballspilleren Erling Braut Haaland. Skulptøren Fritz Røed, kjent for «Sverd i fjell» i Hafrsfjord, har også satt sitt preg på Bryne gjennom Fritz Røed Skulpturpark, som inneholder flere av hans skulpturer. Bryne er kjent som hjemsted for forfatteren Arne Garborg, hvis liv og forfatterskap formidles ved Garborgsenteret. Bryne tilbyr naturopplevelser ved Frøylandsvatnet, med turstier langs vannet. I 2016 ble området utvidet med broen Midgardsormen, som forbinder turstiene på hver side av vannet. Overnattingstilbud omfatter blant annet Bryne kro og hotell og Jæren Hotell. Nedenfor er det sammenfattet en oppsummering av deler av reiselivstilbudet i Time kommune, henter fra kildene i Tabell 4-5.

Tabell 4-5 Oversikt over aktører og attraksjoner i Time

Aktør/Attraksjon	Beskrivelse
Friluftsaktiviteter	Time har mange lett tilgjengelige nærturer og turmål: Sandtangen bypark med lysløype, trimpark og rikt fugleliv; kobler direkte mot stier langs Frøylandsvatnet. Midgardsormen gang- og sykkelbru over Frøylandsvatnet mellom Sandtangen og Njåskogen. Melsvatnet med ca. 4 km universell turvei og flere badeplasser. Utvalgte topper/områder (også beskrevet innledningsvis): Lyefjellet, Karten og Brusaknuden , Sælandsfjellet, samt kommunens program «Ti turar i Time».
Fotlandsfossen	Fotlandsfossen, Jærens største foss med historiske anlegg: Fotland mølle (1845) som museum/utstillingslokale, og Fotland kraftstasjon (1915) teknisk/vasskraftmuseum
Garborg- kulturarv	Garborgsenteret, nasjonalt formidlingssenter i Bryne. Garborgheimen, barndomshjemmet på Garborgvegen. Knudaheio, Arne Garborgs sommarstove ved Undheim. Alle driftet gjennom Jærmuseet.
Restauranter og gårdsutsalg	- Heldigvis restaurant og bar - Matbaren Hotell Jæren - Line gard - Jerseymeieriet
Fritz Røed skulpturpark	Skulpturpark med ti verk av Fritz Røed langs Bryneåna midt i Bryne sentrum
Overnatting	Hotell Jæren og Bryne Kro & Hotell

Fritidsboliger

I 2024 var det registrert 860 fritidsboliger i Bjerkreim kommune. Dette omfatter hytter, sommerhus og andre fritidsbygg[64]. Antall fritidsboliger har økt fra 749 i 2014, noe som indikerer en økende popularitet som hyttekommune, med kort avstand til Stavanger, Sandnes og Egersund. Bjerkreim tilbyr hytteeiendommer fra lavland til fjellhytter, med større hytteområder lokalisert rundt Stavtjørn (rundt 25 km fra tiltaket) og Hytland-Lauperak[65]., Stavtjørn er i stadig utvikling og kommunen har fokus på å tilrettelegge og ivareta å bevare de mest verdifulle turområdene i kommunen. Tiltaket vil være synlig fra hyttefeltet i Hytland, og omtales videre i fagrapporten for landskap[66].

Ifølge kommunens planstrategi er fritidsbebyggelse en viktig del av næringslivet i kommunen, og det er avsatt flere områder til dette formålet i kommuneplanen, med formål om å fortette eksisterende hyttefelt[67]. Planstrategien påpeker at det er utfordrende å både tilrettelegge for utbygging av reiselivsanlegg og hyttefelt for å øke den lokale reiselivsnæringen samtidig som natur- og friluftsområder skal ivaretas.

[64] (Statistisk sentralbyrå, 2024)
[65] (Bjerkreim kommune, u.å.)
[66] Rapportnummer: 10265688-01-LARK-RAP
[67] (Bjerkreim kommune, u.å.)

I Time kommune var det i 2024 registrert 53 fritidsboliger, inkludert hytter og sommerhus. Fritidsboligmarkedet i Time er svært begrenset, og antallet har vært gått noe ned fra 61 enheter i 2014. Ingen helårsboliger eller våningshus blir benyttet som fritidsboliger i kommunen.

Generelt sett vil bruken av fritidsboliger også bringe indirekte inntekter for den lokale handelsnæringen, kulturarrangører, serveringssteder, tilbydere av håndverker- og vedlikeholdstjenester m.fl. Disse ringvirkningen av hytteturismen er ikke forsøkt tallfestet. Det er også viktig å presisere at tiltakenes eventuelle påvirkning på eiendomsverdien i influensområdet ikke utredes av Multiconsult og er dermed ikke en del av denne rapporten

4.5.2 Reiselivets økonomiske betydning

I det følgende presenteres en del statistikk for å vise betydningen av reiselivet for verdiskaping og kommuneøkonomi. Det norske reiselivets totale verdiskaping i 2024 er beregnet til 121 milliarder kroner, som er høyere enn nivået før COVID-19 pandemien[68]. Det er grunn til å anta at statistikken ikke fanger opp den fulle verdien av reiselivet på lokalt nivå, spesielt som en tilleggsnæring for lokale aktører. Reiselivsnæringen kan som tidligere nevnt deles inn i fem delnæringer: Overnattingsvirksomhet, serveringsvirksomhet, transport, formidling, og kultur og underholdning.

Tabell 4-6 Verdiskapning (i 1000 NOK, faste 2024-kroner) innenfor reiselivet i Norge i 2024[69]

Bransje	**Verdiskapning i 2024 (i 1000 NOK)**
Transport	48 523 482
Serveringsvirksomhet	32 258 998
Overnattingsvirksomhet	19 242 256
Kultur og underholdning	15 666 265
Formidling	4 958 196
Sum	**120 649 197**

Regionalt

Den samlede verdiskapingen fra reiselivsnæringen i Rogaland var nær 9,3 milliarder kroner i 2024[70]. Dette tilsvarer rundt 6,5 prosent av verdiskapingen i reiselivsnæringen på landsbasis, og innebærer at Rogaland er det fjerde største fylket målt i verdiskaping, se Tabell 4-7.

Tabell 4-7 Oversikt over verdiskapning (i 1000 NOK, faste 2024-kroner) per fylke i 2024[71]

Fylke	**Verdiskapning i 2024 (i 1000 NOK)**
Oslo	31 497 855
Vestland	16 203 732
Akershus	12 961 790

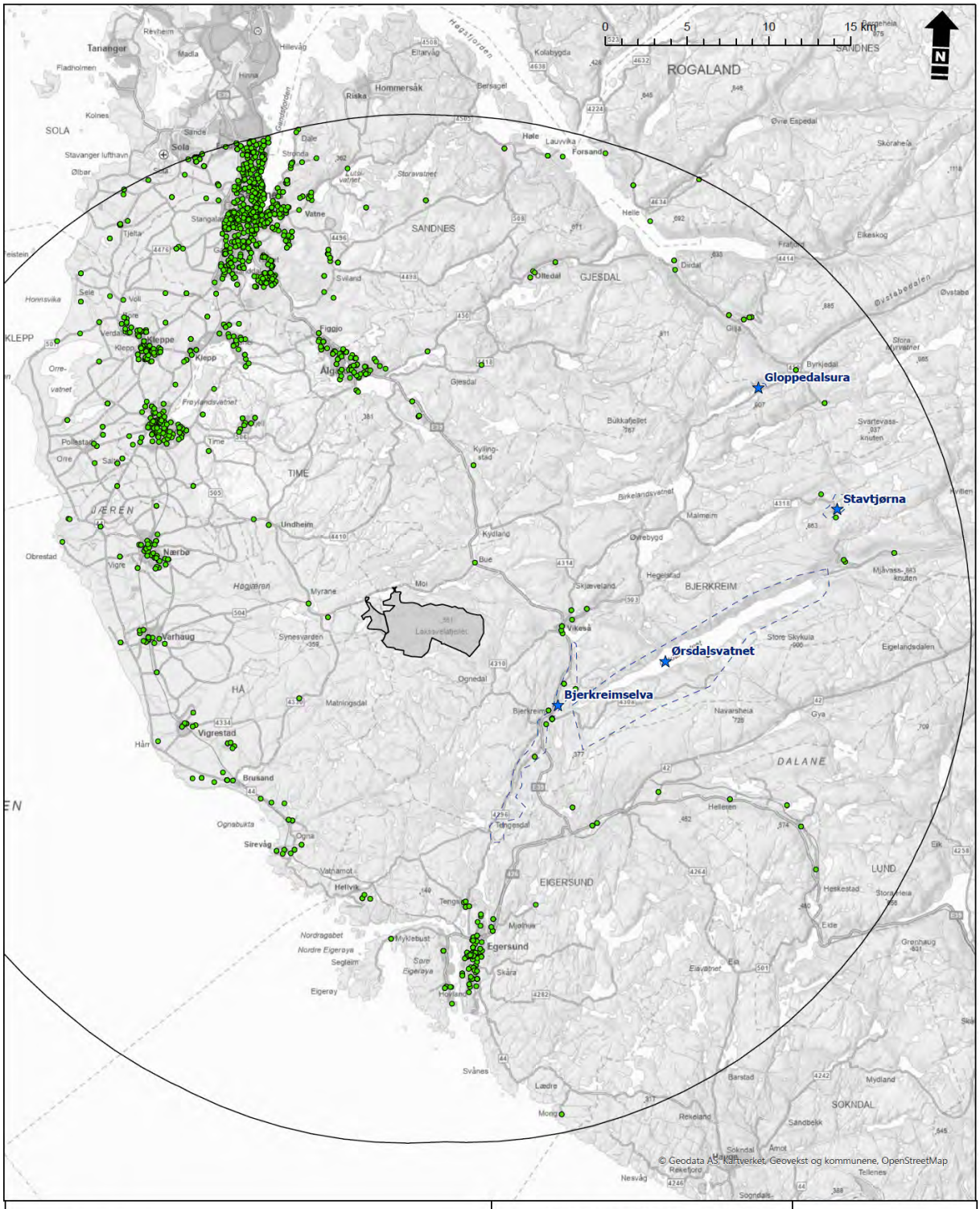
[68] (Innovasjon Norge, 2025)
[69] (Innovasjon Norge, 2025)
[70] (Innovasjon Norge, 2025)
[71] (Innovasjon Norge, 2025)

Rogaland	**9 293 827**
Trøndelag	7 839 945
Nordland	7 588 597
Agder	5 837 966
Innlandet	5 262 520
Troms	4 456 501
Møre og Romsdal	4 252 810
Buskerud	4 155 244
Vestfold	3 208 414
Østfold	3 087 466
Finnmark	2 313 561
Telemark	2 049 743
Svalbard	626 439
Sum	**120 649 198**

Multiconsult har kartlagt reiselivsaktører innenfor et radius på 30 kilometer fra planområdet, se Figur 4-2. Reiselivsaktørene har blitt kartlagt ved hjelp av næringskoder innen de overnevnte fem delnæringene: Transport, overnattingsvirksomhet, serveringsvirksomhet, formidling og kultur og underholdning. Denne kategoriseringen av delnæringer i reiselivssektoren er også i tråd med NVE sin definisjon presentert innledningsvis. Enkelte aktører som kan ha blitt utelatt av kartleggingen dersom de bedriver reiselivsvirksomhet som en tilleggsnæring. Bedriften kan da være registrert under en annen næringskode.

Som det fremgår av kartet i Figur 4-2 er flere aktører sentrert rundt Sandnes, Egersund, Bryne, Klepp og Nærbø. Det er svært få reiselivsaktører lokalisert i umiddelbar nærhet til planområdene. Blant de nærmeste er en nyetablerte Backyard Camp som tilbyr naturbasert overnatting og har planer om å utvide kapasiteten. Backyard Camps har mottatt støtte både fra Innovasjon Norge og Bjerkreim kommune. I dagens situasjon oppleves eksisterende vindkraftverk som lite synlige fra overnattingsenhetene i campen, og støy forekommer kun under bestemte vindforhold.

Figur 4-2 presenterer også fire sentrale reiselivslokaliteter; Gloppedalsura, Stavtjørn, Bjerkreimselva og Ørsdalsvatnet.



Tegnforklaring

- Reiselivsbedrift
- Hovedattraksjon
- Hovedattraksjon ca. flate
- Influensområde 30 km
- Planområdet

MELLOMSTRAND OG MOIFJELLET VINDKRAFTVERK

Oversiktskart Reiseliv

Reiselivsbedrifter og hovedattraksjoner

Oppdrag:	10265688-01	Målestokk A3:	1:205 000
Tegnet:	ØWJ	Dato:	8.10.2025
Kartgrunnlag:	Geocache gråtone, Geodata		

Statkraft

Utarbeidet av:
Multiconsult
Multiconsult AS
Postboks 2070
7708 Steinkjer

Figur 4-2 Kart over kartfestede reiselivsaktører og viktige lokale attraksjoner innen deler av det regionale influensområde.

Lokalt

Tabell 4-8 viser verdiskaping i reiselivsnæringen for kommunene i Rogland fylke. Time kommune er rangert som nummer 8 (av totalt 23 kommuner), med en verdiskaping på over 145,9 millioner kroner i 2024, opp fra 138,8 millioner i 2023. Bjerkreim kommune hadde i 2024 en verdiskaping på 15,2 millioner kroner, etter en betydelig vekst på 69 prosent fra året før. Dette er den høyeste vekstratene blant kommunene presentert i tabell *Tabell 4-8*. Likevel har Bjerkreim noe av den laveste verdiskapingen fra reiselivet i fylket i absolutte tall.

Tabell 4-8 Oversikt over reiselivsrelatert verdiskapning (i 1000 NOK, faste 2024-kroner) for de kommunene i Rogaland fylke i 2024[72]

Kommune	2023	2024	Endring %
Stavanger	4 319 868	4 182 207	-3 %
Sola	2 094 609	1 799 703	-14 %
Sandnes	1 217 896	1 239 289	2 %
Haugesund	544 804	582 423	7 %
Karmøy	300 183	328 115	9 %
Eigersund	265 121	177 027	-33 %
Gjesdal	170 748	160 923	-6 %
Time	**138 836**	**145 902**	**5 %**
Strand	129 035	133 434	3 %
Hå	112 761	141 447	25 %
Klepp	86 854	90 671	4 %
Suldal	77 191	75 311	-2 %
Randaberg	58 125	61 720	6 %
Hjelmeland	39 675	58 047	46 %
Kvitsøy	31 869	29 883	-6 %
Sauda	31 823	28 484	-10 %
Tysvær	30 753	32 798	7 %
Utsira	23 066	18 714	-19 %
Sokndal	20 828	22 299	7 %

[72] (EY for Innovasjon Norge, 2025)

Kommune	2023	2024	Endring %
Vindafjord	17 885	19 214	7 %
Bjerkreim	**8 997**	**15 176**	**69 %**
Lund	4 855	2 794	-42 %
Bokn	4 066	6 520	60 %
Totalt Rogaland	**9 729 849**	**9 352 101**	**-3,9 %**

Time kommune

I 2024 var det anslått 352 lønnstakere i reiselivsnæringen i Time kommune, som utgjør 4,4 prosent av alle lønnstakere i kommunen[73]. Nedenfor følger en oversikt over hvordan reiselivets verdiskapning fordeler seg på de forskjellige bransjene i Time kommune. Her er serveringsvirksomhet, etterfulgt av overnattingsvirksomhet, de største bransjene.



Figur 4-3 Oversikt over verdiskapning per bransje i Time og Bjerkreim kommune[74].

Bjerkreim kommune

Figur 4-3 viser at verdiskaping fra reiselivsbransjene i Bjerkreim kommune er betraktelig lavere enn Time kommune og at det er ingen verdiskaping som er knyttet direkte til overnattingsvirksomhet. Samtidig viser

[73] (Innovasjon Norge, 2025)
[74] (Innovasjon Norge, 2025)

kartleggingen i Tabell 4-4 at det finnes overnattingskapasitet, dog begrenset, i kommunen, og det kan ikke utelukkes at enkelte aktører ikke fanges opp i statistikken dersom reiseliv drives som tilleggsnæring.

I 2024 var det anslått 28 lønnstakere i reiselivsnæringen i Bjerkreim. Av disse var flest tilknyttet serveringsvirksomhet, mens det ikke var noen lønnstakere innen overnattingsvirksomhet. Samlet utgjorde reiselivsnæringen 2,7 prosent av alle lønnstakere i kommunen[75]. Det kan være flere som jobbet med reiseliv, ettersom enkelte aktører driver reiselivsvirksomhet som en tilleggsaktivitet. Dette gir likevel en indikasjon på reiselivet økonomiske betydning lokalt og regionalt. Utover dette foreligger det på nærværende tidspunkt ingen inngående oversikt over antall turister og omsetning hos de lokale reiselivsaktørene i Bjerkreim kommune.

4.5.3 Verdivurdering

Lokalt reiseliv

Time sin reiselivsnæring er sterkt sentralisert til Bryne, som er kommunens eneste tettsted med et reelt reiselivstilbud og aktiv markedsføring gjennom Fjord Norway og Edge of Norway. Reiselivstilbudet i Bryne er konsentrert rundt kulturarv knyttet til Garborg, Pøbels veggmalerier og skulpturparken.

Næringen har en større sysselsetting og verdiskaping enn i Bjerkreim, men utgjør likevel en beskjeden del av kommunens totale næringsstruktur. Bryne er samtidig den eneste delen av kommunen som blir løftet fram i regionale og nasjonale markedsføringskanaler, mens øvrige deler av kommunen ikke profileres som reisemål. Utover Bryne finnes det svært få attraksjoner eller kommersielle aktører som retter seg mot turister. Time kommune har tidligere vært blant et av landets minst besøkte kommuner målt i andel av kortbruk fra norske sommerturister[76]. Reiselivet i Time kommune vurderes på bakgrunn av dette å ha *liten verdi* med referanse til Tabell 4-2.

Bjerkreim tiltrekker seg primært lokale og/eller regionale besøkende og hytteturisme. Turismen er stort sett begrenset til friluftsaktivitet og reiselivsnæringen bidrar i liten grad til verdiskapning og skatteinngang lokalt sammenlignet med andre lokale næringer og større reiselivsdestinasjoner. Flere lokaliteter i kommunen inngår i Magma Geopark Unesco verdensarv. Opprettelsen av Destinasjon Bjerkreim for å konsolidere markedsføringen reiselivsaktørene vitner om en satsing på reiselivet fra kommunen sin side. Selv om næringen har hatt en betydelig prosentvis vekst perioden 2023-2024, er den fortsatt liten i absolutte tall på grunn av et lavt utgangspunkt. Samlet sett vurderes Bjerkreim å ha svært begrenset kommersiell turisme, og reiselivets bidrag til den lokale økonomien og sysselsettingen er beskjedent. Reiselivet i Bjerkreim kommune vurderes likevel å ha *liten verdi* med referanse til Tabell 4-2.

Regionalt reiseliv

Rogaland fylke har stor verdi som reiselivsdestinasjon med betydelige natur- og kulturbaserte attraksjoner, inkludert nasjonalt anerkjente reisemål som Preikestolen og Lysefjorden. Fylket tiltrekker både nasjonale og internasjonale besøkende og har et bredt spekter av næringsaktører, som bidrar til lokal sysselsetting og økonomisk vekst. Rogalands natur- og kulturlandskap er vesentlige for å ivareta Norges reiselivsprofil og tiltrekker seg et bredt spekter av turister, noe som forsterker regionens betydning i norsk reiseliv. Rogaland har høy verdiskapning og mange sysselsatte innen reiselivsnæringen. Reiselivet i Rogaland vurderes dermed å ha *stor verdi* jamført Tabell 4-2.

[75] (Innovasjon Norge, 2025)
[76] (Hagesæther & Amundsen, 2024)

4.6 Påvirkning og konsekvens

4.6.1 0-altenativet

0-alternativet utgjør referansealternativet og representerer forventet utvikling av reiselivet dersom tiltaket ikke gjennomføres. Dette forstås i praksis som at Mellomstrand og Moifjellet vindkraftverk i Bjerkreim og Time kommune ikke bygges.

Utviklingen av det regionale og lokale reiselivet påvirkes i stor grad av svingninger i den nasjonale og globale økonomien, som har direkte innvirkning på folks privatøkonomi og dermed deres reisevaner, både i forbindelse med fritids- og forretningsreiser. Økonomiske svingninger, som inflasjon, valutakursendringer og generell økonomisk usikkerhet kan dempe etterspørselen etter reiser, mens perioder med økonomisk vekst kan føre til økt aktivitet i sektoren. Uforutsette hendelser, som koronapandemien, har også vist hvor sårbar reiselivssektoren er for slike etterspørselssjokk.

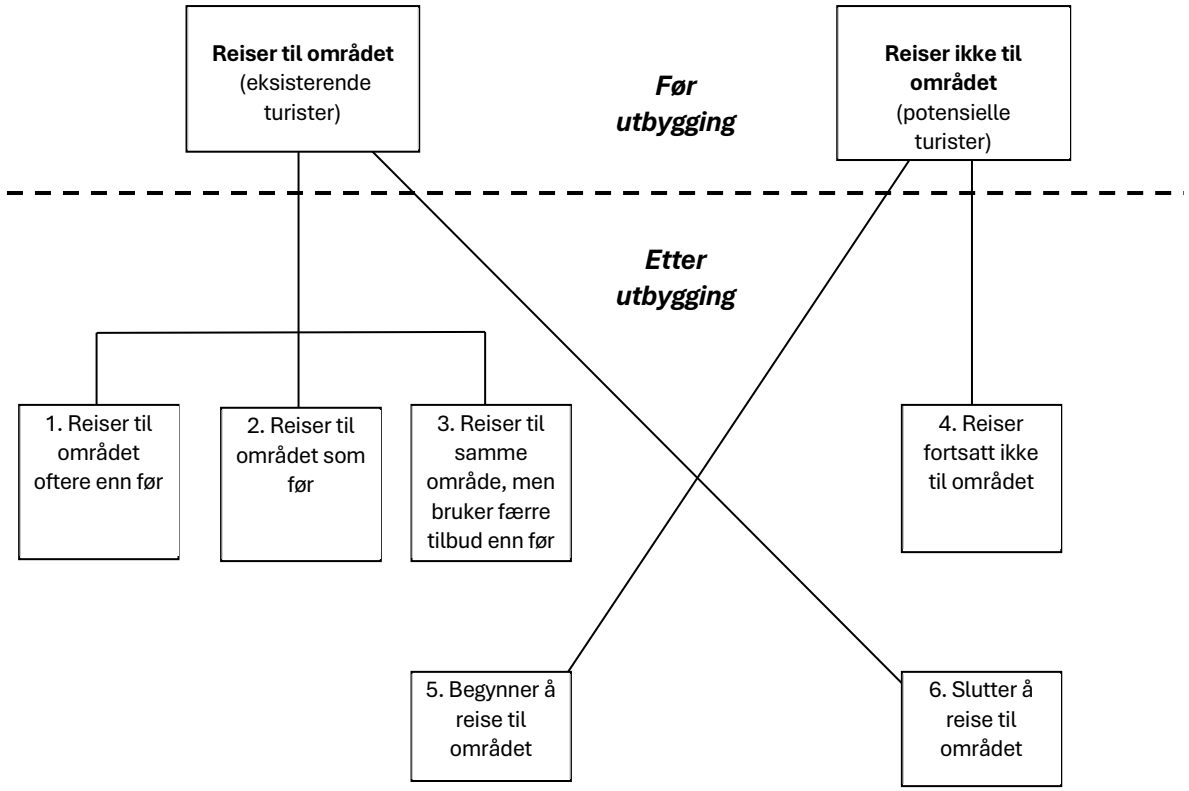
Før pandemien opplevde norsk reiseliv en periode med sterk vekst, spesielt i utenlandsmarkedet, der interessen for naturbaserte opplevelser og lokalprodusert mat og drikke i Norge var stigende[77]. Under pandemien falt utenlandsmarkedet bort, men reiselivsbedrifter klarte å kompensere noe for bortfallet av internasjonale besøkende grunnet flere nordmenn ferierte i eget land. Økt betalingsvilje fra norske gjester, tilpasningsevne blant aktørene og nasjonale støttetiltak bidro til en lavere omsetningsnedgang enn først antatt.

Konsekvensen av 0-alternativet er per definisjon ubetydelig (0).

4.6.2 Litteraturgjennomgang

Konsekvensene på reiselivsnæringen, spesielt den naturbaserte delen av næringen, er nært forbundet med sosial aksept for vindkraft, landskapsinntrykk og opplevelsesverdi[78]. Det er en betydelig grad av usikkerhet knyttet til hvordan reiselivet vil reagere på vindkraftutbygging, særlig i områder hvor naturen er en viktig del av reiselivsopplevelsen. Konsekvensene av vindkraft kan være både direkte, som en nedgang i antall besøkende, og indirekte, som et redusert økonomisk potensial for reiselivsaktørene i området. Først når bruksmønstrene har stabilisert seg, vil de virkelige effektene bli tydeligere, inkludert eventuelle økonomiske konsekvens for reiselivsnæringen. En slik tankegang følger samme modell som brukes for å vurdere virkning av inngrep på friluftslivet (se DN-Håndbok 18-2001). Modellen justeres imidlertid ut fra at dette dreier seg om næringsvirksomhet, og negative virkninger derfor først oppstår når næringsaktørene får mindre inntekter fra besøkende.

[77] (Erik Jakobsen et al., 2021)
[78] (Edita Tverijonaite & Anna Dóra Sæþórsdóttir, 2023)



Figur 4-4 Konseptualisering av mulige sammenheng mellom etablering av vindkraft og virkning på reiselivet i området.

En litteraturgjennomgang av studier om reiseliv og vindkraftverk viser at turister generelt har lavere aksept for vindkraftverk sammenlignet med andre typer fornybar energi, noe som hovedsakelig skyldes de visuelle endringene og vindkraftverkets potensielle innvirkning på landskapets karakter[79]. Det er verdt å merke seg at turister og reiselivsaktører ofte viser sterkere motstand mot foreslåtte prosjekter enn mot de som allerede er etablert, noe som kan knyttes til en status quo-bias, der eksisterende tilstander foretrekkes fremfor endringer[80].

NVE sin litteraturgjennomgang viser til at det i enkelte tilfeller er mulig å integrere vindkraftverk i reiselivet uten betydelige negative konsekvenser, spesielt når utbyggingen inngår i en bredere, helhetlig utviklingsstrategi[81] .Etterprøvingsstudie av vindkraftverkene på Smøla, Hitra, Midtfjellet og Ytre Vikna viser at de enkelte lokale overnattingsbedrifter nær tiltaket enten har opplevd ubetydelig virkning, eller i noen tilfeller positiv økonomisk virkning, primært for bedrifter med overnattingskapasitet til å huse anleggsarbeidere under utbygging. Dette divergerer fra de antatt negative konsekvensene for reiselivet i konsekvensutredningene av hvert tiltak, hvor påvirkning på friluftslivet var vektet høyt[82]. Studien viser også at turistenes individuelle oppfatninger av vindkraftverk og fokus på omgivelsene kan ha avgjørende

[79] (Sæþórsdóttir et al., 2018; Frantál & Kunc, 2011)
[80] (Samuelson & Zeckhauser, 1988).
[81] (Norges vassdrags- og energidirektorat, 2022)
[82] (Riise, E. et al., 2016)

betydning for hvordan vindkraft oppleves. Dette kan variere mellom norske og utenlandske turister. Reiselivsaktiviteter som fokuserer på natur- og landskapsopplevelser kan være mer sårbare for slike inngrep [83]. En studie som sammenlignet reiselivsnæringen i Smøla og Frøya viser at vindkraftutbyggingen har hatt en positiv og diversifiserende effekt på reiselivsnæringen på Smøla, særlig gjennom høy aktivitet i anleggsfasen og en generell vekst også etter ferdigstillelse [84]. Studien peker på at denne utviklingen på Smøla henger sammen med at vindkraftutbyggingen, som var det første store vindkraftverket i Norge, og reiselivet inngikk i en samlet, kommunal strategi.

Selv om forskningen i hovedsak indikerer at vindkraftverk har begrenset betydning for turistenes valg av reisemål, viser enkelte studier at selv mindre endringer i besøksnivå kan ha merkbare økonomiske konsekvenser lokalt, særlig i områder med høy avhengighet av naturbasert turisme [85]. NVE understreker behov for mer kunnskap om hvordan vindkraftutbygging påvirker reiselivsnæringen, særlig segmenter som kan være sårbare for slike inngrep [86]. Det understrekes at etterprøving av flere vindkraftutbygginger kan bidra til et mer robust kunnskapsgrunnlag om samlede virkninger under ulike lokale forhold. Videre fremhever NVE at det er begrenset kunnskap om hvordan vindkraftutbygging kan påvirke Norges omdømme som reiselivsdestinasjon.

Gjennom prosjektet «Kraftturisme. Opplevelser i det vestnorske kraftlandskapet» har Rogaland fylkeskommune som mål å videreutvikle reiselivsopplevelser knyttet til kraftproduksjon [87]. Kraftturisme i Norge har hovedsakelig vært forbundet med vannkraft. En studie fra Portugal fant at vindkraftverk hadde en større mulighet for å bli turistattraksjoner i landskap allerede preget av industriell aktivitet, spesielt i områder med lavt eller ingen kulturell eller naturmessig verdi [88]. Selv om Bjerkreim og Time kommune har flere vindkraftverk i drift i dag, har landskapet rundt planområdene høy naturmessig verdi og deler av Moi/-Laksvelsafjellet er et viktig friluftsområdet

Per i dag foreligger det ikke en mer detaljert oversikt over turiststrømmen og omsetningen til de lokale reiselivsaktørene i Time og Bjerkreim kommune enn hva som er presentert under avsnitt 4.5.2. Det er generelt sett svært vanskelig å kvantifisere eventuelle økonomiske virkninger tiltaket måtte ha på reiselivet i både tiltakskommunene og tilgrensende nabokommuner.

I vurderinger av vindkraftutbyggingens påvirkning på reiselivet i Rogaland er det verdt å bemerke at regionen har flere vindkraftverk, inkludert prosjekter i Bjerkreim og omkringliggende kommuner som allerede har bidratt til en kumulativ visuell påvirkning. Dette ble framhevet i forbindelse med nasjonale ramme for vindkraft i 2019, hvor den samlede belastningen på Rogaland fylke ble ansett som høy, særlig på grunn av sårbare natur- og turistområder som Preikestolen og Lysefjorden, som har stor betydning for turismen i regionen [89]

I Rogaland sin fylkesdelplan for vindkraft fra 2007 ble planområdene klassifisert som et "nei-område" på grunn av betydelige konflikter med nasjonale miljømål, basert på vurderinger fra Direktoratet for naturforvaltning og Riksantikvaren. Fylkesdelplanen vurderte likevel reiselivet til å ha liten til ingen konfliktgrad ved Mellomstand/Moifjellet-området [90]. Det er dog viktig å presisere at kunnskapsgrunnlaget har endret seg siden fylkesdelsplanen ble publisert i 2007.

[83] (Riise, E. et al., 2016)
[84] (Bjerkestrand, 2010)
[85] (Broekel & Alfken, 2015; Riddington et al., 2010, Frantál & Kunc, 2011; Warren & McFadyen, 2010).
[86] (Norges vassdrags- og energidirektorat, 2022).
[87] (Jenssen, 2021)
[88] (Silva & Delicado, 2017).
[89] (Preikestol-turisme stopper vindmøller, 2019).
[90] (Rogaland fylkeskommune, 2007)

4.6.3 Vurdering av tiltakets påvirkning på lokalt og regionalt reiseliv

Lokalt

Anleggsfasen

Anleggsarbeidet vil føre til midlertidige forstyrrelser i form av støy, trafikk og landskapsinngrep, som kan ha en negativ effekt på friluftslivet og naturbaserte reiselivsaktiviteter. Konsekvensutredningen for friluftsliv vurderer de to mest direkte berørte friluftslivsområdene, FL1 Moifjellet og Urdalsnipa og FL2 Brusaknuden og Karten, til begge å ha stor verdi som friluftslivslokaliteter lokalt. Konsekvensene er primært knyttet til visuell forstyrrelse, støy, skyggekast som vil prege turen opp til Urdalsnipa. Det henvises videre til tema friluftsliv for en mer detaljer vurdering av tiltakets konsekvens på friluftsliv.

I henhold til NVE sin definisjon av reiseliv ses her på den næringsmessige betydningen av å selge varer og tjenester til folk på reise og turisme. Norconsult og Agenda Kaupangs studie viser at vindkraftutbyggingene som ble analysert i begrenset grad ga økt omsetning til reiselivsnæringen, og at eventuelle positive effekter i hovedsak tilfaller overnattingssteder med tilstrekkelig kapasitet til å ta imot anleggsarbeidere. For de aktuelle tiltakene (alternativ 1 og 2) vurderes de positive effektene som begrensede. Dette skyldes blant annet at det er begrenset overnattingskapasitet i nærheten av tiltaket og det planlegges en midlertidig brakkerigg for anleggspersonell sentralt i Bjerkreim, nær eksisterende servicetilbud i Vikeså-området. Midlertidig brakkerigg for personell vil avklares nærmere som del av anskaffelsesprosessen og i dialog med aktuelle leverandører. Den overnattingskapasiteten som finnes i Bjerkreim og Time kan likevel bli benyttet, avhengig av leverandørenes valg. Uavhengig av innkvarteringsform kan det forventes noe økt omsetning hos lokale service- og handelsbedrifter i anleggsfasen, særlig i Vikeså-området, men omfanget er vanskelig å tallfeste på nåværende tidspunkt.

Samtidig vil anleggsaktivitet i og nær planområdet medføre redusert opplevelseskvalitet for deler av det natur- og friluftsbaserte reiselivet, samt de få reiselivaktørene i nærheten av planområdet. Dette gjelder spesielt i Bjerkreim kommune, der natur og tilgjengelighet til friluftsområder utgjør sentrale attraksjonsverdier for besøkende. Den faktiske innvirkningen på omsetning og turistbesøk kan imidlertid variere avhengig av lokale tilpasninger og turistgruppenes aksept for slike inngrep.

På denne bakgrunn vurderes tiltaket å kunne medføre en *liten negativ konsekvens (–)* for reiselivet i Bjerkreim kommune i anleggsfasen for både alternativ 1 og 2.

Reiselivstilbudet i Time kommune er i hovedsak konsentrert til Bryne-området og ligger i betydelig avstand fra planområdene. Det vurderes derfor som lite sannsynlig at anleggsaktiviteten vil medføre merkbare økonomiske virkninger for reiselivsnæringen i Time kommune, og konsekvensen av alternativ 1 i anleggsfasen vurderes som *ubetydelig (0).*

Driftsfasen

Etter ferdigstillelse vil de visuelle endringene bli en fast del av landskapet, noe som kan påvirke turisters opplevelse av områdets naturverdier. Dette kan redusere tiltrekningskraften for turister som søker uberørte landskap, noe som kan ha langsiktig negativ effekt på reiselivsaktører i området, særlig for virksomheter avhengige av naturopplevelser. Basert på erfaringer fra eksisterende vindkraftverk, dvs. oppfølgende undersøkelser knyttet til vindkraft og reiseliv[91], er det lite som tilsier at utbyggingen vil medføre direkte tap av arbeidsplasser innenfor reiselivsnæringen i verken Bjerkreim eller Time kommune.

[91] (Riise, E. et al., 2016)

Situasjonen i Bjerkreim kommune skiller seg fra dette ved at området allerede er preget av omfattende vindkraftutbygging, noe som innebærer at erfaringene fra studien ikke uten videre kan overføres direkte til lokale forhold.

Bjerkreim kommune har gjennomført en reiselivssatsinger som bidratt til økt verdiskaping i det lokale reiselivet, til tross for eksisterende vindkraftverk, noe som kan indikere en viss grad av robusthet i reiselivsnæringen. Veksten i verdiskaping fra 2023 til 2024 viser at reiselivet fortsatt er i utvikling, og at dagens vindkraft ikke har stoppet denne. Et eksempel er satsingen på Backyard Camps, som ligger i nærheten av planområdet og som har utviklet sitt overnattingstilbud og planlegger videre ekspansjon, til tross for nærhet til eksisterende vindkraft. Vindkraftverkene har vært en del av landskapet i flere år, og turister som besøker området er allerede vant til at slike inngrep finnes i landskapet.

Det er dog viktig å presisere at de planlagte vindkraftverkene vil berøre naturområder som i dag er viktig friluftsområder og som blant annet markedsføres gjennom Destinasjon Bjerkreim. Tiltaket innebærer en betydelig utvidelse av det samlede vindkraftarealet i kommunen og vil bidra til ytterligere og forsterket visuell påvirkning i områdene som allerede er høyest visuelt påvirket i dag. Dette gjør det usikkert om den robustheten reiselivet hittil har vist vil opprettholdes over tid. Særlig kan visuelle og lydmessige endringer påvirke landskapsopplevelsen ved turmål som Urdalsnipa, Brusaknuden og Karten og nærliggende områder. Selv om planområdene ikke har mange kommersielle reiselivsaktører i umiddelbar nærhet i dag, er friluftslivet en forutsetning for den naturbaserte reiselivsprofilen og videreutvikling av denne, for kommunen og de få reiselivaktørene (som Backyard Camps) i nærheten av tiltaket.

Samlet sett vurderes tiltakets å ha en *noe forringet (-)* konsekvens for reiselivet i Bjerkreim for begge alternativene, der størst risiko ligger i redusert opplevelsesverdi for turister og derav mulig inntektssvikt for aktører som baserer seg på naturbaserte opplevelser.

Reiselivstilbudet i Time kommune er i hovedsak konsentrert til Bryne, og ligger i betydelig avstand fra planområdene. På bakgrunn av dette vurderes det som lite sannsynlig at tiltaket vil medføre merkbare økonomiske effekter for reiselivet i driftsfasen. Samlet sett vurderes konsekvensen for reiseliv i Time som *ubetydelig (0)* for alternativ 1. Det er dog viktig å anerkjenne at landskapsopplevelsen rundt Karten og Brusaknuden vil bli berørt som følge av tiltaket

Regionalt

På regionalt nivå er de sentrale reiselivslokalitetene i Rogaland lokalisert langt unna tiltaksområdet. Disse vil dermed i svært begrenset grad bli berørt av tiltaket. Avstanden bidrar til at regionens samlede reiselivstilbud og attraktivitet forventes å forbli uendret. Tiltaket antas derfor ikke å gi konsekvenser av betydning for det regionale reiselivet i verken anleggs- eller driftsfase, og vurderes som *ubetydelig (0)* for begge alternativene.

De faktiske konsekvensene for reiselivet kan først måles når næringen opplever økonomiske tap, enten gjennom færre turister eller lavere betalingsvilje. Dersom slike tap oppstår, er det imidlertid ikke nødvendigvis tiltaket i seg selv som er årsaken. Tapene kan også skyldes andre faktorer, som for eksempel ettervirkninger av pandemien eller endringer i norsk og global økonomi.

4.7 Avbøtende tiltak

Avbøtende tiltak som omfatter reiseliv er nært knyttet til både natur- og kulturlandskap. Derfor kan foreslåtte avbøtende tiltak for landskap, kulturmiljø, folkehelse, naturmangfold og friluftsliv ha en positiv innvirkning på reiselivet, og det henvises derfor til de respektive fagrapportene. Videre vil tett dialog med berørte reiselivsaktører, for å konkretisere eventuelle avbøtende tiltak være formålstjenlig. Det henvises til kapittel 3.6 for beskrivelse av kompenserende tiltak som er foreslått.

4.8 Oppfølgende undersøkelser

Oppfølgende undersøkelser være relevante for å bedre forstå eventuelle langsiktige virkninger på reiselivsnæringen, særlig knyttet til hvordan samlokalisering av flere vindkraftprosjekter kan påvirke reiselivet lokalt og regionalt. På denne bakgrunn kan det være hensiktsmessig å legge til rette for dialog med reiselivsaktører i regionen for å følge utviklingen over tid. Utover dette er det ikke foreslått videre oppfølgende undersøkelser innenfor temaet reiseliv.

4.9 Usikkerhet

Reiselivets verdi og sensitivitet anses å være tilstrekkelig vurdert, selv om ikke alle reiselivsaktører nødvendigvis er fanget opp i tilgjengelig statistikk eller kartlagt under kapittel 4.5 og grunnlaget for verdisetting er dermed vurdert å være godt. Det er samtidig knyttet usikkerhet til vurderingen av tiltakets faktiske virkninger på reiselivsnæringen. Dette skyldes blant annet at det er metodisk krevende å isolere og kvantifisere virkninger av vindkraftutbygging på reiseliv, særlig der effektene er indirekte, langsiktige og samvirker med andre påvirkningsfaktorer. Konsekvensene for reiselivet kan først måles når næringen opplever økonomiske tap, enten gjennom færre turister eller lavere betalingsvilje. Dersom slike tap oppstår, er det imidlertid ikke nødvendigvis tiltaket i seg selv som er årsaken. Tapene kan også skyldes andre faktorer, som for eksempel endringer i norsk og global økonomi. Videre finnes det allerede flere etablerte vindkraftverk i området, noe som gjør det utfordrende å skille virkninger av det nye tiltaket fra den samlede påvirkningen av eksisterende inngrep i landskapet.

5 Samlet vurdering

Tabellen nedenfor sammenfatter konsekvensene for lokal og regionalt næringsliv og sysselsetting, kommuneøkonomi og reiseliv i anleggsfasen og driftsfasen., iht. *Tabell 3-1*.

Tabell 5-1 Oppsummering av konsekvenser for lokal og regional sysselsetting, kommuneøkonomi og reiseliv

			Alt. 1	
Næringsliv og sysselsetting	**Anleggsfasen**	**Driftsfasen**	**Anleggsfasen**	**Driftsfasen**
Bjerkreim kommune	Middels positiv (++)	Liten positiv (+)	Middels positiv (++)	Liten positiv (+)
Time kommune	Middels positiv (++)	Ubetydelig (0)	Middels positiv (++)	Ubetydelig (0)
Rogaland fylke	Liten positiv (+)	Ubetydelig (0)	Liten positiv (+)	Ubetydelig (0)
Kommuneøkonomi				
Bjerkreim kommune	Ikke vurdert	Svært stor positiv (++++)	Ikke vurdert	Svært stor positiv (++++)

Time kommune	Ikke vurdert	Liten positiv (+)	Ikke gjeldende	Ikke gjeldende
Reiseliv				
Bjerkreim kommune	Noe negativ (-)	Noe negativ (-)	Noe negativ (-)	Noe negativ (-)
Time kommune	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)
Rogaland fylke	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)	Ubetydelig (0)

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Fagrapport:

Landbruk

RAPPORT

Moifjellet & Mellomstrand vindkraftverk – fagutredning landbruk

OPPDRAGSGIVER
Statkraft AS

EMNE
Landbruk

DATO / REVISJON: 26. februar 2026

DOKUMENTKODE: 10265688-01-RIM-RAP-001



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RAPPORT

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0 Sammendrag

0.0 Utredningskrav

Utredningen for tema landbruk er utført etter metodikk beskrevet i V712[1]. I henhold til håndboka skal jordbruk behandles under ikke-prissatte konsekvenser, mens skogbruk behandles under prissatte konsekvenser.

Utredningen er utført av Multiconsult ved Fredrik D. Vaadal (Master i biovitenskap fra Nord universitet) og kvalitetssikret av Katinka Svatun Eines (Master i biovitenskap fra Nord universitet og agronom fra Sogn Jord – og Hagebruksskule). Rapporten er godkjent av Håvard Finanger (seksjonsleder Vindkraft).

0.1 Kunnskapsgrunnlag

Kunnskapsgrunnlaget som er benyttet kommer fra følgende kilder:

- Norsk institutt for bioøkonomi (NIBIO) sin kartdatabase Kilden (https://kilden.nibio.no/)
- Statsforvalteren i Rogaland sin kartdatabase https://temakart-rogaland.no/rmp
- Kontakt med grunneiere
- Kontakt med Ognedalstølen beitelag
- Kommunens landbruksavdeling
- Skjøtselsplan for del av Lakssvelafjellet (Norsk Landbruksrådgivning v/Birgitt Harstad, 2020)

Det er ikke foretatt egen befaring/kartlegging i forbindelse med utredningen for tema landbruk.

Kunnskapsgrunnlaget vurderes som godt.

0.2 Konsekvensvurdering

0.2.1 Alternativ 1

Planområdet til alternativ 1 dekker et areal på 17,5 km^2, fordelt på 16,0 km^2 i Bjerkreim kommune og 1,4 km^2 i Time kommune, Rogaland fylke.

Verdisatte delområder

Planområdet er delt inn i 26 delområder basert på kunnskapsgrunnlaget. Delområdene er beskrevet og opplistet i kapittel 4.3.

tabell 0-1. I tillegg er området en del av Ognedalstølen beitelag. Det er også noe aktivitet av jakt og fiske i og i tilknytning til planområdet.

Tabell 0-1: Areal i kategoriene fulldyrka jord, overflatedyrka jord, innmarksbeite, dyrkbar jord og produktiv skog innen planområdet og influensområdet for alternativer for nett-tilknytning. Areal er hentet fra Kildens tjeneste Arealrapport som er basert på AR5 og kartlaget dyrkbar jord.

Arealkategori	Fulldyrka jord	Overflatedyrka jord	Innmarksbeite	Dyrkbar jord	Produktiv skog
Areal i dekar	76,1	0	206,9	394,0	19,8

[1] https://www.vegvesen.no/globalassets/fag/handboker/hb-v712-konsekvensanalyser-2021.pdf

Jordbruk, utmark og skogbruk

Kartlagene «Verdiklasser basert på jordsmonnskart» og «Verdiklasser basert på AR5 og DMK» fra NIBIO viser at fulldyrka areal ved atkomstvei i Time kommune, samt delen av planområdet som ligger lengst nord, ned mot Moi er av middels og stor verdi. Ifølge kartlaget «Verdiklasser for dyrkbar jord» fra NIBIO er den dyrkbare jorda innen planområdet av noe verdi.

Beiteverdi og den næringsmessige betydningen for jakt og fiske (utmark) vurderes samlet sett til å ha en viss betydning, og utmarkverdiene vurderes derfor til å ha noe verdi.

Produktivt skogareal i planområdet er relativt lite, 19,8 daa. Skogbruksverdiene for produktiv skog ligger for det meste i Time kommune, og består av tilgrensende bestand av låg og middels bonitet. En liten del er av særs høg bonitet, men er ikke av betydelig størrelse. Produktiv skog vurderes derfor å få ubetydelig konsekvens av tiltaket.

0.2.2 Alternativ 2

Planområdet til alternativ 2 dekker et areal på totalt 16,3 km^2, og befinner seg i Bjerkreim kommune i Rogaland fylke.

Verdisatte delområder

Planområdet er delt inn i 19 delområder basert på kunnskapsgrunnlaget. Delområdene er beskrevet og opplistet i kapittel 5.3.

NIBIOs karttjeneste «Arealrapport» i Kilden er brukt for å fremheve jordbruks- og skogbruksverdier. Totalt areal for kategoriene innen influensområdet er oppsummert i tabell 0-2. I tillegg er området en del av Ognedalstølen beitelag. Det er også noe aktivitet av jakt og fiske i og i tilknytning til planområdet.

Tabell 0-2: Areal i kategoriene fulldyrka jord, overflatedyrka jord, innmarksbeite, dyrkbar jord og produktiv skog innen planområdet og influensområdet for alternativer for nett-tilknytning. Areal er hentet fra Kildens tjeneste Arealrapport som er basert på AR5 og kartlaget dyrkbar jord.

Arealkategori	Fulldyrka jord	Overflatedyrka jord	Innmarksbeite	Dyrkbar jord	Produktiv skog
Areal i dekar	39,2	0	46,2	345,5	0,1

Jordbruk, utmark og skogbruk

Kartlaget «Verdiklasser basert på AR5 og DMK» fra NIBIO viser at fulldyrka areal i planområdet er av middels og stor verdi. Ifølge kartlaget «Verdiklasser for dyrkbar jord» fra NIBIO er den dyrkbare jorda innen planområdet av noe verdi.

Beiteverdi og den næringsmessige betydningen for jakt og fiske (utmark) vurderes samlet sett til å ha en viss betydning, og utmarkverdiene vurderes derfor til å ha noe verdi.

Skogbruksverdiene i planområdet er små, der 0,1 dekar med produktiv skog på låg bonitet vurderes å få ubetydelig konsekvens av tiltaket.

0.2.3 Konsekvenser av alternativer

Nullalternativet er vurdert å ha ubetydelig konsekvens for landbruk. Det er to alternativ som utredes, alternativ 1 og alternativ 2, samt to alternativer for nettilgang (nettanlegg 1 og 2). Alternativ 1 er vurdert å ha noe negativ konsekvens (samme for nettilgang 1 og 2) og alternativ 2 er vurdert å ha noe negativ konsekvens (samme for nettilgang 1 og 2). Dette er oppsummert i tabell 0-3.

Tabell 0-3: Oppsummering og rangering av alternativer – nullalternativet, alternativ 2 og alternativ 1.

Alternativer	Nullalternativet	Alternativ 2 Nettanlegg 1	Alternativ 2 Nettanlegg 2	Alternativ 1 Nettanlegg 1	Alternativ 1 Nettanlegg 2
Oppsummering fra tabell 5-7 og tabell 4-7	-	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (11 av 19 delområder), men et relativt høyt antall delområder med noe miljøskade (8 av 19) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (11 av 19 delområder), men et relativt høyt antall delområder med noe miljøskade (8 av 19) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (14 av 26 delområder), men et relativt høyt antall delområder med noe miljøskade (12 av 26) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (14 av 26 delområder), men et relativt høyt antall delområder med noe miljøskade (12 av 26) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.
Vurdering	Ingen konsekvens	Noe negativ konsekvens	Noe negativ konsekvens	Noe negativ konsekvens	Noe negativ konsekvens
Rangering	1	2	2	3	3
Forklaring til rangering	Det er lite som skiller alternativene for nettilkobling, og de rangeres derfor likt for alle alternativer. Nullalternativet rangeres som nummer 1 da det ikke er knyttet noen konsekvens til dette. Alternativ 2 (Moifjellet) rangeres som nummer 2 da dette omfatter mindre berørt areal og medfører at mindre antall delområder får noe miljøskade (8 av 19 mot 11 av 26). Alternativ 1 (Moifjellet og Mellomstrand) rangeres som nummer 3 da dette omfatter større berørt areal og medfører at høyere antall delområder får noe miljøskade (11 av 26 mot 8 av 19).				

0.3 Midlertidige virkninger

I anleggsfasen forventes tiltaket å medføre midlertidig arealbeslag, anleggstrafikk og støy. Deler av planområdet vil antagelig være utilgjengelig pga. økt trafikk og støy vil kunne medføre forstyrrelser og økt stressnivå for beitedyr, samt øke faren for påkjørsel og skader fra maskiner og utsyr. Midlertidige arealbeslag og for eksempel kjøreskader kan ha langtidsvirkninger.

0.4 Usikkerhet

Det per i dag liten kunnskap om hvordan vindkraft påvirker dyrs helse, blant annet som følge av støy og forurensing[2]. Dette er faktorer som negativt kan påvirke kjøtt – og melkeproduksjon. Det er også kunnskapsmangler når det gjelder vindkraftverks innvirkning på utmarksressurser[3].

Riggområder, midlertidige lagringsplasser er ikke avklart enda. Dette er i utgangspunktet midlertidige virkninger, men noen midlertidige tiltak kan medføre varige konsekvenser, f.eks. ved kjøreskader og pakking av jord som forringer jordkvaliteten.

[2] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/
[3] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/

0.5 Avbøtende tiltak

For å redusere negative virkninger som følge av tiltaket, anbefales avbøtende tiltak listet under. Listen er ikke uttømmende. Disse tiltakene, og eventuelle ytterlige tiltak, vurderes nærmere og fastlegges i forbindelse med utarbeidelse av miljø, -transport-, og anleggsplan.

Hovedpunkter for avbøtende tiltak:

- Så langt som mulig minimere arealbeslag.
- Opprettholde god kommunikasjon og kontakt med berørte eiere og brukere av landbruks- og beiteareal.
- Kompensere for tap eller forringelse av dyrkamark gjennom oppdyrking av nye arealer.
- Skjøtselsplan for kystlynghei som beskriver hvordan forbedre beitet.
- Tilbakeføre midlertidig beslaglagt areal.
- Uforme vindkraftverket på en slik måte at arealbrukskonflikt reduseres.

0.6 Oppfølgende undersøkelser

Det anbefales overvåkning mht. tiltakets påvirkning på beitedyr og jaktbart vilt.

1 Bakgrunn og utredningskrav

1.1 Bakgrunn for prosjektet

NVE forventer i sin langsiktige kraftmarkedsanalyse (LA25) en økning av kraftforbruket i Norge fram mot 2050 på 56 TWh eller ca. 42 %. Dette er noe lavere enn Norges vassdrags- og energidirektorat (NVE) forventet i LA23, som følge av usikkerhet om utviklingen i ny norsk industri. Det økte forbruket forventes dekt hovedsakelig av havvind og vindkraft på land, der sistnevnte forventes å vokse med om lag 17 TWh i Norge fram mot 2050.

Tilbake i juni 2005 ble det meldt oppstart for et «Moi-/Laksesvelafjellet vindkraftverk» med et planområde på 11,9 km2. NVE ga konsesjon i desember 2009, i en felles behandling av sju vindkraftsøknader i samme region. Av de øvrige fikk tre konsesjon og tre fikk avslag. For Moi-/Laksesvelafjellet vindkraftverk reduserte NVE planområdet og maksimal installert effekt ift. konsesjonssøknaden, og ga vilkår om bl.a. for- og etterundersøkelser for hubro og trekkende rovfugl. Det var omsøkt inntil 180 MW for 57 turbiner, NVE reduserte til 150 MW, tilsvarende 47–48 turbiner.

NVEs konsesjonsvedtak i 2009 ble påklaget for alle de sju vindkraftverkene. I juli 2012, etter klagebehandling, valgte Olje- og energidepartementet (OED) å ikke gi konsesjon til Moi-/Laksesvelafjellet vindkraftverk.

Statkraft er Europas største leverandør av fornybar energi gjennom vannkraft, vindkraft og solkraft, og har en ambisjon om å bidra til en mer bærekraftig framtid ved å levere fornybar energi. Statkraft mener at et Moifjellet og Mellomstrand vindkraftverk vil ha store fordeler ut ifra en teknisk-økonomisk vurdering, og kan gi et samfunnsmessig viktig bidrag til å dekke opp noe av behovet for mer fornybar kraft i Norge og Europa. Samtidig vil flere av innvendingene mot prosjektet som førte til avslag i 2012 fortsatt gjelde. Statkraft har på grunnlag av ny kunnskap siden 2012, og en ny konsekvensutredning, forsøkt å finne en oppdatert utbyggingsløsning der fordelene klart overstiger ulempene, slik at planmyndigheten stadfester en områderegulering og konsesjonsmyndigheten innvilger konsesjon.

En positiv holdning fra kommuner og grunneiere står sentralt når Statkraft nå velger å søke på nytt om et vindkraftverk på Moifjellet og Mellomstrand.

1.2 Utredningskrav

Konsekvenser av tiltaket utredes i henhold til utredningsprogrammet fastsatt av Norges vassdrags- og energidirektorat[4]. I utredningsprogrammet er utredningskravet for tema landbruk omtalt slik:

> ***Tiltakshaver skal:***
>
> - *Beskrive landbruksarealer og landbruksaktiviteter i tiltaks– og influensområdet, og vurdere virkninger for jord– og skogbruk og annen landbruksaktivitet, herunder driftsulemper, tap av dyrka jord og dyrkbar jord, beiteareal, type skogsareal som berøres og virkning for produksjon.*
> - *Dersom vindkraftverket berører dyrka eller dyrkbar jord, skal alternativ plassering av komponenter og terrenginngrep vurderes og beskrives.*
>
> *Metode skal følge Statens vegvesens håndbok V712. Lokale og regionale myndigheter og lokalt/regionalt næringsliv skal kontaktes for informasjon om nåværende og planlagt arealbruk til landbruksformål. I tilfeller der beitearealer blir berørt, skal beitebruksplaner benyttes i arbeidet med utredningen dersom slike foreligger.*

2 Metode

Formålet med konsekvensutredninger er å sikre at hensynet til miljø og samfunn blir synliggjort i utarbeidelse av planer og tiltak. Forskrift om konsekvensutredninger (KU-forskriften) fastsetter krav til innhold i en konsekvensutredning.

I henhold til KU-forskriften § 17 skal utredninger følge anerkjent metodikk og utføres av personer med relevant faglig kompetanse. I dette kapitlet beskrives metodikken i fagrapporten og fagkompetansen som ligger til grunn.

Utredningen for tema landbruk er utført etter metodikk beskrevet i Håndbok V712[5]. I henhold til håndboka skal jordbruk behandles under ikke-prissatte konsekvenser, mens skogbruk behandles under prissatte konsekvenser. Da tiltaket berører betydelig små arealer produktiv skog (alternativ 2; 0,1 daa og alternativ 1; 19,8 daa), er prissatte konsekvenser ikke utredet i denne rapporten. Ikke-prissatt metode i V712 skal sikre en faglig, systematisk og enhetlig analyse av de konsekvensene et tiltak vil medføre for de aktuelle fagtemaene. En forkortet versjon av de viktigste trinnene i metoden er gjengitt i dette kapitlet. For en mer utfyllende beskrivelse av metodikken henvises det til Håndbok V712.

2.1 Definisjoner og avgrensning

2.1.1 Definisjon av landbruk

En generell definisjon av landbruk er næringer som har jorden som produksjonsgrunnlag. NVE definerer landbruk som dyrka og dyrkbar jord, produktiv skog og beiteressurser[6]. I vegvesenets håndbok V712 er jord– og skogbruk, samt utmarksressurser registreringskategorier innenfor tema naturressurser. Utmarksressurser omfatter utmarksbeite, jakt og fiske.

[4] Utredningsprogram Moifjellet vindkraftverk. Datert 26.07.24
[5] Statens vegvesen (2018). *Konsekvensanalyser.* Håndbok V712. ISBN: 978-82-7207-718-0
[6] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/

2.1.2 Avgrensning mot andre fagtema

Øvrige naturressurser (reindrift og fiskeri) anses ikke som relevant for prosjektet, og det er ikke framsatt krav om utredning av disse temaene. Annet lokalt og regionalt næringsliv utredes i konsekvensutredning av lokalt og regionalt næringsliv. Den kulturelle verdien av gårdsmiljøer og andre kulturmiljøer knyttet til landbruket utredes i delrapport kulturmiljø (10265688-01-RIM-RAP-005). Den næringsmessige betydningen av jakt og fiske omtales i denne utredningen, mens den rekreasjonelle betydningen omtales under delrapport friluftsliv (10265688-01-RIM-RAP-004). Kystlynghei som beiteressurs omtales i denne rapporten, mens kystlynghei som naturtype omtales i delrapport naturmangfold (10265688-01-RIM-RAP-003).

2.2 Fagkompetanse

Utredningen er utført av Multiconsult ved Fredrik D. Vaadal (Master i biovitenskap fra Nord universitet). Katinka Svatun Eines (Master i biovitenskap fra Nord universitet og agronom fra Sogn Jord – og Hagebruksskule) har kvalitetssikret utredningen. Håvard Finanger (oppdragsleder, seksjonsleder) har godkjent rapporten.

2.3 Avgrensning av plan – og influensområde

Planområdet er det samme for alle fagtema. Området der virkninger forventes å kunne opptre utgjør influensområdet for det aktuelle fagtemaet. Influensområdet består av alle områder som blir direkte påvirket av arealbeslag ved planlagt utbygging, i dette tilfellet areal avsatt til vindturbiner, atkomstveger, transformatorstasjon med mer. For tema landbruk er influensområdet satt til det meldte planområdet og buffer på 30 meter fra senterlinja til alternativer for nett-tilknytning (se figur 5-2 og figur *4-2*).

2.4 Verdisetting av delområder

Verditabellen i V712 er lagt til grunn ved verdisetting av områder knyttet til landbruk. For jordbruksareal og dyrkbar jord er det ved verdisetting tatt utgangspunkt i temakart med verdisetting fra NIBIOs karttjeneste Kilden, iht. metodikk beskrevet i V-712. Verdikriterier er oppsummert i tabell 2-1.

Tabell 2-1: Verdikriterier for tema naturressurser, herunder jordbruk (Kilde: Statens vegvesens håndbok V712).

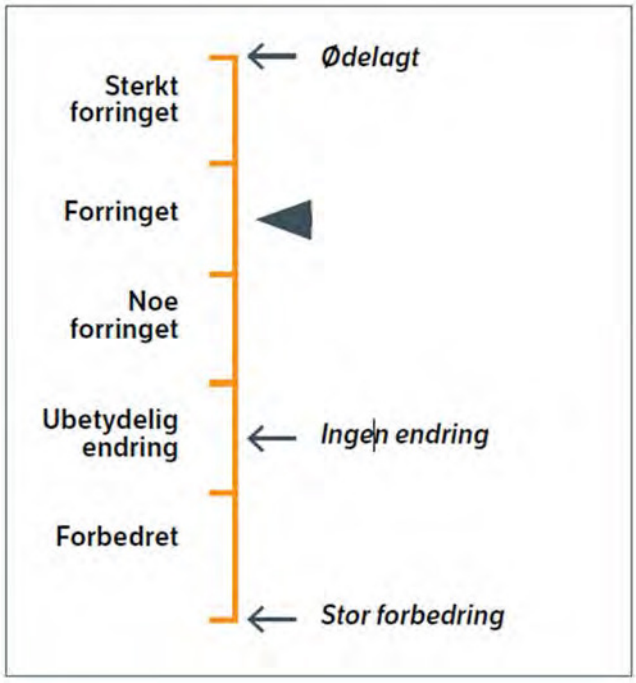
Verdikategori		Ubetydelig verdi	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
Jordbruk	**Jordbruksareal med jordsmonnkart**		Jordressursklasse 3 med store driftstekniske begrensninger Jordressursklasse 4	Jordressursklasse 2 med store driftstekniske begrensninger Jordressursklasse 3 uten store driftstekniske begrensninger	Jordressursklasse 1 med store driftstekniske begrensninger Jordressursklasse 2 uten store driftstekniske begrensninger	Jordressursklasse 1 uten store driftstekniske begrensninger
	Fulldyrka jord uten jordsmonnkart			Organisk jord eller jorddekt, tungbrukt	Jorddekt, lettbrukt og mindre lettbrukt	
	Overflatedyrka jord eller innmarksbeite uten jordsmonnkart		Grunnlendt eller organisk jord	Jorddekt		
	Dyrkbar jord		Organisk jord. Jorddekt, ikke tidligere dyrka, som enten er tørkesvak eller ikke selvdrenert,	Jorddekt, tidligere dyrka. Jorddekt, ikke tidligere dyrka, som er selvdrenert og ikke blokkrik.		

Verdikategori		Ubetydelig verdi	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
			eller er selvdrenert og blokkrik eller svært blokkrik.			
Utmark	**Utmarksbeite**	Mindre godt beite	Godt beite med middels utnyttelsesgrad	Svært godt beite og stor utnyttelsesgrad		
	Jakt og ferskvannsfiske	Uten næringsbetydning	Jakt- og/eller fiskeressurser med en viss næringsmessig betydning	Jakt- og/eller fiskeressurser med stor næringsmessig betydning	Spesielt viktig jakt eller fiskeressurser (eks nasjonalt viktige laksevassdrag)	

2.5 Vurdering av påvirkning på delområder

Påvirkning er et uttrykk for endringer som det foreslåtte tiltaket vil medføre på det berørte delområdet.

Vurdering av påvirkning gjelder for den ferdig etablerte situasjonen (driftsfasen). Potensielle framtidige påvirkninger som følge av andre eller framtidige planer, inngår ikke i vurderingen jf. V712. Kun områder som blir varig påvirket vurderes. Vurdering av påvirkning følger en skala med fem trinn fra forbedret til sterkt forringet (figur 2-1 og tabell 2-2).



Figur 2-1: Skala for vurdering av påvirkning. Hentet fra Håndbok V712.

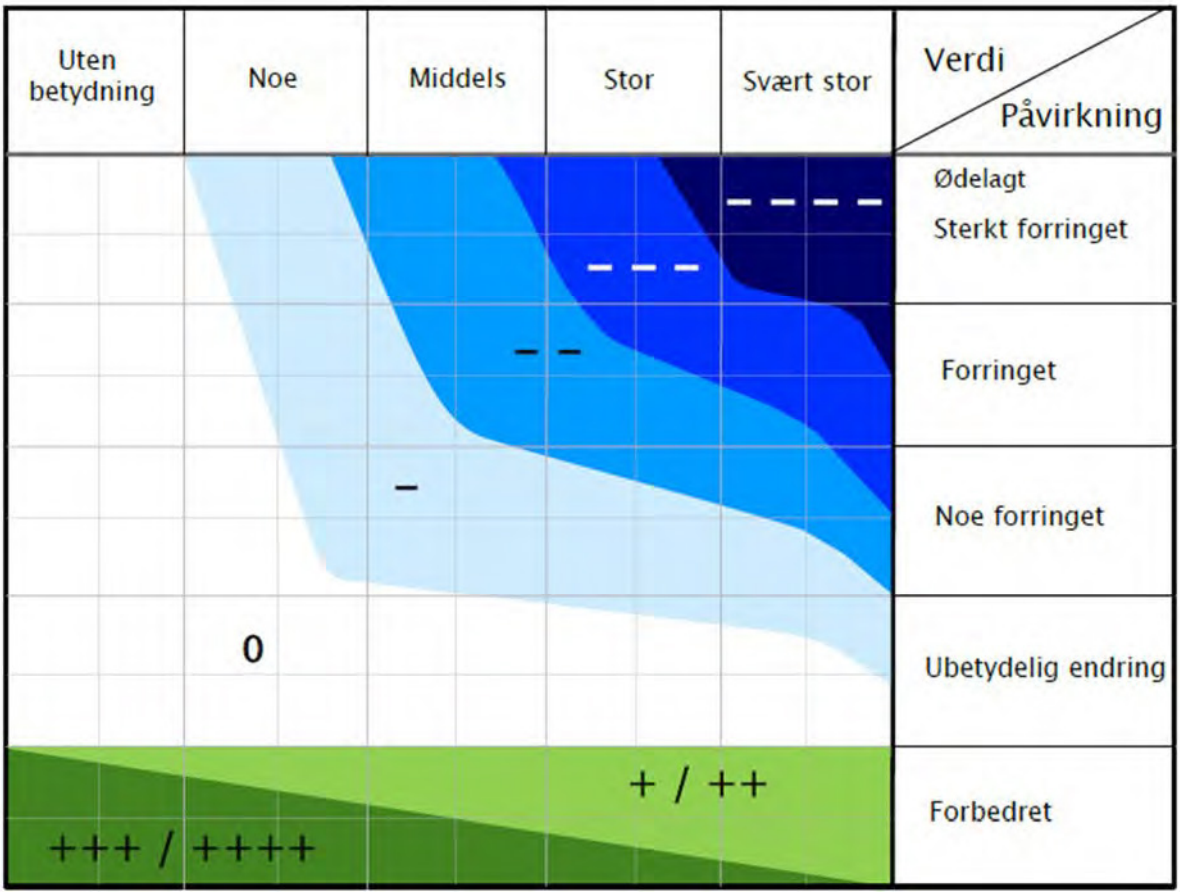
Tabell 2-2: Påvirkningskriterier for tema naturressurser (kilde: Statens vegvesens håndbok V712)

Tiltakets påvirkning	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Jordbruk	Bedret arrondering. Der det ligger til rette for å slå sammen dyrka jord	Jordbruksareal/jordressurser berøres ikke, eventuelt kun noe dyrkbar jord.	Mindre om-disponering foreslås. Berører et mindre og	Større areal foreslås omdisponert. Utbyggingsforslaget berører sammen-	Betydelig areal foreslås omdisponert. Utbyggingsforslaget

Tiltakets påvirkning	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
	til større enheter etter anlegg. Forbedret tilgjengelighet.		isolert jordbruksareal.	hengende jordbruksområde av noe størrelse slik at det reduserer mulig-heten til effektiv utnyttelse av jordbruksareal.	berører kjerneområde for landbruk eller et stort, sammenhengende jordbruksområde slik at det i stor grad reduserer muligheten til effektiv utnyttelse av jordbruksareal.
Utmark	Bedret arrondering av beiteområder. Reduksjon av påkjørselsrisiko for beitedyr. Bedrete forhold for utøvelse av jakt og fiske (fjerning av vandringshindre, tilretteleggingstiltak for fiskeoppgang)		Arealbeslag eller fragmentering av beiteområder som i noen grad reduserer muligheten til effektiv utnyttelse av beiteområder. Fragmentering, vandringshindre og andre effekter som i noen grad reduserer mulighetene for næringsmessig utnyttelse av jakt og fiske.	Arealbeslag eller fragmentering som i betydelig grad reduserer muligheten til effektiv utnyttelse av beiteområder. Fragmentering, vandringshindre eller andre effekter som i betydelig grad reduserer de mulighetene for næringsmessig utnyttelse av jakt og fiske.	Arealbeslag eller fragmentering som fjerner muligheten til effektiv utnyttelse av beiteområder. Fragmentering, vandringshindre eller andre effekter som fjerner mulighetene for næringsmessig utnyttelse av jakt og fiske.
Vann	Utbyggingsalternativ som eliminerer dagens påvirkning og all belastning på eksisterende vannkilde eller større akviferer.		Utbygging innen 200 m til tilsigsområde eller vannkilde som kan gi fare for påvirkning. Utbygging i kanten av en større akvifer som kan gi fare for påvirkning.	Nærføring til tilsigsområde og/ eller vannkilde som gir stor fare for påvirkning av drikkevann. Utbygging over en akvifer som gir stor fare for påvirkning.	Drikkevannskilde må tas ut av bruk. Akvifer forventes varig påvirket av forurensning eller vil få senket grunnvannstand / poretrykk.
Mineralressurser	Gjennomføring av planen sikrer atkomst til forekomst av stor eller svært stor verdi som har forhindret uttak til nå.		Gjennomføring av planen vil redusere uttaket med mellom 25 – 50 % av utnyttbar mengde.	Gjennomføring av planen vil redusere uttaket med mellom 50 – 75 % av utnyttbar mengde.	Gjennomføring av planen vil hindre all utnyttelse eller begrense uttak av forekomsten med minst 75 % av utnyttbar mengde.

2.6 Vurdering av konsekvens for delområder

Konsekvensen for hvert delområde framkommer ved å sammenholde verdivurderingen med vurderingen av tiltakets påvirkning. Dette gjøres ved bruk av en konsekvensvifte, en matrise hvor delområdets verdi utgjør x-aksen og påvirkning på delområdet utgjør y-aksen (se figur 2-2). Skalaen for konsekvens går fra 4 minus til 4 pluss (figur 2-3).



Figur 2-2: Konsekvensvifta iht. V712. Konsekvensen for hvert delområde framkommer ved å sammenholde verdi (x-aksen) med påvirkning (y-aksen).

Skala	Konsekvensgrad	Forklaring
----	4 minus (- - - -)	Den mest alvorlige miljøskaden som kan oppnås for delområdet. Gjelder kun for delområder med stor eller svært stor verdi.
---	3 minus (- - -)	Alvorlig miljøskade for delområdet.
--	2 minus (- -)	Betydelig miljøskade for delområdet.
-	1 minus (-)	Noe miljøskade for delområdet.
0	Ingen/ubetydelig (0)	Ubetydelig miljøskade for delområdet.
+/++	1 pluss (+) 2 pluss (++)	Miljøgevinst for delområdet: Noe forbedring (+), betydelig miljøforbedring (++)
+++/ ++++	3 pluss (+++) 4 pluss (++++)	Benyttes i hovedsak der delområder med ubetydelig eller noe verdi får en svært stor verdiøkning som følge av tiltaket.

Figur 2-3: Skala for konsekvens med forklaring til hvert trinn å skalaen. Hentet fra V712.

2.7 Vurdering av konsekvens for alternativer

Når konsekvensen for hvert delområde er utredet, gjøres det en samlet vurdering av konsekvensen av hvert alternativ. Konsekvens for alternativ er gitt i en seksdels skala fra stor positiv konsekvens til kritisk negativ konsekvens (figur 2-4).

Skala	Trinn 2: Kriterier for fastsettelse av konsekvens for hvert alternativ
Kritisk negativ konsekvens	Svært stor miljøskade for temaet, gjerne i form av store samlede virkninger. Stor andel av strekning har særlig høy konfliktgrad. Vanligvis flere delområder med konsekvensgrad 4 minus (- - - -). Brukes unntaksvis
Svært stor negativ konsekvens	Stor miljøskade for temaet, gjerne i form av store samlede virkninger. Vanligvis har stor andel av strekningen høy konfliktgrad. Det finnes delområder med konsekvensgrad 4 minus (- - - -), og typisk vil det være flere/mange områder med tre minus (- - -).
Stor negativ konsekvens	Flere alvorlige konfliktpunkter for temaet. Typisk vil flere delområder ha konsekvensgrad 3 minus (- - -).
Middels negativ konsekvens	Delområder med konsekvensgrad 2 minus (- -) dominerer. Høyere konsekvensgrader forekommer ikke eller er underordnete.
Noe negativ konsekvens	Liten andel av strekning med konflikter. Delområder har lave konsekvensgrader, typisk vil konsekvensgrad 1 minus (-), dominere. Høyere konsekvensgrader forekommer ikke eller er underordnete.
Ubetydelig konsekvens	Alternativet vil ikke medføre vesentlig endring fra referansesituasjonen (referansealternativet). Det er få konflikter og ingen konflikter med høye konsekvensgrader.
Positiv konsekvens	I sum er alternativet en forbedring for temaet. Delområder med positiv konsekvensgrad finnes. Kun ett eller få delområder med lave negative konsekvensgrader, og disse oppveies klart av delområder med positiv konsekvensgrad.
Stor positiv konsekvens	Stor forbedring for temaet. Mange eller særlig store/viktige delområder med positiv konsekvensgrad. Kun ett eller få delområder med lave negative konsekvensgrader, og disse oppveies klart av delområder med positiv konsekvensgrad.

Figur 2-4: Kriterier for fastsettelse av konsekvens for hvert alternativ. Hentet fra V712.

2.8 Datagrunnlag og kvalitet

Det er ikke foretatt egen kartlegging i forbindelse med utredning for landbruk. Utredningen av tema landbruk er basert på følgende informasjonskilder:

- Norsk institutt for bioøkonomi (NIBIO) sin kartdatabase Kilden (https://kilden.nibio.no/)
- https://temakart-rogaland.no/rmp
- https://www.temakart-rogaland.no/
- Kontakt med grunneiere
- Kontakt med Ognedalstølen beitelag
- Kommunens landbruksavdeling
- Skjøtselsplan for del av Lakssvelafjellet (Norsk Landbruksrådgivning v/Birgitt Harstad, 2020)

Datagrunnlaget vurderes som godt.

3 Nullalternativet

Nullalternativet er sammenligningsgrunnlaget for konsekvensutredningen, og er forventet situasjon i influensområdet i sammenligningsåret dersom tiltaket ikke blir gjennomført. Sammenligningsåret er året tiltaket kan være realisert og er her satt til 2030. Nullalternativet inkluderer nåværende miljøtilstand samt vedtatte planer for området som det er grunn til å tro vil bli gjennomført. Det er såpass kort tid fra nå (2025) til 2030 at det ikke forventes merkbare endringer i området som følge av klimaendringer. Nullalternativet settes på denne bakgrunn til likt med dagens miljøtilstand.

3.1 Miljøtilstand

Moifjellet med Lakssvelafjellet og Brusaknuden ligger inn mot møtepunktet mellom Bjerkreim kommune i øst, Time kommune i nordvest og Hå kommune i sørvest. Området inngår i Høg-Jæren, de høyereliggende (over ca. 120 moh.) heiområdene med mye nakent fjell og sparsomt morenedekke like øst for det flate Låg-Jæren som er Norges største lavslette med mektig morenedekke og intensiv landbruksdrift. Planområdene og landskapet rundt er preget av relativt fattige lyngheier med småskala jordbruksarealer i dalene. Bebyggelsen består av spredte gårder av varierende størrelse og mindre tettsteder. E39 går øst for planområdene, og en 300 kV sentralnettslinje vest for planområdene. I sør ligger Bjerkreim vindpark søndre klynge med 70 vindturbiner, i nord Stigafjellet vindkraftverk med 7 vindturbiner og Måkaknuten vindkraftverk med 22 vindturbiner og i vest, Høg-Jæren vindkraftverk med 32 vindturbiner. Moifjellet er høyere enn det nærmeste omlandet, særlig mot Låg-Jæren i vest og sør, og man må ca. 15 km mot øst og nord før fjellene blir enda høyere. Bjerkreimsenderen på Urdalsnipa, sentralt og høyeste punkt (561 moh.) i planområdene, er synlig fra et stort omland. Fjellet er preget av langsgående, knudrete rygger fra sørøst mot nordvest, mest markert i øst, med et titalls mindre vatn spredd utover. Sørvestre del av planområdet inkluderer et lavereliggende areal omkring 300 moh. mellom Moifjellet og Bjerkreim vindparks søndre klynge. Med unntak av vei og kraftledning til senderen på Urdalsnipa, er det lite inngrep i høyereliggende deler av planområdene. Avstander til vei gjør at det er et gjenværende INON-område sone 2 (1-3 km fra tyngre inngrep) på 3,65 km2 sør for Urdalsnipa, hovedsakelig mot sørvest.

3.2 Andre planer og lovverk

Planområdet og mye av omlandet er i hovedsak utlagt til LNFR i gjeldende planer. Det er reguleringsplan for et steinbrudd i drift («Moi brudd og massetak») nord i planområdene, i Bjerkreim kommune. Atkomstvei alternativ 2, går igjennom dette. I nord i Time kommune, foreligger en reguleringsplan for et avsluttet grustak («Masseuttak ved Oslandsvatnet»). I Time kommune er det i arealdelen satt av et større areal for masseuttak ved Oslandsvatnet enn det som per i dag er regulert. Planområdet alternativ 1 berører også et areal som er regulert gjennom reguleringsplan for Fv504. Det er hensynssoner i plan for drikkevannskilden Hagavatnet med nedbørfelt som berører sørvestre del av planområdene. Det er ikke vedtatte eller andre forslag til planer for nye utbygginger i planområdene. Omkring planområdene er det i Bjerkreim kommune utlagt arealer til framtidig næringsvirksomhet og til nåværende og framtidig, offentlig eller privat tjenesteyting nord for Røyslandsvatnet. I Time kommune er det et par reguleringsplaner for massetak ved Kartavoll. I Hå kommune er det ikke nærliggende reguleringsplaner eller utbyggingsformål i arealdelen (utenom areal for Bjerkreim vindpark). Det er såpass kort tid fra nå (2024) til 2030 at det ikke forventes merkbare endringer i området som følge av klimaendringer. Nullalternativet settes på denne bakgrunn til likt med dagens miljøtilstand.

4 Alternativ 1 – Moifjellet og Mellomstrand vindkraftverk

4.1 Planområdet, arealinngrep og komponenter

4.1.1 Valg av lokalitet

I Sør-Norge er gjennomsnittlig vindstyrke høyest fra sørvestspissen mellom Rogaland og Agder og videre nordover langs Langfjella. De mellomhøye fjellområdene innenfor Jærstrendene peker seg ut nasjonalt ved å ha svært god vindressurs og moderat terrengkompleksitet. Det er også relativt korte avstander til mulige ilandføringssteder, til egnet offentlig veinett og til mulige tilknytningspunkt til

regional-/sentralnettet. Dette har da også medført at det allerede er bygd ut en rekke vindkraftverk i regionen.

Moifjellet ligger noe høyere enn omlandet og har svært gode vindressurser. Tidligere gjennomførte vindmålinger fra 2011/2012 er benyttet for å estimere vindhastighet og produksjon. Vinden varierer over planområdet fra 7-10 m/s. Middelvind i foreløpige produksjonsestimater er i underkant av 9 m/s. Dette anses å være særdeles gode vindressurser. E39 ligger et par km mot øst, og fv. 504 like nedenfor fjellet i nord. Det går ei sentralnettslinje like vest for fjellet, og Bjerkreim sentralnettstasjon ligger 4-5 km mot sør. En vindkraftutbygging her framstår derfor som teknisk og økonomisk svært velegnet.

Mellomstrand ligger i Time kommune, vest for Moifjellet. Delen av planområdet som omfatter Mellomstrand har mye av den samme karakteristikken som Moifjellet som beskrevet over.

4.1.2 Planområdet

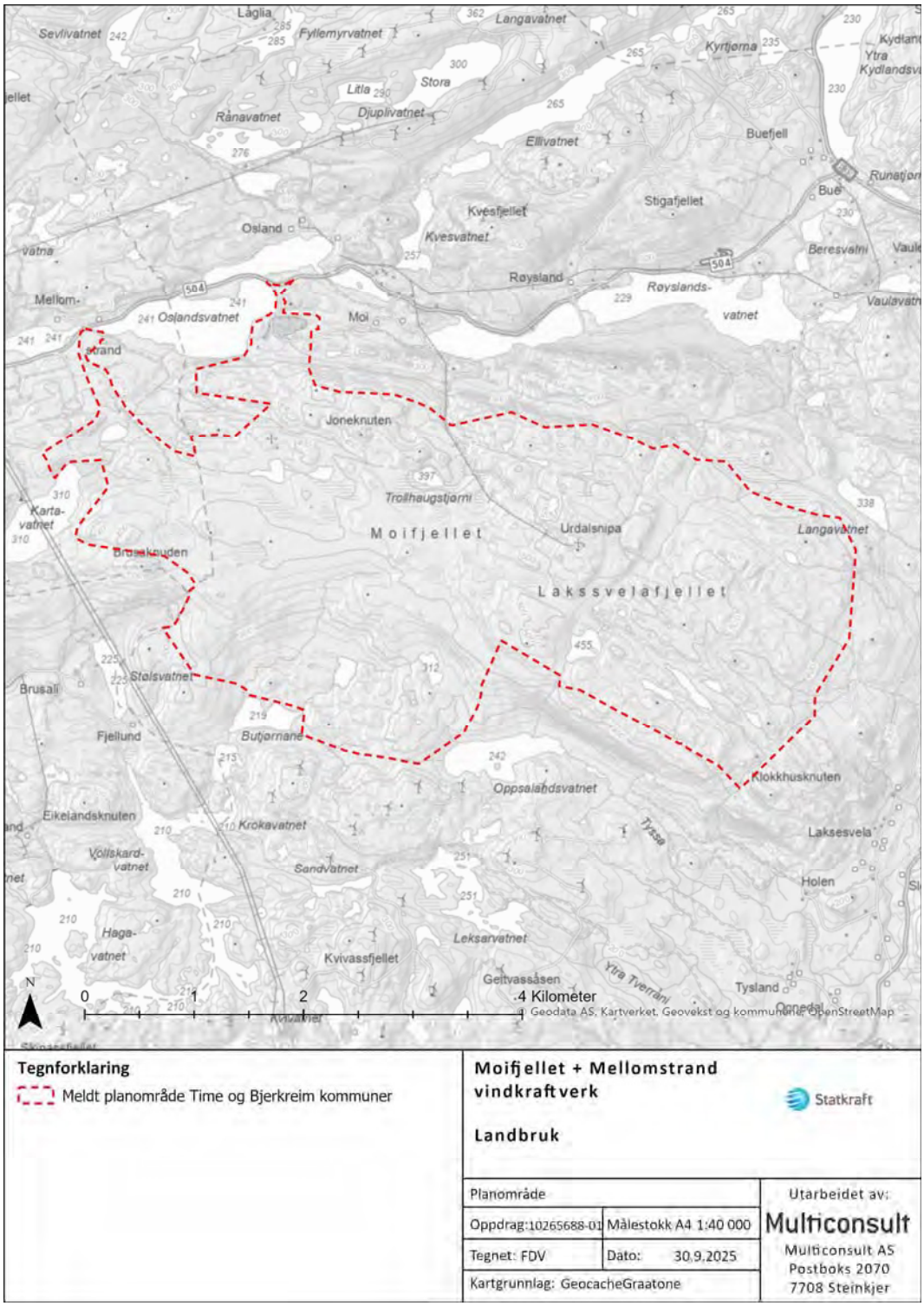
Moifjellet og Mellomstrand vindkraftverk omfatter et todelt planområde på totalt 17,5 km^2, bestående av planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune på 16,0 km^2, og planområdet for områderegulering av Mellomstrand vindkraftverk i Time kommune på 1,4 km^2. Planområdene ligger i Rogaland fylke.

Deler av strekningene for alternativer for nett-tilknytning strekker seg utenfor planområdet. Her er det lagt til grunn et ryddebelte på 30 meter ved avgrensning av influensområde (se figur *4-2* og figur 4-10).

Eksempelutlegget som ligger til grunn for konsekvensutredningen omfatter:

- Atkomstvei i Time kommune, fra fv. 504 øst for Mælandsvatnet og til internveinett vest for Legetjørn, med midlertidig rigg- og lagerområde langs denne. De første ca. 0,8 km vil gå gjennom innmark, mens øvre del vil være en ny vei i utmark. Det vurderes to ulike, alternative traséer for atkomstveien:
    - i: Fortsette rett fram i ny trasé fra sving ved landbruksbygg, for så å dreie tilbake inn på eksisterende vei før plantefelt med sitkagran. Total lengde 2,1 km.
    - ii: Følge eksisterende vei så langt denne går. Total lengde 2,1 km.
- Atkomstvei Time (2,1 km) Internveier med ca. 33 km i Bjerkreim kommune og 3 km i Time kommune (inkl. tilknytning til internvei i Bjerkreim)
- 42 vindturbiner med 200 m totalhøyde, med fundamenter og kranoppstillingsplasser
- Jordkabler i internveier fra vindturbiner til ny Moifjellet transformatorstasjon
- Sentral transformatorstasjon på Moifjellet
- To alternative plasseringer for driftsbygg:
    - Langs atkomstvei i Mellomstrand / Time kommune
    - Sentralt oppe på Moifjellet, øst på Botnabringane
- To alternative ca. 5 km lange traséer for nettilknytning i luftledning fra ny Moifjellet transformatorstasjon til eksisterende Bjerkreim transformatorstasjon, som må utvides med en ny transformator, se figur *4-2*.
- Masseuttak/steinbrudd for veier og plasser
- Midlertidige arealer for rigg og mellomlagring

Totalt berørt areal (inkludert atkomstvei) før istandsetting er 1055–1140 dekar. Etter istandsetting er det anslått til 310–360 dekar permanent areal. Av dette omfatter Mellomstrand vindkraftverk 122–130 dekar før istandsetting og 32–38 dekar etter istandsetting.



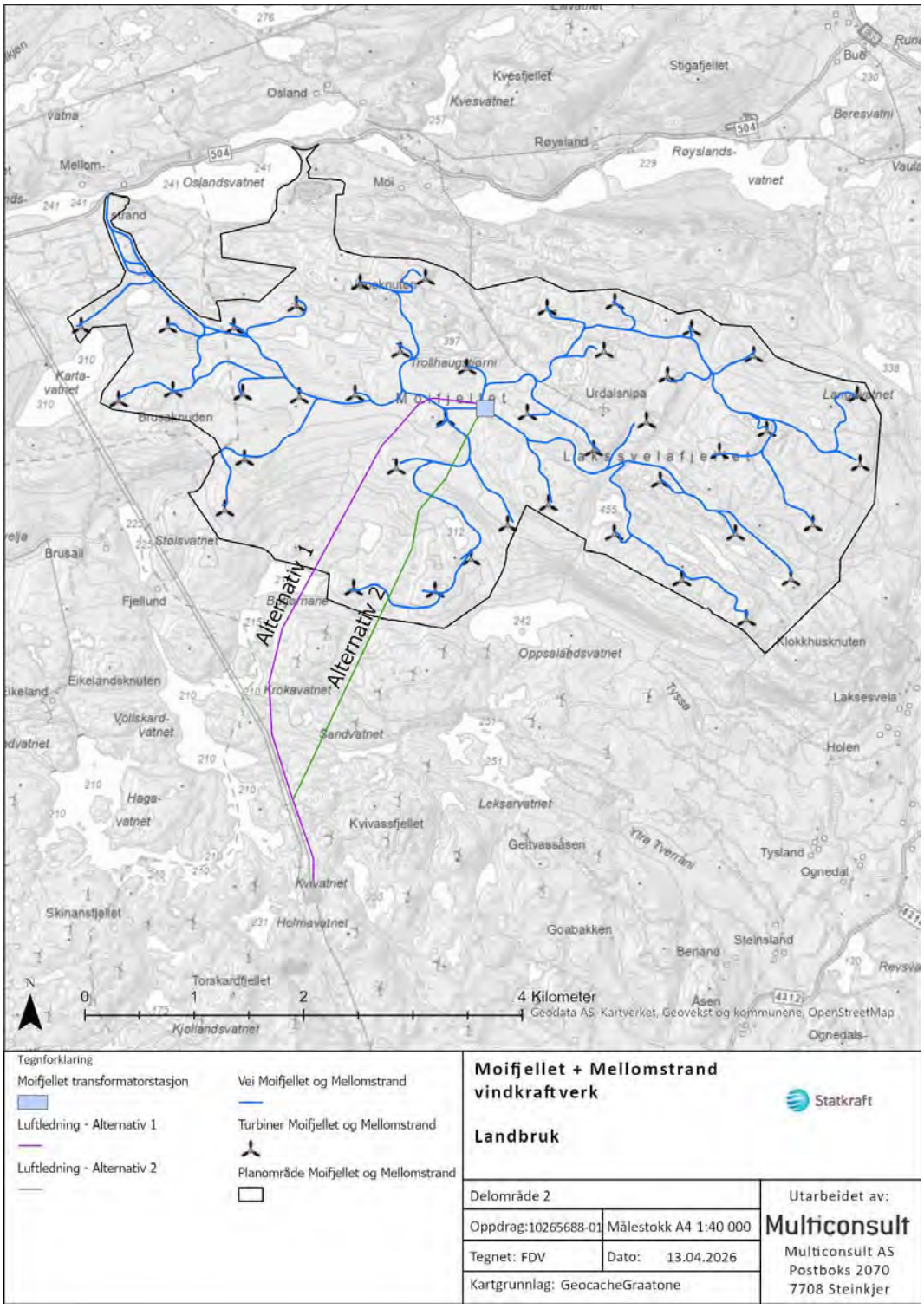
Figur 4-1. Planområde Mellomstrand og Moifjellet vindkraftverk.

4.1.3 Arealinngrep

Mellomstrand og Moifjellet vindkraftverk vil medføre følgende hovedtyper av arealinngrep:

- Atkomstvei og internveier med møte- og snuplasser, med rør/kulverter over vassdrag
- Kranoppstillingsplasser for montering av vindturbiner
- Fundamenter for vindturbiner
- Jordkabler i vei fra vindturbiner til transformatorstasjon vest for Urdalsnipa
- Tomt for samlokalisert transformatorstasjon og driftsbygg

- Arealer for riggområde og for mellomlagring av komponenter
    - Dette vil være midlertidige arealer som enten samordnes med arealer til varig bruk, tilbakeføres eller legges på allerede opparbeidete arealer utenfor planområdet. Dette avklares i detaljplan.
- Fundamenter for master til nettilknytning fra transformatorstasjon til Bjerkreim transformatorstasjon, sør for planområdet
- Massetak for uttak av stein til veier og plasser. Disse vil lukkes og revegeteres i den grad de ikke inngår i varige anlegg.



Figur 4-2. Alternativer for kraftledning til Bjerkreim transformatorstasjon i sør. Alternativ 1 er prioritert.

4.2 Kunnskapsgrunnlaget inkl. verdivurderinger

Dette kapitlet gir en oversikt over dagens situasjon og eksisterende kunnskap om landbruk innen utredningsområdet. Landbruk omfatter jordbruk, utmark og skogbruk. Verdiene som påvises her legges til grunn for de neste kapitlene med inndeling og verdisetting av delområder.

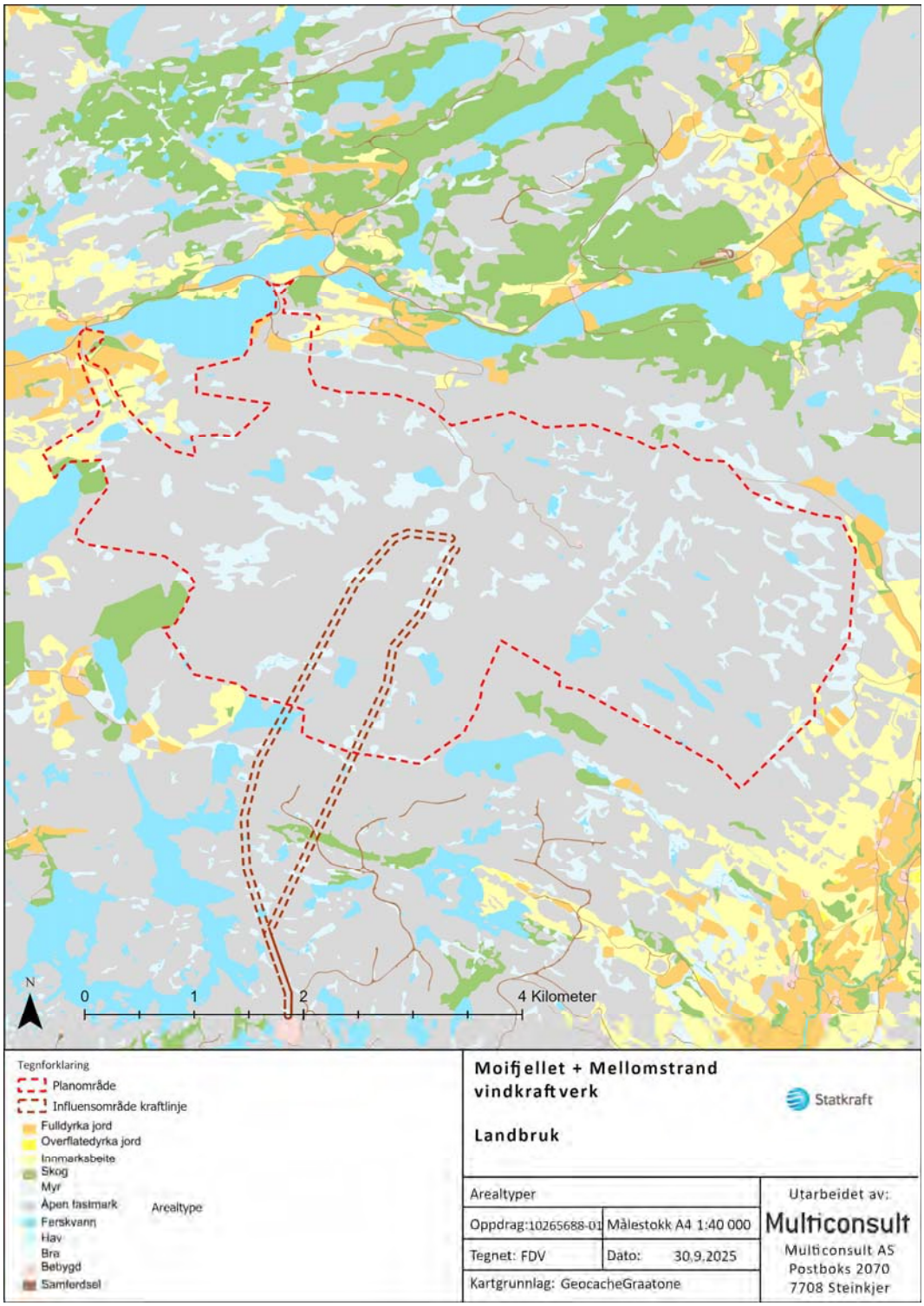
4.2.1 Jordbruk

Langs eksisterende veier er det noe fulldyrka jord og innmarksbeiter (figur 4-3). I tillegg er det spredte områder med dyrkbar jord (figur 4-4). Innmarksbeitene beites av sau og storfe.

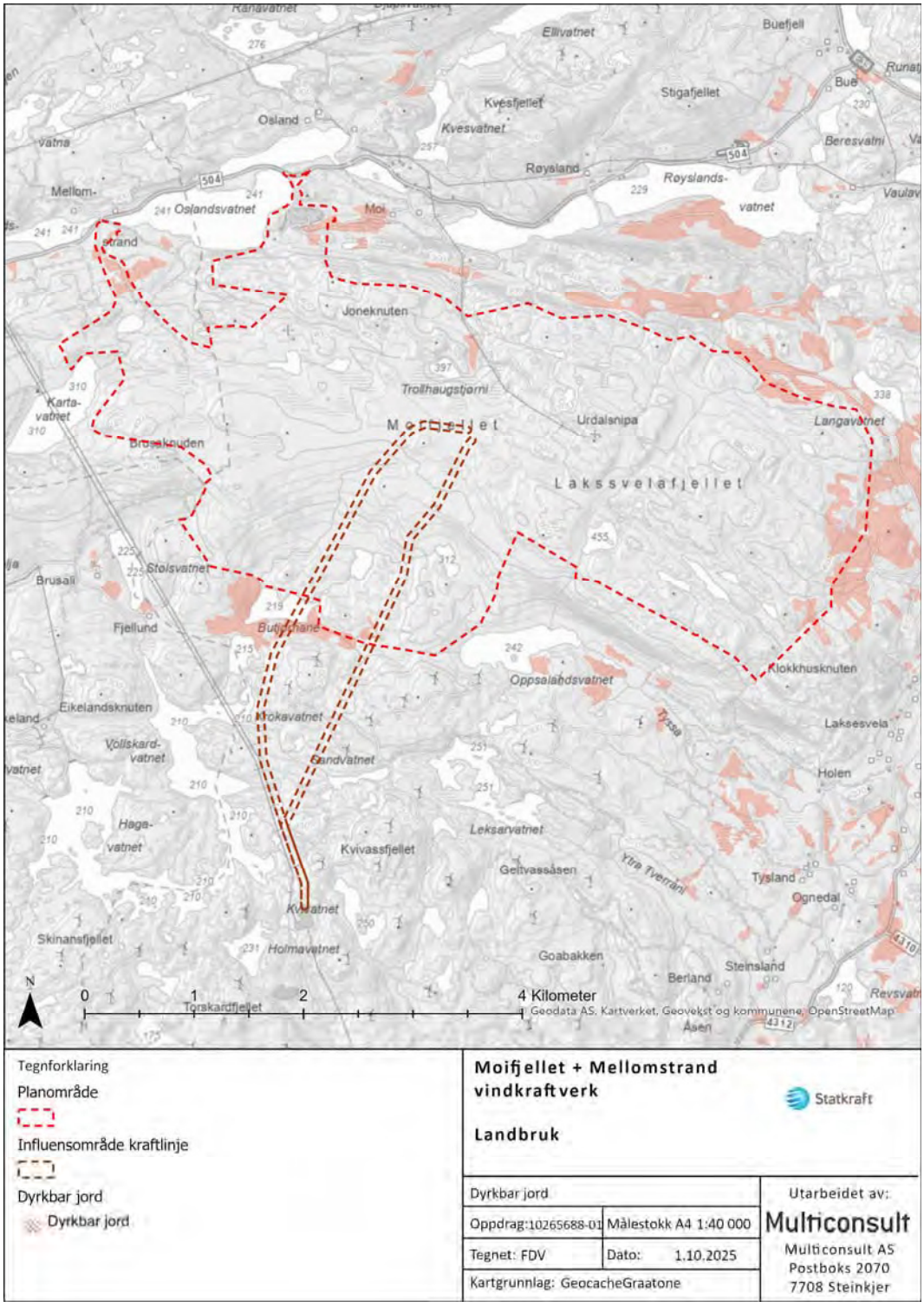
Kategorien omfatter alt jordbruksareal, det vil si fulldyrka jord, overflatedyrka jord og innmarksbeite. Oversikt over jordbruksareal i disse kategoriene, samt produktiv skog er hentet fra Arealressurskart (AR5) og NIBIOs kartlag dyrkbar jord, tilgjengelig fra NIBIOs kartløsning Kilden. Areal av hver kategori innen planområdet og influensområdet for alternativer for nett-tilknytning er beregnet ved hjelp av NIBIOs tjeneste «Arealrapport» i Kilden. Totalt areal for kategoriene innen influensområdet er oppsummert i tabell 4-1 og illustrert i figur 4-3 og figur 4-4.

Tabell 4-1: Areal i kategoriene fulldyrka jord, overflatedyrka jord, innmarksbeite, dyrkbar jord og produktiv skog innen planområdet og influensområdet for alternativer for nett-tilknytning. Areal er hentet fra Kildens tjeneste Arealrapport som er basert på AR5 og kartlaget dyrkbar jord.

Arealkategori	Fulldyrka jord	Overflatedyrka jord	Innmarksbeite	Dyrkbar jord	Produktiv skog
Areal i dekar	76,1	0	206,9	394,0	19,8



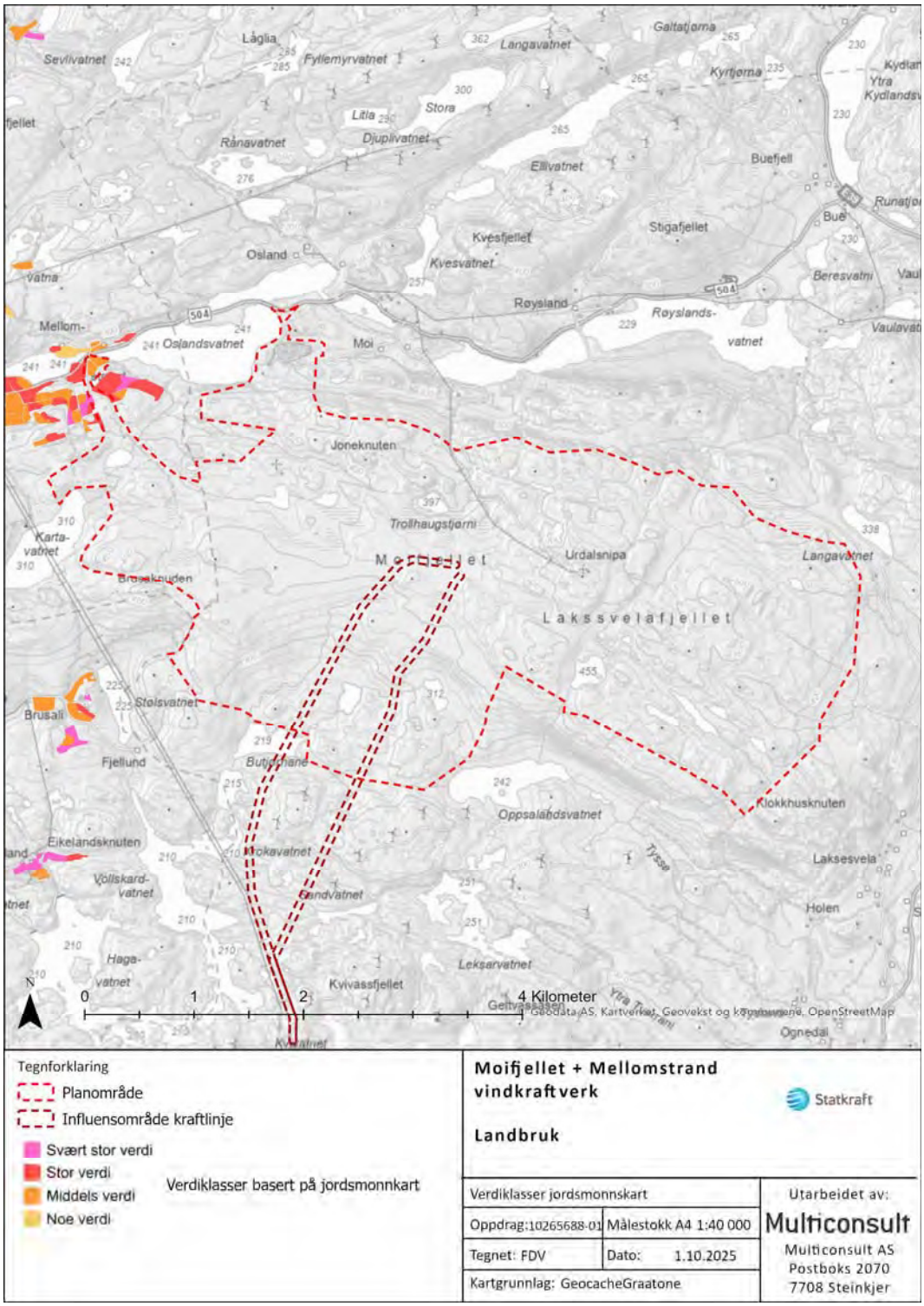
Figur 4-3: Arealtyper innen planområdet og influensområdet for alternativer for nett-tilknytning. Kilde: WMS-laget AR5 fra NIBIO.



Figur 4-4: Dyrkbar jord i planområdet og influensområdet for alternativer for kraftlinjetrasé. Kilde: WMS-tjenesten Dyrkbar jord fra NIBIO.

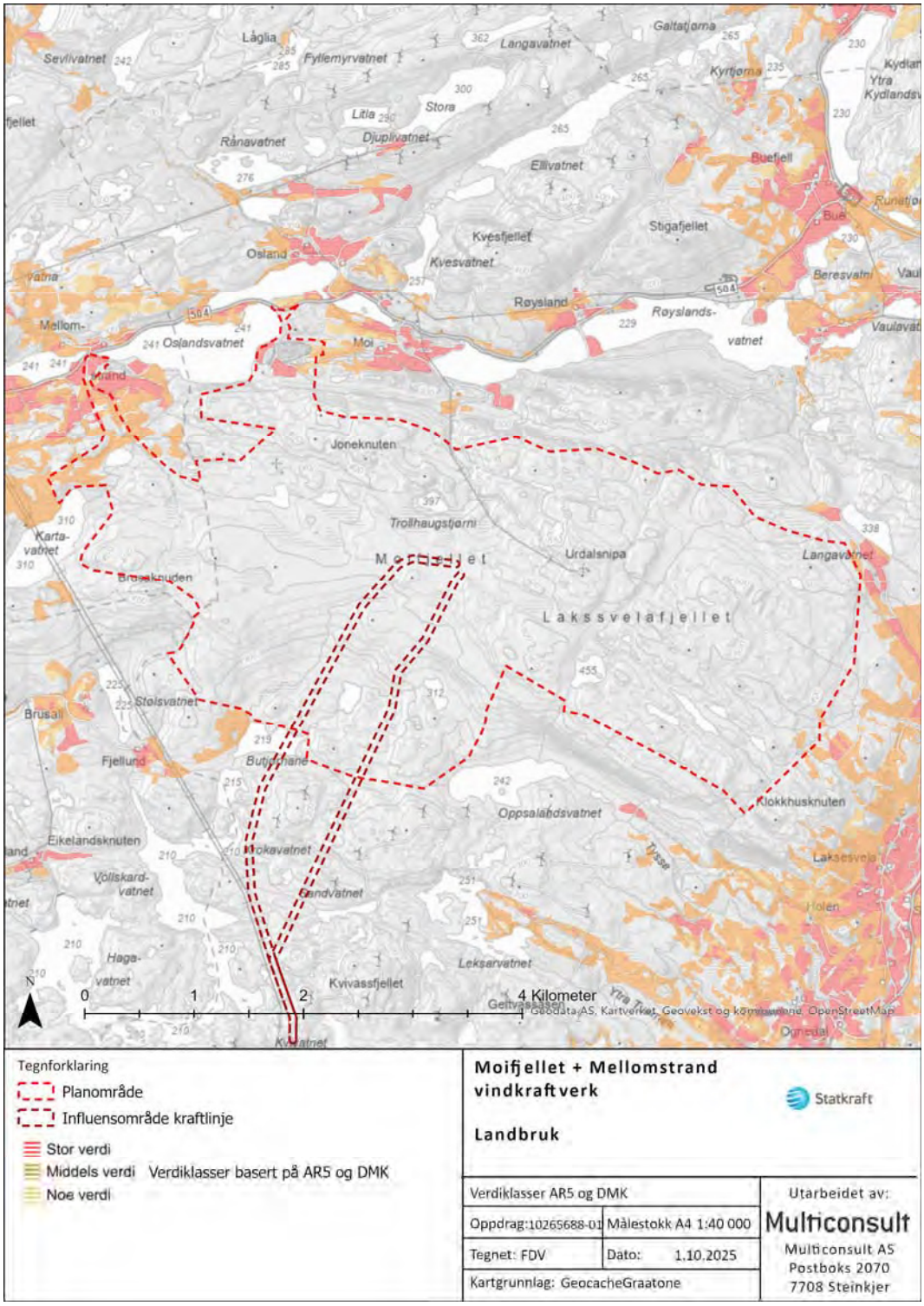
Kartlaget «Verdiklasser basert på jordsmonnskart» fra NIBIO viser at fulldyrka areal ved atkomstvei i Time kommune, er av middels og stor verdi (figur 4-5). Kartlaget «Verdiklasser basert på AR5 og DMK» fra NIBIO viser verdi for de fulldyrka arealene og innmarksbeite i resten av planområdet og influensområdet for alternativer for nett-tilknytning. Kartlaget er utviklet for bruk i

konsekvensutredninger etter V712 og brukes for områder uten jordsmonnskart[7]. Disse arealene er av middels og stor verdi (figur 4-6). Ifølge kartlaget «Verdiklasser for dyrkbar jord» fra NIBIO er den dyrkbare jorden innen planområdet er av noe verdi (figur 4-7). Kartlaget er utviklet for bruk ved konsekvensanalyser etter Statens vegvesens Håndbok V712[8].

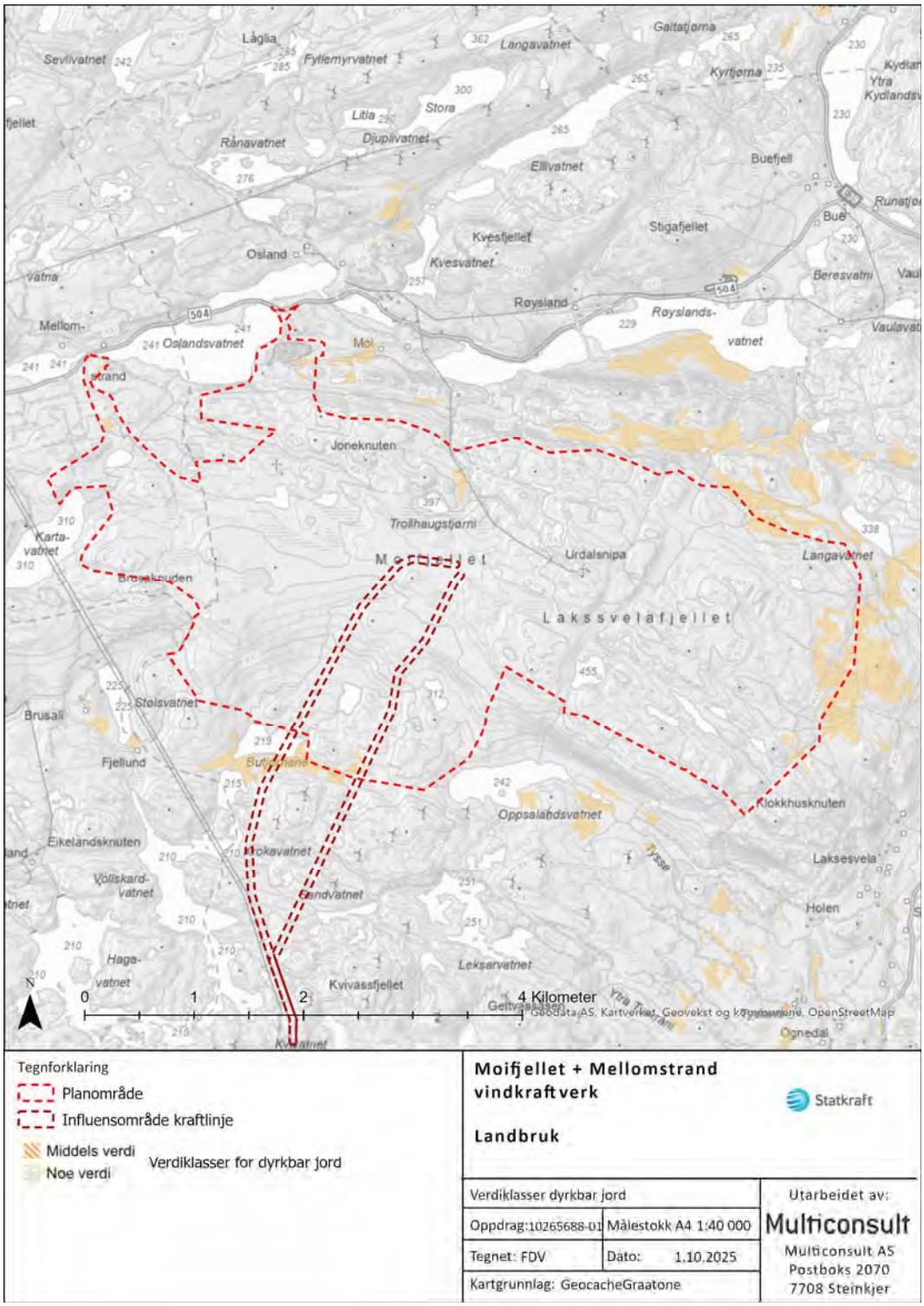


Figur 4-5: Verdiklasser basert på jordsmonnskart for jordbruksareal (fulldyrka jord og innmarksbeite). Kilde: WMS-tjenesten Verdiklasser basert på jordsmonnkart fra NIBIO.

[7] https://www.nibio.no/tema/jord/arealressurser/andre-kart/verdiklasser-for-jordbruksareal-og-dyrkbar-jord/verdiklasser-basert-pa-ar5-og-dmk
[8] https://www.nibio.no/tema/jord/arealressurser/andre-kart/verdiklasser-for-jordbruksareal-og-dyrkbar-jord/verdiklasser-for-dyrkbar-jord



Figur 4-6: Verdiklasser for jordbruksareal basert på arealressurskart (AR5) og digitalt markslagkart (DMK). Kilde: WMS-tjenesten Verdiklasser basert på AR5 og DMK fra NIBIO.



Figur 4-7: Verdiklasser for dyrkbar jord. Den dyrkbare jorden innen planområdet er av noe verdi. Kilde: WMS-tjenesten Verdiklasser for dyrkbar jord fra NIBIO.

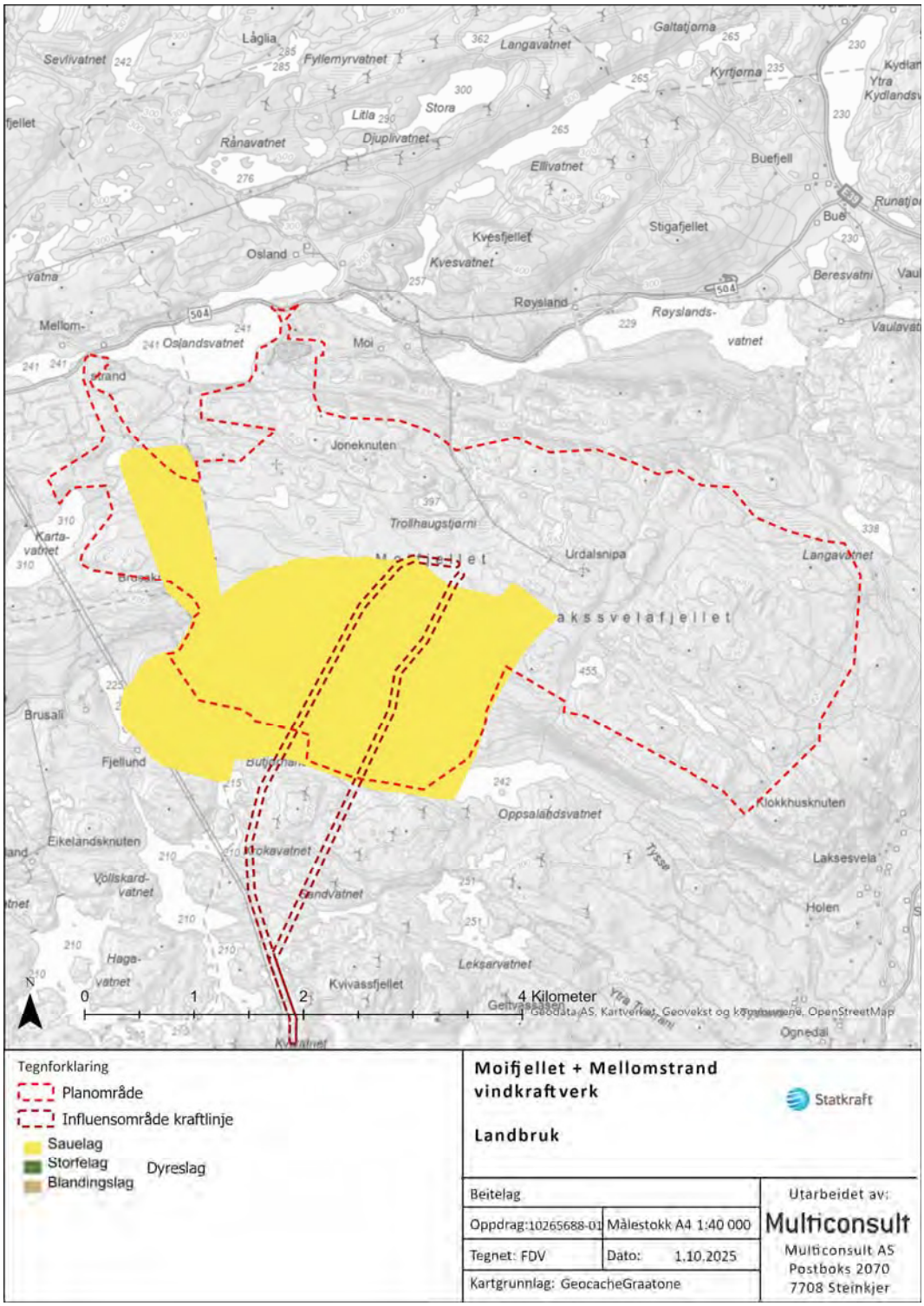
4.2.2 Utmark

Planområdet er i hovedsak et åpent utmarksområde som består av kystlynghei, berg, myr og vann. Kategorien utmark omfatter beiteområder for husdyr, viktige områder for vilt som jaktressurs og ferskvannsfiske i næringssammenheng. Kilder til informasjon om utmarksressurser og bruk av disse, er hentet fra kartlaget «utmarksbeite» som er tilgjengelig fra Kilden, Skjøtselsplan for del av

Lakssvelafjellet[9], Overordnet skjøtselsplan for kystlynghei i Bjerkreim vindkraftverk[10], informasjon fra Statsforvalteren i Rogaland om regionalt miljøprogram i landbruket, informasjon fra Bjerkreim kommune om beitebruk og kontakt med grunneiere og Ognedalstølen beitelag. Også grunnlag fra SSB ligger til grunn for vurderingen.

WMS-tjenesten beitedata, fra NIBIO viser avgrensning av Ognedalstølen beitelag i sør-vestlig del av planområdet (se figur 4-8). Beitelaget består av 15 medlemmer og det var ifølge Kilden sluppet 1018 sau (inkl. lam) på beite i 2023. I tillegg til beitelaget beiter det god del sau innen planområdet, samt noe storfe. Ifølge informasjon mottatt fra Bjerkreim kommune beiter det ca. 1 350 sau (inkl. lam) og 95 kyr (inkl. ungdyr) i utmarka i området. Dette er tall basert bl.a. på produksjonstilskudd og er ikke nøyaktige tall for hvor mange dyr som beiter innen det avgrensede planområdet.

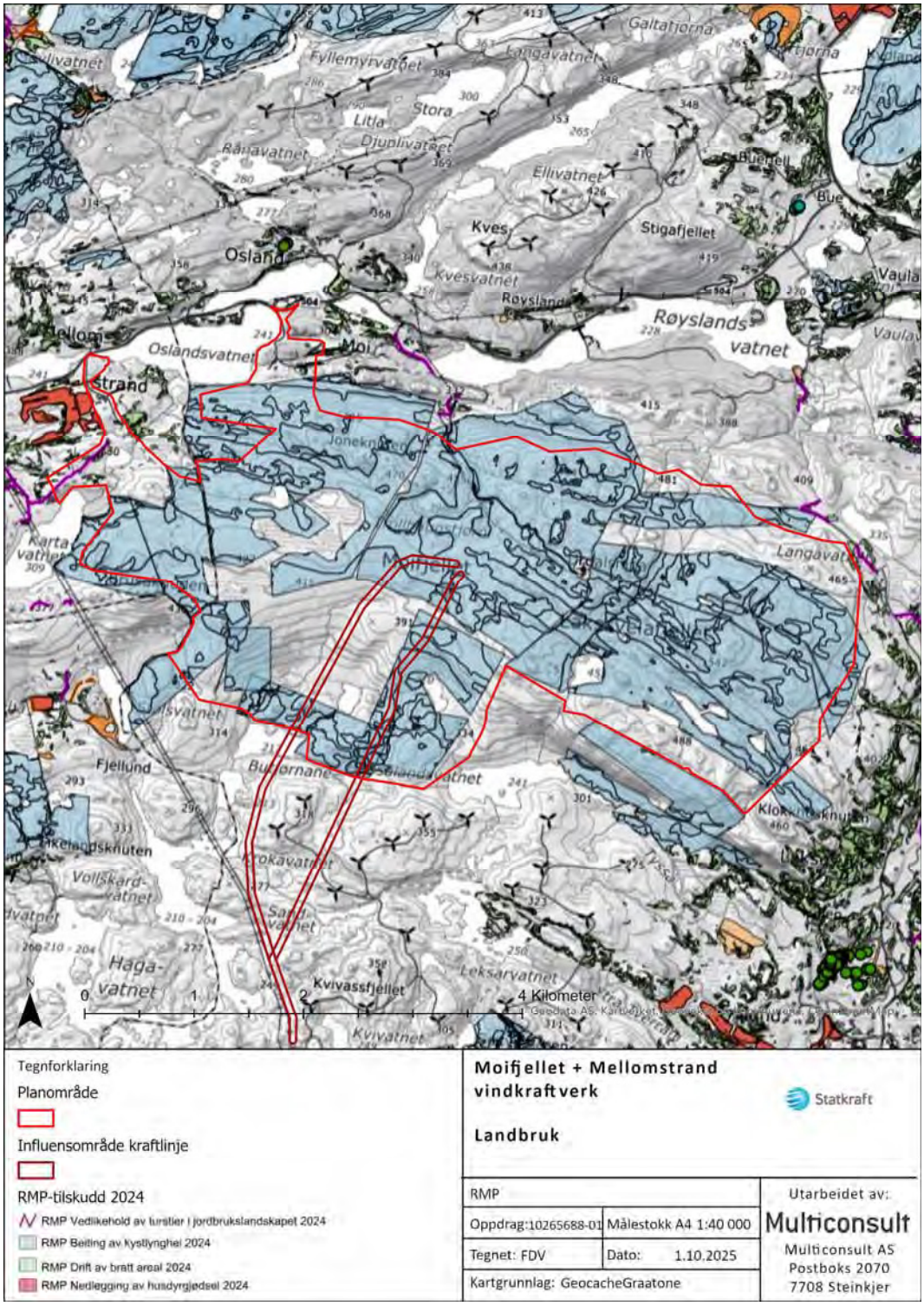
[9] Harstad, B. (2020). Skjøtselsplan for del av Lakssvelafjellet, gbnr. 61/4 og 58/1. Kystlynghei i Bjerkreim kommune, Rogaland fylke.
[10] Engen Torvik, S. (2022). Overordnet skjøtselsplan for kystlynghei i Bjerkreim vindkraftverk. Oppdatert etter kartlegging av naturtyper 2022. Ecofact rapport 907.



Figur 4-8: Avgrensning for Ognedalstølen beitelag. Kilde: WMS-tjenesten beitedata fra NIBIO.

Ifølge kartlaget «RMP søknadsdata 2024», tilgjengelig fra Temakart-Rogaland[11], er det flere driftsenheter som har søkt om midler fra regionalt miljøprogram for beiting av kystlynghei innen planområdet (se figur 4-9). Ifølge data mottatt fra Statsforvalteren i Rogaland er alle arealene med kystlynghei i tilstandsklasse «svært viktig». Tilstandsklassen var for dette arealet i 2023 basert på verdi i DN Håndbok 13, som tidligere var standard kartleggingsmetode for naturtyper. Når området er oppdatert med NiN-kartlegging, vil tilstandsklassene baseres på denne.

[11] https://temakart-rogaland.no/rmp



Figur 4-9: Areal hvor det har blitt søkt om tilskudd via Regional miljøprogram (RMP). De fleste arealene gjelder tilskudd knyttet til beiting av kystlynghei, mens det er også noen mindre areal som gjelder tilskudd knyttet til drift av bratt areal, nedlegging av husdyrgjødsel og vedlikehold av turstier i jordbrukslandskapet. Kilde: Temakart-Rogaland.

For en del av området er det av Norsk landbruksrådgivning ved Birgitt Harstad utarbeidet en skjøtselsplan for kystlynghei for to av eiendommene innen planområdet[12]. Denne beskriver at det er

[12] Harstad, B. (2020). Skjøtselsplan for del av Lakssvelafjellet, gbnr. 61/4 og 58/1. Kystlynghei i Bjerkreim kommune, Rogaland fylke.

varierende beitetrykk innen arealet skjøtselsplanen er skrevet for. Basert på befaring i forbindelse med konsekvensutredningen for naturmangfold, vurderes det at området nokså homogent, og at denne beskrivelsen dermed passer godt for det meste av utmarksbeitearealet på Moifjellet og Mellomstrand. Mye av kystlyngheia er dominert av blåtopp, som er en viktig beiteplante langs kysten[13]. Generelt vurderes beitet som godt og med middels utnyttelsesgrad, da det er varierende utnyttelsesgrad i området. På bakgrunn av dette og kriterier i verditabellen vurderes utmarksbeitet som av noe.

I forbindelse med Bjerkreim vindkraftverk har Ecofact utarbeidet en skjøtselsplan for kystlynghei. Alternativ for nett-tilknytning går gjennom deler av området som inngår i denne skjøtselsplanen. Skjøtselsplanen beskriver at det er lavt til moderat beitetrykk. Dette var også inntrykket utreder fikk i forbindelse med kartlegging av naturtyper i området.

I tillegg til utmarksbeite for husdyr, drives det noe jakt innen planområdet. Ifølge viltforvalter i Bjerkreim kommune jaktes det hovedsakelig hjort, men også rådyr, elg og småvilt, herunder rev, hare, skogsfugl, rugde og mår. Tall fra SSB viser at det i kommunen jaktes mest hjort. I jaktåret 2023-2024 ble det felt 224 hjort og 50 rådyr. For hjort er trenden stigende. Av småvilt ble det innen kommunen felt 50 rev i 2022 – 2023. Tall for annet småvilt og fugl var ikke tilgjengelig, med unntak av orrfugl, hvor det i 2022-2023 ble felt 0. Ifølge Bjerkreim jeger – og fiskeforening benyttes området til jakt, men ikke i like stor utstrekning som områdene rundt. Dette påvirker verdisettingen.

Fiske i området er hovedsakelig knyttet til områdene rundt Moifjellet, som vannene langs fv. 504 fra Bue (E39) til Varhaug og Undheim, hvor det drives omfattende fiske etter ørret og røye. Spesielt er Røyslandsvatnet som grenser til planområdet i nord et viktig fiskevann som benyttes bl.a. til notfiske. Sammenlignet med områdene rundt, drives det lite fiske innen planområdet, men ifølge grunneier er Trollhaugstjørni et fiskevann på Moifjellet der det er satt ut fisk med tanke på fritidsfiske. Det skal også ha blitt satt ut fisk i andre vann på Moifjellet og Mellomstrand, men status her er usikker. Fiske på Moifjellet og Mellomstrand er ikke knyttet til næringsfiske.

Den næringsmessige betydningen av jakt og fiske vurderes samlet sett til å ha en viss betydning, og jakt og ferskvannsfiske vurderes derfor til å ha **noe verdi**.

4.2.3 Skogbruk

Kategorien omfatter produktiv skog med økonomisk verdi. Kilder til informasjon om skogbruk er Arealressurskart (AR5, NIBIO) og skogressurskart (SR16, NIBIO) som er tilgjengelig fra Kilden.

I følge AR5 er det total 19,8 dekar produktiv skog innen planområdet (figur 4-3 og tabell 4-1). Arealene med produktiv skog ligger noe spredt innenfor planområdet; et bestand med middels bonitet som delvis ligger inne i planområdet ved Stølsvatnet, et bestand med middels bonitet som delvis ligger innenfor planområdet nord for Kartavatnet, et bestand med lav til middels bonitet som ligger delvis innenfor planområdet ved Dyrdalsfjella og et bestand med særs høg til høg bonitet som ligger delvis innenfor planområdet ved Mellomstrand. Bonitet er gitt i kartlaget «AR5 bonitet». Det er i tillegg noe skog spredt i planområdet, men dette er klassifisert som uproduktivt/impediment, og er derfor ikke omtalt videre i utredningen. I forbindelse med kartlegging av naturmangfold ble det observert noen teiger med plantet sitka– og lerkeskog innen planområdet. Disse er synlige på flyfoto. Teigene antas ikke berørt, og er derfor heller ikke videre omtalt i utredningen.

[13] http://info.nlr.no/resources/10302/Grovforepost_2020/Nr_14_2020/HUSDYRBEITE_i_UtMark_2009_utg_2.pdf

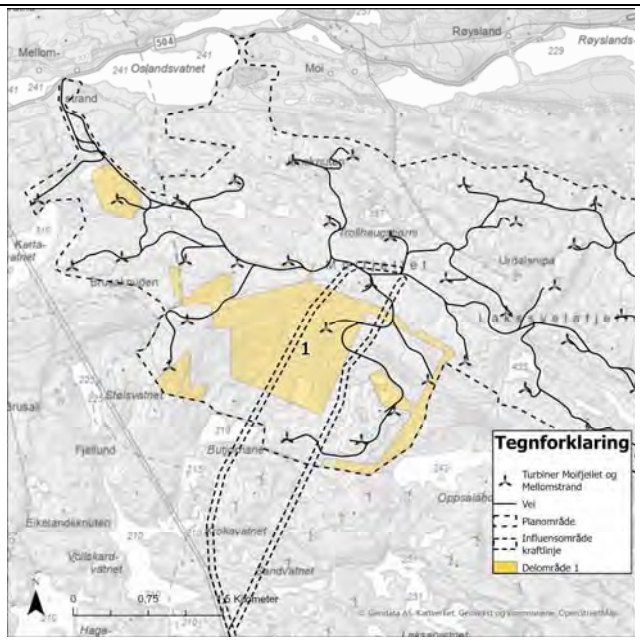
Alternativ 2 for nett-tilknytning berører noe skog. Dette er plantet skog på impediment, det vil si skog med en forventet produksjonsevne på mindre enn 0,1 m^3 per dekar[14]. Den er også klassifisert som uproduktiv i AR5. På bakgrunn av dette omtales ikke denne skogen videre.

Tiltaket vurderes å ha ingen/ubetydelig konsekvens for skogbruk.

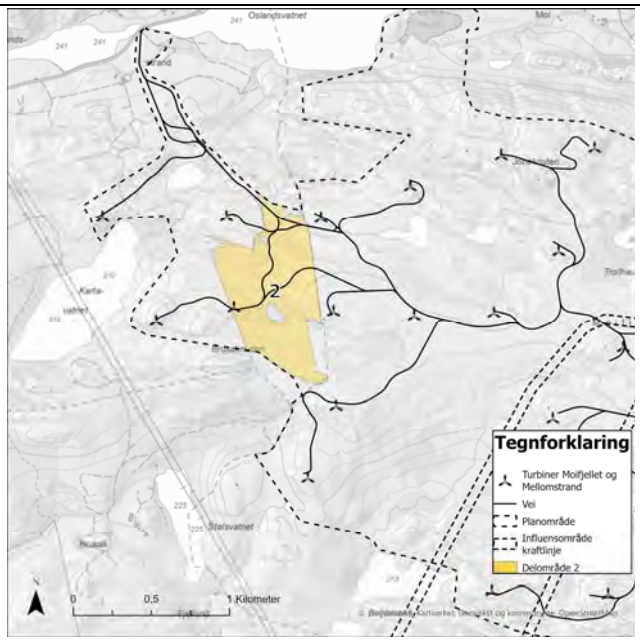
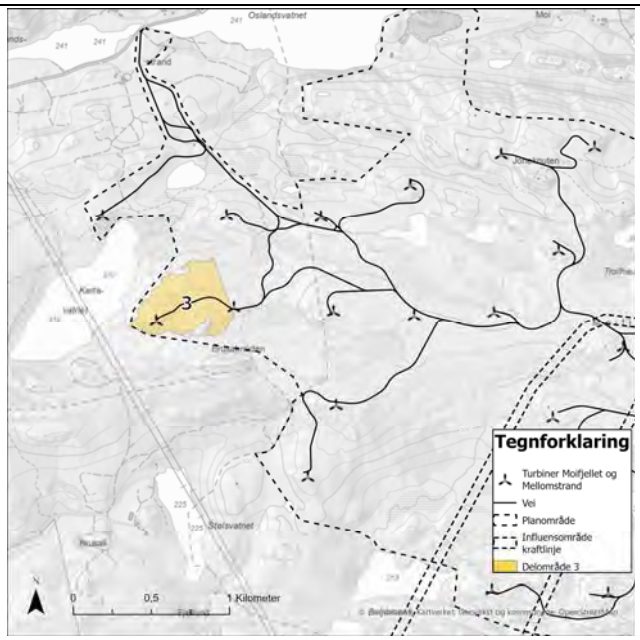
4.3 Delområder

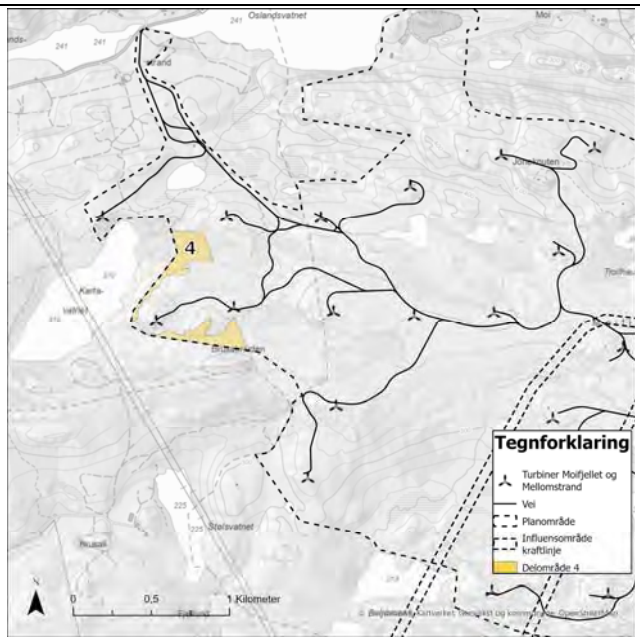
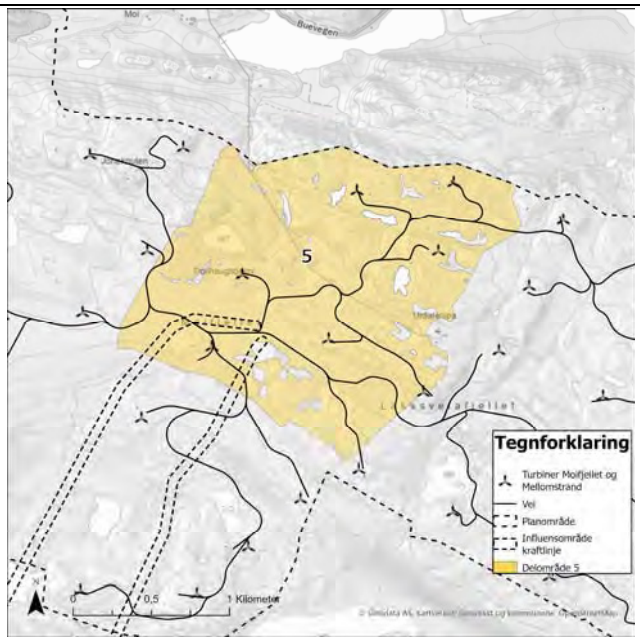
Med utgangspunkt i kunnskapsgrunnlaget er utredningsområdet delt inn i 26 delområder. Delområdene er delt opp etter kunnskap om tilskudd gitt gjennom RMP for beiting på kystlynghei, beitelagsområder og AR50 Arealressurs Jordbruk. Det er skilt på like areal som har fått tilskudd til beiting på kystlynghei som befinner seg på ulike gårds- og bruksnummer. Det er også skilt på areal som har fått RMP-tilskudd som enten ligger nærmere enn 20 meter fra senterpunkt vei/vindturbin, eller lengre unna enn 20 meter fra senterpunkt på vei/vindturbin. Dette for å skille på arealer som blir direkte berørt og ikke. 20 meter er satt for å ta høyde for bruk av areal 20 meter eller nærmere senterpunkt vei/vindturbin i en eventuell anleggsperiode. Areal som brukes av beitelag, men som overlapper med areal som er tildelt RMP-tilskudd til beiting på kystlynghei, er favorisert delområder basert på RMP-tilskudd. Delområder som overlapper og/eller har liknende funksjon og verdi, og som befinner seg på samme gårds- og bruksnummer (kun delområder som er basert på RMP-tilskudd) er slått sammen til et delområde. En oppsummering av delområdene er gitt i tabell 4-2 og figur 4-10.

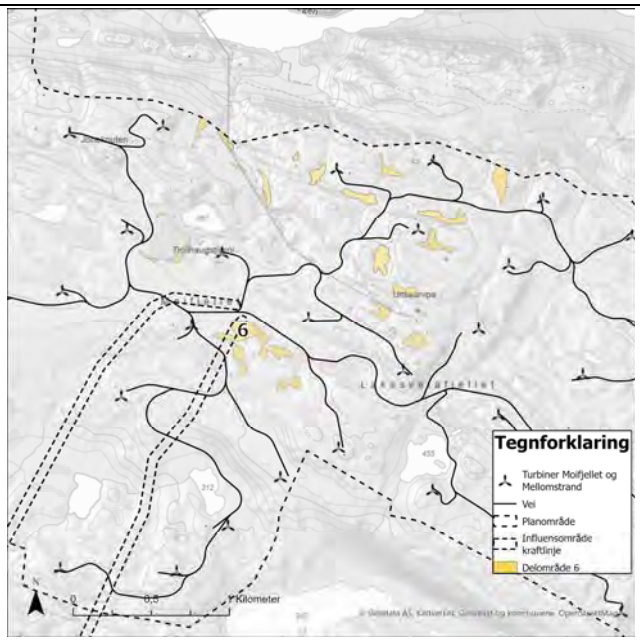
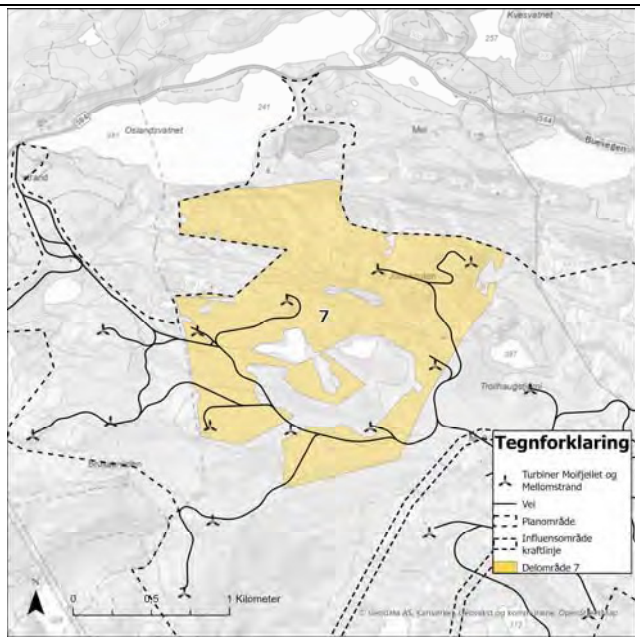
Tabell 4-2: Delområder med beskrivelse. Nummerering henviser til delområder vist i figur 4-10.

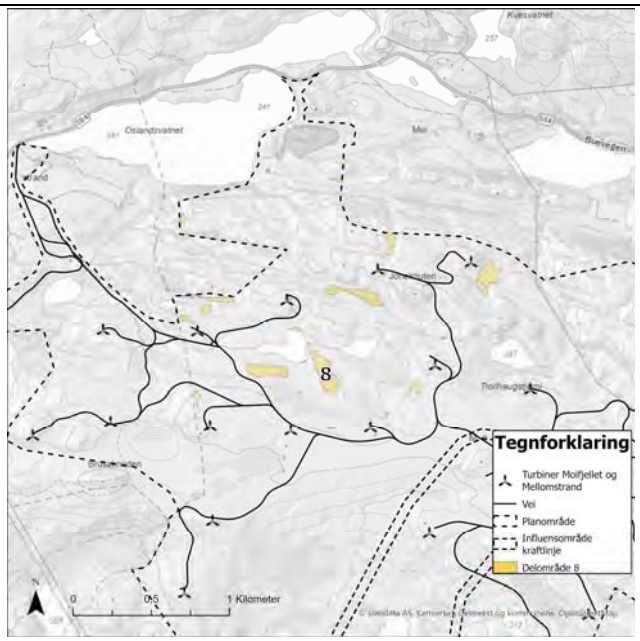
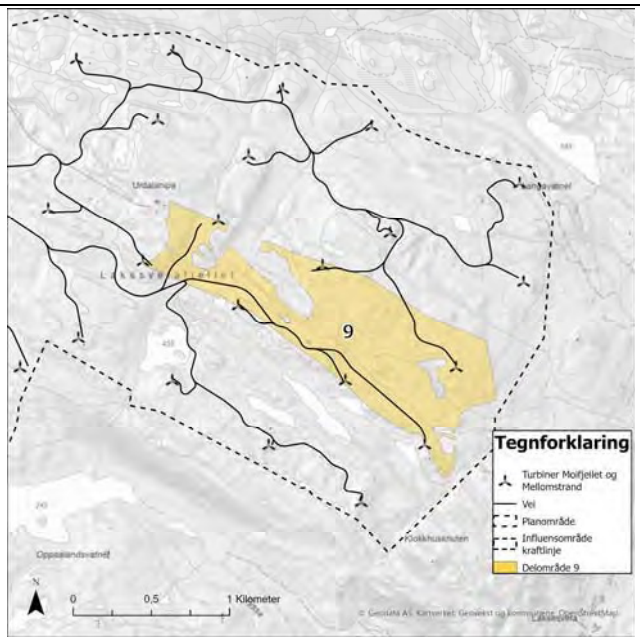
ID	Delområdenavn	Beskrivelse	Kart
1	Ognedalstølen beitelag	Beiteområde som er redusert av planområdets avgrensing og av areal som er tildelt RMP-tilskudd i 2024. Arealet disponeres av 15 medlemmer av beitelaget, og det ble sluppet 1069 sau og lam totalt på hele beiteområdet i 2024. Området består stort sett av kystlynghei med god tilstand (NiN-kartlegging) fordi lokaliteten er uten gjenvekst og generelt i bruk med lavt beitetrykk. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

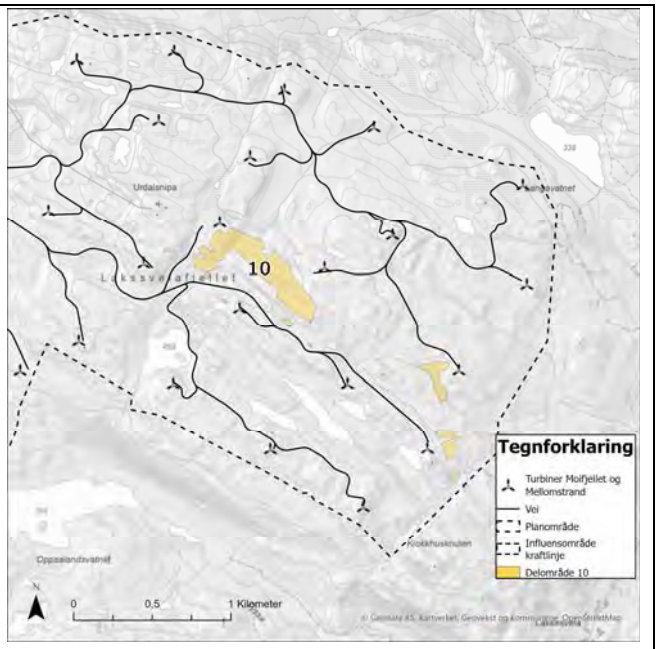
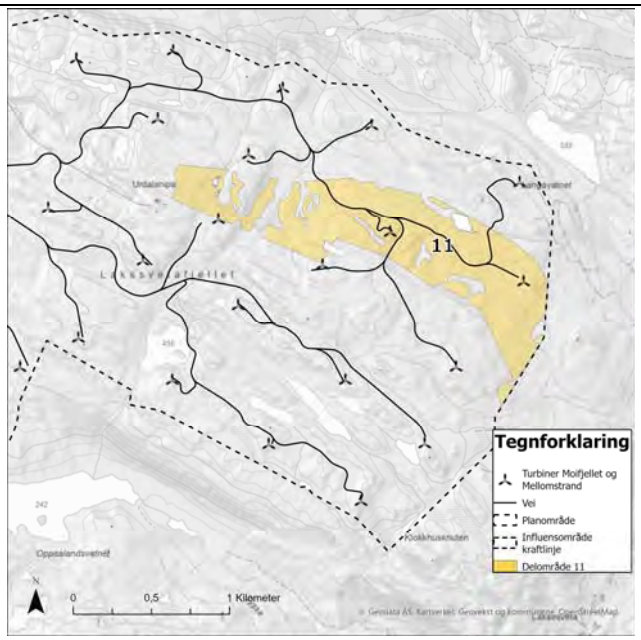
[14] https://www.nibio.no/tema/jord/arealressurser/ar50/skogbonitet

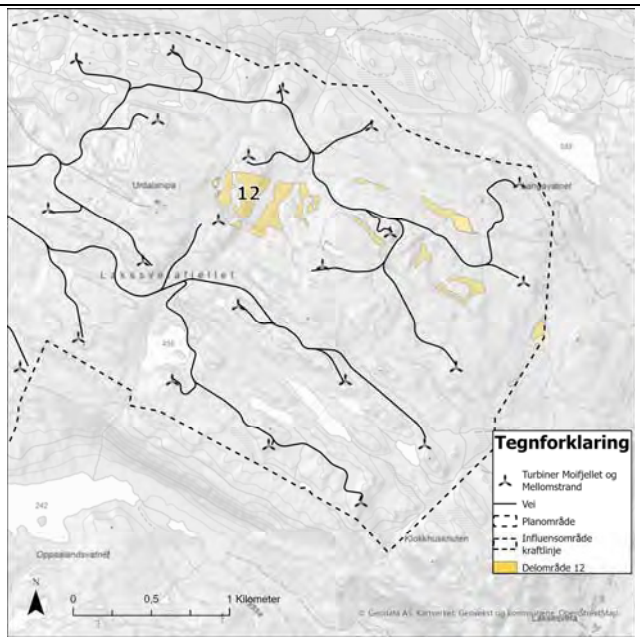
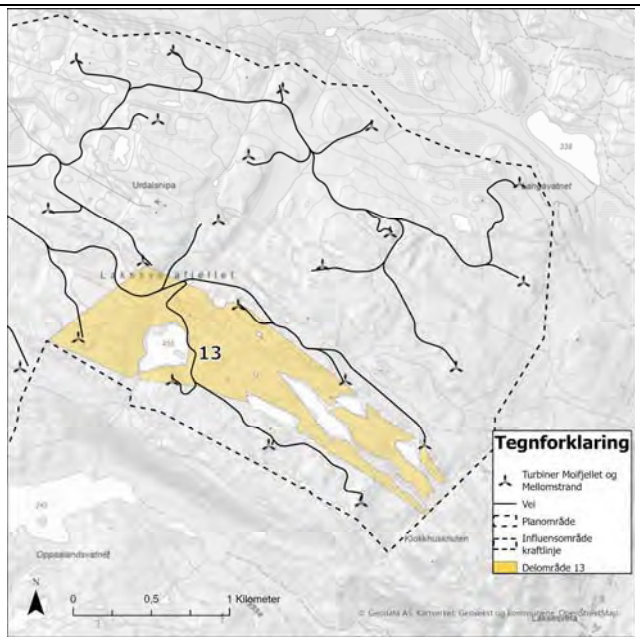
2	Brusaknuden øst 1	Delområdet er avgrenset til arealflater innenfor eiendom 50/3 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området dekkes i sin helhet av beiteområdet til Ognedalstølen beitelag. Området er i AR5 kategorisert som åpen fastmark. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn at areal inngår i beiteområdet og tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
3	Brusaknuden vest 1	Delområdet er avgrenset til arealflater innenfor eiendom 50/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

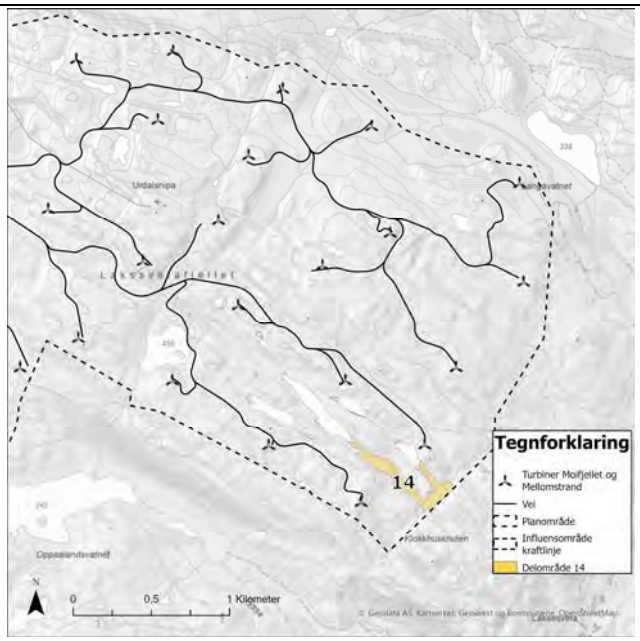
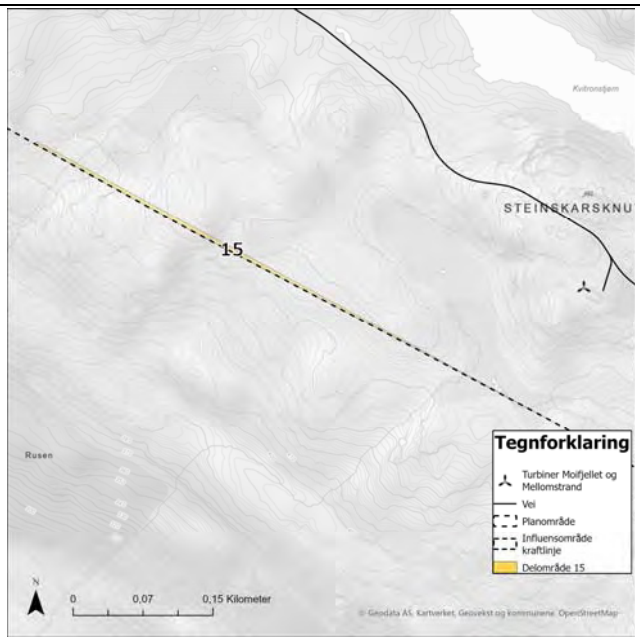
4	Brusaknuden vest 2	Delområdet er avgrenset til arealflater innenfor eiendom 50/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
5	Vennedalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 58/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

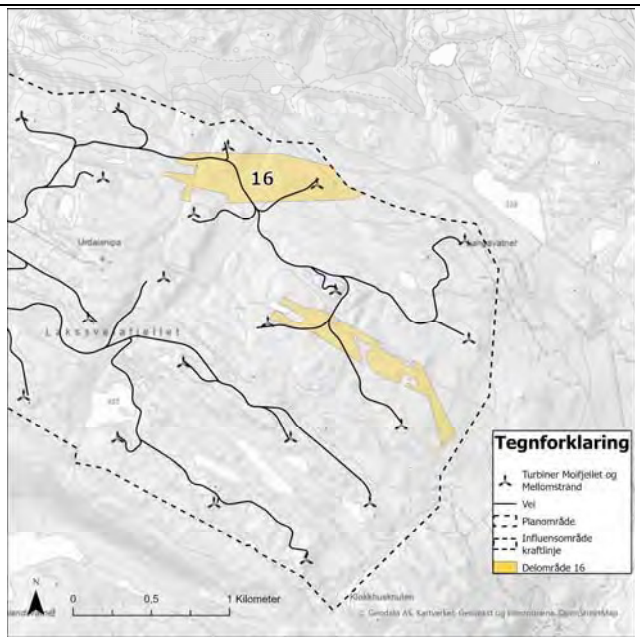
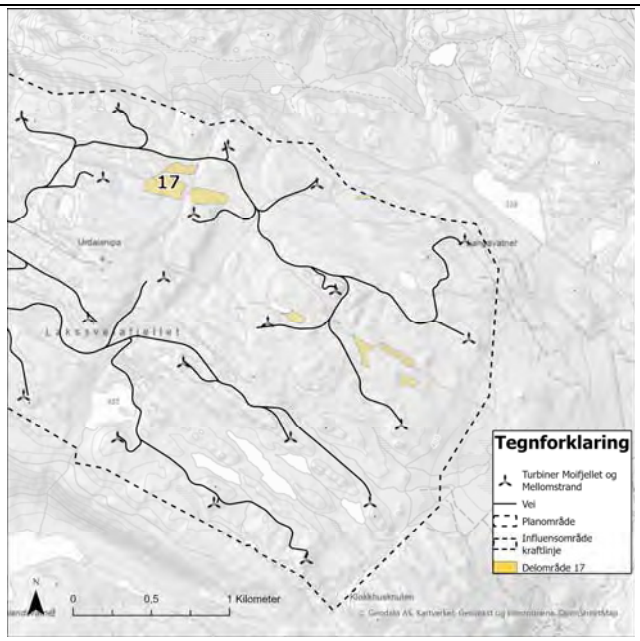
6	Vennedalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 58/1 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Mindre deler av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes til ubetydelig verdi da areal består mest av myr og vann, og bare noe areal med kystlynghei. Delområdet er vist med gul farge i figur av visuelle årsaker.	
7	Store Dalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 58/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Ett område i nord mot Brendehammaren er kartlagt som naturbeitemark i dårlig tilstand med lav kvalitet. Delområdet vurderes å ha noe verdi på bakgrunn av utnyttelse som naturbeitemark og tilstand på beiteressurser (kystlynghei).	

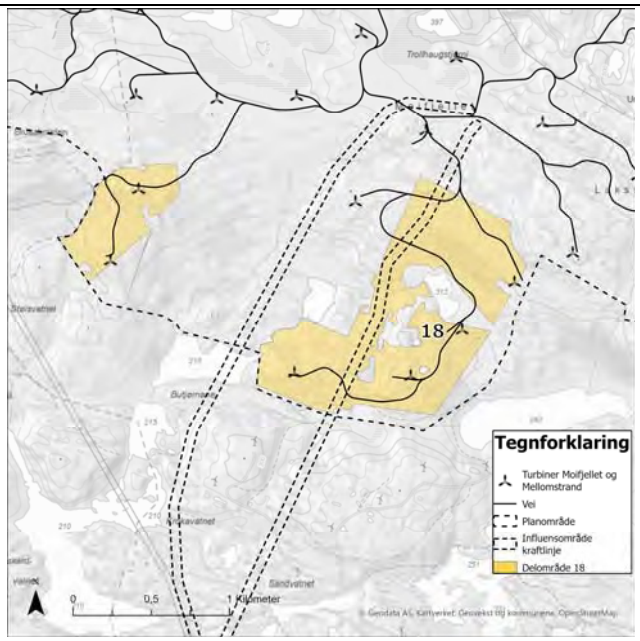
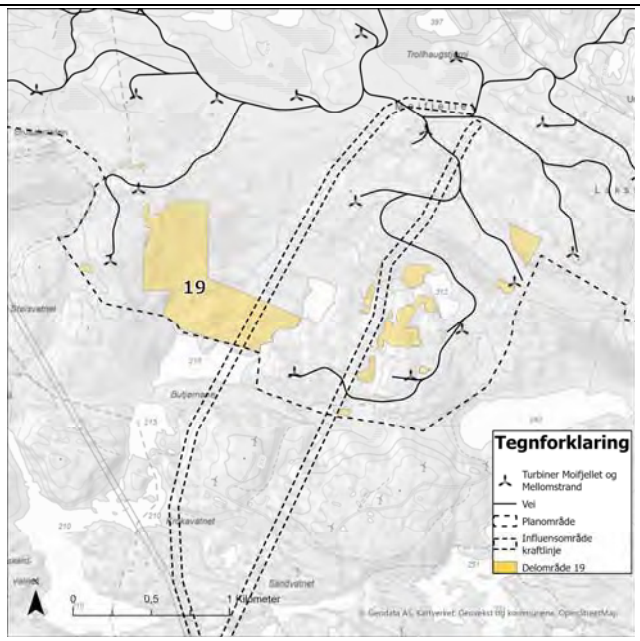
8	Store Dalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 58/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Deler av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
9	Lassen 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

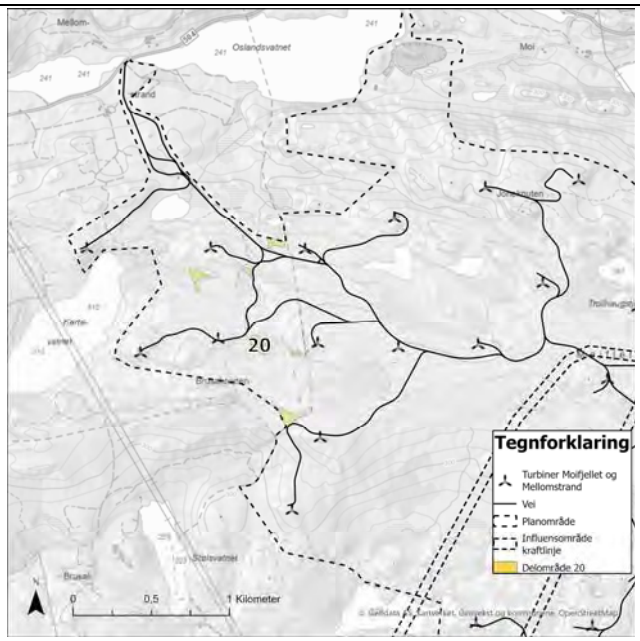
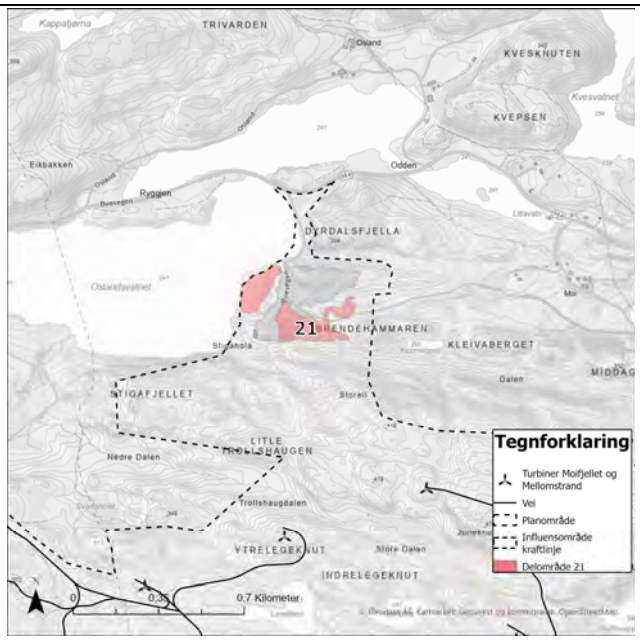
10	Lassen 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
11	Støvedalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/3 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

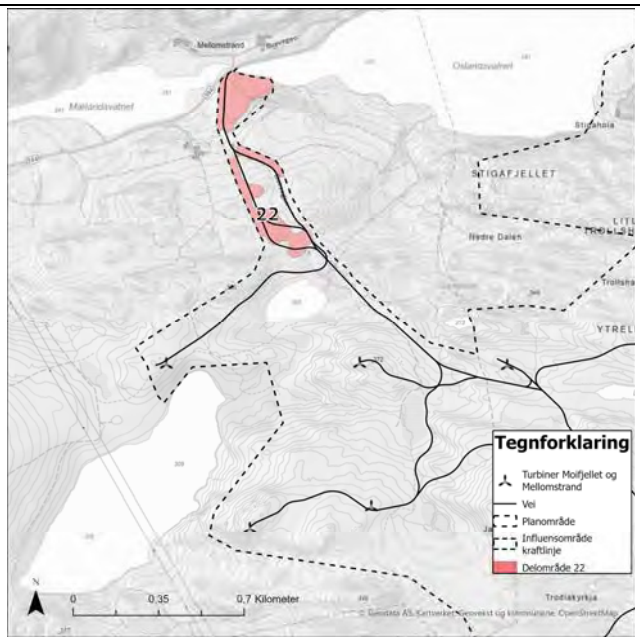
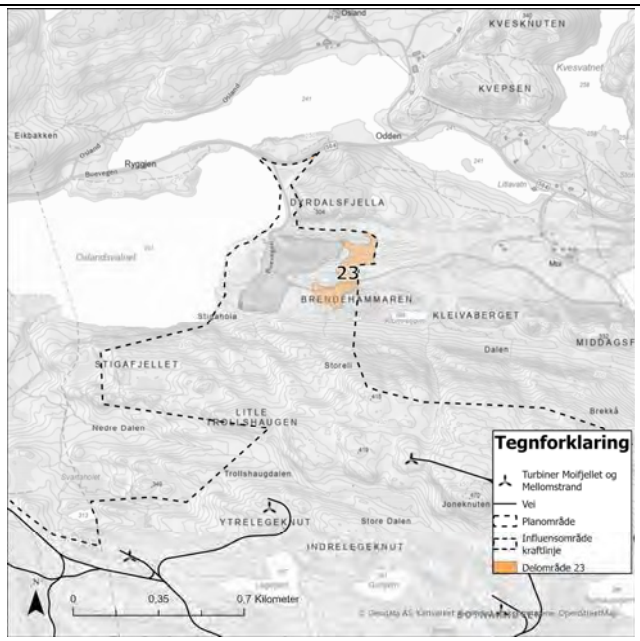
12	Støvedalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/3 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Deler av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
13	Syltreknuten 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

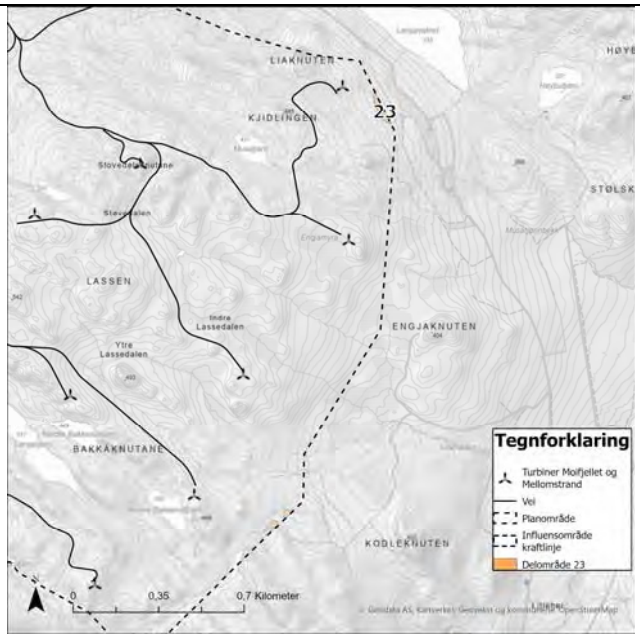
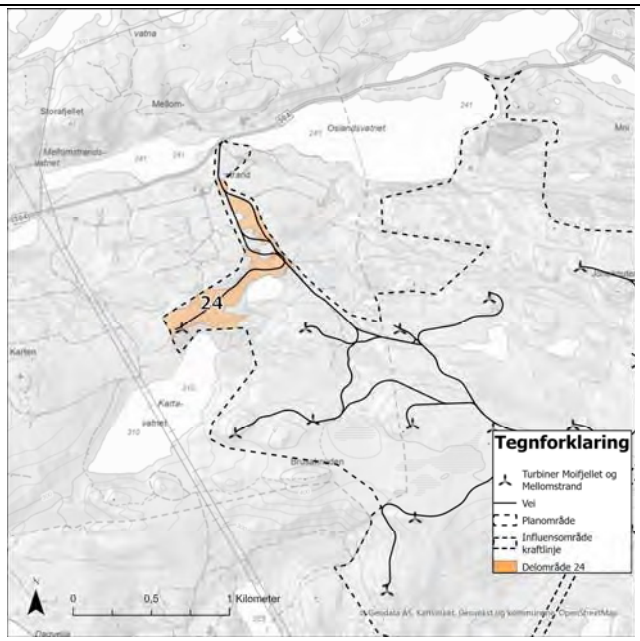
14	Syltreknuten 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
15	Steinskarsknuten	Delområdet er avgrenset til arealflater innenfor eiendom 61/6 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

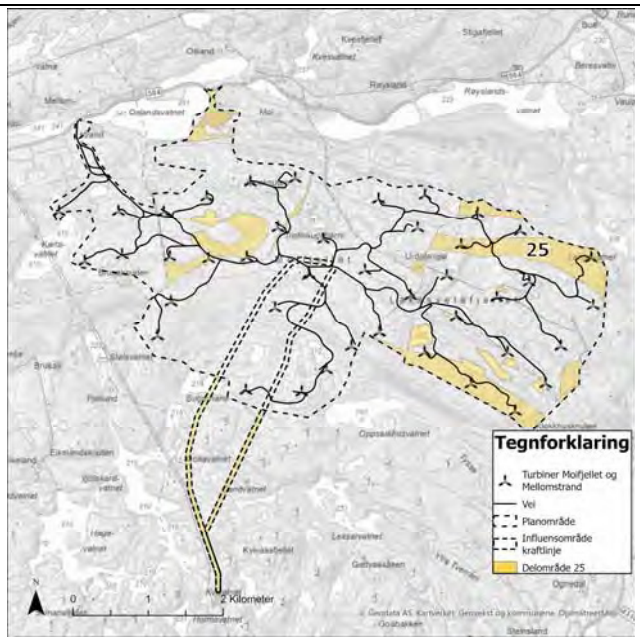
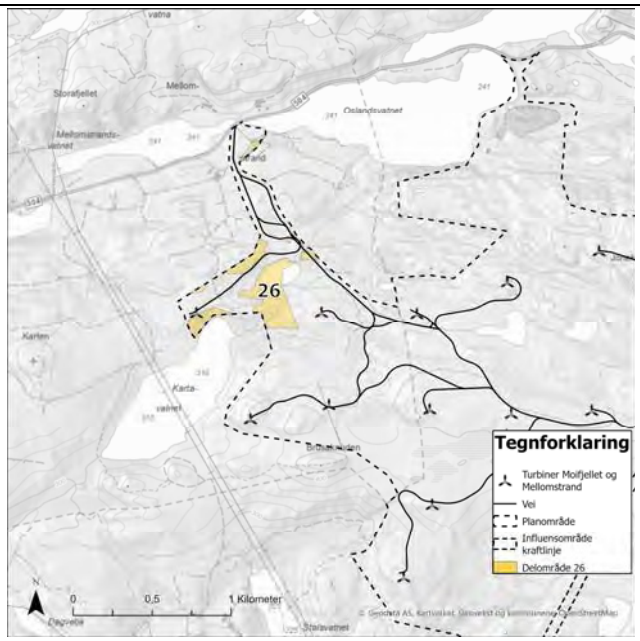
16	Råtnedalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/9 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
17	Råtnedalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/9 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

18	Moifjellet sør 1	Delområdet er avgrenset til arealflater innenfor eiendom 62/1 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området dekkes i sin helhet av beiteområdet til Ognedalstølen beitelag. Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
19	Moifjellet sør 2	Delområdet er avgrenset til arealflater innenfor eiendom 62/1 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området dekkes i sin helhet av beiteområdet til Ognedalstølen beitelag. Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Selv om delområdet er dekket i sin helhet av beiteareal for beitelag, vurderes det til å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

20	Brusaknuden øst 2	Delområdet er avgrenset til arealflater innenfor eiendom 50/3 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området dekkes i sin helhet av beiteområdet til Ognedalstølen beitelag. Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
21	Brendehammaren 1	Delområdet er avgrenset til arealflater i Bjerkreim kommune som etter AR50 er kategorisert som fulldyrka- og overflatedyrka jord (AR50 kode 24). Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*. Størsteparten av området har etter «Verdiklasser basert på AR5 og DMK» verdi *Stor verdi* (fulldyrka jord, jorddekt).	

22	Mellomstrand 1	Delområdet er avgrenset til arealflater i Time kommune som etter AR50 er kategorisert som fulldyrka- og overflatedyrka jord (AR50 kode 24). Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *middels* og *noe verdi*. Deler av området har etter «Verdiklasser basert på AR5 og DMK» verdi *middels verdi* og *stor verdi* (fulldyrka jord, jorddekt). Deler av området har etter «Verdiklasser basert på jordsmonnkart» verdi *stor verdi* og verdi *middels verdi*. Jordkvalitet på sistnevnte areal er henholdsvis 1 og 2. Delområdet vurderes å ha middels verdi på bakgrunn av at arealet er fulldyrka med stor og middels verdi etter «Verdiklasser basert på jordsmonnkart» og jordkvalitet.	
23	Brendehammaren, Liaknuten & Kodleknuten	Delområdet er avgrenset til arealflater i Bjerkreim kommune som etter AR50 er kategorisert som innmarksbeite (AR50 kode 25). En mindre del av området har etter «Verdiklasser for dyrkbar jord» verdi noe verdi (myr, organisk jordlag). Størsteparten av området har etter «Verdiklasser basert på AR5 og DMK» verdi *noe verdi* (innmarksbeite, grunnlendt) og *middels verdi* (innmarksbeite, jorddekt).	

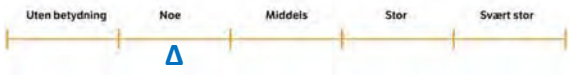
			
24	Mellomstrand 2	Delområdet er avgrenset til arealflater i Time kommune som etter AR50 er kategorisert som innmarksbeite (AR50 kode 25). Størsteparten av området har etter «Verdiklasser basert på AR5 og DMK» verdi *middels verdi* (innmarksbeite, jorddekt).	

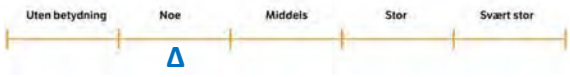
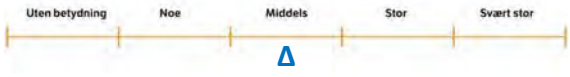
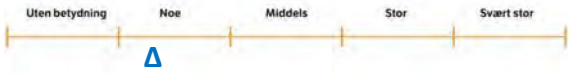
25	Moifjellet øvrig	Delområdet er avgrenset til arealflater i Bjerkreim kommune som etter AR50 er kategorisert som ikke relevant (AR50 kode 98), som ikke er tildelt RMP-tilskudd i 2024, og som heller ikke inngår i arealet til Ognedalstølen beiteområde. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av arealet i øst er kategorisert som innmarksbeite etter AR5. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *middels verdi* og *noe verdi*. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei) og mindre arealer av dyrkbar jord med verdi noe og middels.	
26	Mellomstrand 3	Delområdet er avgrenset til arealflater i Time kommune som etter AR50 er kategorisert som ikke relevant (AR50 kode 98), som ikke er tildelt RMP-tilskudd i 2024, og heller ikke inngår i arealet til Ognedalstølen beiteområde. Deler av delområdet er ifølge AR5 barskog av middels bonitet. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*. På bakgrunn av at de arealene til delområdene som innehar noe verdi (middels bonitet og dyrkbar jord) ikke blir berørt av tiltaket (vei), vurderes delområdet til ubetydelig verdi.	

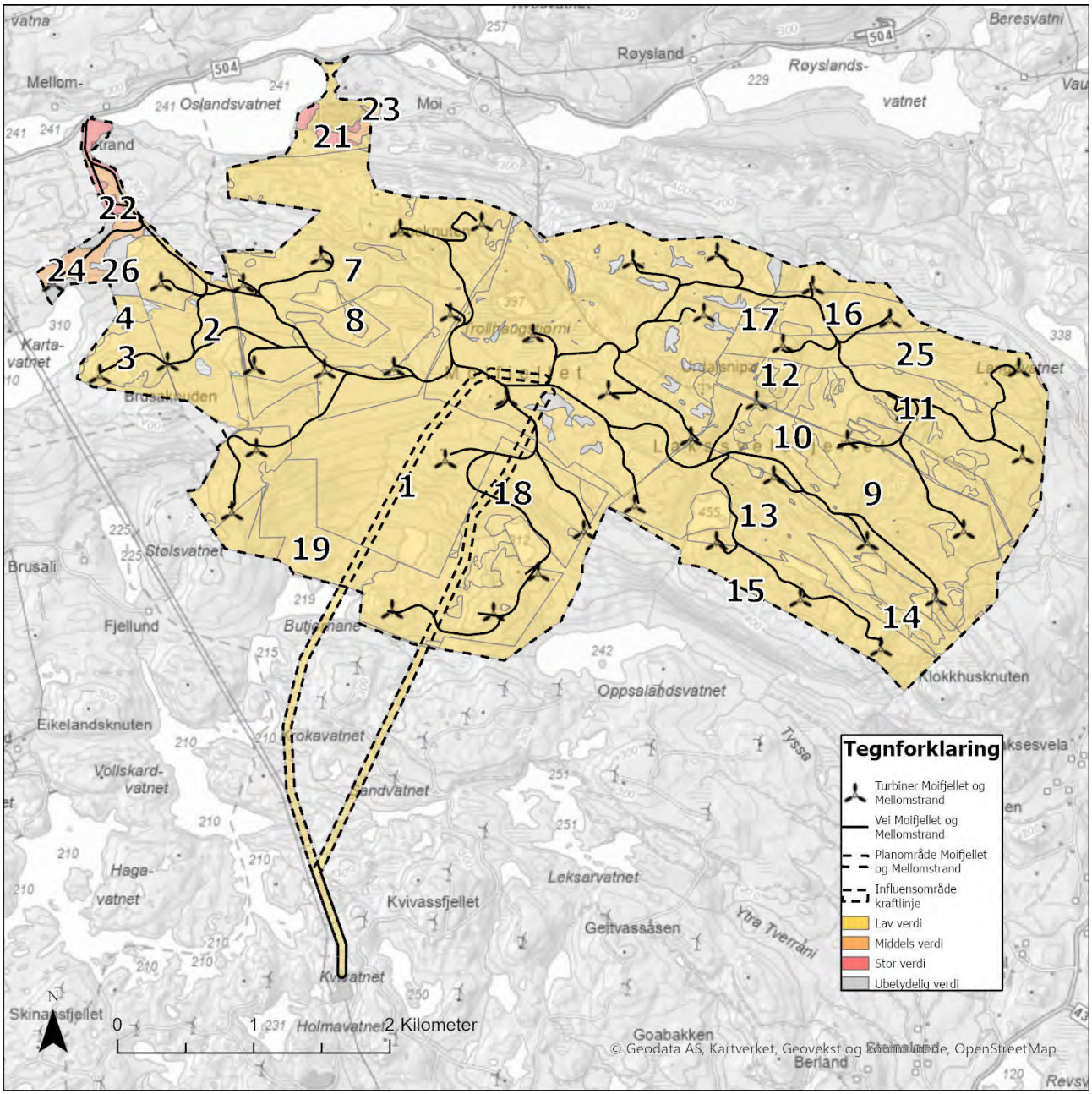
4.4 Verdi

Tabell 4-3: Delområder med verdisetting iht. V712. Nummerering henviser til delområder vist i figur 4-10.

Delområdenr.	Delområdenavn	Plassering verdiskala	Verdi iht. V712

1	Ognedalstølen beitelag		Noe verdi
2	Brusaknuden øst 1		Noe verdi
3	Brusaknuden vest 1		Noe verdi
4	Brusaknuden vest 2		Noe verdi
5	Vennedalen 1		Noe verdi
6	Vennedalen 2		Ubetydelig verdi
7	Store Dalen 1		Noe verdi
8	Store Dalen 2		Noe verdi
9	Lassen 1		Noe verdi
10	Lassen 2		Noe verdi
11	Støvedalen 1		Noe verdi
12	Støvedalen 2		Noe verdi
13	Syltreknuten 1		Noe verdi
14	Syltreknuten 2		Noe verdi
15	Steinskarsknuten		Noe verdi

16	Råtnedalen 1		Noe verdi
17	Råtnedalen 2		Noe verdi
18	Moifjellet sør 1		Noe verdi
19	Moifjellet sør 2		Noe verdi
20	Brusaknuden øst 2		Noe verdi
21	Brendehammaren 1		Stor verdi
22	Mellomstrand 1		Stor verdi
23	Brendehammaren, Liaknuten & Kodleknuten		Middels verdi
24	Mellomstrand 2		Middels verdi
25	Moifjellet øvrig		Noe verdi
26	Mellomstrand 3		Ubetydelig verdi



Figur 4-10: Verdikart for delområdene for de ulike registreringskategoriene og tiltaket med utlegg for vindturbiner, internveier og alternativer for kraftlinjetraséer. Nummereringen av delområdene henviser til delområdeinndelingen i tabell 4-2 og tabell 4-3.

4.5 Påvirkning og konsekvens

4.5.1 Generelt om påvirkning

Arealtap innen de ulike arealtypene regnes som den viktigste faktoren når det gjelder vurdering av påvirkning på landbruk (V712). For skogområder er økonomisk tap som følge av arealtapet den viktigste påvirkningen.

Tiltaket vil på ulike måter påvirke fulldyrka jord, innmarksbeiter, utmarksbeiter, og jakt og fiske som næringsgrunnlag. Den produktive skogen i området er noe spredt fordelt i og i utkantene av planområdet. Det er per i dag ikke forventet at tiltaket vil medføre vesentlige virkninger på dette

skogsarealet, da de produktive skogarealene ligger på arealer som det ikke planlegges å gjennomføre fysiske inngrep på eller i umiddelbar nærhet av. Produktiv skog som ligger ved Mellomstrand (særs høg til høg bonitet) kan bli påvirket om utforming av atkomstvei krever dette. Ved et slikt tiltak må eventuell påvirkning og avbøtende tiltak vurderes nærmere.

Innen planområdet er den største påvirkningen arealbeslag av beite. Anleggsveier kan føre til økt tilgjengelighet, noe som kan være positivt med hensyn til tilsyn, sanking og skjøtsel av beiteområder. Samtidig viser tidligere konsekvensutredninger til at nye veier kan føre til at dyr lettere trekker ut av området, og at økt menneskelig aktivitet kan være med på å stresse dyrene. Her kan utbygd veinett føre til at sau lettere trekker ned mot innmark eller ut av området. Dette kan videre føre til gjengroing av utmark og utfordringer mht. drift og sanking. Erfaringer fra andre land tilsier at beiteressurser fortsatt kan utnyttes etter utbygging[15]. Når det gjelder støy og påvirkning på beitedyr er kunnskapen begrenset. Det samme gjelder effekter på dyrs helse, kjøtt og melkeproduksjon, og deres bruk av direkte og indirekte berørte arealer. Økt trafikk i området vil øke faren for påkjørsel av husdyr. Alternativer for kraftlinjetraséer er planlagt i beiteområder (utmarksbeiter), hvor påvirkningen knyttes til arealbeslag ved mastepunktene. Permanent arealbeslag per mast er beregnet til 6-8 dekar. De fleste påvirkede områdene er større beitearealer med middels beitetrykk, og det forventes ikke at kraftlinjene vil være til hinder for videre beitedrift i området.

Tiltaket kan medføre driftsulemper f.eks. om tiltaket fører til oppstykking av teiger slik at dette vanskeliggjør tilkomst eller jordbearbeiding.

Tiltaket anslås i en driftsfase til å berøre 310-360 daa ved en gjennomsnittlig veibredde på 10 meter. Areal som blir berørt for hver vindturbin med tilhørende oppstillingsplass anslås å være ca. 30 x 60 meter (18 daa), men er ikke med i arealregnskap, da eksakt plassering og utforming for hver enkelt ikke er fastsatt. Totalt utgjør vindturbiner med oppstillingsplasser ca. 756 daa (42 vindturbiner x ca. 18 daa). Vindturbiner og oppstillingsplasser blir likevel slik plassert at det i hovedsak er beiteareal (kystlynghei; åpen jorddekt fastmark og åpen skrinn fastmark) som blir berørt. Det forventes ikke at vindturbiner og oppstillingsplasser som arealbeslag vil være til hinder for videre beitedrift i området.

Som beskrevet i kapittel 4.1.2 er totalt berørt areal anslått til 385 daa (atkomstvei og internveier) + 756 (vindturbiner og riggplasser) = 1141 daa. Moifjellet og Mellomstrand vindkraftverk vil likevel berøre kun mindre areal med fulldyrka jord og innmarksbeite. Anslag over berørt areal basert på foreløpig prosjekterte utlegg, er vist i tabell 4-4.

Tabell 4-4: Anslått berørt jordbruksareal (fulldyrka jord og innmarksbeite), basert på AR5 for atkomstvei og internveier i hele planområdet.

	Planområdet	
	AR5 fulldyrka jord	AR5 innmarksbeite
Berørt areal	0,9 daa	15,7 daa
Totalt i planområdet	76,1 daa	206,9 daa
Berørt areal, %	1,2 %	7,6 %

Anslått berøring av dyrkbar jord basert for atkomstvei og internveier, er vist i tabell 4-5.

[15] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/

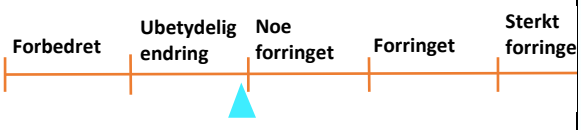
Tabell 4-5: Anslått berørt areal av dyrkbar jord for atkomstvei og internveier i hele planområdet.

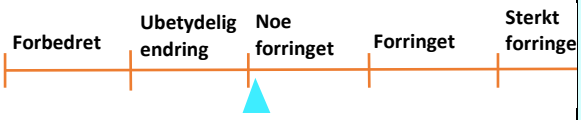
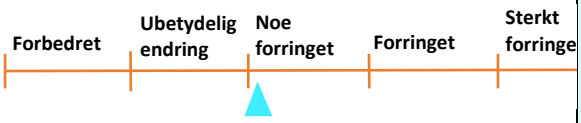
	Planområdet
Berørt areal	7,5 daa
Totalt i planområdet	394,0 daa
Berørt areal, %	1,9 %

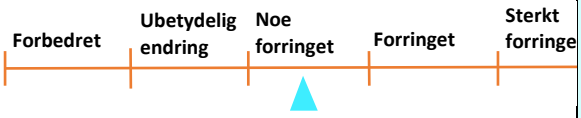
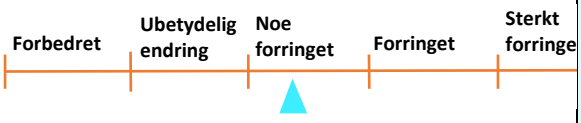
4.5.2 Påvirkning og konsekvens i driftsfasen

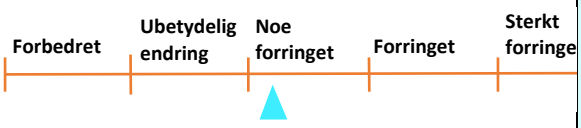
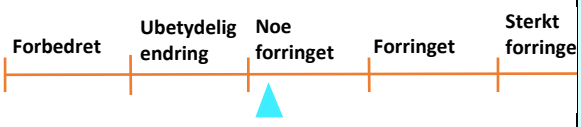
Påvirkning og konsekvens i driftsfasen på delområdene er oppsummert i tabell 4-6.

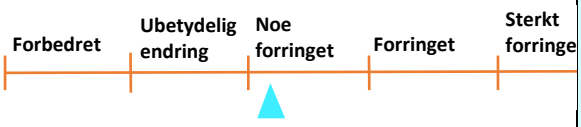
Tabell 4-6: Påvirkning og konsekvens av tiltaket på delområdene.

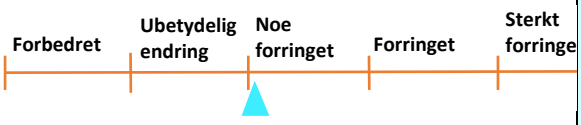
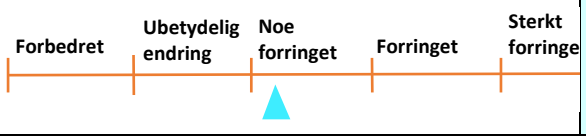
Delområdenr.	Delområde	Verdi	Påvirkning	Konsekvens
1	Ognedalstølen beitelag	Noe verdi	Det er planlagt to (2) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av alt. 1 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Dette vil også gjelde ved valg av alt. 2 for nettanlegg, men da i betydelig mindre grad. Tiltaket vil som følge av vindturbiner, internveier og kraftledning medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er dog ikke tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring, da området ikke er tildelt RMP-tilskudd i 2024 (ei heller 2023 og 2022), og synes derfor ikke å være et prioritert beiteområde. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade (0). 	Ubetydelig miljøskade (0)
2	Brusaknuden øst 1	Noe verdi	Det er planlagt én (1) vindturbin i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av dette medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir ubetydelig til noe miljøskade for delområdet (0/-). På bakgrunn av dette settes derfor konsekvensgrad til (marginalt) noe miljøskade (-).	Noe miljøskade (-)

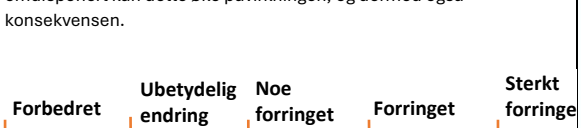
				
3	Brusaknuden vest	Noe verdi	Det er planlagt én (1) vindturbin i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av dette medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir ubetydelig til noe miljøskade for delområdet (0/-). På bakgrunn av dette settes derfor konsekvensgrad til (marginalt) noe miljøskade (-). 	Noe miljøskade (-)
4	Brusaknuden vest 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
5	Vennedalen 1	Noe verdi	Det er planlagt sju (7) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av alt. 1 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Dette vil også gjelde ved valg av alt. 2 for nettanlegg, men da i mindre grad. Tiltaket vil som følge av vindturbiner, internveier og kraftledning medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-).	Noe miljøskade (-)

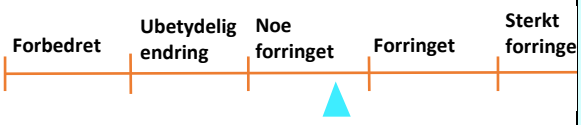
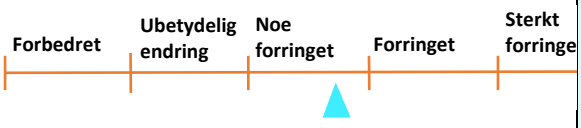
				
6	Vennedalen 2	Ubetydelig verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med ubetydelig verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
7	Store Dalen 1	Noe verdi	Det er planlagt seks (6) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
8	Store Dalen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
9	Lassen1	Noe verdi	Det er planlagt fire (4) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne	Noe miljøskade (-)

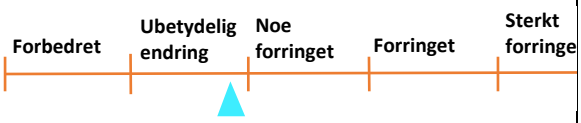
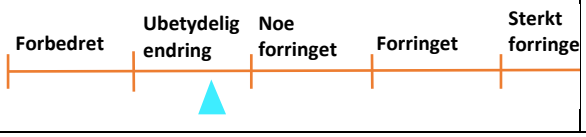
			benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	
10	Lassen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
11	Støvedalen 1	Noe verdi	Det er planlagt tre (3) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
12	Støvedalen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring.	Ubetydelig miljøskade (0)

			Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	
13	Syltreknuten 1	Noe verdi	Det er planlagt tre (3) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
14	Syltreknuten 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
15	Steinskarsknuten	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)

16	Råtnedalen 1	Noe verdi	Det er planlagt én vindturbin og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbin og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet fra ubetydelig til noe forringet. Ubetydelig til noe forringet påvirkning av området med noe verdi gir ubetydelig til noe miljøskade (0/-). På bakgrunn av dette settes derfor konsekvensgrad til (marginalt) noe miljøskade (-). 	Noe miljøskade (-)
17	Råtnedalen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
18	Moifjellet sør 1	Noe verdi	Det er planlagt seks (6) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av alt. 2 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Dette vil ikke gjelde ved valg av alt. 1 for nettanlegg. Tiltaket vil som følge av vindturbiner, internveier og nettanlegg medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)

19	Moifjellet sør 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved valg av alt. 1 for nettanlegg vil det bli etablert noen mastepunkter for kraftledning innenfor området. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
20	Brusaknuden øst 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
21	Brendehammaren 1	Stor verdi	Det er ikke planlagt atkomstvei innenfor området. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av dyrkajord som i dag er fulldyrka/overflatedyrka. Ved omdisponering av fulldyrka/overflatedyrka jord vil produksjonsgrunnlaget for arealet reduseres eller bortfalle. Påvirkningen vurderes til ubetydelig endring. Ubetydelig endring av området med stor verdi gir ubetydelig miljøskade for delområdet (0) *. *Det er viktig å nevne at omfanget av omdisponering av fulldyrka/overflatedyrka jord er styrende, og hvis betydelig areal blir omdisponert kan dette øke påvirkningen, og dermed også konsekvensen. 	Ubetydelig miljøskade (0)
22	Mellomstrand 1	Stor verdi	Det er planlagt atkomstvei innenfor området. Tiltaket vil som følge av dette medføre noe arealtap og oppsplitting av dyrkajord som i dag er fulldyrka/overflatedyrka, og dyrkbar jord. Ved omdisponering av fulldyrka/overflatedyrka jord vil produksjonsgrunnlaget for arealet reduseres eller bortfalle. Omfanget av tiltaket og nødvendige tilpasninger er styrende for hvor mye areal som blir påvirket. På bakgrunn av arealets totale størrelse (74,6 daa) og at tiltaket vil medføre en oppsplitting av fulldyrka/overflatedyrka jord på deler av arealet, men ikke omdisponere store arealer (kun til atkomstvei), vurderes påvirkningen til noe forringet.	Noe miljøskade (-)

			Noe forringelse av området med stor verdi gir noe miljøskade for delområdet (-) *. *Det er viktig å nevne at omfanget av omdisponering av fulldyrka/overflatedyrka jord og dyrkbar jord er styrende, og hvis betydelig areal blir omdisponert kan dette øke påvirkningen, og dermed også konsekvensen. 	
23	Brendehammaren, Liaknuten & Kodleknuten	Middels verdi	Det er ikke planlagt atkomstvei innenfor området. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av dyrkbar jord eller innmarksbeite. Ved omdisponering av fulldyrka/overflatedyrka jord vil produksjonsgrunnlaget for arealet reduseres eller bortfalle. Omfanget av tiltaket og nødvendige tilpasninger er styrende for om areal kan bli påvirket. På bakgrunn av dette vurderes påvirkningen til ubetydelig endring. Ubetydelig endring av området med middels verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
24	Mellomstrand 2	Middels verdi	Det er planlagt atkomstvei og internveier innenfor betydelige deler av området. Tiltaket vil som følge av dette medføre noe arealtap og oppsplitting av innmarksbeite. Ved omdisponering av innmarksbeite vil ressursgrunnlaget for arealet reduseres eller bortfalle. Omfanget av tiltaket og nødvendige tilpasninger er styrende for hvor mye areal som blir påvirket. På bakgrunn av arealets totale størrelse (182,7 daa) og at tiltaket vil medføre en oppsplitting av innmarksbeite på større deler av arealet, men ikke omdisponere store arealer (kun til atkomstvei og internveier), vurderes påvirkningen til noe forringet. Noe forringelse av området med middels verdi gir noe miljøskade for delområdet (-) *. *Det er viktig å nevne at omfanget av omdisponering av innmarksbeite er styrende, og hvis betydelig areal blir omdisponert kan dette øke påvirkningen, og dermed også konsekvensen. 	Noe miljøskade (-)
25	Moifjellet øvrig	Noe verdi	Det er planlagt åtte (8) vindturbiner i området, samt internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av både alt. 1 eller 2 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Tiltaket vil som følge av vindturbiner, internveier og nettanlegg medføre noe arealtap og oppsplitting av et kystlyngheiareal som er potensialt utmarksbeite (inngår ikke i beitelagsområde og er ikke tildelt RMP-tilskudd i 2024). En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er ikke tildelt RMP-tilskudd i 2024 innenfor delområdet. Området omfatter også areal som er kategorisert som ikke	Ubetydelig miljøskade (0)

			relevant i jordbrukssammenheng. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade (0). 	
26	Mellomstrand 3	Ubetydelig verdi	Det er ikke planlagt vindturbiner innenfor delområdet. Det er planlagt internvei innenfor en liten del av delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap av betydning. Det er ikke tildelt RMP-tilskudd i 2024 innenfor delområdet. Tiltaket vil ikke medføre arealbeslag på produktiv skog eller dyrkbar jord innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med ubetydelig verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)

Det forventes ikke arealtap av produktiv skog i forbindelse med tiltaket og dermed er det vurdert ubetydelig konsekvens for skogbruk.

Hverken alternativ 1 eller 2 for nettanlegg forventes å ha annet enn ubetydelig konsekvens for landbruk.

4.5.3 Oppsummering av påvirkning og konsekvens

Anslått arealbeslag innen kategoriene er oppsummert i tabell 4-4 og tabell 4-5. Konsekvensgraden vurderes i forhold til 0-alternativet, som per definisjon har ubetydelig konsekvens (0).

Det er i hovedsak kun ett alternativ for vindkraftverket. Alternativene dreier seg om alternativ for nett-tilknytning (1 eller 2). For de fleste delområdene har alternativene for nett-tilknytning liten betydning. De to alternativene for nett-tilknytning medfører tilnærmet lik påvirkning på delområder med lik funksjon og verdi, og det er derfor ikke foretatt en rangering av de to alternativene med hensyn til foretrukket trasé.

Den samlede konsekvensen for tema landbruk vurderes å være noe negativ konsekvens (tabell 4-7). Det er overvekt av delområder med ingen/ubetydelig konsekvens, hvorav alle er lokalisert på areal som ikke påvirkes direkte av tiltaket, eller i mindre omfang. Videre er det 12 delområder hvor påvirkningen vurderes til noe konsekvens, som følge av noe arealtap og oppsplitting av delområdene. I tillegg er det det usikkerhet knyttet til beitedyrenes respons på vindturbinene.

Tabell 4-7: Samlet konsekvens for tiltaket

Delområder	Nullalternativet	Moifjellet og Mellomstrand vindkraftverk	
		Alternativ 1	
		Nettanlegg 1	Nettanlegg 2

Ognedalstølen beitelag	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Brusaknuden øst 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Brusaknuden vest 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Brusaknuden vest 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Vennedalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Vennedalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Store Dalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Store Dalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Lassen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Lassen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Støvedalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Støvedalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Syltreknuten 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Syltreknuten 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Steinskarsknuten	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Råtnedalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Råtnedalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Moifjellet sør 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Moifjellet sør 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Brusaknuden øst 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Brendehammaren 1	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Mellomstrand 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Brendehammaren, Liaknuten & Kodleknuten	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Mellomstrand 2	0	Noe miljøskade (-)	Noe miljøskade (-)
Moifjellet øvrig	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Mellomstrand 3	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Avveining		Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (15 av 26 delområder), men et	

		relativt høyt antall delområder med noe miljøskade (11 av 26) trekker opp den samlede konsekvensen.	
Samlet vurdering		Noe negativ konsekvens	Noe negativ konsekvens
Rangering	1	2	2
Forklaring til rangering	Det er lite som skiller alternativene for nett-tilkobling, og de er derfor rangert helt likt. Nullalternativet rangeres som nummer 1 da det ikke er knyttet noen konsekvens til dette. Alternativ 1 er rangert som nummer 2, etter nullalternativet.		

4.5.4 Tiltakets påvirkning og konsekvens i anleggsfasen

I anleggsfasen forventes tiltaket å medføre midlertidig arealbeslag, anleggstrafikk og støy. Deler av planområdet vil antagelig være utilgjengelig pga. økt trafikk og støy vil kunne medføre forstyrrelser og økt stressnivå for beitedyr, samt øke faren for påkjørsel og skader fra maskiner og utsyr. Midlertidige arealbeslag og for eksempel kjøreskader kan ha langtidsvirkninger[16]. Avbøtende tiltak for å redusere negative virkninger i anleggs – og driftsfase er oppsummert i kapitel 7 Avbøtende tiltak

5 Alternativ 2 – Moifjellet vindkraftverk

5.1 Planområdet, arealinngrep og komponenter

5.1.1 Valg av lokalitet

I Sør-Norge er gjennomsnittlig vindstyrke høyest fra sørvestspissen mellom Rogaland og Agder og videre nordover langs Langfjella. De mellomhøye fjellområdene innenfor Jærstrendene peker seg ut nasjonalt ved å ha svært god vindressurs og moderat terrengkompleksitet. Det er også relativt korte avstander til mulige ilandføringssteder, til egnet offentlig veinett og til mulige tilknytningspunkt til regional-/sentralnettet. Dette har da også medført at det allerede er bygd ut en rekke vindkraftverk i regionen.

Moifjellet ligger noe høyere enn omlandet og har svært gode vindressurser. Tidligere gjennomførte vindmålinger fra 2011/2012 er benyttet for å estimere vindhastighet og produksjon. Vinden varierer over planområdet fra 7-10 m/s. Middelvind i foreløpige produksjonsestimater er i underkant av 9 m/s. Dette anses å være særdeles gode vindressurser. E39 ligger et par km mot øst, og fv. 504 like nedenfor fjellet i nord. Det går ei sentralnettslinje like vest for fjellet, og Bjerkreim sentralnettstasjon ligger 4-5 km mot sør. En vindkraftutbygging her framstår derfor som teknisk og økonomisk svært velegnet.

5.1.2 Planområdet

Tiltaket Moifjellet vindkraftverk omfatter et planområde på totalt 16,3 km^2 eller 16307 dekar, Bjerkreim kommune, Rogaland fylke (se figur 5-1). Deler av strekningene for alternativer for nett-tilknytning strekker seg utenfor planområdet. Her er det lagt til grunn et ryddebelte på 30 meter ved avgrensning av influensområde (se figur 5-2 og figur 5-3).

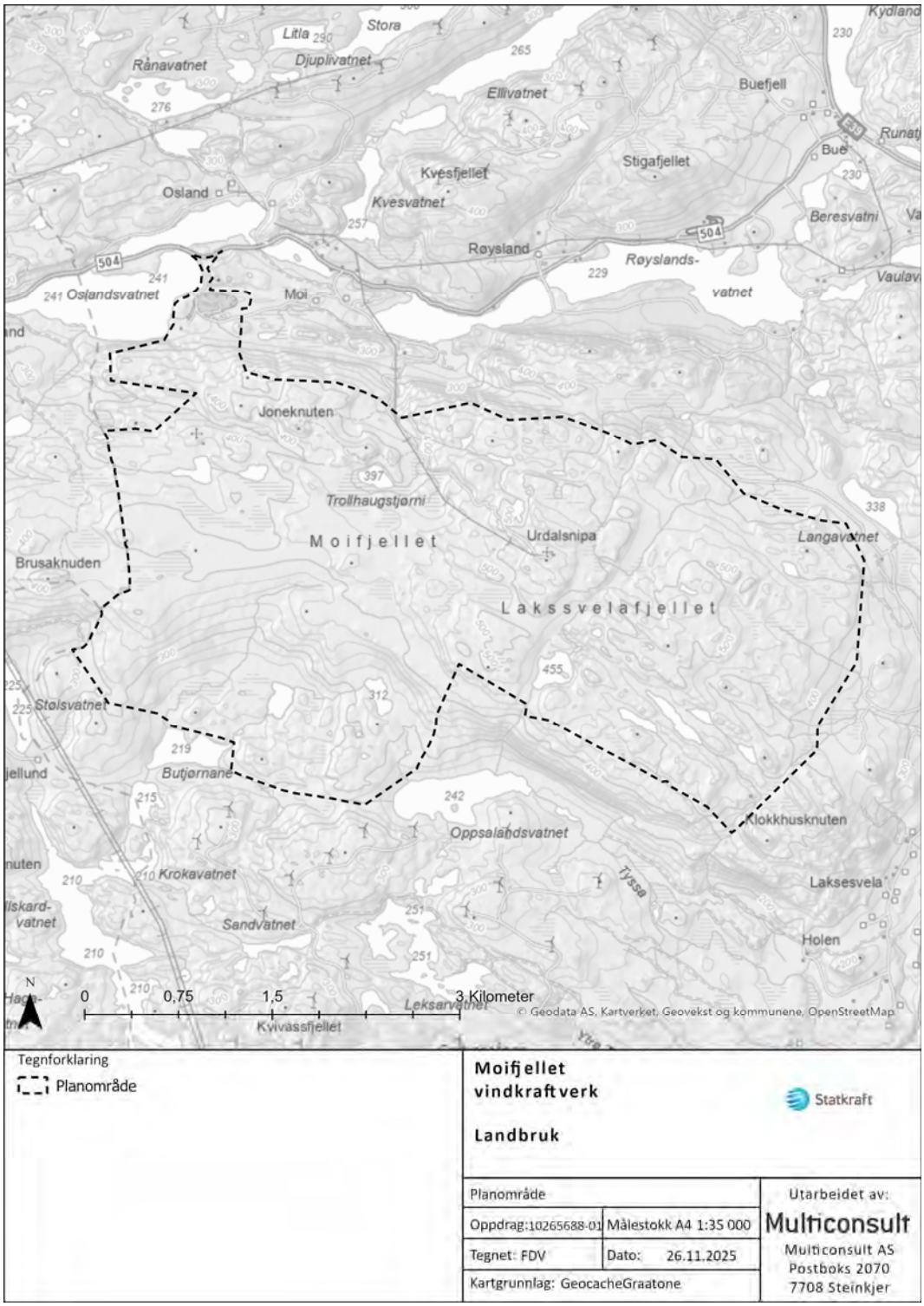
Eksempelutlegget som ligger til grunn for konsekvensutredningen omfatter:

- Atkomstvei Bjerkreim 2,6 km
- Internveier ca. 33 km

[16] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/

- 38 vindturbiner med 200 m totalhøyde med fundamenter og kranoppstillingsplasser
- Jordkabler i internveier fra vindturbiner til ny Moifjellet transformatorstasjon
- Sentral transformatorstasjon på Moifjellet, mellom Svarteknut og Knudane
- Sentralt driftsbygg på Moifjellet, øst på Botnabringane
- To alternative ca. 5 km lange traséer for nettilknytning i luftledning fra ny Moifjellet transformatorstasjon til eksisterende Bjerkreim transformatorstasjon, som må utvides med en ny transformator, se figur 5-2.
- Masseuttak/steinbrudd for veier og plasser
- Midlertidige arealer for rigg og mellomlagring

Totalt berørt areal (inkludert atkomstvei) før istandsetting er ca. 1050 dekar. Etter istandsetting er det anslått til ca. 370 dekar permanent areal (ca. 2,2 % av planområdet).



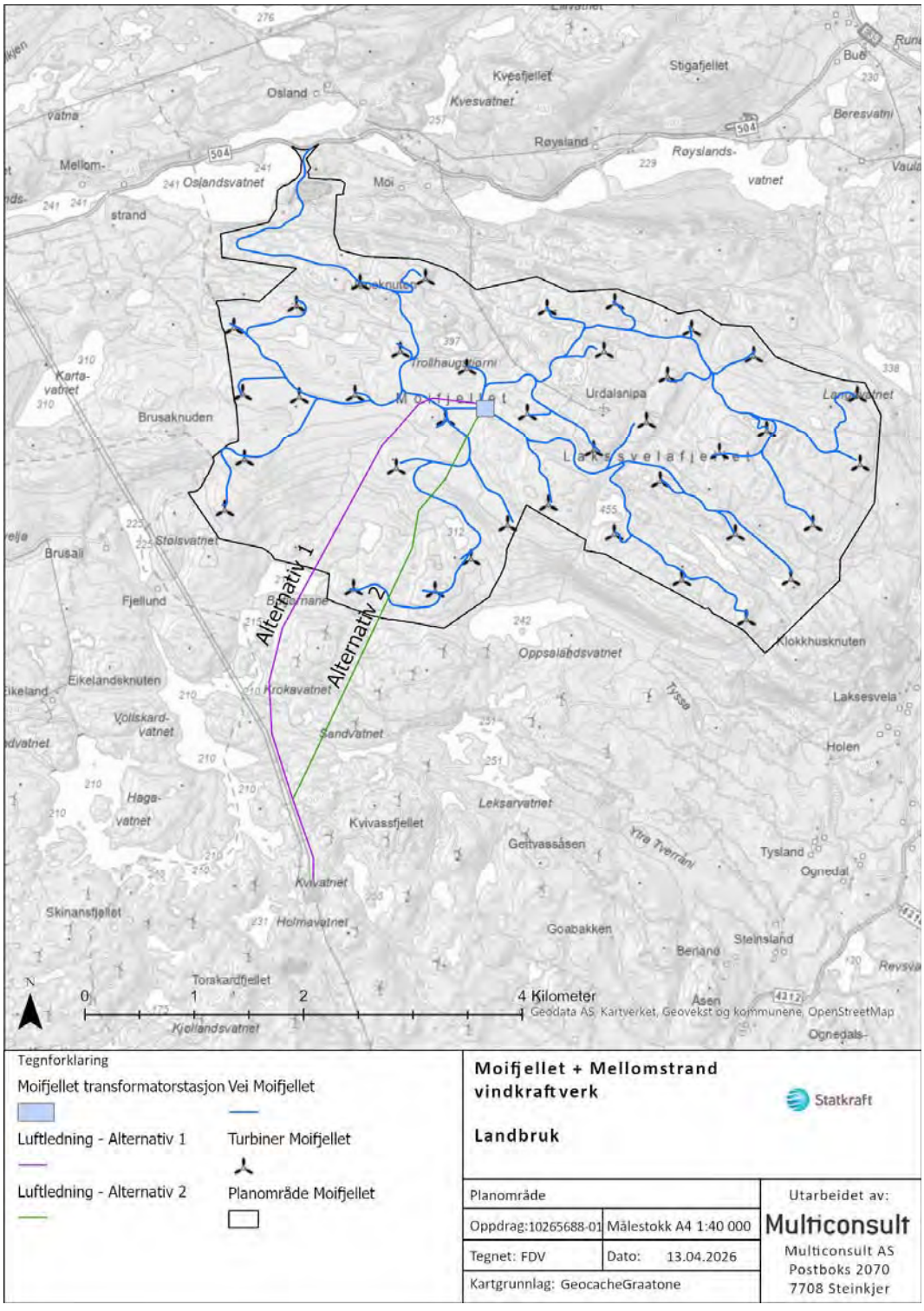
Figur 5-1. Planområde Moifjellet vindkraftverk.

5.1.3 Arealinngrep

Moifjellet vindkraftverk vil medføre følgende hovedtyper av arealinngrep:

- Atkomstvei og internveier med møte- og snuplasser, med rør/kulverter over vassdrag
- Kranoppstillingsplasser for montering av vindturbiner
- Fundamenter for vindturbiner
- Jordkabler i vei fra vindturbiner til transformatorstasjon vest for Urdalsnipa
- Tomt for samlokalisert transformatorstasjon og driftsbygg

- Arealer for riggområde og for mellomlagring av komponenter. Dette vil være midlertidige arealer som enten samordnes med arealer til varig bruk, tilbakeføres eller legges på allerede opparbeidede arealer utenfor planområdet. Dette avklares i detaljplan.
- Fundamenter for master til nettilknytning fra transformatorstasjon til Bjerkreim transformatorstasjon, sør for planområdet
- Massetak for uttak av stein til veier og plasser. Disse vil lukkes og revegeteres i den grad de ikke inngår i varige anlegg.



Figur 5-2. Alternativer for kraftledning til Bjerkreim transformatorstasjon i sør. Alternativ 1 er prioritert.

5.2 Kunnskapsgrunnlaget inkl. verdivurderinger

Dette kapitlet gir en oversikt over dagens situasjon og eksisterende kunnskap om landbruk innen utredningsområdet. Landbruk omfatter jordbruk, utmark og skogbruk. Verdiene som påvises her legges til grunn for de neste kapitlene med inndeling og verdisetting av delområder.

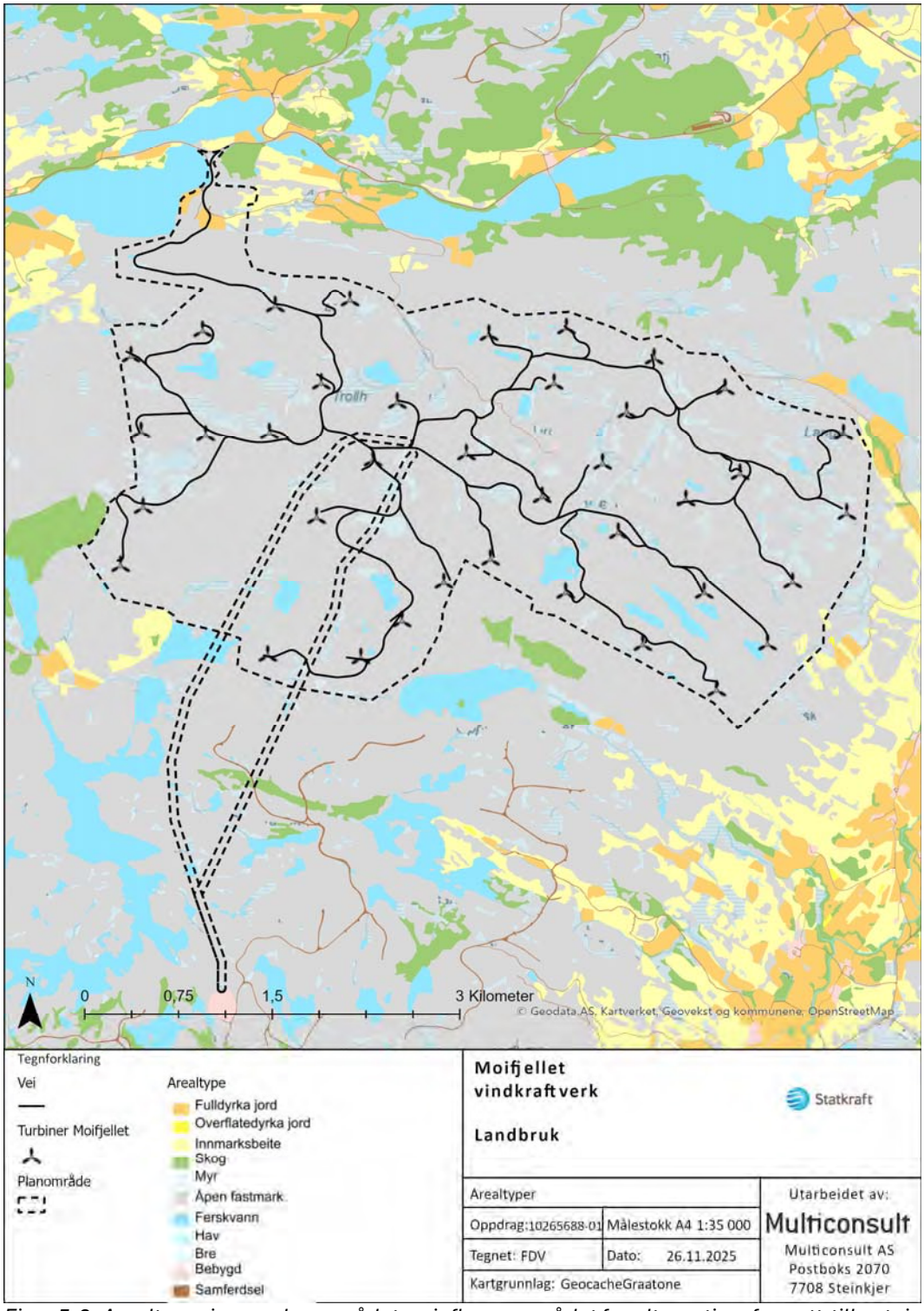
5.2.1 Jordbruk

Helt nord ved atkomstvei er det noe fulldyrka jord og innmarksbeiter (figur 5-3). I tillegg er det spredte områder med dyrkbar jord (figur 5-4). Innmarksbeitene beites av sau og storfe.

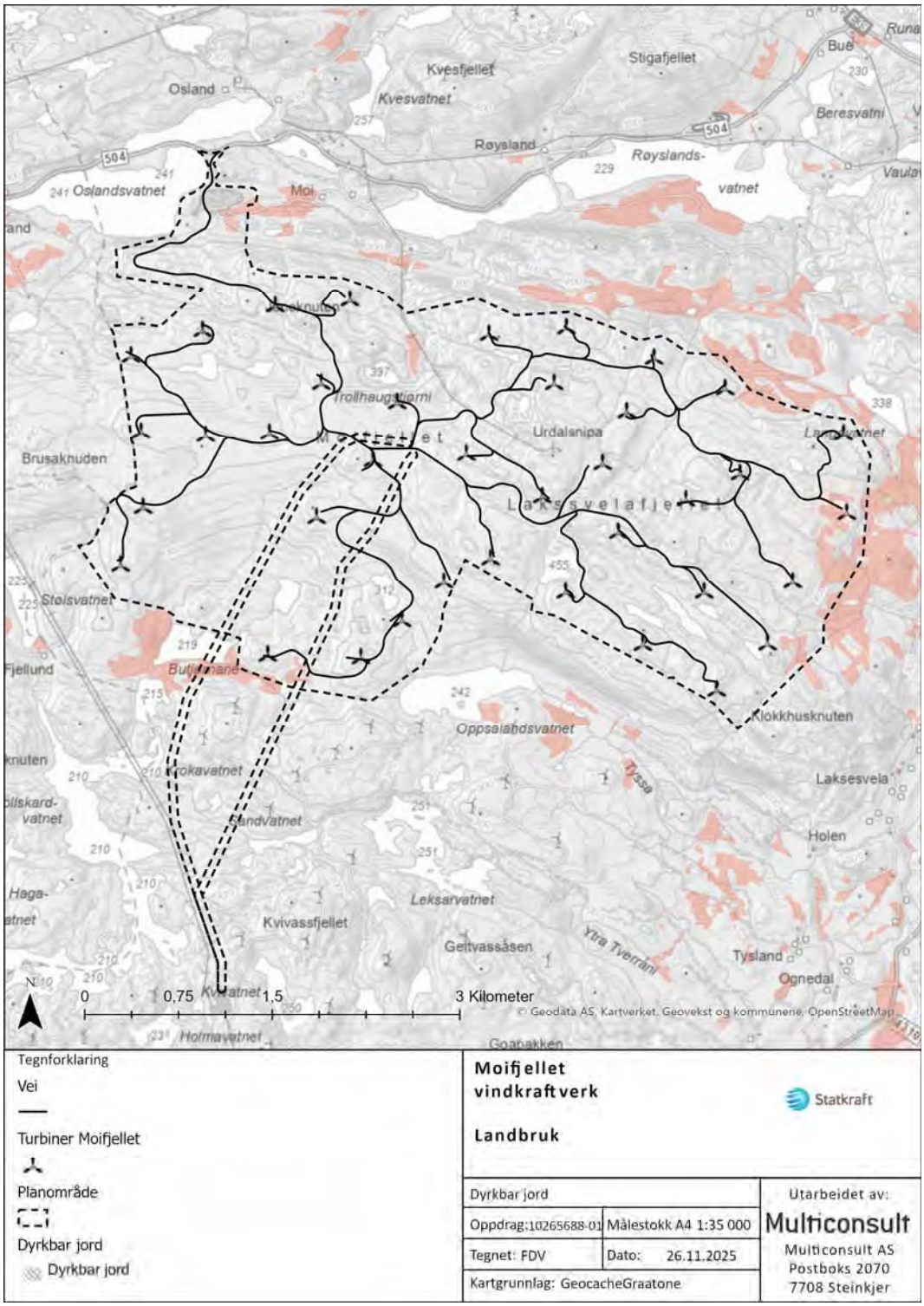
Kategorien omfatter alt jordbruksareal, det vil si fulldyrka jord, overflatedyrka jord og innmarksbeite, samt dyrkbar jord. Oversikt over jordbruksareal i disse kategoriene, samt produktiv skog er hentet fra Arealressurskart (AR5) og NIBIOs kartlag dyrkbar jord, tilgjengelig fra NIBIOs kartløsning Kilden. Areal av hver kategori innen planområdet og influensområdet for alternativer for nett-tilknytning er beregnet ved hjelp av NIBIOs tjeneste «Arealrapport» i Kilden. Totalt areal for kategoriene innen influensområdet er oppsummert i tabell 5-1 og illustrert i figur 5-3 og figur 5-4.

Tabell 5-1: Areal i kategoriene fulldyrka jord, overflatedyrka jord, innmarksbeite, dyrkbar jord og produktiv skog innen planområdet og influensområdet for alternativer for nett-tilknytning. Areal er hentet fra Kildens tjeneste Arealrapport som er basert på AR5 og kartlaget dyrkbar jord.

Arealkategori	Fulldyrka jord	Overflatedyrka jord	Innmarksbeite	Dyrkbar jord	Produktiv skog
Areal i dekar	39,2	0	46,2	345,5	0,1



Figur 5-3: Arealtyper innen planområdet og influensområdet for alternativer for nett-tilknytning. Kilde: WMS-laget AR5 fra NIBIO.

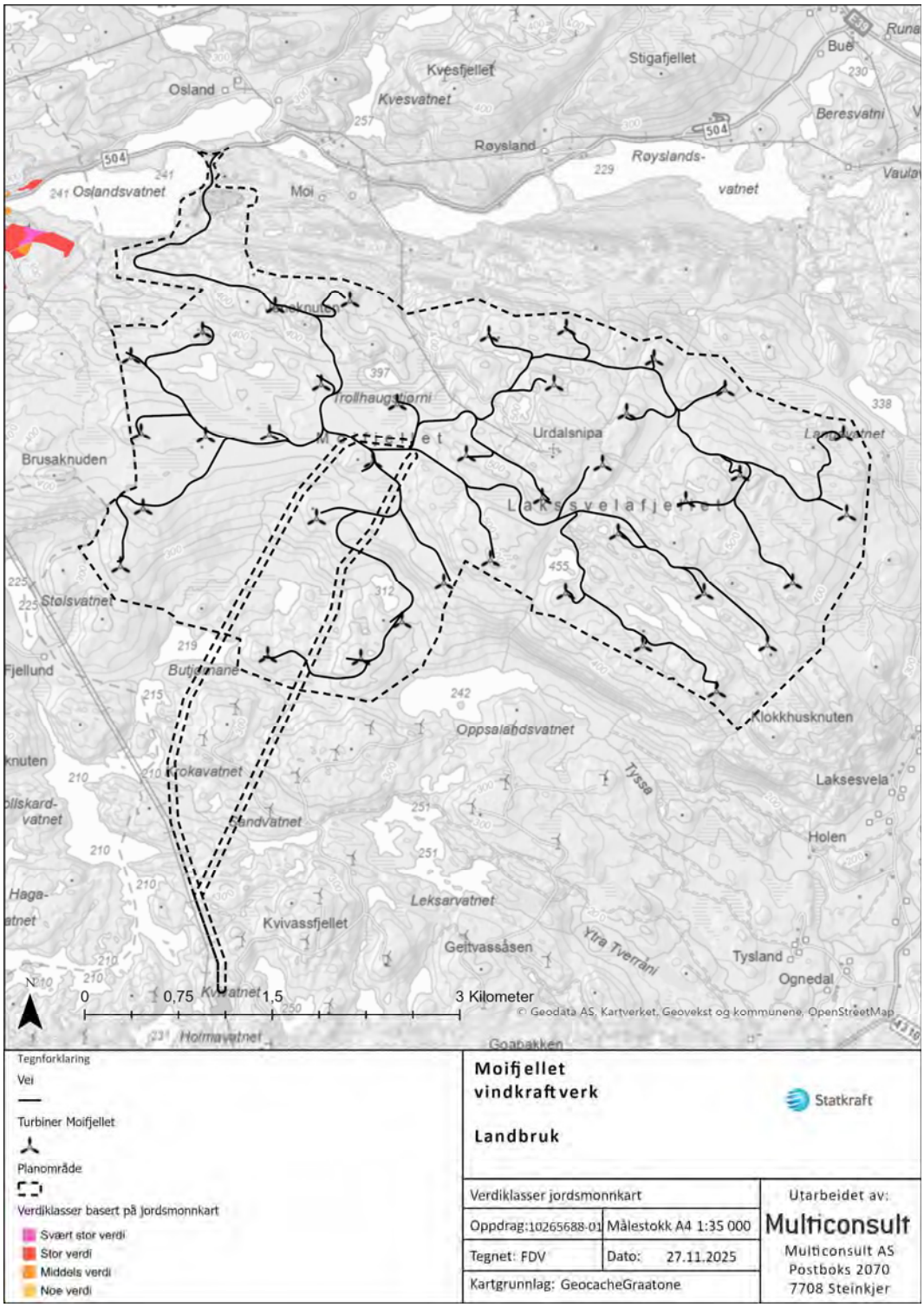


Figur 5-4: Dyrkbar jord i planområdet og influensområdet for alternativer for kraftlinjetrasé. Kilde: WMS-tjenesten Dyrkbar jord fra NIBIO.

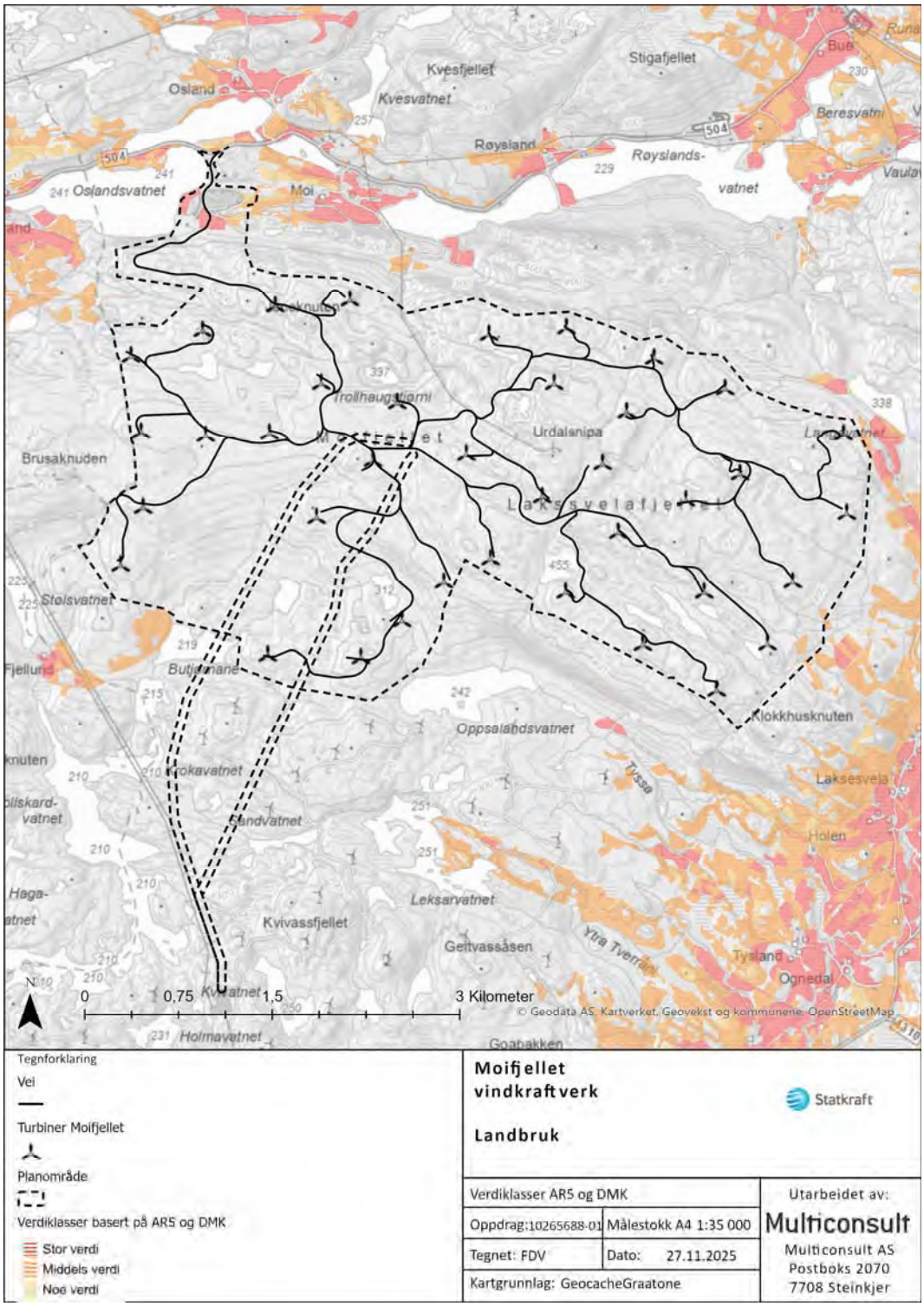
Kartlaget «Verdiklasser basert på jordsmonnskart» fra NIBIO viser ingen arealer av verdi (hverken noe, middels eller stor verdi) innenfor planområdet (figur 5-5). Kartlaget «Verdiklasser basert på AR5 og DMK» fra NIBIO viser verdi for de fulldyrka arealene og innmarksbeite i resten av planområdet og influensområdet for alternativer for nett-tilknytning. Kartlaget er utviklet for bruk i konsekvensutredninger etter V712 og brukes for områder uten jordsmonnskart[17]. Disse arealene er av

[17] https://www.nibio.no/tema/jord/arealressurser/andre-kart/verdiklasser-for-jordbruksareal-og-dyrkbar-jord/verdiklasser-basert-pa-ar5-og-dmk

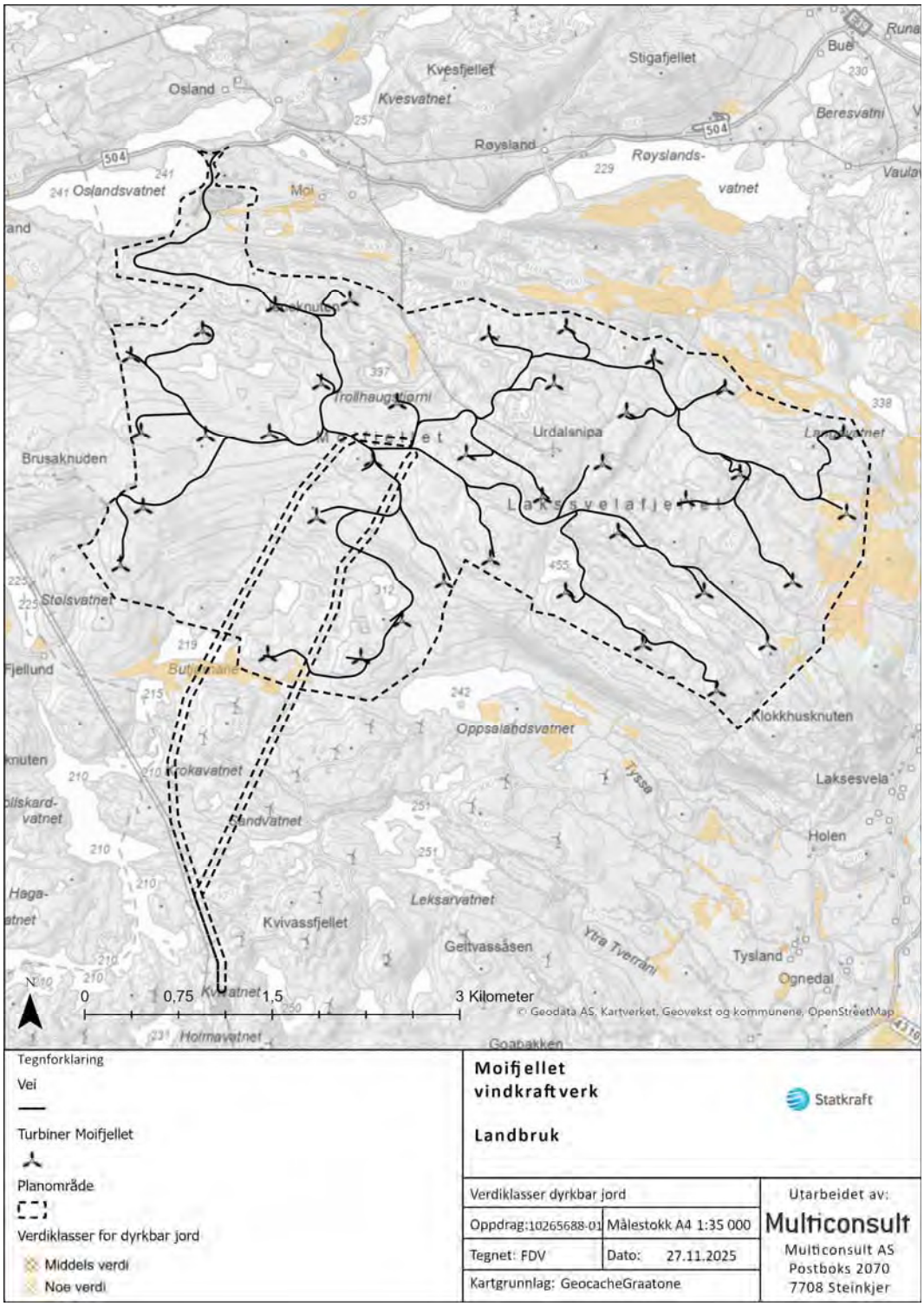
middels og stor verdi (figur 5-6). Ifølge kartlaget «Verdiklasser for dyrkbar jord» fra NIBIO er den dyrkbare jorden innen planområdet av noe verdi (figur 5-7).



Figur 5-5: Verdiklasser basert på jordsmonnskart for jordbruksareal (fulldyrka jord og innmarksbeite). Kilde: WMS-tjenesten Verdiklasser basert på jordsmonnkart fra NIBIO.



Figur 5-6: Verdiklasser for jordbruksareal basert på arealressurskart (AR5) og digitalt markslagkart (DMK). Kilde: WMS-tjenesten Verdiklasser basert på AR5 og DMK fra NIBIO.



Figur 5-7: Verdiklasser for dyrkbar jord, hentet fra Kilden. Den dyrkbare jorden innen planområdet er av noe verdi (Kilden, NIBIO).

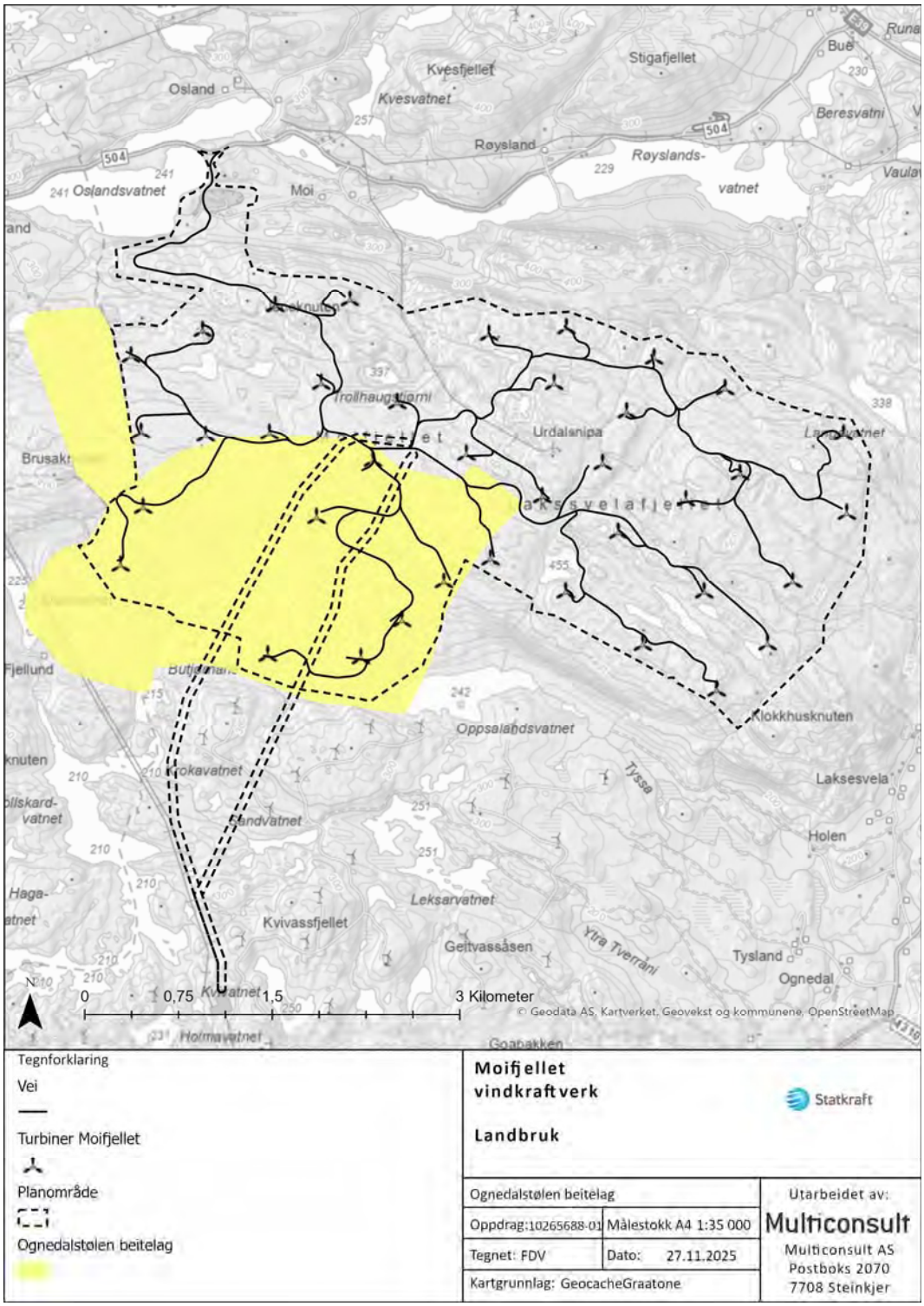
5.2.2 Utmark

Planområdet er i hovedsak et åpent utmarksområde som består av kystlynghei, berg, myr og vann. Kategorien utmark omfatter beiteområder for husdyr, viktige områder for vilt som jaktressurs og ferskvannsfiske i næringssammenheng. Kilder til informasjon om utmarksressurser og bruk av disse, er hentet fra kartlaget «utmarksbeite» som er tilgjengelig fra Kilden, Skjøtselsplan for del av

Lakssvelafjellet[18], Overordnet skjøtselsplan for kystlynghei i Bjerkreim vindkraftverk[19], informasjon fra Statsforvalteren i Rogaland om regionalt miljøprogram i landbruket, informasjon fra Bjerkreim kommune om beitebruk og kontakt med grunneiere og Ognedalstølen beitelag. Også grunnlag fra SSB ligger til grunn for vurderingen.

WMS-tjenesten beitedata, fra NIBIO viser avgrensning av Ognedalstølen beitelag i sør-vestlig del av planområdet (se figur 5-8). Beitelaget består av 15 medlemmer og det var ifølge Kilden sluppet 1018 sau (inkl. lam) på beite i 2023. I tillegg til beitelaget beiter det god del sau innen planområdet, samt noe storfe. Ifølge informasjon mottatt fra Bjerkreim kommune beiter det ca. 1 350 sau (inkl. lam) og 95 kyr (inkl. ungdyr) i utmarka i området. Dette er tall basert bl.a. på produksjonstilskudd og er ikke nøyaktige tall for hvor mange dyr som beiter innen det avgrensede planområdet.

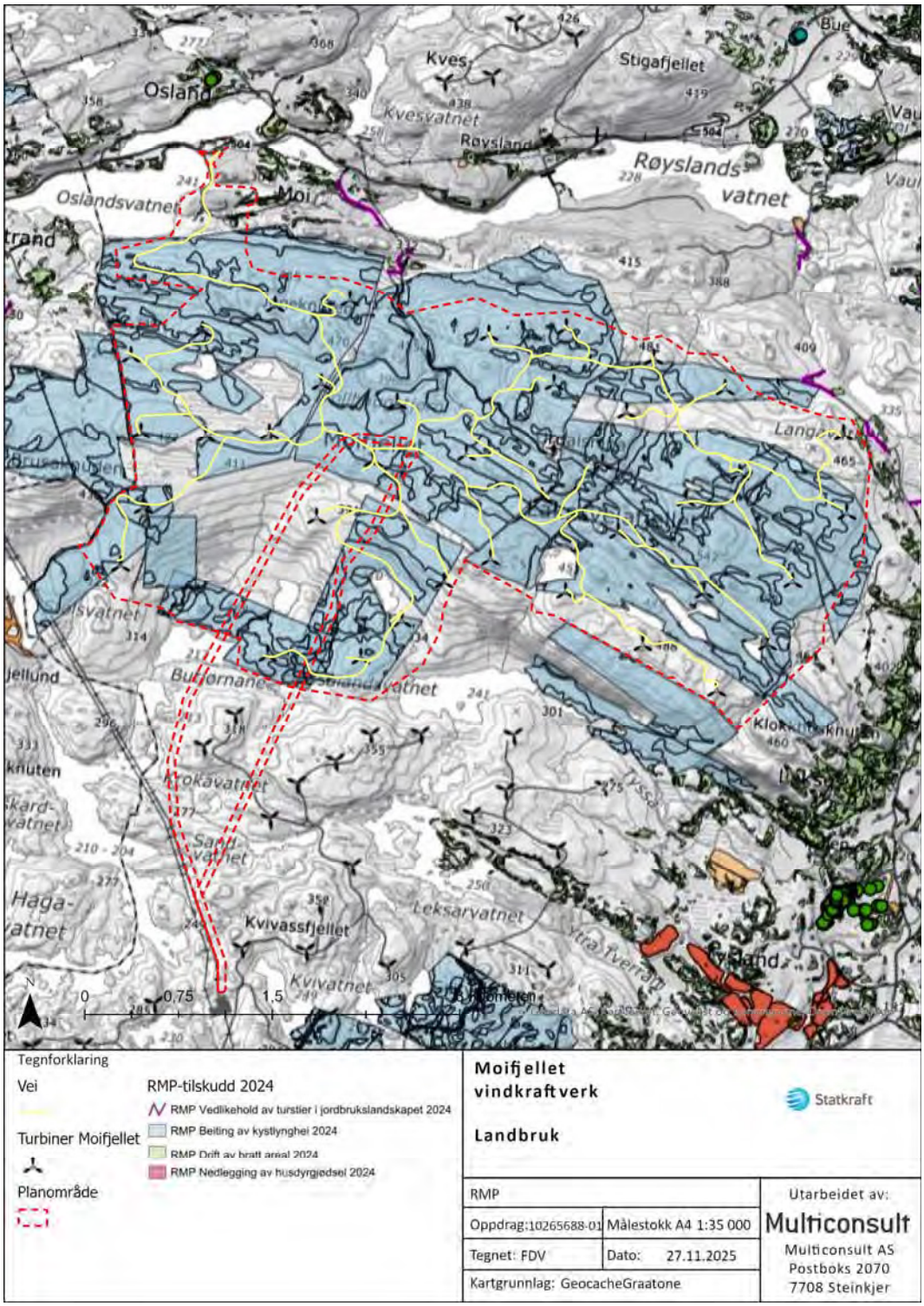
[18] Harstad, B. (2020). Skjøtselsplan for del av Lakssvelafjellet, gbnr. 61/4 og 58/1. Kystlynghei i Bjerkreim kommune, Rogaland fylke.
[19] Engen Torvik, S. (2022). Overordnet skjøtselsplan for kystlynghei i Bjerkreim vindkraftverk. Oppdatert etter kartlegging av naturtyper 2022. Ecofact rapport 907.



Figur 5-8: Avgrensning for Ognedalstølen beitelag. Kilde: WMS-tjenesten beitedata fra NIBIO.

Ifølge kartlaget «RMP søknadsdata 2024», tilgjengelig fra Temakart-Rogaland[20], er det flere driftsenheter som har søkt om midler fra regionalt miljøprogram for beiting av kystlynghei innen planområdet (se figur 5-9). Ifølge data mottatt fra Statsforvalteren i Rogaland er alle arealene med kystlynghei i tilstandsklasse «svært viktig». Tilstandsklassen var for dette arealet i fjor basert på verdi i DN Håndbok 13, som tidligere var standard kartleggingsmetode for naturtyper. Når området er oppdatert med NiN-kartlegging, vil tilstandsklassene baseres på denne.

[20] https://temakart-rogaland.no/rmp



Figur 5-9: Areal hvor det har blitt søkt om tilskudd via Regional miljøprogram (RMP). De fleste arealene gjelder tilskudd knyttet til beiting av kystlynghei, mens det er også noen mindre areal som gjelder tilskudd knyttet til drift av bratt areal, nedlegging av husdyrgjødsel og vedlikehold av turstier i jordbrukslandskapet. Kilde: Temakart-Rogaland.

For en del av området er det av Norsk landbruksrådgivning ved Birgitt Harstad utarbeidet en skjøtselsplan for kystlynghei for to av eiendommene innen planområdet[21]. Denne beskriver at det er varierende beitetrykk innen arealet skjøtselsplanen er skrevet for. Basert på befaring i forbindelse med konsekvensutredningen for naturmangfold, vurderes det at området nokså homogent, og at denne

[21] Harstad, B. (2020). Skjøtselsplan for del av Lakssvelafjellet, gbnr. 61/4 og 58/1. Kystlynghei i Bjerkreim kommune, Rogaland fylke.

beskrivelsen dermed passer godt for det meste av utmarksbeitearealet på Moifjellet. Mye av kystlyngheia er dominert av blåtopp, som er en viktig beiteplante langs kysten[22]. Generelt vurderes beitet som godt og med middels utnyttelsesgrad, da det er varierende utnyttelsesgrad i området. På bakgrunn av dette og kriterier i verditabellen vurderes utmarksbeitet som av noe.

I forbindelse med Bjerkreim vindkraftverk har Ecofact utarbeidet en skjøtselsplan for kystlynghei. Begge alternativene for nett-tilknytning går gjennom deler av området som inngår i denne skjøtselsplanen. Skjøtselsplanen beskriver at det er lavt til moderat beitetrykk. Dette var også inntrykket utreder fikk i forbindelse med kartlegging av naturtyper i området.

I tillegg til utmarksbeite for husdyr, drives det noe jakt innen planområdet. Ifølge viltforvalter i Bjerkreim kommune jaktes det hovedsakelig hjort, men også rådyr, elg og småvilt, herunder rev, hare, skogsfugl, rugde og mår. Tall fra SSB viser at det i kommunen jaktes mest hjort. I jaktåret 2023-2024 ble det felt 224 hjort og 50 rådyr. For hjort er trenden stigende. Av småvilt ble det innen kommunen felt 50 rev i 2022 – 2023. Tall for annet småvilt og fugl var ikke tilgjengelig, med unntak av orrfugl, hvor det i 2022-2023 ble felt 0. Ifølge Bjerkreim jeger – og fiskeforening benyttes området til jakt, men ikke i like stor utstrekning som områdene rundt. Dette påvirker verdisettingen.

Fiske i området er hovedsakelig knyttet til områdene rundt Moifjellet, som vannene langs fv. 504 fra Bue (E39) til Varhaug og Undheim, hvor det drives omfattende fiske etter ørret og røye. Spesielt er Røyslandsvatnet som grenser til planområdet i nord et viktig fiskevann som benyttes bl.a. til notfiske. Sammenlignet med områdene rundt, drives det lite fiske innen planområdet, men ifølge grunneier er Trollhaugstjørni et fiskevann på Moifjellet der det er satt ut fisk med tanke på fritidsfiske. Det skal også ha blitt satt ut fisk i andre vann på Moifjellet, men status her er usikker. Fiske på Moifjellet er ikke knyttet til næringsfiske.

Den næringsmessige betydningen av jakt og fiske vurderes samlet sett til å ha en viss betydning, og jakt og ferskvannsfiske vurderes derfor til å ha **noe verdi**.

5.2.3 Skogbruk

Kategorien omfatter produktiv skog med økonomisk verdi. Kilder til informasjon om skogbruk er Arealressurskart (AR5, NIBIO) og Skogressurskart (SR16, NIBIO) som er tilgjengelig fra Kilden.

I følge AR5 er det total 0,1 dekar produktiv skog innen planområdet (figur 5-3 og

tabell 5-1). Produktiv skog finnes ved enden av atkomstvei ved Dyrdalsfjella. Produktiv skog i enden av atkomstvei er ifølge informasjon gitt i kartlaget «AR5 bonitet», av låg bonitet. I forbindelse med kartlegging av naturmangfold ble det observert noen teiger med plantet sitka– og lerkeskog innen planområdet. Disse er synlige på flyfoto. Teigene antas ikke berørt, og er derfor heller ikke videre omtalt i utredningen.

Alternativ 2 for nett-tilknytning berører noe skog. Dette er plantet skog på impediment, det vil si skog med en forventet produksjonsevne på mindre enn 0,1 m^3 per dekar[23]. Den er også klassifisert som uproduktiv i AR5. På bakgrunn av dette omtales ikke denne skogen videre.

Tiltaket vurderes å ha ingen/ubetydelig konsekvens for skogbruk.

[22] http://info.nlr.no/resources/10302/Grovforepost_2020/Nr_14_2020/HUSDYRBEITE_i_UtMark_2009_utg_2.pdf
[23] https://www.nibio.no/tema/jord/arealressurser/ar50/skogbonitet

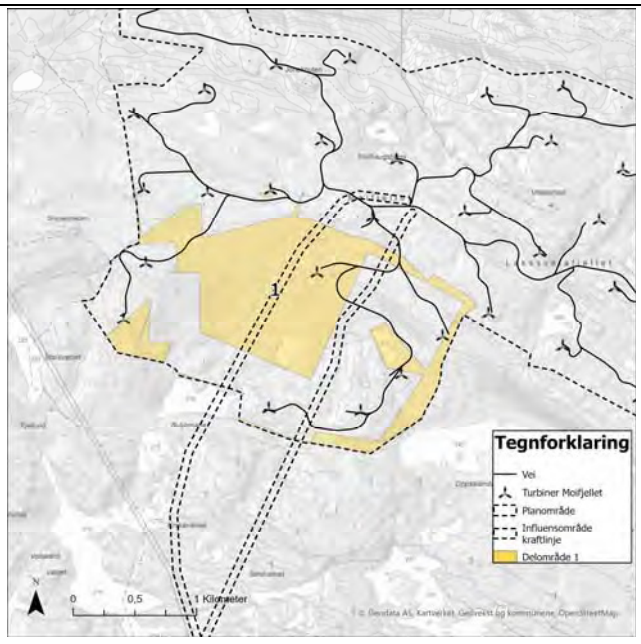
5.3 Delområder

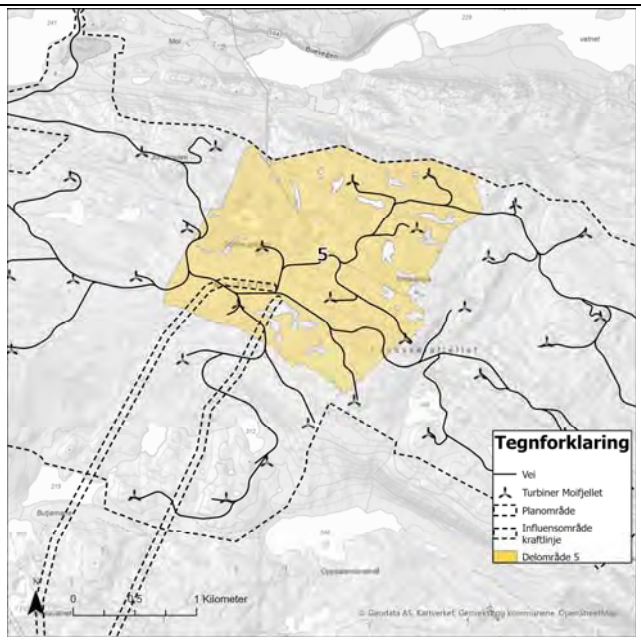
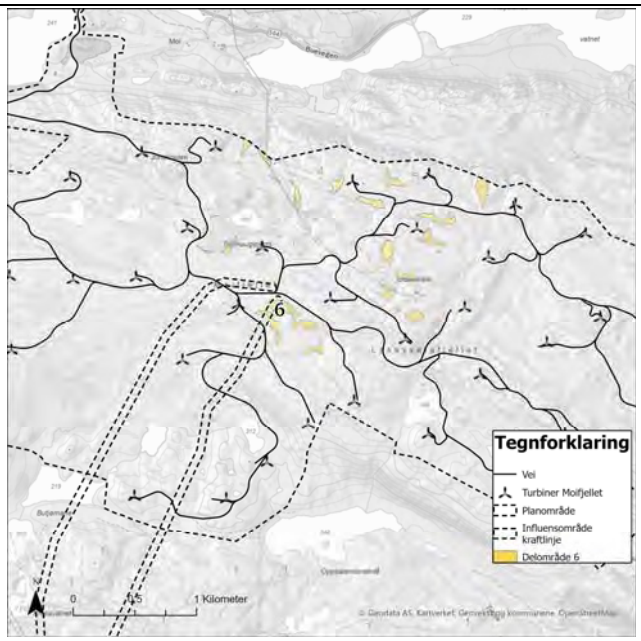
Inndeling i delområder fra tidligere fagrapport landbruk for Moifjellet er endret i ny rapport. Dette begrunnes i endringer på planområdegrense, alternativer for atkomstvei og nye grunnlagsdata for landbruk (i hovedsak RMP-tildeling i 2024 kontra 2023). Det er også gjort en avkortning i antall delområder på faglig grunnlag og vurdering fra tidligere rapport.

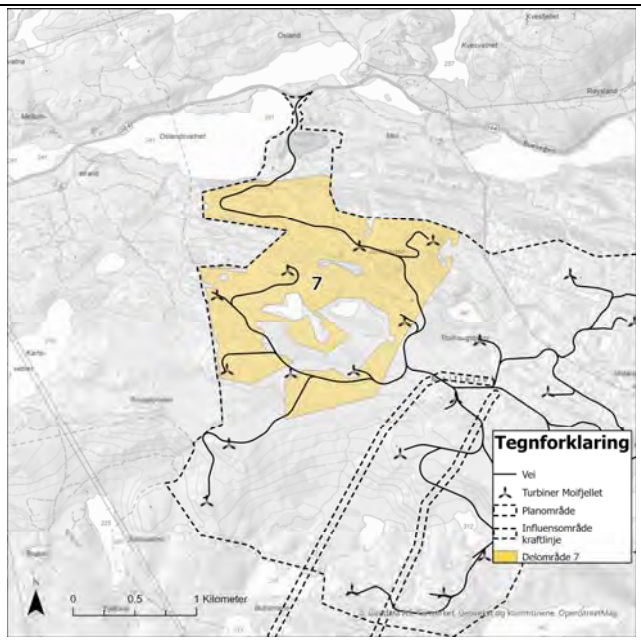
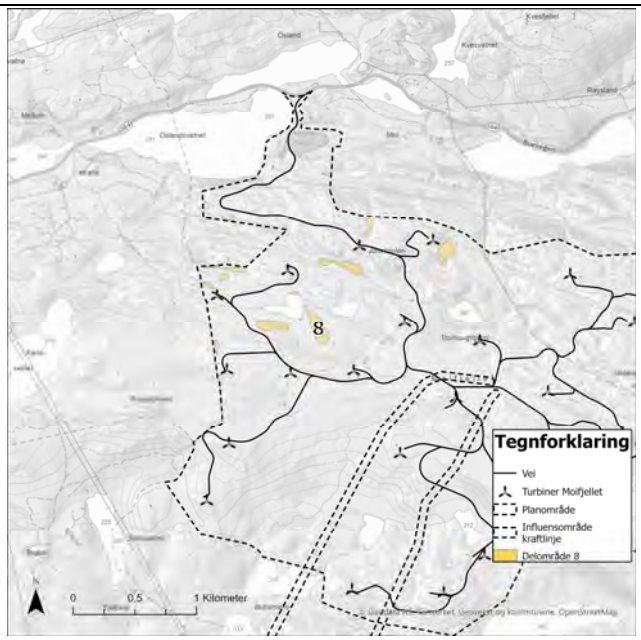
Med utgangspunkt i kunnskapsgrunnlaget er utredningsområdet delt inn i 19 delområder. Delområdene er delt opp etter kunnskap om tilskudd gitt gjennom RMP for beiting på kystlynghei, beitelagsområder og AR50 Arealressurs Jordbruk. Det er skilt på like areal som har fått tilskudd til beiting på kystlynghei som befinner seg på ulike gårds- og bruksnummer. Det er også skilt på areal som har fått RMP-tilskudd som enten ligger nærmere enn 20 meter fra senterpunkt vei/vindturbin, eller lengre unna enn 20 meter fra senterpunkt på vei/vindturbin. Dette for å skille på arealer som blir direkte berørt og ikke. 20 meter er satt for å ta høyde for bruk av areal 20 meter eller nærmere senterpunkt vei/vindturbin i en eventuell anleggsperiode. Areal som brukes av beitelag, men som overlapper med areal som er tildelt RMP-tilskudd til beiting på kystlynghei, er favorisert delområder basert på RMP-tilskudd. Delområder som overlapper og/eller har liknende funksjon og verdi, og som befinner seg på samme gårds- og bruksnummer (kun delområder som er basert på RMP-tilskudd) er slått sammen til et delområde. En oppsummering av delområdene er gitt i tabell 5-2 og figur 5-10.

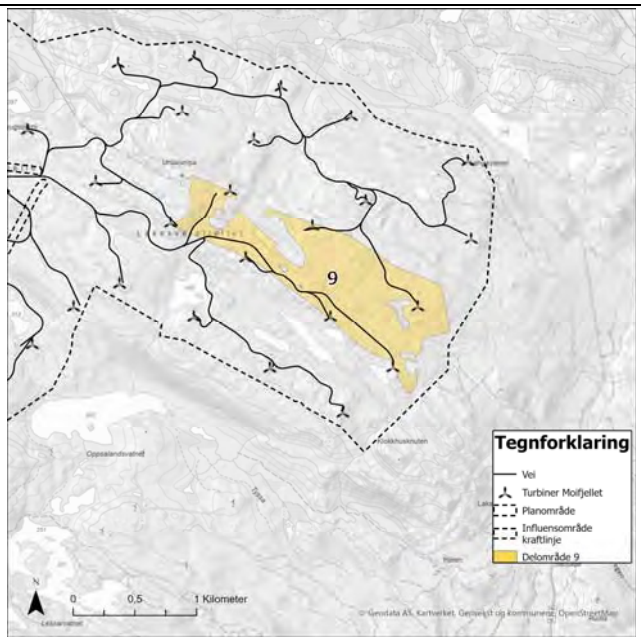
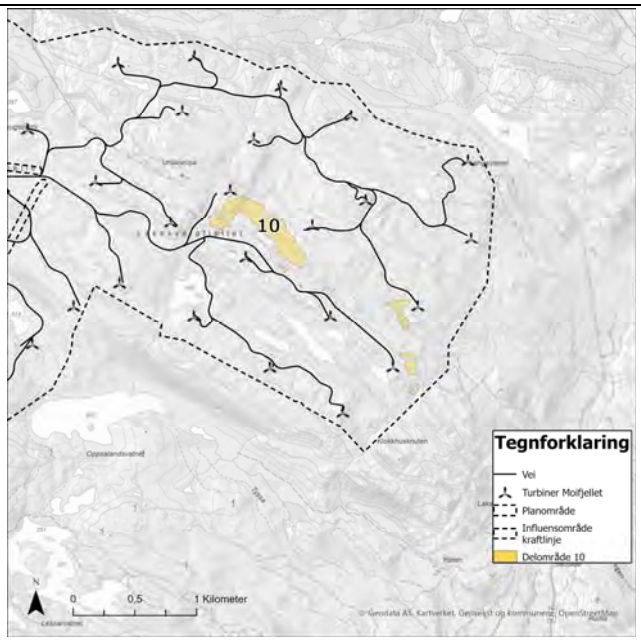
I tabell 5-2, tabell 5-3, tabell 5-6 og tabell 5-7 er delområde-ID og delområdenavn for delområdene 2, 3, 4, 20, 22, 24 og 26 tatt bort da disse delområdene kun er relevante for alternativ 2 (Moifjellet og Mellomstrand). Delområde-ID og delområdenavn på resterende delområder er like for begge alternativ av den hensikt at de vurderes likt mellom alternativene og dermed er lettere å sammenligne mellom alternativene.

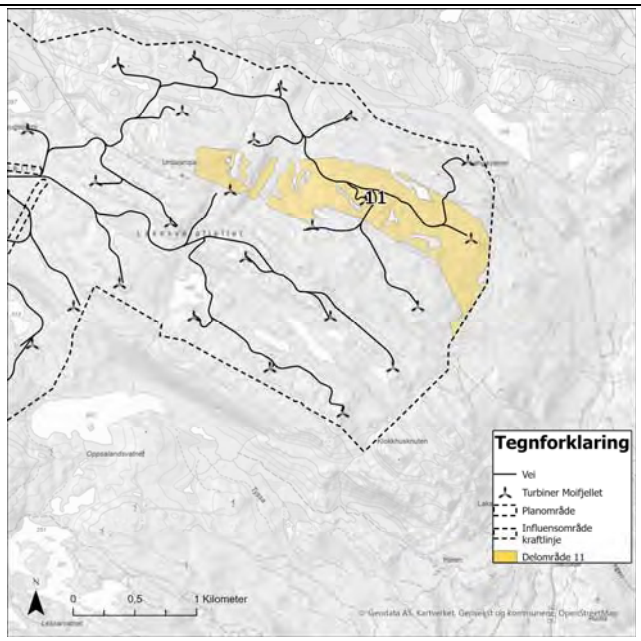
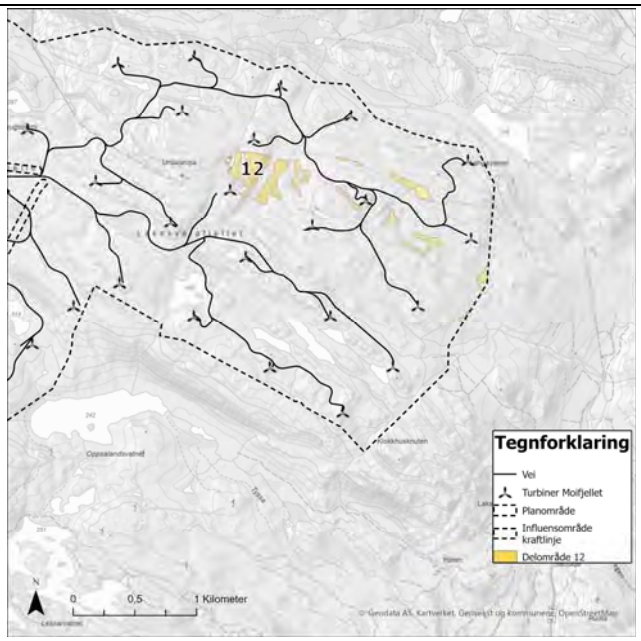
Tabell 5-2: Delområder med beskrivelse. Nummerering henviser til delområder vist i figur 5-10.

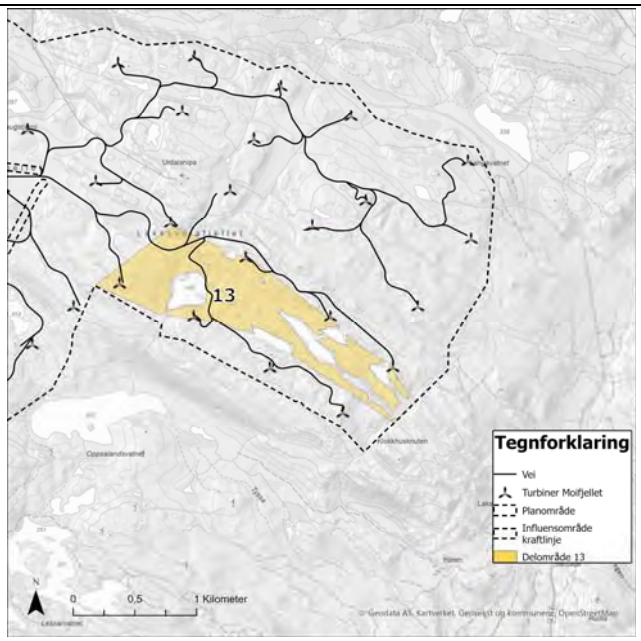
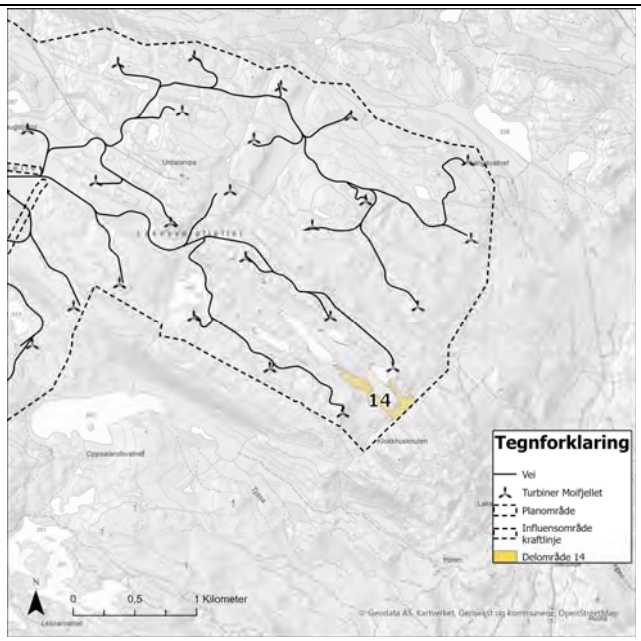
ID	Delområdenavn	Beskrivelse	Kart
1	Ognedalstølen beitelag	Beiteområde som er redusert av planområdets avgrensing og av areal som er tildelt RMP-tilskudd i 2024. Arealet disponeres av 15 medlemmer av beitelaget, og det ble sluppet 1069 sau og lam totalt på hele beiteområdet i 2024. Området består stort sett av kystlynghei med god tilstand (NiN-kartlegging) fordi lokaliteten er uten gjenvekst og generelt i bruk med lavt beitetrykk. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

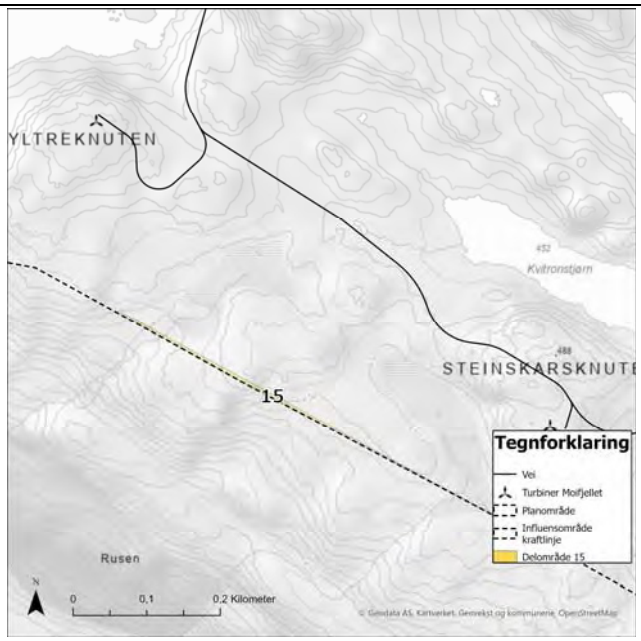
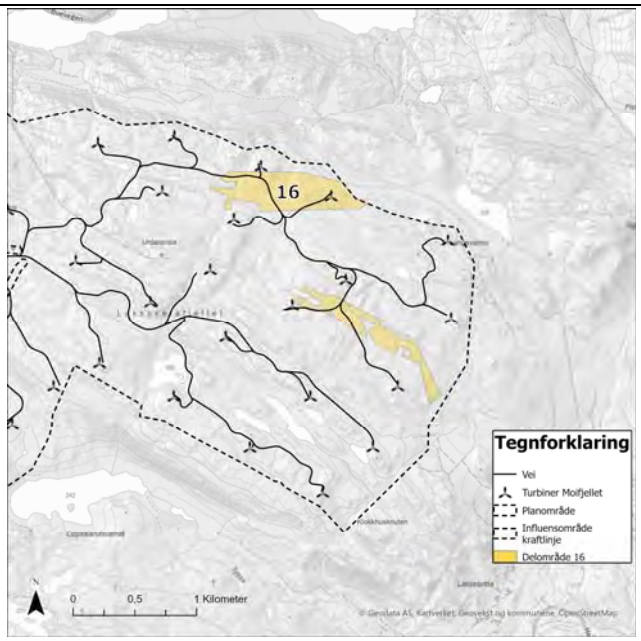
5	Vennedalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 58/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
6	Vennedalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 58/1 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Mindre deler av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes til ubetydelig verdi da areal består mest av myr og vann, og bare noe areal med kystlynghei. Delområdet er vist med gul farge i figur av visuelle årsaker.	

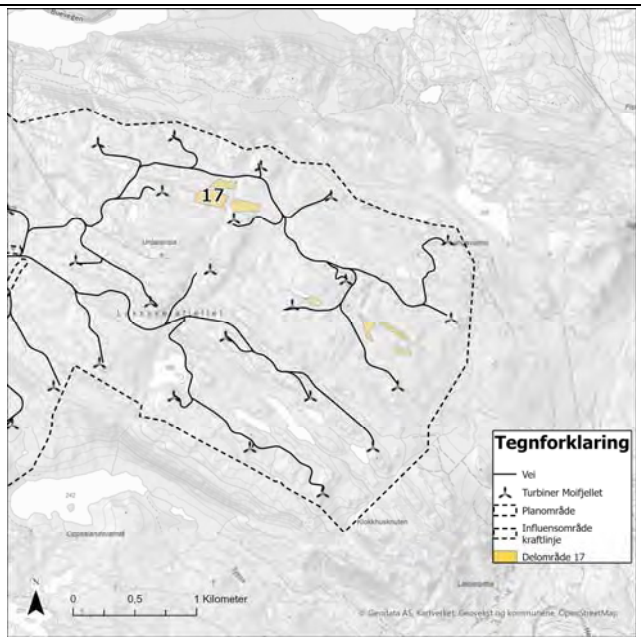
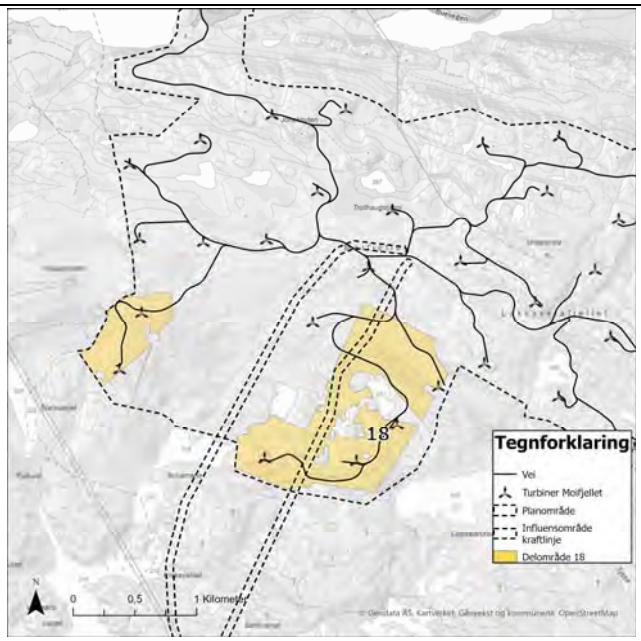
7	Store Dalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 58/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Ett område i nord mot Brendehammaren er kartlagt som naturbeitemark i dårlig tilstand med lav kvalitet. Delområdet vurderes å ha noe verdi på bakgrunn av utnyttelse som naturbeitemark og tilstand på beiteressurser (kystlynghei).	
8	Store Dalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 58/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Deler av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

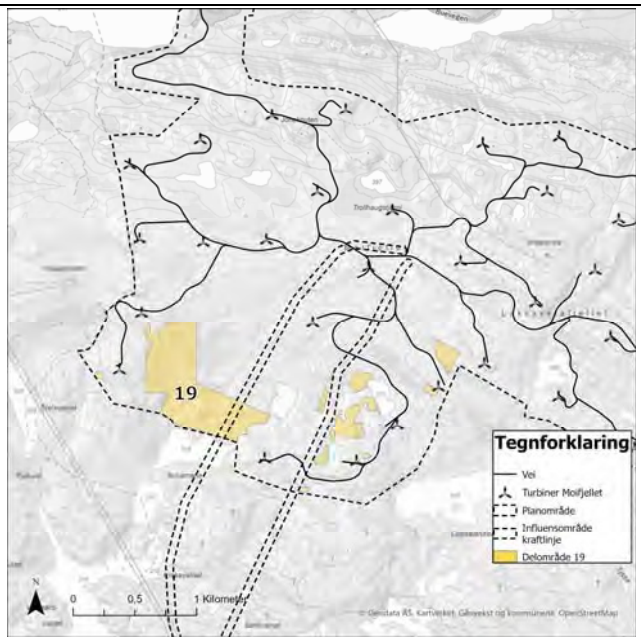
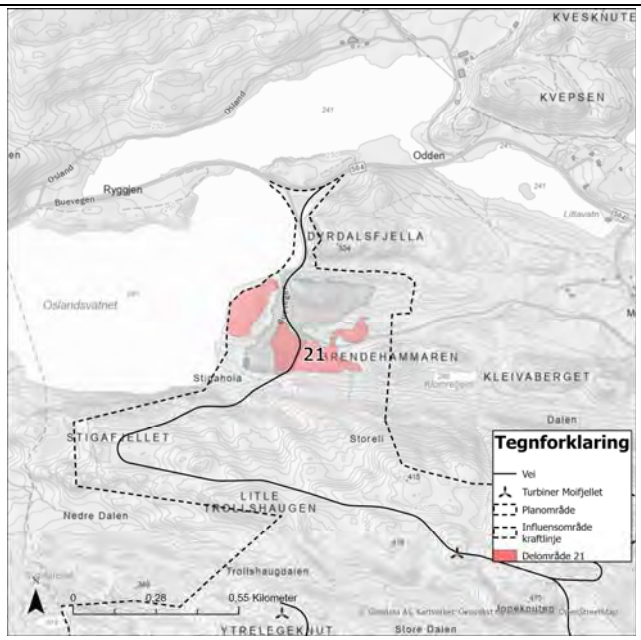
9	Lassen 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
10	Lassen 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/2 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

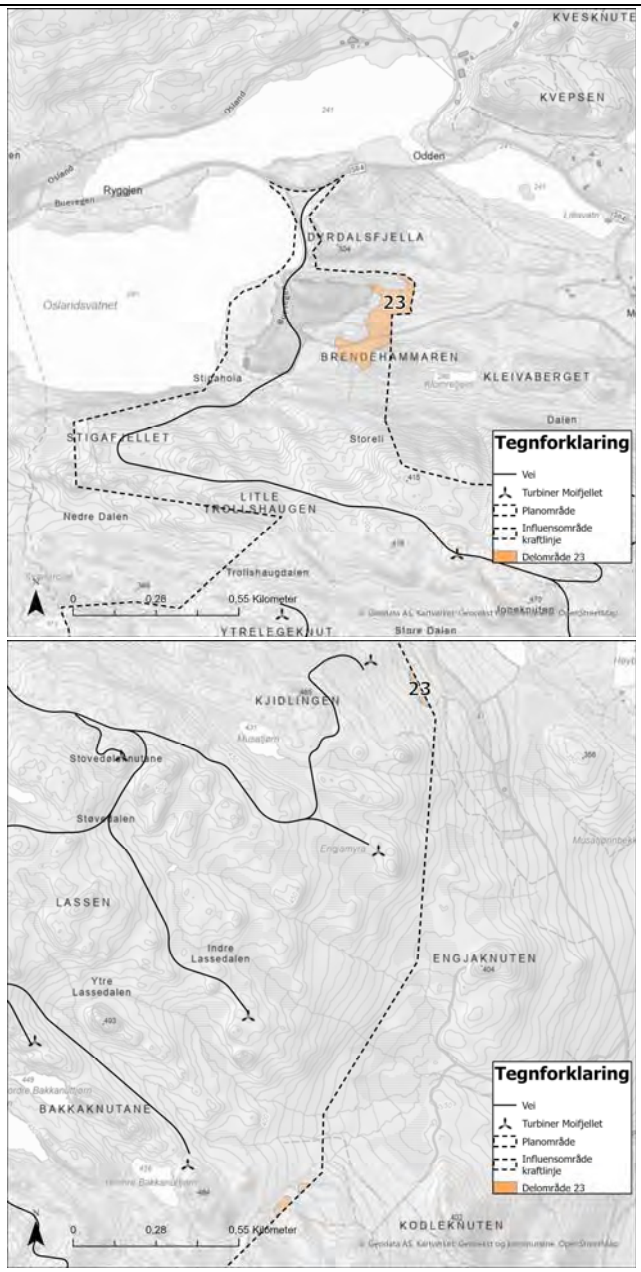
11	Støvedalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/3 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	
12	Støvedalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/3 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Deler av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	

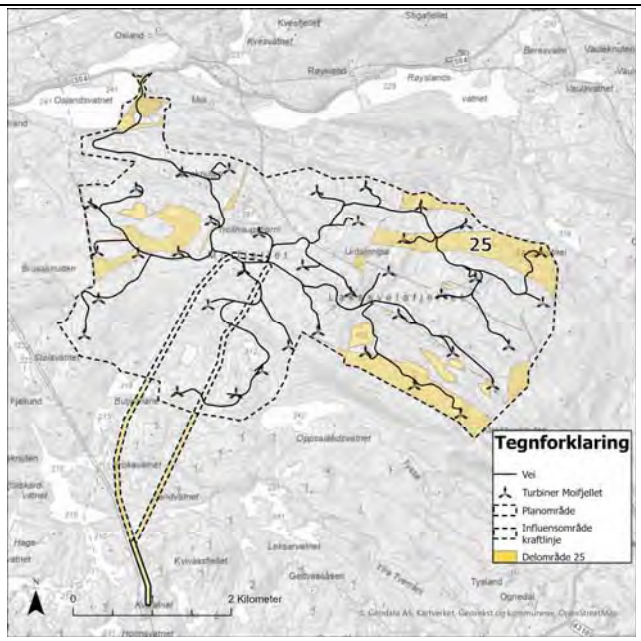
13	Syltreknuten 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
14	Syltreknuten 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/4 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

15	Steinskarsknuten	Delområdet er avgrenset til arealflater innenfor eiendom 61/6 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
16	Råtnedalen 1	Delområdet er avgrenset til arealflater innenfor eiendom 61/9 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

17	Råtnedalen 2	Delområdet er avgrenset til arealflater innenfor eiendom 61/9 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
18	Moifjellet sør 1	Delområdet er avgrenset til arealflater innenfor eiendom 62/1 som har blitt tildelt RMP-tilskudd i 2024, og som ligger på eller nærmere enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området dekkes i sin helhet av beiteområdet til Ognedalstølen beitelag. Området er i AR5 kategorisert som åpen fastmark og myr. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*.	

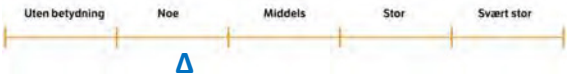
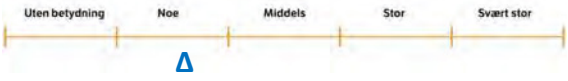
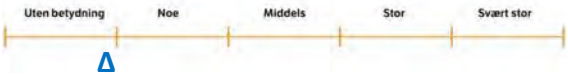
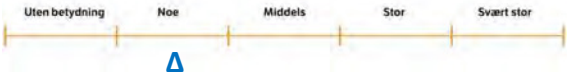
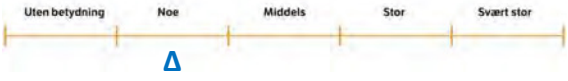
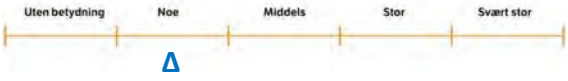
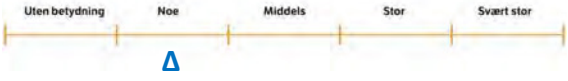
19	Moifjellet sør 2	Delområdet er avgrenset til arealflater innenfor eiendom 62/1 som har blitt tildelt RMP-tilskudd i 2024, og som ligger lengre unna enn 20 m fra tiltaket (vei eller vindturbinpunkt). Området dekkes i sin helhet av beiteområdet til Ognedalstølen beitelag. Området er i AR5 kategorisert som åpen fastmark, myr og vann. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Selv om delområdet er dekket i sin helhet av beiteareal for beitelag, vurderes det til å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei).	
21	Brendehammaren 1	Delområdet er avgrenset til arealflater i Bjerkreim kommune som etter AR50 er kategorisert som fulldyrka- og overflatedyrka jord (AR50 kode 24). Deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *noe verdi*. Størsteparten av området har etter «Verdiklasser basert på AR5 og DMK» verdi *Stor verdi* (fulldyrka jord, jorddekt).	

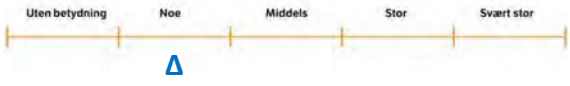
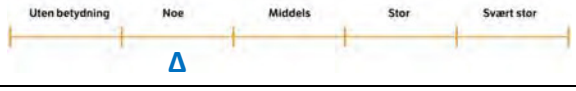
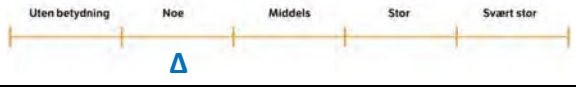
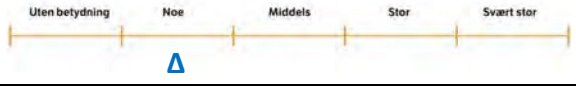
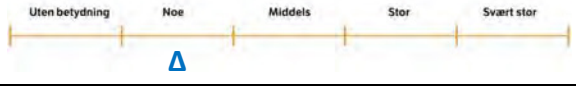
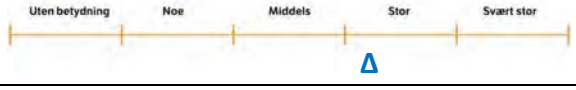
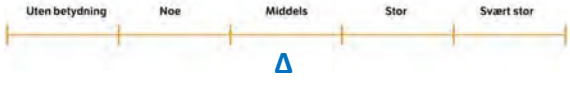
23	Brendehammaren, Liaknuten & Kodleknuten	Delområdet er avgrenset til arealflater i Bjerkreim kommune som etter AR50 er kategorisert som innmarksbeite (AR50 kode 25). En mindre del av området har etter «Verdiklasser for dyrkbar jord» verdi noe verdi (myr, organisk jordlag). Størsteparten av området har etter «Verdiklasser basert på AR5 og DMK» verdi *noe verdi* (innmarksbeite, grunnlendt) og *middels verdi* (innmarksbeite, jorddekt).	

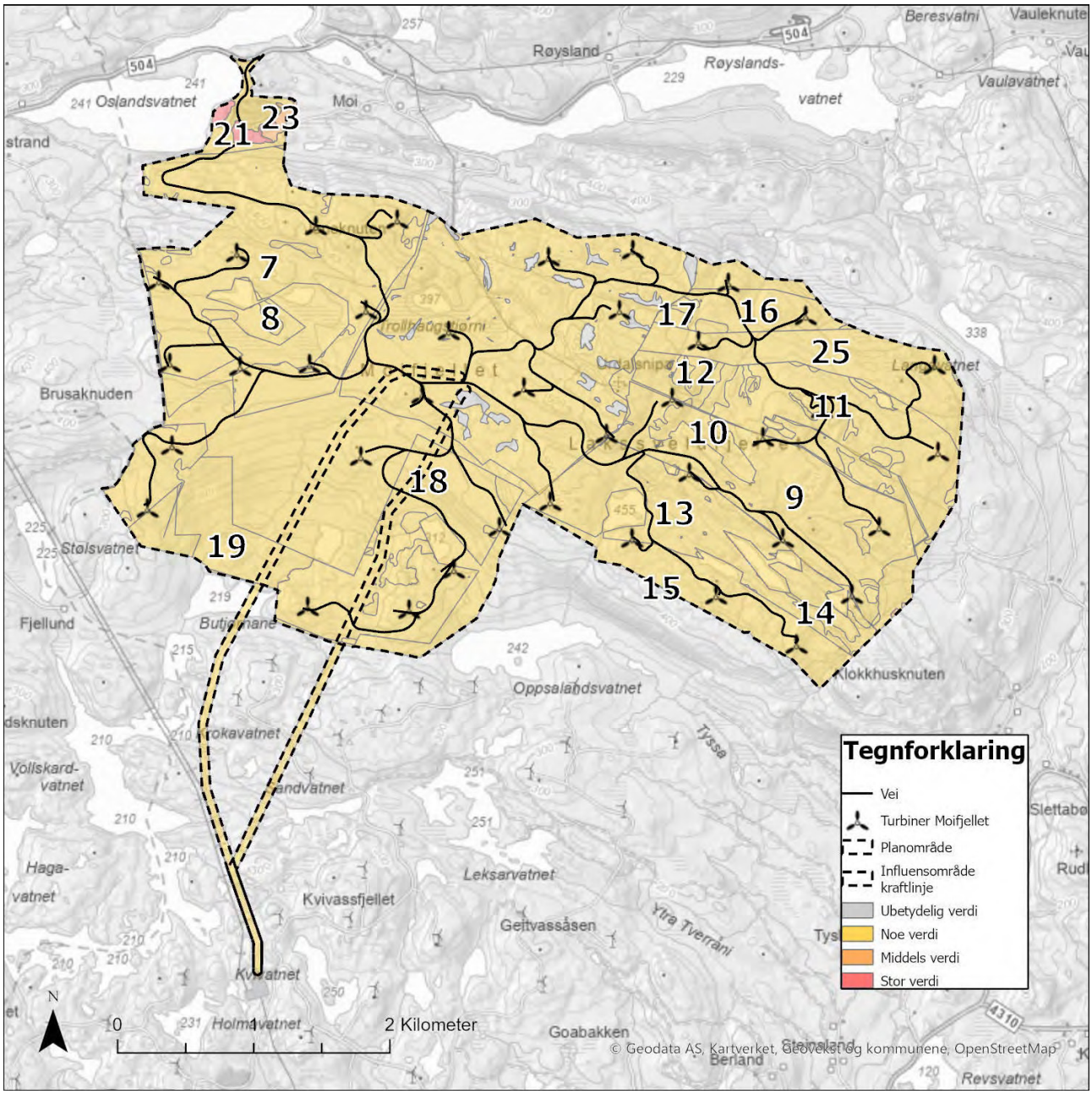
25	Moifjellet øvrig	Delområdet er avgrenset til arealflater i Bjerkreim kommune som etter AR50 er kategorisert som ikke relevant (AR50 kode 98), som ikke er tildelt RMP-tilskudd i 2024, og som heller ikke inngår i arealet til Ognedalstølen beiteområde. Størsteparten av arealet er kartlagt som kystlynghei der tilstand er vurdert som god og kvalitet som svært høy. Små deler av arealet i øst er kategorisert som innmarksbeite etter AR5. Små deler av delområdet har etter «Verdiklasser for dyrkbar jord» verdi *middels verdi* og *noe verdi*. Delområdet vurderes å ha noe verdi på bakgrunn tilstedeværelse av og tilstand på beiteressurser (kystlynghei) og mindre arealer av dyrkbar jord med verdi noe og middels.	

5.4 Verdi

Tabell 5-3: Delområder med verdisetting iht. V712. Nummerering henviser til delområder vist i figur 5-10.

Delområdenr.	Delområdenavn	Plassering verdiskala	Verdi iht. V712
1	Ognedalstølen beitelag		Noe verdi
5	Vennedalen 1		Noe verdi
6	Vennedalen 2		Ubetydelig verdi
7	Store Dalen 1		Noe verdi
8	Store Dalen 2		Noe verdi
9	Lassen 1		Noe verdi
10	Lassen 2		Noe verdi

11	Støvedalen 1		Noe verdi
12	Støvedalen 2		Noe verdi
13	Syltreknuten 1		Noe verdi
14	Syltreknuten 2		Noe verdi
15	Steinskarsknuten		Noe verdi
16	Råtnedalen 1		Noe verdi
17	Råtnedalen 2		Noe verdi
18	Moifjellet sør 1		Noe verdi
19	Moifjellet sør 2		Noe verdi
21	Brendehammaren 1		Stor verdi
23	Brendehammaren, Liaknuten & Kodleknuten		Middels verdi
25	Moifjellet øvrig		Noe verdi



Figur 5-10: Verdikart for delområdene for de ulike registreringskategoriene og tiltaket med utlegg for vindturbiner og internveier, samt influensområde for alternativer for kraftlinjetraséer..

5.5 Påvirkning og konsekvens

5.5.1 Generelt om påvirkning

Arealtap innen de ulike arealtypene regnes som den viktigste faktoren når det gjelder vurdering av påvirkning på landbruk (V712). For skogområder er økonomisk tap som følge av arealtapet den viktigste påvirkningen.

Tiltaket vil på ulike måter påvirke fulldyrka jord, innmarksbeiter, utmarksbeiter, og jakt og fiske som næringsgrunnlag. Det er per i dag ikke forventet at tiltaket vil medføre vesentlige virkninger på produktiv skog. Ved endringer må eventuell påvirkning og avbøtende tiltak vurderes nærmere.

Innen planområdet er den største påvirkningen arealbeslag av beite. Anleggsveier kan føre til økt tilgjengelighet, noe som kan være positivt med hensyn til tilsyn, sanking og skjøtsel av beiteområder.

Samtidig viser tidligere konsekvensutredninger til at nye veier kan føre til at dyr lettere trekker ut av området, og at økt menneskelig aktivitet kan være med på å stresse dyrene. Her kan utbygd veinett føre til at sau lettere trekker ned mot innmark eller ut av området. Dette kan videre føre til gjengroing av utmark og utfordringer mht. drift og sanking. Erfaringer fra andre land tilsier at beiteressurser fortsatt kan utnyttes etter utbygging. Når det gjelder støy og påvirkning på beitedyr er kunnskapen begrenset. Det samme gjelder effekter på dyrs helse, kjøtt og melkeproduksjon, og deres bruk av direkte og indirekte berørte arealer. Økt trafikk i området vil øke faren for påkjørsel av husdyr. Alternativer for kraftlinjetraséer er planlagt i beiteområder (utmarksbeiter), hvor påvirkningen knyttes til arealbeslag ved mastepunktene. Permanent arealbeslag per mast er beregnet til 6-8 dekar. De fleste påvirkede områdene er større beitearealer med middels beitetrykk, og det forventes ikke at kraftlinjene vil være til hinder for videre beitedrift i området.

Tiltaket kan medføre driftsulemper f.eks. om tiltaket fører til oppstykking av teiger slik at dette vanskeliggjør tilkomst eller jordarbeiding.

Tiltaket anslås i en driftsfase å berøre ca. 370 daa ved en gjennomsnittlig veibredde på 10 meter. Areal som blir berørt for hver vindturbin med tilhørende oppstillingsplass anslås å være ca. 30 x 60 meter (18 daa), men er ikke med i arealregnskap, da eksakt plassering og utforming for hver enkelt ikke er fastsatt. Totalt utgjør vindturbiner med oppstillingsplasser ca. 684 daa (38 vindturbiner x ca. 18 daa). Vindturbiner og oppstillingsplasser blir likevel slik plassert at det i hovedsak er beiteareal (kystlynghei; åpen jorddekt fastmark og åpen skrinn fastmark) som blir berørt. Det forventes ikke at vindturbiner og oppstillingsplasser som arealbeslag vil være til hinder for videre beitedrift i området.

Som beskrevet i kapittel 5.1.2 er totalt berørt areal anslått til 349 daa (atkomstvei og internveier) + 684 (vindturbiner og riggplasser) = 1033 daa. Moifjellet vindkraftverk vil likevel berøre kun mindre areal med fulldyrka jord og innmarksbeite. Anslag over berørt areal basert på foreløpig prosjekterte utlegg, er vist i tabell 5-4.

Tabell 5-4: Anslått berørt jordbruksareal (fulldyrka jord og innmarksbeite), basert på AR5 for atkomstvei og internveier i hele planområdet.

	Planområdet	
	AR5 fulldyrka jord	AR5 innmarksbeite
Berørt areal	1,5 daa	0,0 daa
Totalt i planområdet	39,2 daa	46,2 daa
Berørt areal, %	3,8 %	0 %

Anslått berøring av dyrkbar jord basert på foreløpig prosjekterte utlegg, er vist i tabell 5-5.

Tabell 5-5: Anslått berørt areal av dyrkbar jord for atkomstvei og internveier i hele planområdet.

	Planområdet
Berørt areal	0,5 daa
Totalt i planområdet	345,5 daa
Berørt areal, %	0,1 %

5.5.2 Påvirkning og konsekvens i driftsfasen

Påvirkning og konsekvens i driftsfasen på delområdene er oppsummert i tabell 5-6.

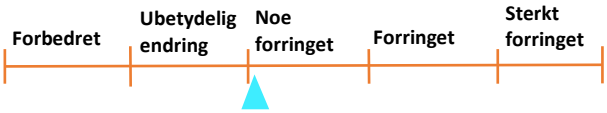
Tabell 5-6: Påvirkning og konsekvens av tiltaket på delområdene.

Delområdenr.	Delområde	Verdi	Påvirkning	Konsekvens
1	Ognedalstølen beitelag	Noe verdi	Det er planlagt to (2) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av alt. 1 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Dette vil også gjelde ved valg av alt. 2 for nettanlegg, men da i betydelig mindre grad. Tiltaket vil som følge av vindturbiner, internveier og kraftledning medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er dog ikke tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring, da området ikke er tildelt RMP-tilskudd i 2024 (ei heller 2023 og 2022), og synes derfor ikke å være et prioritert beiteområde. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade (0). 	Ubetydelig miljøskade (0)
5	Vennedalen 1	Noe verdi	Det er planlagt sju (7) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av alt. 1 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Dette vil også gjelde ved valg av alt. 2 for nettanlegg, men da i mindre grad. Tiltaket vil som følge av vindturbiner, internveier og kraftledning medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
6	Vennedalen 2	Ubetydelig verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024	Ubetydelig miljøskade (0)

			innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med ubetydelig verdi gir ubetydelig miljøskade for delområdet (0). 	
7	Store Dalen 1	Noe verdi	Det er planlagt seks (6) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
8	Store Dalen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
9	Lassen1	Noe verdi	Det er planlagt fire (4) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-).	Noe miljøskade (-)

				
10	Lassen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
11	Støvedalen 1	Noe verdi	Det er planlagt tre (3) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
12	Støvedalen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
13	Syltreknuten 1	Noe verdi	Det er planlagt tre (3) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbiner og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr.	Noe miljøskade (-)

			Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	
14	Syltreknuten 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
15	Steinskarsknuten	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
16	Råtnedalen 1	Noe verdi	Det er planlagt én vindturbin og internvei som vil strekke seg gjennom delområdet på forskjellige steder. Tiltaket vil som følge av vindturbin og internveier medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet fra ubetydelig til noe forringet. Ubetydelig til noe forringet påvirkning av området med noe verdi gir ubetydelig til noe miljøskade (0/-). På bakgrunn av dette settes derfor konsekvensgrad til (marginalt) noe miljøskade (-).	Noe miljøskade (-)

				
17	Råtnedalen 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
18	Moifjellet sør 1	Noe verdi	Det er planlagt seks (6) vindturbiner i området, og internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av alt. 2 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Dette vil ikke gjelde ved valg av alt. 1 for nettanlegg. Tiltaket vil som følge av vindturbiner, internveier og nettanlegg medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Området vil fortsatt kunne benyttes til beite, uten at det er utredet hvilken virkning vindkraftverket har på beitedyr. Internveier kan forenkle arbeidet med innsanking og tilsyn, men kan også ha motsatt effekt dersom dyrene benytter seg av veiene til å trekke ut av området. En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til noe forringet. Noe forringet påvirkning av området med noe verdi gir noe miljøskade (-). 	Noe miljøskade (-)
19	Moifjellet sør 2	Noe verdi	Det er ikke planlagt vindturbiner eller internveier innenfor delområdet. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av et kystlyngheiareal som benyttes som utmarksbeite. Ved valg av alt. 1 for nettanlegg vil det bli etablert noen mastepunkter for kraftledning innenfor området. Ved forringelse av kystlyngheias kvalitet kan dette medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er tildelt RMP-tilskudd i 2024 innenfor delområdet. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)

21	Brendehammaren 1	Stor verdi	Det er planlagt atkomstvei innenfor området. Tiltaket vil som følge av dette medføre noe arealtap og oppsplitting av dyrkajord som i dag er fulldyrka/overflatedyrka. Ved omdisponering av fulldyrka/overflatedyrka jord vil produksjonsgrunnlaget for arealet reduseres eller bortfalle. Omfanget av tiltaket og nødvendige tilpasninger er styrende for hvor mye areal som blir påvirket. På bakgrunn av arealets totale størrelse (49,2 daa) og at tiltaket vil medføre en oppsplitting av fulldyrka/overflatedyrka jord på deler av arealet, men ikke omdisponere store arealer (kun til atkomstvei), vurderes påvirkningen til noe forringet. Noe forringelse av området med stor verdi gir noe miljøskade for delområdet (-) *. *Det er viktig å nevne at omfanget av omdisponering av fulldyrka/overflatedyrka jord er styrende, og hvis betydelig areal blir omdisponert kan dette øke påvirkningen, og dermed også konsekvensen. 	Noe miljøskade (-)
23	Brendehammaren, Liaknuten & Kodleknuten	Middels verdi	Det er ikke planlagt atkomstvei innenfor området. Tiltaket vil som følge av dette ikke medføre noe arealtap og oppsplitting av dyrkbar jord eller innmarksbeite. Ved omdisponering av fulldyrka/overflatedyrka jord vil produksjonsgrunnlaget for arealet reduseres eller bortfalle. Omfanget av tiltaket og nødvendige tilpasninger er styrende for om areal kan bli påvirket. På bakgrunn av dette vurderes påvirkningen til ubetydelig endring. Ubetydelig endring av området med middels verdi gir ubetydelig miljøskade for delområdet (0). 	Ubetydelig miljøskade (0)
25	Moifjellet øvrig	Noe verdi	Det er planlagt åtte (8) vindturbiner i området, samt internvei som vil strekke seg gjennom delområdet på forskjellige steder. I tillegg vil det ved valg av både alt. 1 eller 2 for nettanlegg bli etablert flere mastepunkter for kraftledning innenfor området. Tiltaket vil som følge av vindturbiner, internveier og nettanlegg medføre noe arealtap og oppsplitting av et kystlyngheiareal som er potensialt utmarksbeite (inngår ikke i beitelagsområde og er ikke tildelt RMP-tilskudd i 2024). En eventuell forringelse av kystlyngheias kvalitet kan medføre lavere satser for tilskudd, ettersom satsene settes etter kvaliteten på kystlyngheia. Det er ikke tildelt RMP-tilskudd i 2024 innenfor delområdet. Området omfatter også areal som er kategorisert som ikke relevant i jordbrukssammenheng. Påvirkningen vurderes samlet til ubetydelig endring. Ubetydelig endring av området med noe verdi gir ubetydelig miljøskade (0). 	Ubetydelig miljøskade (0)

Det forventes ikke arealtap av produktiv skog i forbindelse med tiltaket og dermed er det vurdert ubetydelig konsekvens for skogbruk.

Hverken alternativ 1 eller 2 for nettanlegg forventes å ha annet enn ubetydelig konsekvens for landbruk.

5.5.3 Oppsummering av påvirkning og konsekvens

Anslått arealbeslag innen kategoriene er oppsummert i tabell 5-4 og tabell 5-5. Konsekvensgraden vurderes i forhold til 0-alternativet, som per definisjon har ubetydelig konsekvens (0).

Alternativ 2 gjelder for Moifjellet vindkraftverket. Alternativene i dette kapitlet dreier seg om alternativ for nett-tilknytning (1 eller 2). For de fleste delområdene har alternativene for nett-tilknytning liten betydning. De to alternativene for nett-tilknytning medfører tilnærmet lik påvirkning på delområder med lik funksjon og verdi, og det er derfor ikke foretatt en rangering av de to alternativene med hensyn til foretrukket trasé.

Den samlede konsekvensen for tema landbruk vurderes å være noe negativ konsekvens (tabell 5-7). Det er overvekt av delområder med ingen/ubetydelig konsekvens (11 av 19), hvorav alle er lokalisert på areal som ikke påvirkes direkte av tiltaket, eller i mindre omfang. Videre er det 8 delområder hvor påvirkningen vurderes til noe konsekvens, som følge av noe arealtap og oppsplitting av delområdene. I tillegg er det det usikkerhet knyttet til beitedyrenes respons på vindturbinene.

Tabell 5-7: Samlet konsekvens for tiltaket.

Delområder	Nullalternativet	Moifjellet og Mellomstrand vindkraftverk	
		Alternativ 2	
		Nettanlegg 1	Nettanlegg 2
Ognedalstølen beitelag	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Vennedalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Vennedalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Store Dalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Store Dalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Lassen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Lassen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Støvedalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Støvedalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Syltreknuten 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Syltreknuten 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Steinskarsknuten	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)

Råtnedalen 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Råtnedalen 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Moifjellet sør 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Moifjellet sør 2	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Brendehammaren 1	0	Noe miljøskade (-)	Noe miljøskade (-)
Brendehammaren, Liaknuten & Kodleknuten	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Moifjellet øvrig	0	Ubetydelig miljøskade (0)	Ubetydelig miljøskade (0)
Avveining		Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (11 av 19 delområder), men et relativt høyt antall delområder med noe miljøskade (8 av 19) trekker opp den samlede konsekvensen.	
Samlet vurdering		Noe negativ konsekvens	Noe negativ konsekvens
Rangering	1	2	2
Forklaring til rangering	Det er lite som skiller alternativene for nett-tilkobling, og de er derfor rangert helt likt. Nullalternativet rangeres som nummer 1 da det ikke er knyttet noen konsekvens til dette. Alternativ 1 er rangert som nummer 2, etter nullalternativet.		

5.5.4 Tiltakets påvirkning og konsekvens i anleggsfasen

I anleggsfasen forventes tiltaket å medføre midlertidig arealbeslag, anleggstrafikk og støy. Deler av planområdet vil antagelig være utilgjengelig pga. økt trafikk og støy vil kunne medføre forstyrrelser og økt stressnivå for beitedyr, samt øke faren for påkjørsel og skader fra maskiner og utsyr. Midlertidige arealbeslag og for eksempel kjøreskader kan ha langtidsvirkninger[24]. Avbøtende tiltak for å redusere negative virkninger i anleggs – og driftsfase er oppsummert i kapitel 7 Avbøtende tiltak.

6 Rangering av alle alternativer

Oppsummering i tabell 6-1 viser at nullalternativet rangeres først (1), etterfulgt av alternativ 2 (2) og alternativ 1 (3).

Tabell 6-1: Oppsummering og rangering av alle alternativer – nullalternativet, alternativ 1 og alternativ 2.

Alternativer	Nullalternativet	Alternativ 2 Nettanlegg 1	Alternativ 2 Nettanlegg 2	Alternativ 1 Nettanlegg 1	Alternativ 1 Nettanlegg 2

[24] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/

Oppsummering fra tabell 5-7 og tabell 4-7	-	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (11 av 19 delområder), men et relativt høyt antall delområder med noe miljøskade (8 av 19) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (11 av 19 delområder), men et relativt høyt antall delområder med noe miljøskade (8 av 19) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (14 av 26 delområder), men et relativt høyt antall delområder med noe miljøskade (12 av 26) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.	Det er en overvekt av delområder der tiltaket medfører ubetydelig miljøskade (14 av 26 delområder), men et relativt høyt antall delområder med noe miljøskade (12 av 26) trekker opp den samlede konsekvensen. Det er lite som skiller nettalternativ 1 og 2 – rangeres derfor likt.
Vurdering	Ingen konsekvens	Noe negativ konsekvens	Noe negativ konsekvens	Noe negativ konsekvens	Noe negativ konsekvens
Rangering	1	2	2	3	3
Forklaring til rangering	Det er lite som skiller alternativene for nettilkobling, og de rangeres derfor likt for alle alternativer. Nullalternativet rangeres som nummer 1 da det ikke er knyttet noen konsekvens til dette. Alternativ 2 (Moifjellet) rangeres som nummer 2 da dette omfatter mindre berørt areal og medfører at mindre antall delområder får noe miljøskade (8 av 19 mot 11 av 26). Alternativ 1 (Moifjellet og Mellomstrand) rangeres som nummer 3 da dette omfatter større berørt areal og medfører at høyere antall delområder får noe miljøskade (11 av 26 mot 8 av 19).				

7 Avbøtende tiltak

For å redusere negative virkninger som følge av tiltaket, anbefales avbøtende tiltak listet under. Listen er ikke uttømmende. Disse tiltakene, og eventuelle ytterlige tiltak, vurderes nærmere og fastlegges i forbindelse med utarbeidelse av miljø, -transport-, og anleggsplan.

Følgende avbøtende tiltak anbefales:

- Så langt som mulig minimere arealbeslag.
- Opprettholde god kommunikasjon og kontakt med berørte eiere og brukere av landbruks- og beiteareal.
    - Legge anleggsperioden utenom beitesesongen. Dersom dette ikke er mulig, bør det settes opp midlertidige gjerder for å hindre at beitedyr kommer inn i anleggsområdet og blir skadet.
    - Etablere grinder/ferister der atkomstveier krysser eksisterende grensegjerder, slik at gjerdefunksjonen opprettholdes og beiteområdet kan benyttes som tidligere.
    - Opprette et internkontrollsystem som sikrer at beitedyr har tilgang på drikkevann, både i drifts – og anleggsfase.
    - Tilgang til tilkomstveier og internveier for grunneiere som benytter området til landbruk/beite.

- Kompensere for tap eller forringelse av dyrkamark gjennom oppdyrking av nye arealer.
    - Inngåelse av avtaler med grunneiere om økonomisk kompensasjon.
- Skjøtselsplan for kystlynghei som beskriver hvordan forbedre beitet.
    - Brenning av kystlynghei for å bedre beite.
- Midlertidig beslaglagt areal.
    - Unngå å benytte dyrka og dyrkbar jord til riggområde eller mellomlagring av masser, da dette kan medføre pakking av jorda, noe som reduserer kvaliteten på arealet.
    - Tilbakeføre og istandsette midlertidig beslaglagte areal, som riggområder og midlertidige atkomstveier fortløpende.
    - Om dyrka og dyrkbar jord tas av, mellomlagres jorda og benyttes iht. beskrivelser i MOP/MTA.
    - Istandsetting av områder med stedegen og beitevennlig vegetasjon.
- Uforme vindkraftverket på en slik måte at arealbrukskonflikt reduseres.

8 Usikkerheter og oppfølgende undersøkelser

Det per i dag liten kunnskap om hvordan vindkraft påvirker dyrs helse, blant annet som følge av støy og forurensing[25]. Dette er faktorer som negativt kan påvirke kjøtt – og melkeproduksjon. Det anbefales overvåkning med hensyn til tiltakets påvirkning på beitedyr. Det er også kunnskapsmangler når det gjelder vindkraftverks innvirkning på utmarksressurser[26]. Det anbefales overvåkning med hensyn til tiltakets påvirkning på jaktbart vilt.

Se egen rapport på vannmiljø for avbøtende tiltak omkring forurensing til og i vann under drifts- og anleggsfasen.

Riggområder, midlertidige lagringsplasser er ikke avklart enda. Dette er i utgangspunktet midlertidige virkninger, men noen midlertidige tiltak kan medføre varige konsekvenser, f.eks. ved kjøreskader og pakking av jord som forringer jordkvaliteten.

[25] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/
[26] https://www.nve.no/energi/energisystem/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/landbruk/

Fagrapport:

Mineralressurser

RAPPORT

Moifjellet og Mellomstrand vindkraftverk – Konsekvensutredning mineralressurser

OPPDRAGSGIVER

Statkraft

EMNE

Konsekvensutredning mineralressurser

DATO / REVISJON:	5. mars 2026 / 03
DOKUMENTKODE:	10265688-01-RIGberg-RAP-002



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RAPPORT

OPPDRAG	**Moifjellet og Mellomstrand vindkraftverk**	DOKUMENTKODE	10265688-01-RIGberg-RAP-002
EMNE	Konsekvensutredning mineralressurser	TILGJENGELIGHET	Åpen
OPPDRAGSGIVER	**Statkraft**	OPPDRAGSLEDER	Håvard Finanger
KONTAKTPERSON	Andreas Stokke og Kristin Serck-Hanssen	UTARBEIDET AV	Agnes Haker
KOORDINATER	Sone: 32 Øst: 323220 Nord: 6503210	ANSVARLIG ENHET	10232014 Ingeniørgeologi Sør
KOMMUNE	Bjerkreim og Time kommuner		

SAMMENDRAG

I forbindelse med konsekvensutredning og konsesjonssøknader for Moifjellet og Mellomstrand vindkraftverk, har Multiconsult utført en konsekvensutredning av virkninger som vindkraftverket kan ha på mineralressurser i influensområdet til tiltaket. Metoden som er brukt for konsekvensutredningen av mineralressurser følger Statens vegvesens Håndbok V712 Konsekvensanalyser. Både ikke-prissatte og prissatte konsekvenser er vurdert.

Konsekvensutredningen for Moifjellet og Mellomstrand vindkraftverk har to alternativer:

1. Alternativ 1: Moifjellet og Mellomstrand vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune og planområdet for Mellomstrand i Time kommune, med adkomstvei fra Mellomstrand i Time kommune.
2. Alternativ 2: Moifjellet vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune, med adkomstvei vest for Moi i Bjerkreim kommune.

Planområdene ligger i både Bjerkreim kommune (Moifjellet) og i Time kommune (Mellomstrand), med hver sin prosess for områderegulering etter plan- og bygningsloven.

Rapporten belyser geologien i planområdene, både berggrunnsgeologien og kvartærgeologien, samt registrerte mineralressurser i planområdene og Sør-Rogaland generelt. Det er registrerte forekomster av sand, grus og pukk i dalsøkket nord for Moifjellet, der adkomstvei i Time kommune (Alt. 1) og adkomstvei i Bjerkreim kommune (Alt. 2) ligger. Det er ingen registrerte forekomster av mineralressurser ellers i planområdene. Det er heller ingen bergrettigheter eller undersøkelsesvirksomhet som berører planområdene til vindkraftverket.

Det er i rapporten gjort en nærmere verdivurdering av 5 delområder for tema mineralressurser. Det er kun de registrerte forekomstene av sand og grus i breelvavsetninger som er vurdert å ha noen verdi. Steinbruddet til Moi Pukk er i drift og dette delområdet er derfor vurdert til å ha middels verdi. Tiltakets påvirkning på alle delområdene er vurdert til å være ubetydelig.

Konklusjonen av konsekvensutredningen er at tiltaket Moifjellet og Mellomstrand vindkraftverk ikke vil ha noen konsekvens av betydning på mineralressurser i influensområdet til tiltaket sammenlignet med nullalternativet. Det er ingen forskjell mellom Alternativ 1 (Moifjellet og Mellomstrand vindkraftverk, med adkomstvei Time) og Alternativ 2 (Moifjellet vindkraftverk, med adkomstvei Bjerkreim) med hensyn til tema mineralressurser.

REV.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV
03	05.03.2026	Revidert etter innspill fra Statkraft	Agnes Haker	Unni Hagen	Håvard Finanger
02	20.01.2026	Første utkast med nytt alternativ, Mellomstrand. Rev00 og rev01 gjelder konsekvensutredning for Moifjellet (10252119-01-RIGberg-RAP-002)	Agnes Haker	Unni Hagen	Håvard Finanger
01	05.02.2025	Revidert tekst i tiltaksbeskrivelse	Agnes Haker	Unni Hagen	Håvard Finanger
00	14.11.2024	Klar til utsendelse	Agnes Haker	Unni Hagen	Håvard Finanger

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Vedlegg

Vedlegg 1 – Bilder

1 Innledning

Multiconsult Norge AS utarbeider i oppdrag for Statkraft en konsekvensutredning for Moifjellet og Mellomstrand vindkraftverk som skal brukes til behandling av områderegulering og konsesjonssøknad av vindkraftverket. NVE (Norges vassdrags- og energidirektoratet) har fastsatt et utredningsprogram for Moifjellet vindkraftverk (oversendt i brev datert 26.07.2024) [1] og for Mellomstrand vindkraftverk (oversendt i brev datert 30.10.2025) [14].

Denne rapporten omhandler tema Mineralressurser, og er en konsekvensutredning av virkninger vindkraftverket vil ha på mineralressurser i området. Utbygging av vindkraft kan begrense pågående og framtidig utvinning av mineralressurser. Samtidig kan det finnes gevinster ved samlokalisering av inngrep og gjenbruk/felles bruk av infrastruktur.

Metoden som er brukt for konsekvensutredningen av mineralressurser følger Statens vegvesens Håndbok V712 Konsekvensanalyser [2]. I tillegg er NVEs informasjonsside om «kunnskapsgrunnlag om virkninger av vindkraft på land – mineralressurser» [3] brukt til å innhente informasjon om metode for konsekvensutredning av mineralressurser.

Utredningen for mineralressurser er utført av geolog Agnes Haker, Multiconsult. Området er kartlagt på to befaringsdager i august og september 2024. Relevante bilder er vist i Vedlegg 1.

2 Tiltaksbeskrivelse

2.1 Om vindkraftverket

Konsekvensutredningen for Moifjellet og Mellomstrand vindkraftverk tar for seg to alternativer:

1. Alternativ 1: Moifjellet og Mellomstrand vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune og planområdet for Mellomstrand i Time kommune, med adkomstvei fra Mellomstrand i Time kommune.
2. Alternativ 2: Moifjellet vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune, med adkomstvei vest for Moi i Bjerkreim kommune.

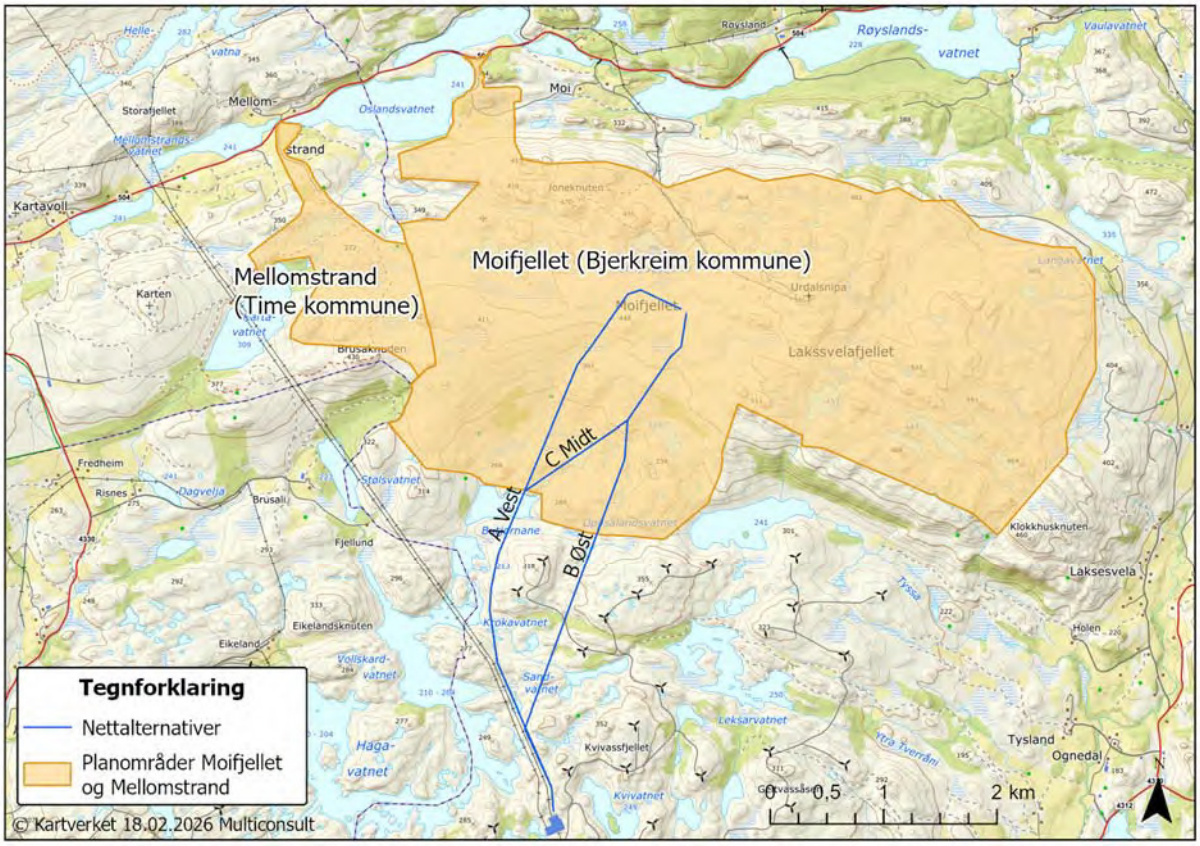
Planområdene ligger i både Bjerkreim kommune (Moifjellet) og i Time kommune (Mellomstrand), med hver sin prosess for områderegulering etter plan- og bygningsloven (se kart i Figur 2).

I forbindelse med konsekvensutredningene for Moifjellet vindkraftverk i 2024 ble også alternativene for nettraséer utredet. Det er vurdert tre alternativer for nettilknytningen, hvorav A og B alternativene er vist på de fleste kart i denne rapporten. Tiltaksområdet for denne konsekvensutredningen inkluderer imidlertid ikke nettilknytningen, da nettilknytningen allerede er vurdert i egen separat nettkonsesjonssøknad som ble sendt 30.06.2025. Konsekvensutredningen beskrevet videre i denne rapporten omhandler derfor kun produksjonsanlegget for vindkraft.

Et oversiktskart over området og tiltakene er vist i Figur 2. Planområdene for vindkraftverk med vindturbiner og trafo ligger hovedsakelig på Moifjellet/Lakssvelafjellet i Rogaland fylke. Arealinngrep i forbindelse med vindkraftverket vil omfatte:

- 38 vindturbiner i Bjerkreim kommune og 4 vindturbiner i Time kommune, 200 m totalhøyde, med tilhørende fundamenter og kranoppstillingsplasser
- Tomt til transformatorstasjon og driftsbygg på Moifjellet

- Adkomstvei og internveier, totalt ca. 38 km vei (Alt. 1) eller 36 km vei (Alt. 2) (med møte- og snuplasser)
- Jordkabler i internveiene fra vindturbiner til ny Moifjellet transformatorstasjon
- Nye traséer for nettilknytning i luftledning fra ny Moifjellet transformatorstasjon til eksisterende Bjerkreim transformatorstasjon. Med dette følger mastefundamenter. Nettilknytningen omtales ikke videre i denne rapporten.
- Masseuttak/steinbrudd for uttak av steinmasser til veier og plasser
- Midlertidige arealer for rigg og mellomlagring



Figur 1. Planområder for Moifjellet og Mellomstrand vindkraftverk. Omsøkte alternativer for nettilknytning mot Bjerkreim transformatorstasjon i sør er vist til orientering.

2.2 Eksisterende planer i området

Planområdene og mye av omlandet er i hovedsak utlagt til LNFR i gjeldende planer. Det er reguleringsplan for et steinbrudd i drift («Moi brudd og massetak») nord for Moifjellet i Bjerkreim kommune som adkomstvei alternativ 2 går igjennom. Det er en reguleringsplan for et avsluttet grustak («Masseuttak ved Oslandsvatnet») i Time kommune, direkte øst for adkomstvei alternativ 1. I Time kommunedelplan er det satt av et større areal for masseuttak ved Oslandsvatnet enn det som per i dag er regulert. Planområdene for Moifjellet og Mellomstrand vindkraftverk berører også reguleringsplan for Fv.504, som adkomstveiene i begge alternativene starter fra.

Det er ikke vedtatte eller andre forslag til planer for nye utbygginger i området. Omkring planområdene er det i Bjerkreim kommune utlagt arealer til framtidig næringsvirksomhet og til nåværende og framtidig, offentlig eller privat tjenesteyting nord for Røyslandsvatnet. I Time

kommune er det et par reguleringsplaner for massetak ved Kartavoll. I Hå kommune er det ikke nærliggende reguleringsplaner eller utbyggingsformål i arealdelen (utenom areal for Bjerkreim vindpark).

2.3 Alternativer som utredes

2.3.1 Alternativ 0

Nullalternativet er sammenligningsgrunnlaget for konsekvensutredningen, og er forventet situasjon i influensområdet i sammenligningsåret dersom tiltaket ikke blir gjennomført. Sammenligningsåret er året tiltaket kan være realisert og er her satt til 2030. Nullalternativet inkluderer nåværende miljøtilstand samt vedtatte planer for området som det er grunn til å tro vil bli gjennomført. Det er såpass kort tid fra nå (2026) til 2030 at det ikke forventes merkbare endringer i området som følge av klimaendringer. Det forventes fram til sammenligningsåret 2030 at fv. 504 oppgraderes iht. vedtatt detaljregulering, og at steinbruddet i «Moi brudd og massetak» blir noe utviklet iht. sin detaljregulering. Det forventes ellers at skulpturen MUTE er satt opp på Karten. Utover dette forventes det ikke særlige endringer innenfor tiltaksområdet. Nullalternativet settes på denne bakgrunn til likt med dagens miljøtilstand, med tillegg av disse tiltakene.

2.3.2 Alternativ 1

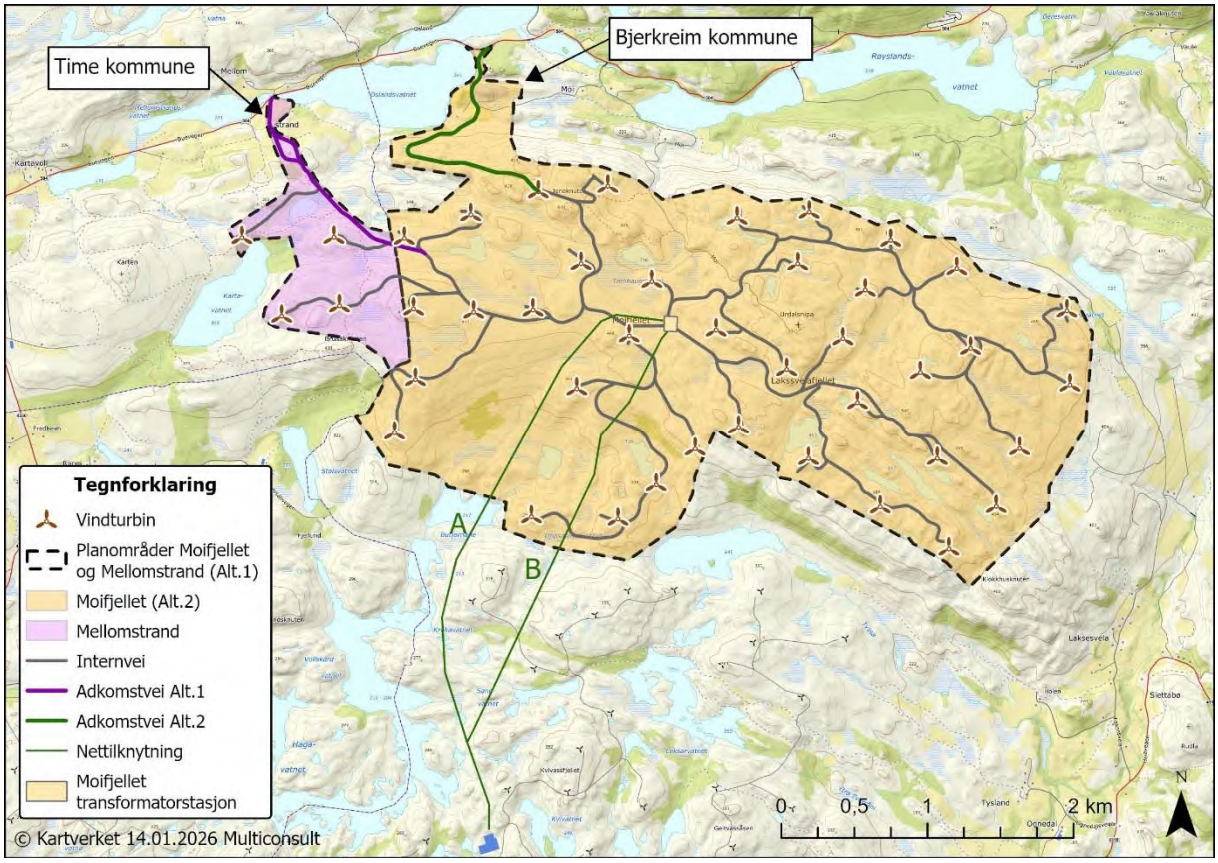
Alternativ 1 omfatter:

- Et todelt planområde på totalt 17,5 km^2, bestående av planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune på 16,0 km^2, og planområdet for områderegulering av Mellomstrand vindkraftverk i Time kommune på 1,4 km^2.
- Adkomstvei i Time kommune, fra fv. 504 øst for Mælandsvatnet og til internveinett vest for Legetjørn, med rigg- og lagerområde langs denne. Det er to like lange varianter for framføring, alternativ i) går på deler av strekningen i ny trasé vest for eksisterende vei, alternativ ii) følger eksisterende grusvei.
- Utredningsløsning med 38 vindturbiner i Bjerkreim kommune og 4 vindturbiner i Time kommune.
- Tilhørende kranoppstillingsplasser, internveier, jordkabler, driftsbygg, og transformatorstasjon.

2.3.3 Alternativ 2

Alternativ 2 omfatter:

- Planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune.
- Adkomstvei i Bjerkreim kommune, fra fv. 504 øst for Oslandsvatnet, gjennom «Moi brudd og massetak» og opp Stigafjellet til internveinett ved Joneknuten, med rigg- og lagerområde nede i «Moi brudd og massetak».
- Utredningsløsning med 38 vindturbiner i Bjerkreim kommune,
- Tilhørende kranoppstillingsplasser, internveier, jordkabler, driftsbygg og transformatorstasjon.



Figur 2. Oversiktskart over beliggenhet av planområdene til vindkraftverket og tiltakets infrastruktur.

3 Metode for konsekvensutredningen

3.1 Definisjon og avgrensning

3.1.1 Definisjon av mineralressurser

Mineralressurser er ikke-fornybare naturressurser, og omfatter både berggrunn og løsmasser. De deles inn i fem kategorier:

- Metalliske malmer
- Industrimineraler
- Energimineraler
- Naturstein
- Byggeråstoff (sprengstein, pukk, grus og sand)

Direktoratet for mineralforvaltning (DMF) er både fagorgan og myndighet for mineralressurser og mineralvirksomhet. Mineralloven regulerer erverv og utvinning av mineralressurser i Norge [9]. Uttak av mineralressurser foregår gjennom underjordsgruver eller dagbrudd/masseuttak i fast fjell, eller masseuttak i løsmasser.

3.1.2 Avgrensning mot andre fagtema

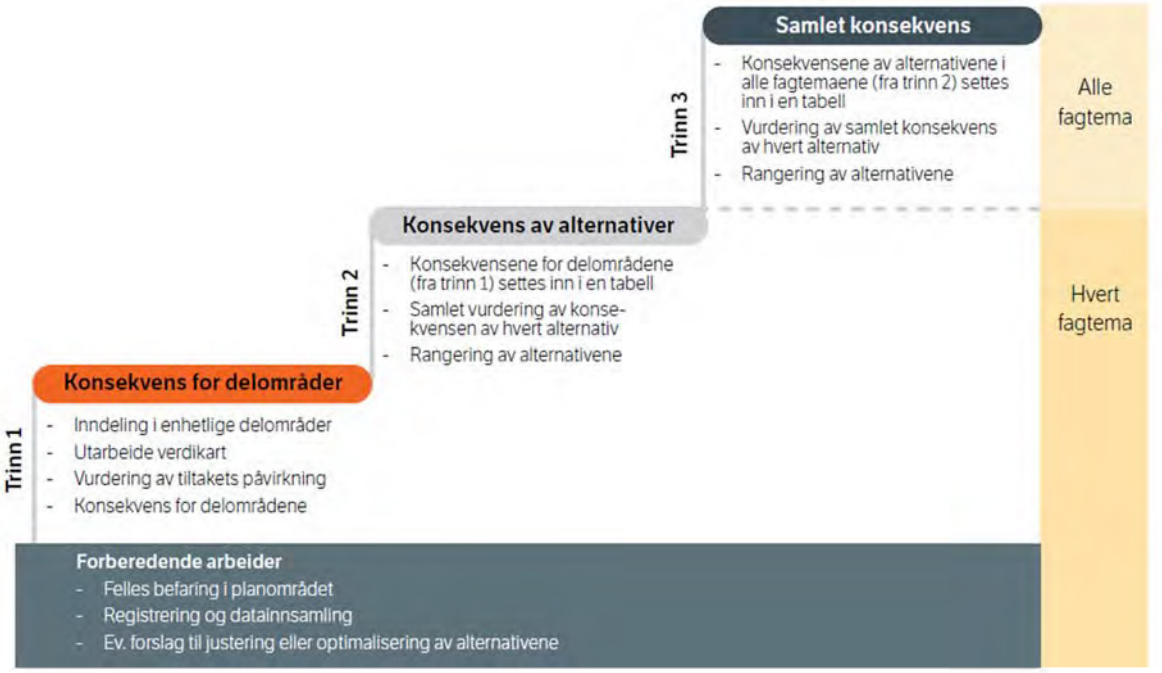
I en konsekvensutredning skal konsekvenser telles kun én gang. I henhold til Statens vegvesen Håndbok V712 [2] skal tema mineralressurser utredes som en underkategori av naturressurser, og dermed som del av ikke-prissatte konsekvenser. Det vil si at forekomster og områder med potensiale for mineralressurser (prospekter) vurderes. Tildelt utvinningsrett for mineralressurser inngår iht. V712 i prissatte konsekvenser.

NVE har imidlertid i sitt utredningsprogram for Moifjellet vindkraftverk [1] bedt om at alle registrerte mineralforekomster beskrives, og at tiltakets påvirkning på disse forekomstene vurderes, uansett om det er aktive uttaksområder eller framtidige, potensielle prospekter. Dermed utredes alle mineralressurser i denne rapporten, både de som per i dag har en økonomisk verdi, og de som kan være potensielle ressurser for framtiden.

Geologiske områder med verdi for forskning/undervisning inngår under temaet «Geologisk mangfold» og utredes ikke i denne rapporten.

3.2 Metodikk

Metoden for konsekvensutredning av ikke-prissatte temaer, herunder naturressurser, er beskrevet i kap. 6 i Statens vegvesens Håndbok V712 [2]. Metoden skal sikre en systematisk, helhetlig og faglig analyse av de konsekvensene et tiltak medfører. Vurderingen gjøres i tre trinn som vist i Figur 3. Trinn 1 og Trinn 2 utføres i denne rapporten for mineralressurser. Trinn 3 er en samlet konsekvensvurdering av alle ikke-prissatte fagtema, og inngår i hovedrapporten for konsekvensutredningen.



Figur 3. Tre-trinns metode for konsekvensutredning av ikke-prissatte tema. Figur hentet fra Håndbok V712 [2].

3.2.1 Trinn 1: Vurdering av konsekvens for delområder

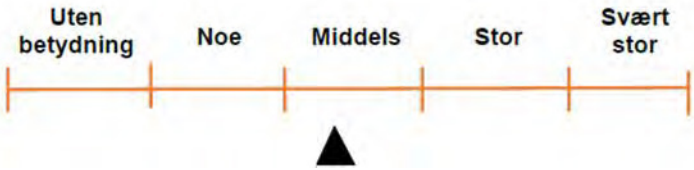
Inndeling i enhetlige delområder

Ved inndeling i delområder, er det ikke bare sett på planområdene, men på 'influensområdet' av tiltaket, som er definert som området der tiltaket kan ha en påvirkning på verdi av mineralressurser. I dette tilfellet er avgrensningen av influensområdet en kombinasjon av planområdene og de registrerte forekomstene av mineralforekomster som overlapper med planområdene.

På grunnlag av innsamlet kunnskap deles influensområdet inn i delområder. Et delområde er definert som et område som har en enhetlig funksjon, karakter og/eller verdi og som derfor skiller seg fra tilgrensende areal. Delområder i tema mineralressurser er områder der det er forekomster, prospekter, og områder med tildelte utvinningsrettigheter av en eller flere av de fem typer mineralressurser (se kap. 3.1.1).

Verdivurdering av delområder

Delområdene får tildelt en verdi for konsekvensutredningen (se Figur 4), som er satt etter kriteriene for verdisetting av mineralressurser som vist i Tabell 1.



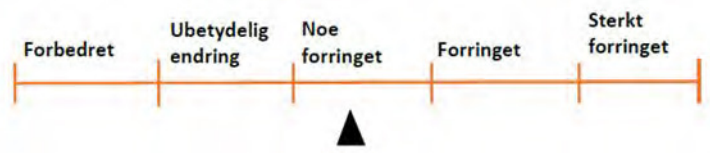
Figur 4. Skala for vurdering av verdi (hentet fra V712 [2].

Tabell 1. Tabell med kriterier for verdisetting av mineralressurser, utarbeidet etter grunnlag fra håndbok V712, med fargepalett etter Miljødirektoratets veileder M-1941.

Delkategori	Ubetydelig verdi	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
Mineralressurser (metaller, industrimineraler, energimineraler, naturstein)	Ikke registrert som en forekomst / lokalt vanlig	Lokalt viktig / liten forekomst	Regionalt viktig	Nasjonalt viktig	Internasjonalt viktig
Byggeråstoff (pukk og grus)	Ikke registrert som en forekomst / lokalt vanlig	Lokalt viktig / liten forekomst	Regionalt viktig	Nasjonalt viktig	Internasjonalt viktig

Påvirkning av tiltaket

Det vurderes heretter hvilken påvirkning de foreslåtte endringene i arealbruk som følge av tiltaket (vindkraftverket) vil ha på delområdene, etter skalaen som vist i Figur 5, og vurderingskriterier gitt i Tabell 2.



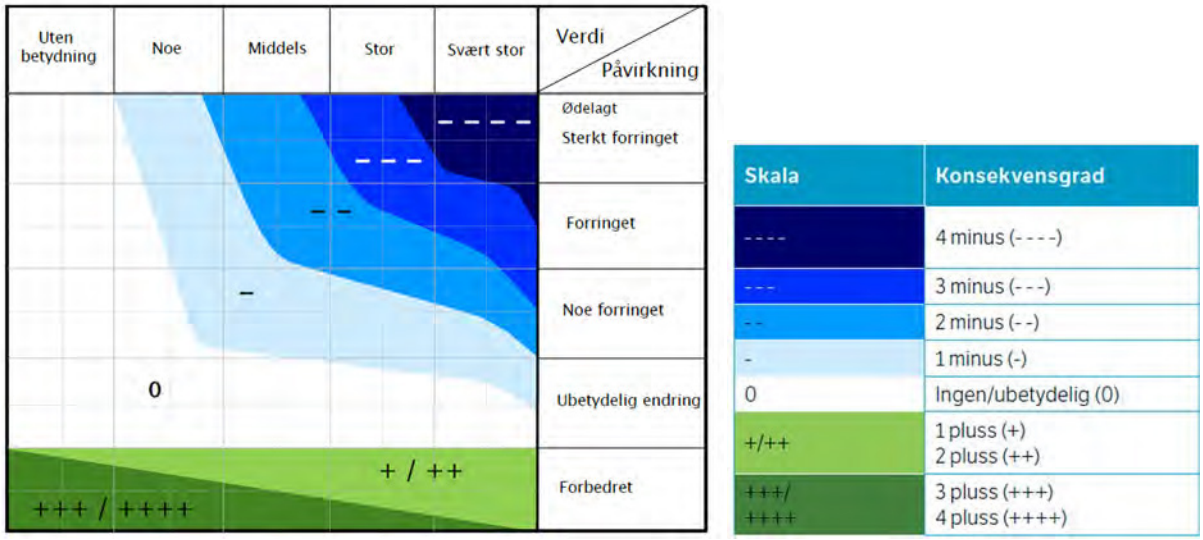
Figur 5. Skala for vurdering av påvirkning (hentet fra V712 [2].

Tabell 2. Tabell for vurdering av påvirkning av mineralressurser, utarbeidet etter grunnlag fra håndbok V712.

Tiltakets påvirkning	Definisjon mht. mineralressurser
Forbedret	Gjennomføring av tiltaket sikrer adkomst til forekomst av stor eller svært stor verdi, som har forhindret uttak til nå.
Ubetydelig endring	Hverken positiv eller negativ endring på ressursen og uttaksmuligheter.
Noe forringet	Gjennomføring av tiltaket vil redusere uttaket med mellom 25 – 50 % av utnyttbar mengde.
Forringet	Gjennomføring av tiltaket vil redusere uttaket med mellom 50 – 75 % av utnyttbar mengde
Sterkt forringet	Gjennomføring av tiltaket vil hindre all utnyttelse eller begrense uttak av forekomsten med minst 75 % av utnyttbar mengde.

Vurdering av konsekvens

Skalaen for konsekvens går fra 4 minus til 4 pluss, da tiltaket kan ha negativ eller positiv konsekvens på delområdet. Dette er vist i Figur 6.



Figur 6. Skala og veiledning for konsekvensvurdering av delområder, hentet fra V712 [2].

3.2.2 Trinn 2: Konsekvenser av alternativer

I dette trinnet gjøres en samlet konsekvensvurdering av alle alternativene i tiltaket. Samlet konsekvens av hvert alternativ sammenlignes med konsekvensen av null-alternativet (ingen vindkraftverk). Kriterier for fastsettelse av konsekvens for hvert alternativ er gitt i Tabell 3.

Tabell 3. Kriterier for fastsettelse av konsekvens for hvert alternativ (kilde: håndbok V712 [2].

Skala	Trinn 2: Kriterier for fastsettelse av konsekvens for hvert alternativ
Kritisk negativ konsekvens	Svært stor miljøskade for temaet, gjerne i form av store samlede virkninger. Stor andel av strekning har særlig høy konfliktgrad. Vanligvis flere delområder med konsekvensgrad 4 minus (- - - -). Brukes unntaksvis
Svært stor negativ konsekvens	Stor miljøskade for temaet, gjerne i form av store samlede virkninger. Vanligvis har stor andel av strekningen høy konfliktgrad. Det finnes delområder med konsekvensgrad 4 minus (- - - -), og typisk vil det være flere/mange områder med tre minus (- - -).
Stor negativ konsekvens	Flere alvorlige konfliktpunkter for temaet. Typisk vil flere delområder ha konsekvensgrad 3 minus (- - -).
Middels negativ konsekvens	Delområder med konsekvensgrad 2 minus (- -) dominerer. Høyere konsekvensgrader forekommer ikke eller er underordnete.
Noe negativ konsekvens	Liten andel av strekning med konflikter. Delområder har lave konsekvensgrader, typisk vil konsekvensgrad 1 minus (-), dominere. Høyere konsekvensgrader forekommer ikke eller er underordnete.
Ubetydelig konsekvens	Alternativet vil ikke medføre vesentlig endring fra referansesituasjonen (referansealternativet). Det er få konflikter og ingen konflikter med høye konsekvensgrader.
Positiv konsekvens	I sum er alternativet en forbedring for temaet. Delområder med positiv konsekvensgrad finnes. Kun ett eller få delområder med lave negative konsekvensgrader, og disse oppveies klart av delområder med positiv konsekvensgrad.
Stor positiv konsekvens	Stor forbedring for temaet. Mange eller særlig store/viktige delområder med positiv konsekvensgrad. Kun ett eller få delområder med lave negative konsekvensgrader, og disse oppveies klart av delområder med positiv konsekvensgrad.

4 Grunnlagsmateriale

For vurdering av konsekvensutredning av mineralressurser i planområdene er følgende grunnlag benyttet:

- Planlagt grunnlag for veier, vindturbiner, trafo, master og linjetrasé (per 14.01.2026)
- Kart fra Norges geologiske undersøkelse (NGU) (https://www.ngu.no/geologiske-kart), herunder:
    - Kart over berggrunnsgeologi [4]
    - Kart over løsmasser [5]
    - Kart over mineraler, metaller og naturstein [6]
    - Kart over grus og pukk [7]
- Kart fra Direktoratet for Mineralforvaltning (https://dirmin.no/kart) [8], herunder:
    - Uttakskart
    - Bergrettighetskart
    - Konsesjonskart
- Håndbok V712 Konsekvensanalyser (Statens vegvesen) [2]
- Norges vassdrags- og energidirektorat (NVE): Kunnskapsgrunnlag om virkninger av vindkraft på land – mineralressurser [3]
- Mineralloven [9]
- Ny minerallov, Norges offentlige utredninger 2022:8 [10]
- Fylkesdelplan for byggeråstoffer på Jæren (utgitt i 2006) [11]
- Regionalplan for massehåndtering på Jæren 2018 – 2040 (utgitt i 2017) [12]
- Levetidsanalyse for byggeråstoff i Norge 2023 [13]
- Faktaark om grus- og pukkforekomster (https://geo.ngu.no/kart/grus_pukk_mobil/)
- Historiske ortofoto av området fra www.norgeibilder.no
- Befaringer i planområdet med fokus på kartlegging av bergartene i områder som planlegges for masseuttak i forbindelse med vindkraftverket

5 Geologiske forhold i planområdene

5.1 Topografi, terreng og vegetasjon

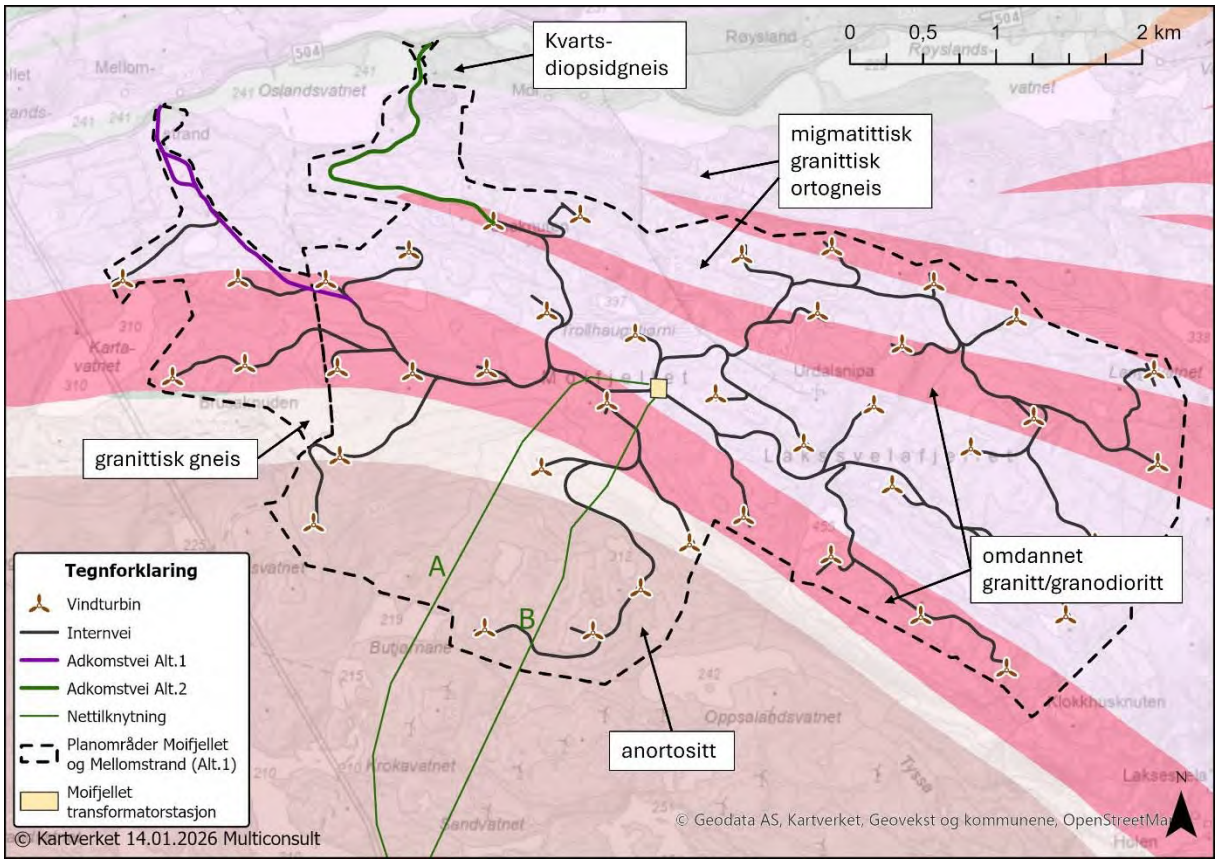
Planområdene ligger hovedsakelig på Moifjellet, som er et kupert fjellplatå på ca. 10 kvadratkilometer størrelse, med terrenghøyder rundt 350 – 500 moh. Høyeste topp er Urdalsnipa på 561 moh. Moifjellet er om lag 200 – 300 m høyere enn det omkringliggende landskapet på Jæren. Adkomstveien i Time kommune (Alt. 1) starter på ca. kote 240 ved fylkesvei 504 og leder opp til transformatorstasjonen.

Terrenget på Moifjellet er typisk Jærsk fjellterreng og det er også et registrert område med kystlynghei. Terrengformasjonene er i dette området preget av NV-SØ-orientertete bergrygger avvekslet med dalsøkk fylt med våtmark (myr og ur). Høydeforskjeller mellom bergryggene og dalsøkkene er typisk 10 – 50 m.

Vegetasjonen i området er dominert av torv, mose og lyng og noen lave einer. Innenfor planområdene er det nesten ingen trær, bortsett fra åpen løvskog i enkelte skråninger rundt Moifjellet. Bergryggene er stort sett uten vegetasjon.

5.2 Berggrunnsgeologi

Berggrunnen i store deler av planområdene består ifølge NGUs 1:50 000 berggrunnsgeologiske kart av forskjellige granittiske gneiser, hovedsakelig migmatittisk granittisk – tonalittisk gneis avvekslet med omdannet, grovkornet granitt/granodioritt (se Figur 7).



Figur 7. NGUs berggrunnsgeologiske kart (1:50 000) for området [4].

Bergartsgrensene, lagdelingen og foliasjonen i gneisen er overveiende orientert med V-Ø til NV-SØ strøk og ca. 50 - 70° fall mot nord. Dette gir opphav til de markerte bergryggene med samme orientering på Moifjellet (se Bilde 1).

I den sørvestre delen av området består berggrunnen av anortositt, tilhørende den nordre delen av Anortositтprovinsen i Rogaland (se Bilde 2). Alle bergartene i området er av svekonorvegisk alder. Anortositten ble dannet for ca. 930 millioner år siden, og er noe yngre enn de granittiske gneisene som finnes på Moifjellet.

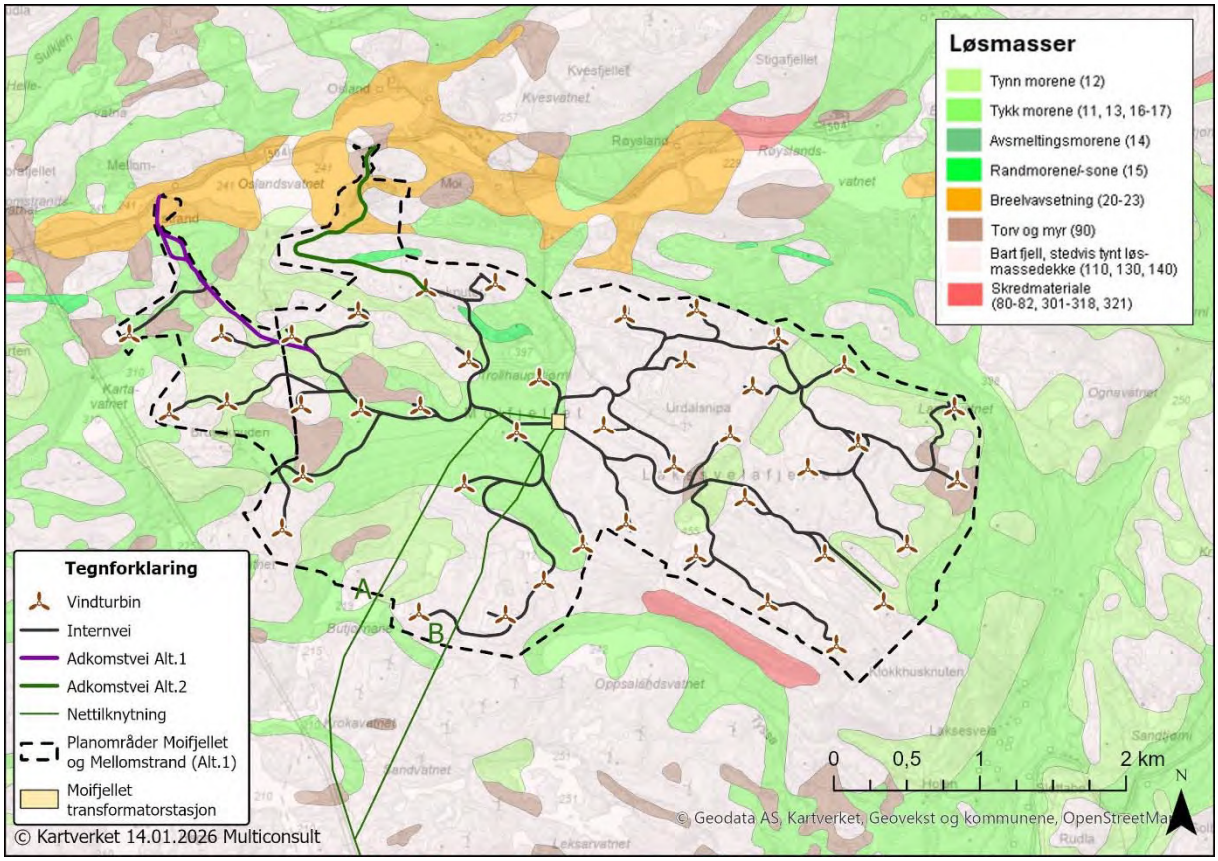
Bergmassen i hele planområdet er overveiende massiv, og fremstår i all hovedsak som svært grovblokkig, med få men svært gjennomsettende sprekker. Sprekkeavstand varierer generelt fra 1 – 5 m, men lokalt kan det være tettere oppsprukne partier. Det er registrert 3 hovedsprekkesett som til sammen danner prismeformede blokker. Gjennom frostforvitring er bergoverflaten i mange områder oppsprukket i helt avløste blokker. De fleste blokkene er i størrelsesorden 1 – 5 m^3, men enkelte blokker er i størrelsesorden 10 – 20 m^3.

5.3 Kvartærgeologi (løsmasser)

Området ligger over marin grense. På NGUs løsmassekart er det registrert mye bart fjell i den midtre og østre delen av Moifjellet, med noe torv/myr og tynne morenemasser i de største dalsøkkene. I vestre del av Moifjellet er det registrert morenemateriale med stedvis stor mektighet (se Figur 8). Trollshaugen, som ligger nordvest for den planlagte trafoen, er en randmorene (se Bilde 3). På nordsiden av Moifjellet, i dalsøkket rundt fylkesveg 504, er det registrert breelvavsetninger.

Det er på befaringene erfart at det er myr/torv i de fleste dalsøkkene, men ofte kombinert med steinholdige morenemasser som dekker hele området, foruten bergryggene der det er bart fjell. Det er mindre områder under bergskrenter med skredur, men det er kun sør for Moifjellet (utenfor planområdene) at det er registrert et større sammenhengende område med skredmateriale.

Det ligger imidlertid mye blokkmateriale i terrenget (flyttblokker), også i flate områder (se Bilde 4). Rundt dreneringsveiene ligger det ofte sammenhengende ur av kantete blokker. Det antas at dette er ur som er lagt igjen av isen etter den siste istiden (ablasjonsmorene). Bergpartiene er ofte preget av frostsprengning, og det er dermed også mange løse blokker i områder med bergblotninger (rundsva).



Figur 8. NGUs kvartærgeologiske kart (1:50 000) for området [5].

6 Mineralressurser i influensområdet og regionen

6.1 Generelt om mineralressurser i Rogaland

I Rogaland er mineralressurser en viktig næring. Det utvinnes byggeråstoff, metaller og industrimineraler. Det ble tidlig innsett at dette er ikke-fornybare ressurser som må sikres for å ivareta en stabil forsyning av masser i framtiden, spesielt av byggeråstoffer til den store byggevirksomheten som finnes i Rogaland. I perioden 2000 – 2005 har NGU foretatt en kartlegging av forskjellige mineralressurser i Rogaland. Spesielt på Jæren er byggevirksomheten stor, samtidig som det er lite utmark og friområder, og større (areal)konflikter mellom byggeråstoffutvinning og blant annet jordbruk.

Det ble i 2006 utgitt en fylkesdelplan for byggeråstoffer på Jæren [11], med formål å sørge for en enhetlig forvaltning av grus- og pukkforekomster på Jæren. På dette tidspunktet var de viktigste mineralressursene i Rogaland (i rekkefølge fra største til minste ressurs (økonomisk verdi): 1) pukk, 2) ilmenitt, 3) grus, 4) anortositt/naturstein, 5) skifer/murestein, og 6) leire.

Etter hvert som det har blitt mer konfliktfylt og komplisert å starte nye uttaksvirksomheter i Rogaland, har fokuset skiftet til bærekraftig håndtering av masser fra bygge- og anleggsaktivitet i regionen (spesielt på Jæren). Med fokus på gjenbruk av overskuddsmasser fra anleggsvirksomhet og det grønne skiftet, er det i 2017 utgitt en regionalplan for massehåndtering på Jæren [12].

Direktoratet for mineralforvaltning har utført en analyse som estimerer den gjenværende levetiden av uttakene av byggeråstoff i Norge [13]. Det gjelder masseuttakene av pukk, grus og sand som er i drift. I henhold til denne analysen er forventet levetid for knust fjell (pukk) i Bjerkreim kommune mellom 5 og 10 år. I Time kommune er levetid for knust fjell (pukk) over 50 år. Forventet levetid for sand og grus er både i Bjerkreim kommune og i Time kommune mellom 10 og 20 år. Når en kommune går tom for byggeråstoff har de flere alternativer, deriblant å utvide eksisterende uttak, åpne nye uttak, eller kjøpe inn byggeråstoff fra andre steder.

Oversiktskart over mineralressurser i området (sørlig del av Rogaland) er vist i Figur 9 (metaller, industrimineraler og naturstein) og i Figur 10 (grus og pukk).

I henhold til Direktorat for Mineralforvaltning sine kart er det ingen bergrettigheter som omfatter (deler av) planområdene. Det er ett uttak i drift innenfor planområdet i Bjerkreim kommune (Moi steinbrudd), samt et par nedlagte uttak for sand og grus i Time kommune (Oslandsvatnet massetak). Disse er nærmere omtalt i kap. 6.6.

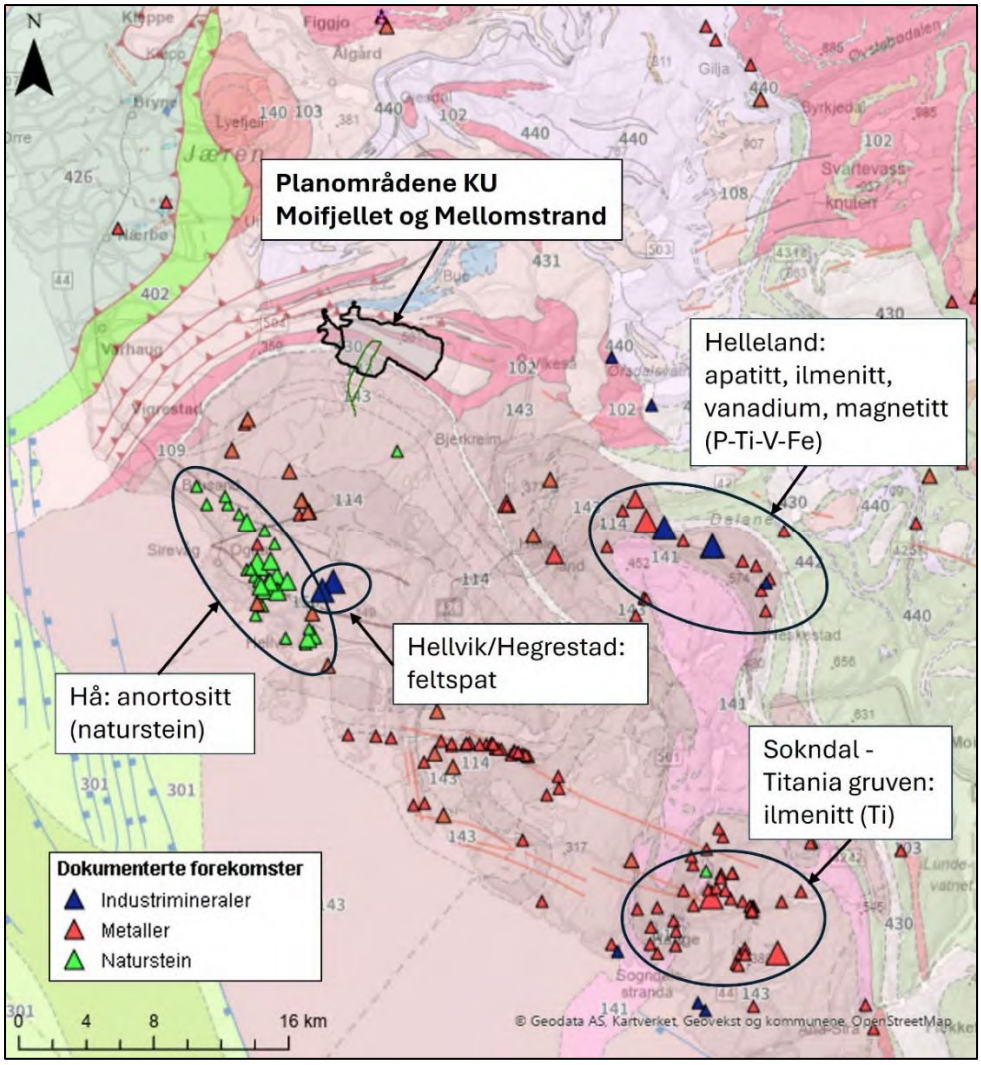
6.2 Metaller

Det er ingen registrerte metallforekomster i planområdene, eller i influensområdet (det direkte nærområdet til vindkraftverket, se kap. 6.7). De nærmeste registrerte malmforekomster ligger på minst 8 km avstand i luftlinje, og forekommer i anortosittkomplekset som ligger sør for Moifjellet. Dette er alle mindre forekomster av jernlegeringsmetaller (Cr, Ni, Co, V, Mo, W og av og til Ti, Mn).

Den mest kjente malmforekomsten i området er ilmenitt som utvinnes av Titania AS i gruven i Sokndal. Ilmenitt (jern-titan) forekommer her i dypbergarter tilhørende Bjerkreim-Sokndal intrusjonen. I Sør-Rogaland finnes disse metaller ofte i (gabbro)norittiske ganger som har intrudert anortositten.

Ved Helleland (Teksevannet) er det planer om utvinning av både malm og industrimineraler fra en lagdelt gabbronoritt i Bjerkreim- Sokndal intrusjonen, som inneholder mineralene apatitt, ilmenitt,

vanadium og magnetitt. Denne forekomsten ligger på ca. 20 km avstand fra sørlig del av planområdene for Moifjellet og Mellomstrand vindkraftverk, og vil dermed ikke bli påvirket av vindkraftverket.



Figur 9. Oversikt over forekomster av metaller, industrimineraler og naturstein i sørlig del av Rogaland. Bakgrunnskartet er berggrunnskartet med målestokk 1:250 000. Den brune fargen antyder Rogaland Anortositt Provinsen.

6.3 Industrimineraler

Det er ingen registrerte forekomster av industrimineraler i planområdene. Den nærmeste og for tiden viktigste forekomsten av industrimineraler er ved Helleland (Teksevannet), og er den nevnte forekomsten av apatitt i gabbronoritt som tilhører Bjerkreim-Sokndal intrusjonen. Det er fosfat som utvinnes fra apatitt.

Ved Hellvik og Hegrestad, omtrent 14 km sørvest for planområdene, utvinnes det feltspat fra anortositt. Feltspaten i anortositten har tidligere blitt brukt som tilslag i vaskepulver og slipemiddel i tannpasta. Nå brukes den som et tilslag til keramikk, betong og asfalt.

Øst for Vikeså er det en registrert forekomst av grafitt, som er funnet i bergarten pelitt. Litt lenger sør, ved Lauperak, er det en registrert forekomst av feltspat og kvarts fra en pegmatittisk åre som viste seg å være urein.

6.4 Energimineraler

Det er ingen registrerte forekomster av energimineraler i Rogaland. Dette er mineraler som avgir energi ved forbrenning (slik som f.eks. kull, uran og thorium).

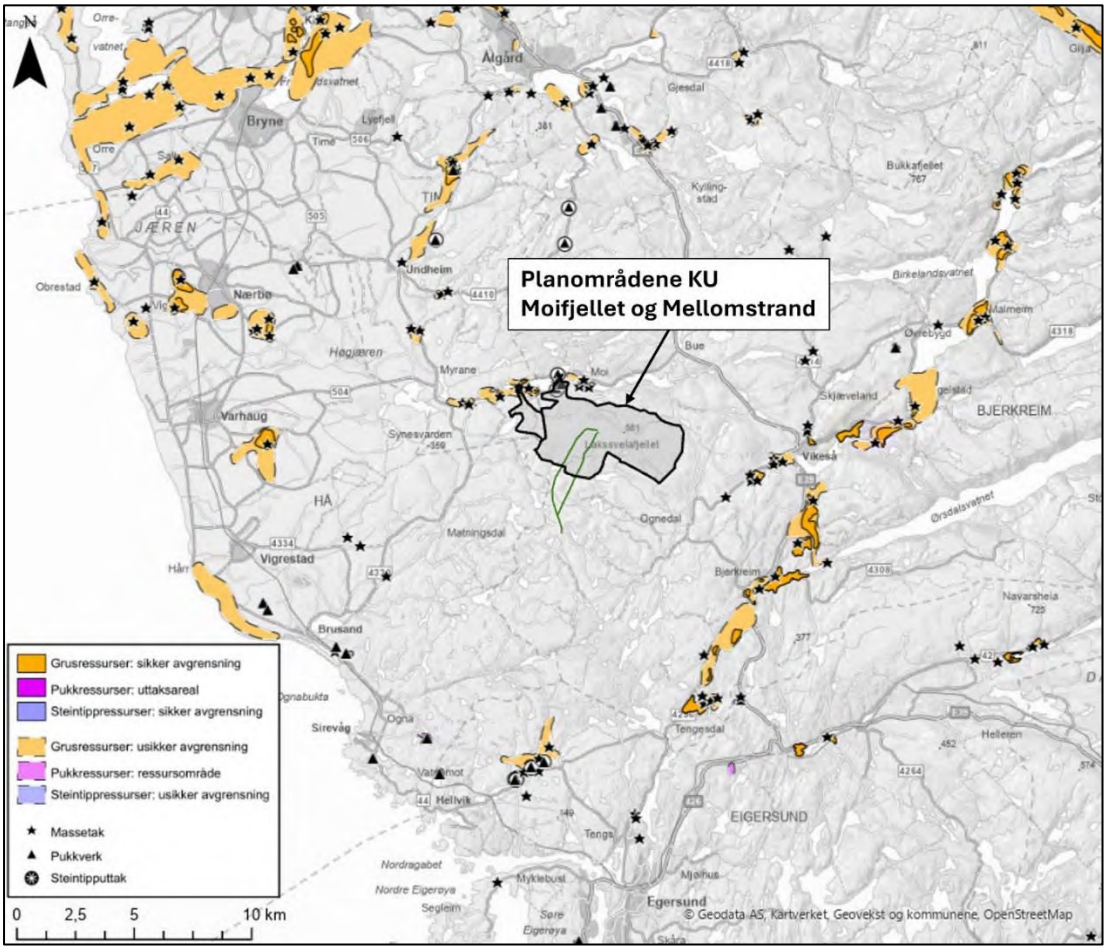
6.5 Naturstein

Det er ingen registrerte forekomster av naturstein i planområdene. Det er imidlertid flere forekomster av naturstein, og uttak i drift, i Hå kommune, omtrent 15 km sørvest for Moifjellet. Her er det for tiden 5 uttak der det utvinnes labradoritt, en anortositt med spesielt fargespill i feltspatkrystallene. Det er i Sør-Rogaland kun anortositten som lokalt utvinnes til formål naturstein.

6.6 Byggeråstoff (pukk, sand og grus)

Det er mange uttak av byggeråstoff i Rogaland, og flere av disse er på Jæren, i nærheten av planområdene (se Figur 10). I mange tilfeller er det sand og grus som utvinnes fra breelvavsetninger, da dette er godt sorterte løsmasseavsetninger. Større morenestein i løsmassene knuses til pukk. Som regel forekommer breelvavsetninger, og dermed også masseuttakene, i dalsøkk.

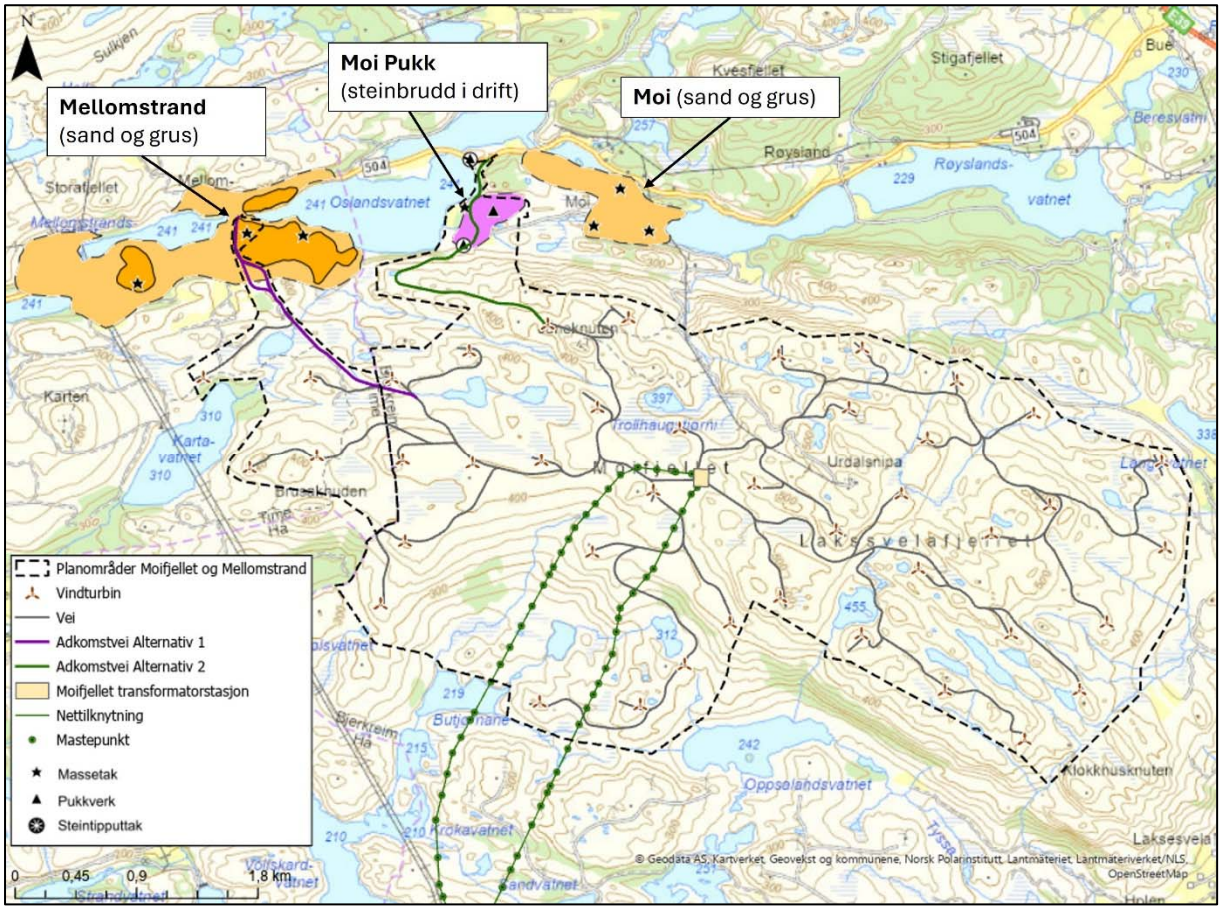
Når løsmassene er tatt ut, videreføres driften ofte ved å ta ut bergmasser i samme området til pukk. Uttak av pukk foregår hovedsakelig i granittiske gneiser i Sør-Rogaland, men også i anortositt. Masseuttakene for pukk er som regel lokalisert i områder som er lett tilgjengelige, men der uttak gjennom sprengning skaper lite konflikt med annet arealbruk i nærområdet.



Figur 10. Oversikt over pukk- og grusforekomster i sørlig del av Rogaland [7]. Gjennomsiktig gul farge betyr at ressursen ikke er volum-beregnet, mens helfarge betyr at ressursen er volumberegnet.

På nordsiden av Moifjellet og Mellomstrand planområdene er det registrert et par forekomster av byggeråstoff som er av betydning for konsekvensutredningen (se Figur 11). I sand og grusforekomstene har det tidligere vært uttak av masser på ulike steder. Det er for tiden kun aktivt uttak av sand og grus i breelvavsetninger som ligger øst og vest for Husavatnet, mot Kartavoll. Disse områdene er imidlertid vurdert til å ligge utenfor influensområdet til tiltaket og er derfor ikke omtalt nærmere.

Moi Pukk er et steinbrudd som er i drift, og omtales nærmere i kap. 7.



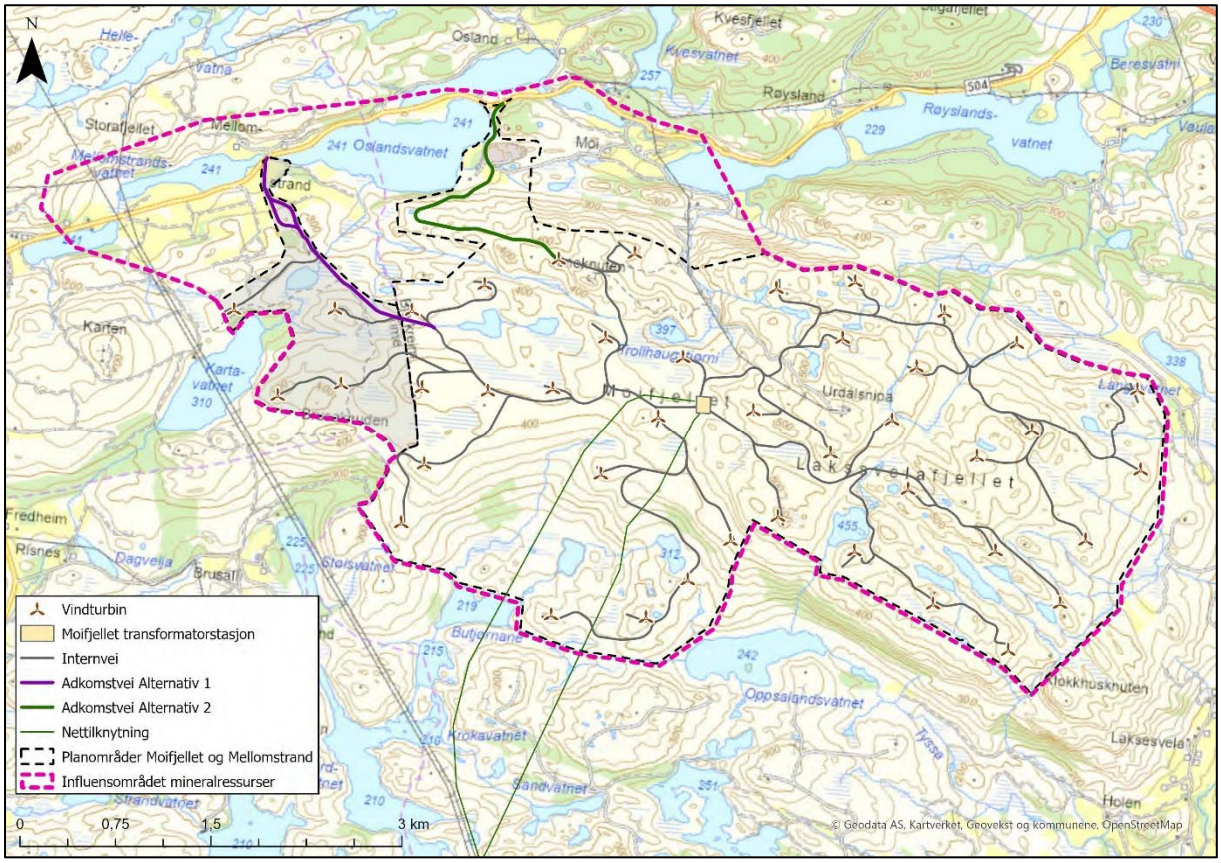
Figur 11. Oversikt over registrerte ressurser og uttak av byggeråstoffer (pukk, grus og sand) i nærheten av planområdene [7].

6.7 Definisjon av influensområdet for KU mineralressurser

I henhold til V712 [2] er influensområdet det området der det ventes vesentlige virkninger av tiltaket. For mineralressurser omfatter influensområdet planområdene til vindkraftverket, da dette er arealet som kan få direkte fysiske inngrep. I utgangspunktet påvirker ikke tiltaket mineralressurser som ligger utenfor planområdene, med mindre ressursarealet blir kuttet av planområdet. Dette er f.eks. tilfellet for ressursene Mellomstrand sand og grus og Moi Pukk som kan bli kuttet av adkomstvegene (se Figur 11). Disse ressursene er derfor i sin helhet tatt med i influensområdet til vindkraftverket, da tiltaket kan påvirke verdien av hele ressursen.

I en tidligere versjon av planområdet for Moifjellet vindkraftverk (alt. 2) var eksisterende grusvei fra Fv.504 til masten på Urdalsnipa med i planområdet. Denne grusveien går gjennom forekomsten Moi (sand og grus), som derfor også var tatt med i influensområdet. Selv om avgrensning av

planområdene nå er endret, og dermed også influensområdet, er det valgt å beholde forekomsten Moi sand og grus i rapporten. Det kan argumenteres at vindkraftverket kan ha en mulig effekt på planprosesser for områderegulering ellers i dalføret mtp. utvinning av mineralressursene. Industrialisering av området gjennom et vindkraftverk kan påvirke om det blir sett på som attraktivt å legge til rette for utvinning av mineralressurser i det direkte nærområdet til vindkraftverket. Influensområdet for mineralressurser er derfor definert som planområdene, og de mineralressursene i dalføret på nordsiden av planområdene som kan bli berørt av tiltaket. Disse ligger alle innenfor 1,5 km avstand fra planavgrensningen på nordsiden. Influensområdet er vist på kart i Figur 12.



Figur 12. Kart som viser planområdene for vindkraftverket og influensområdet for mineralressurser.

6.8 Potensiale for hittil ukjente mineralressurser i planområdet

Etter nærmere kartlegging av området på to befaringer er det ikke oppdaget hittil ukjente mineralressurser i planområdene, som ikke er registrert i NGUs databaser for mineralressurser [6][7]. Det er ikke oppdaget gamle gruver i berggrunn i området. Det er heller ingen bergrettigheter i planområdene. Nærmeste bergrettigheter ligger øst og sør for Moifjellet, på hhv. 4 og 6 km avstand fra Urdalsnipa, og er utstedt til Norge Mineraler AS som driver med prospektering av forekomsten ved Helleland. Planområdet berører ingen undersøkelsesvirksomhet som foregår i området.

For å vurdere potensialet for mineralressurser i området som ikke er registrert i NGUs database (det gjelder størstedelen av vindkraftverket) er disse delt inn i to delområder som er beskrevet og videre vurdert i kap. 7.

7 Trinn 1: Verdi og konsekvens for delområder

7.1 Inndeling i delområder

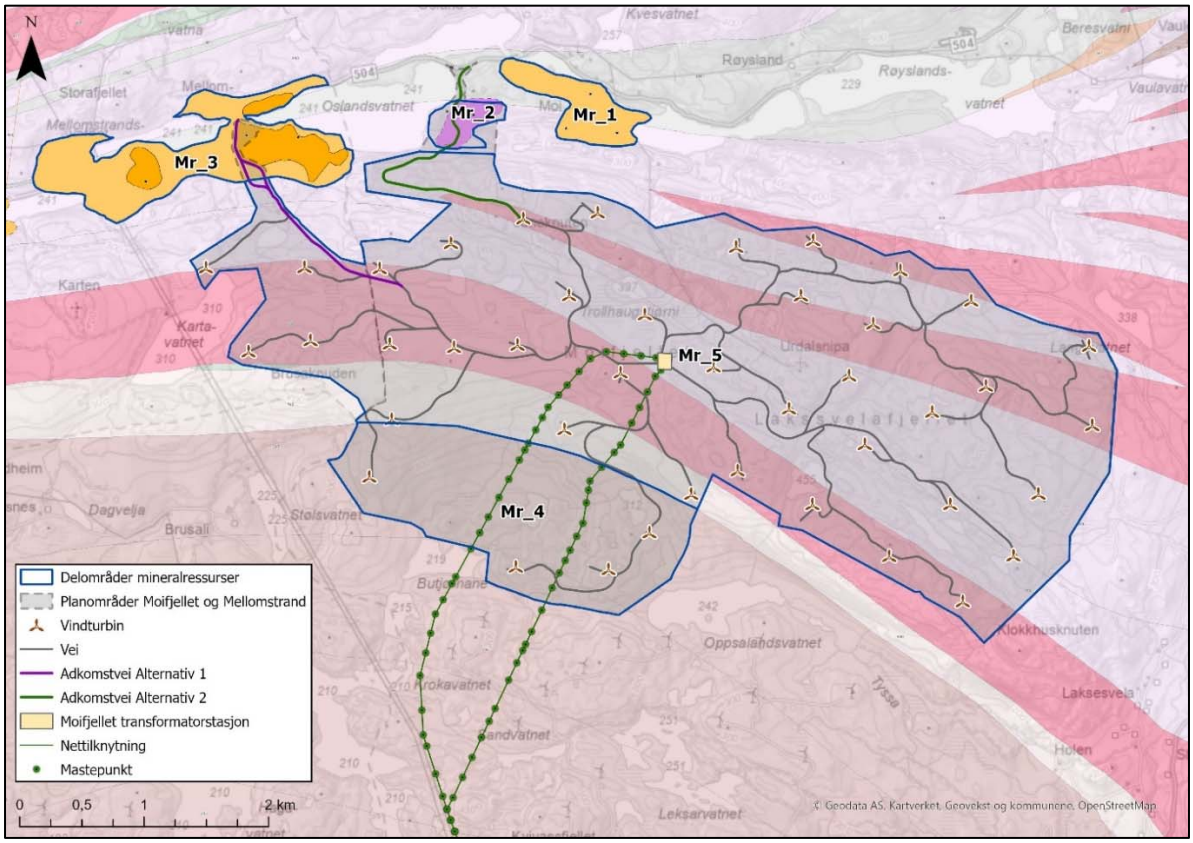
Basert på registrerte forekomster av mineralressurser fra NGUs databaser [6][7], samt kartlagt geologi i planområdene (berggrunn og løsmasser), er det identifisert delområder for mineralressurser i influensområdet til vindkraftverket. Delområdene og begrunnelse for valg er oppsummert i Tabell 4.

Mr_1, Mr_4 og Mr_5, er delområder som kan bli påvirket av vindkraftverket, uavhengig av hvilket alternativ som velges for adkomstvei. Mr_2 blir kun berørt av Alternativ 2 (adkomstvei Bjerkreim). Mr_3 blir kun berørt av Alternativ 1 (adkomstvei Time).

Kart som viser delområdene for mineralressurser er vist i Figur 13.

Tabell 4. Delområder innenfor influensområdet til alternativ 1 og 2.

Delområde ID	Navn	Areal (ha)	Begrunnelse for valg
Mr_1	Moi sand og grus	36	Registrert forekomst sand og grus
Mr_2	Moi Pukk steinbrudd	17	Uttak i drift (pukk)
Mr_3	Mellomstrand sand og grus	127	Registrert forekomst sand og grus
Mr_4	Anortositt	269	Bergart som kan utvinnes med formål pukk eller naturstein, eventuelt fillerprodukter og aluminium
Mr_5	Granittisk gneis	1445	Bergart som kan utvinnes med formål pukk



Figur 13. Oversiktskart over delområder for mineralressurser.

7.2 Delområder

7.2.1 Mr_1 Moi sand og grus

Beskrivelse

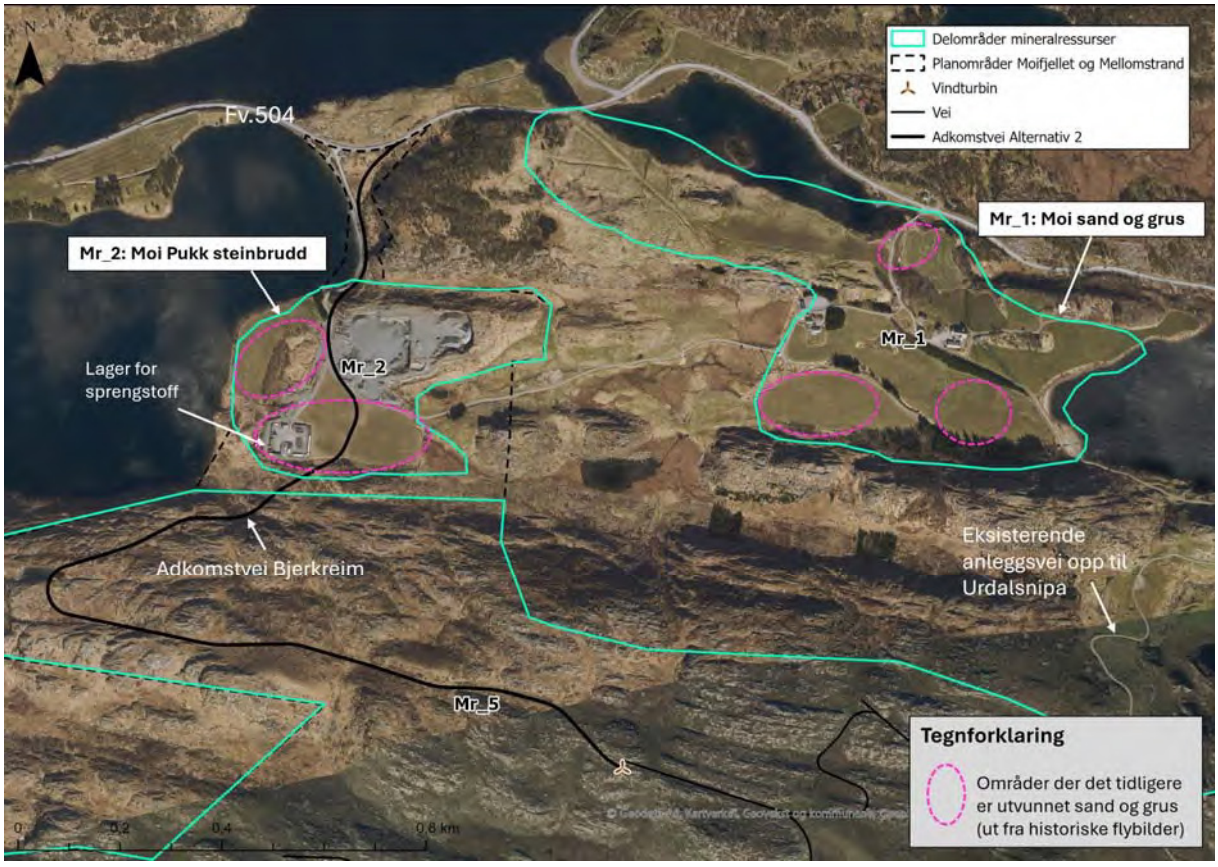
Områdets avgrensning er definert av en registrert forekomst av sand og grus i databasen [7], og dekker store deler av gården Moi. Området ligger på ca. kote 230 – 260, på nordsiden av Moifjellet, mellom Røyslandsvatnet og Oslandsvatnet (se kart i Figur 14). Her er det registrert breelvavsetninger med stedvis store mektigheter. Det er imidlertid også oppstikkende bergknauser i området, og noen områder med torv/myr i terrengoverflaten.

I NGUs grus og pukk database [7] er avsetningen beskrevet som forholdsvis dårlig sortert og med mye stein. Kornfraksjoner er anslagsvis 20 % stein, 40 % grus og 40 % sand. Forekomsten er imidlertid godt egnet for knusing. Det er derfor tidligere tatt ut materiale fra 3 forskjellige massetak på gården.

Det første massetaket lå direkte sør for fylkesvegen, og var i drift fra 40/50-tallet. På 90-tallet ble det tatt ut masser fra et større område ved Røyslandsvatnet, sør for gården. Deretter begynte uttak av masser fra det tredje massetaket, som ligger lengst sørvest og grenser til fjellryggen.

Det har etter tidlig på 2000-tallet ikke vært noe uttak av sand og grus i området. På de arealene som tidligere har vært massetak, er det nå etablert jordbruk (gress). Området er ikke regulert til masseuttak. Det ligger i kommuneplanen for Bjerkreim som LNFR område.

Forekomsten er ikke volumberegnet.



Figur 14. Kart på ortofoto som viser område Moi, på nordsiden av Moifjellet, der delområde Mr_1 og Mr_2 ligger. Omtrentlige områder der det tidligere er tatt ut sand og grus er angitt (basert på historiske flybilder).

Verdivurdering

Ifølge grusdatabasen har forekomsten 'lokal betydning'. I henhold til NGUs klassifiseringssystem betyr det at forekomsten er av betydning for kommunal ressursforvaltning. Det står også nevnt i grusdatabasen at ressursen bør utnyttes maksimalt. Det er imidlertid ikke kjent hvor mye materiale som er igjen i forekomsten, etter tidligere uttak i området. Som nevnt er det heller ingen formelle planer om ytterligere masseuttak i området.

I forhold til andre grus- og sandressurser i området, og iht. Tabell 1, vurderes det at delområdet har 'noe verdi'.

Tiltakets påvirkning

Etter revidering av planområdene, overlapper planområdet i Bjerkreim kommune ikke lenger med forekomsten. Tidligere var området delvis overlappende med planområdet for Moifjellet, fordi det her ligger en eksisterende anleggsvei, som går fra fylkesvegen, gjennom gården Moi, og videre opp til masten på Urdalsnipa (Bjerkreimsenderen). Det var planlagt at det i startfasen kunne være nødvendig å bruke denne anleggsveien for å frakte opp materiale, men dette er nå forkastet.

Ressursen ligger imidlertid i influensområdet til vindkraftverket, da en industrialisering av området vil kunne påvirke framtidig bruk av ressursen. Imidlertid vurderes det at tiltaket vil ha minimal påvirkning på verdien av ressursen siden det ikke etableres permanente tiltak i dette delområdet. Dermed er tiltakets påvirkning på ressursen vurdert som minimal, altså «ubetydelig endring».

Tiltakets konsekvens

Tiltaket har ingen permanent konsekvens for delområdet, og er vurdert til å være 0 (ingen/ubetydelig konsekvensgrad).

7.2.2 Mr_2 Moi Pukk steinbrudd

Beskrivelse

Dette delområdet er definert av området som er regulert til Moi brudd og massetak i Bjerkreim kommunens arealplan. Innenfor delområdet ligger det et steinbrudd som blir drevet av Risa AS (se kart i Figur 14, oversiktsbilde Figur 15 og Bilde 5 i vedlegget). Fra 80-tallet har det vært uttak av sand og grus i vestre og sørlig del av området fra den tidligere forekomsten «Oslandsvatnet». Denne forekomsten er beskrevet som en haugformet breelvavsetning med godt sorterte skrålag av sand og grus. Forekomsten ble imidlertid utdrevet og virksomheten flyttet deretter uttaket til det nåværende bruddområdet. Det tidligere uttaksområdet for sand og grus i sørlig del av delområdet er deretter rehabilitert og blir i dag brukt til jordbruk (gress). Et mindre område blir av Archer AS brukt til lagring av sprengstoff i sikrede containere.

Risa driver steinbruddet og produserer pukk og grus. Det skal være grovknuser, to finknusere og sikteverk i steinbruddet. I henhold til faktaark om forekomsten drives Moi Pukk steinbruddet i en mørk hornblendegneis. I henhold til det berggrunnsgeologiske kartet (Figur 7) drives bruddet i enheten som betegnes som migmatittisk granittisk til granodiorittisk ortogneis. Det er i pukkdatabasen nevnt at det er tatt kvalitetsprøver fra både hornblendegneisen og den mer kvartsrike gneisen mot nord. Begge analyseresultatene viser liten kvalitetsforskjell, og at bergmassen kan benyttes til faste vegdekker med årsdøgntrafikk (ÅDT) opp til 3000 kjøretøyer.

Verdivurdering

Ifølge pukkdatabasen har forekomsten Moi Pukk 'lokal betydning'. I henhold til NGUs klassifiseringssystem betyr det at forekomsten er av betydning for kommunal ressursforvaltning. Den tidligere forekomsten Oslandsvatnet (sand og grus) er utdrevet og har nå liten betydning.

Det har vært muntlig kommunikasjon med masse- og deponiansvarlig i Risa AS om masseuttaket. De mener at kvaliteten på pukk er ganske bra og at bruddet er godt lokalisert da det ligger i nærheten av E39 og flere anleggsprosjekter der det er behov for byggeråstoff. Som ikke-prissatt konsekvens er delområdet vurdert til å ha 'noe verdi'. Da det imidlertid er økonomiske interesser knyttet til ressursen, og aktiv drift, er det likevel vurdert at delområdet har 'middels verdi'.

Tiltakets påvirkning

Traséen for hovedadkomstvei Bjerkreim (Alt. 2) til vindkraftverket ligger gjennom delområdet. Den er planlagt til å følge eksisterende anleggsvei til bruddet, men det vil kreve noen justeringer i bredde og kurvatur for å muliggjøre transport av materiale. Blant annet må veien utvides i en utstikkende lav kolle som nå ligger mellom bruddet og anleggsveien. Arealbeslaget er imidlertid i all hovedsak i området som ligger tett rundt dagens anleggsvei. Sør for bruddet vil adkomstveien ligge gjennom jordbruksarealet der det tidligere er tatt ut sand og frus (forekomst Oslandsvatnet som er utdrevet).

Det vurderes at tiltakets påvirkning på pukkressursen er ubetydelig. Utbedring av adkomstveien fram til steinbruddet vil komme uttaket til gode, og det vil veie opp mot de eventuelle negative konsekvenser av økt anleggstrafikk på denne veien.

Tiltakets konsekvens

I henhold til matrisen i Figur 6 vil tiltaket ha ingen/ubetydelig konsekvens for delområdet.



Figur 15. Dronebilde over delområde Mr_2 tatt i retning nordøst. Omtrentlig beliggenhet av delområdets avgrensning og av adkomstvei Bjerkreim er vist på bildet.

7.2.3 Mr_3 Mellomstrand sand og grus

Beskrivelse

Delområdet Mr_3 er definert som hele området som er definert som forekomsten Mellomstrand sand og grus, på begge sider av Fv. 504 Buevegen, både sør og nord for Oslandsvatnet og Mælandsvatnet (Mellomstrandsvatnet), se Figur 16. Selv om kun et mindre område av ressursen vil bli direkte berørt av tiltaket (Alternativ 1 med adkomstvei Time), vil hele forekomsten bli kuttet av planområdet, og vil i tillegg den industrialiserende effekten av et vindkraftverk kunne påvirke planprosesser i området mht. framtidig utnytting av mineralressursen. På østsiden av adkomstveien i Time er det iht. gjeldende reguleringsplan i Time kommune et masseuttak som nå er utdrevet (også kalt «masseuttak ved Oslandsvatnet», men ikke det samme uttaket som nevnt i delområde Mr_2). Det er i kommuneplanen også satt av to større områder til formål råstoffutvinning. Det ene er på østsiden av adkomstveien, men arealet i dette området blir brukt til jordbruk. Det andre området er direkte øst for Husavatnet. I dette området er det også jordbruk, men en mindre del av området blir brukt til utvinning av sand og grus iht. flyfoto (se Figur 16). Delområde Mr_3 dekker begge disse to arealene.

Forekomst Mellomstrand løsmasseområde er en større breelvavsetning som består av sortert sand og grus, med kornfraksjoner anslagsvis 30 % grus og 70 % sand. Forekomsten er vurdert som egnet til ulike tekniske formål, men spesielt som betongtilslag. Det er tidligere tatt ut mye masser fra forekomsten på ulike steder. Innenfor delområde Mr_3 er det på 80-tallet og igjen på 2000-tallet tatt ut masser fra området direkte sør for fylkesveg 504. På flyfoto fra 2013 er det synlig at det er uttak av løsmasser i et større område i nordøstre del av delområdet, tilgrensende Oslandsvatnet. Begge uttakene er ferdig utdrevet og deretter fylt igjen for å lage jordbruksareal (gress). Det er disse to områdene som til sammen er regulert inn til massetak «Oslandsvatnet» i gjeldende reguleringsplan (fra 2004).

Innenfor delområdet er det en stor del av sand- og grusforekomsten på østre siden av adkomstveien som er volumberegnet til 1.339.625 m^3. Det er antatt en gjennomsnittlig mektighet på 4 m i breelvavsetningen.

Verdivurdering

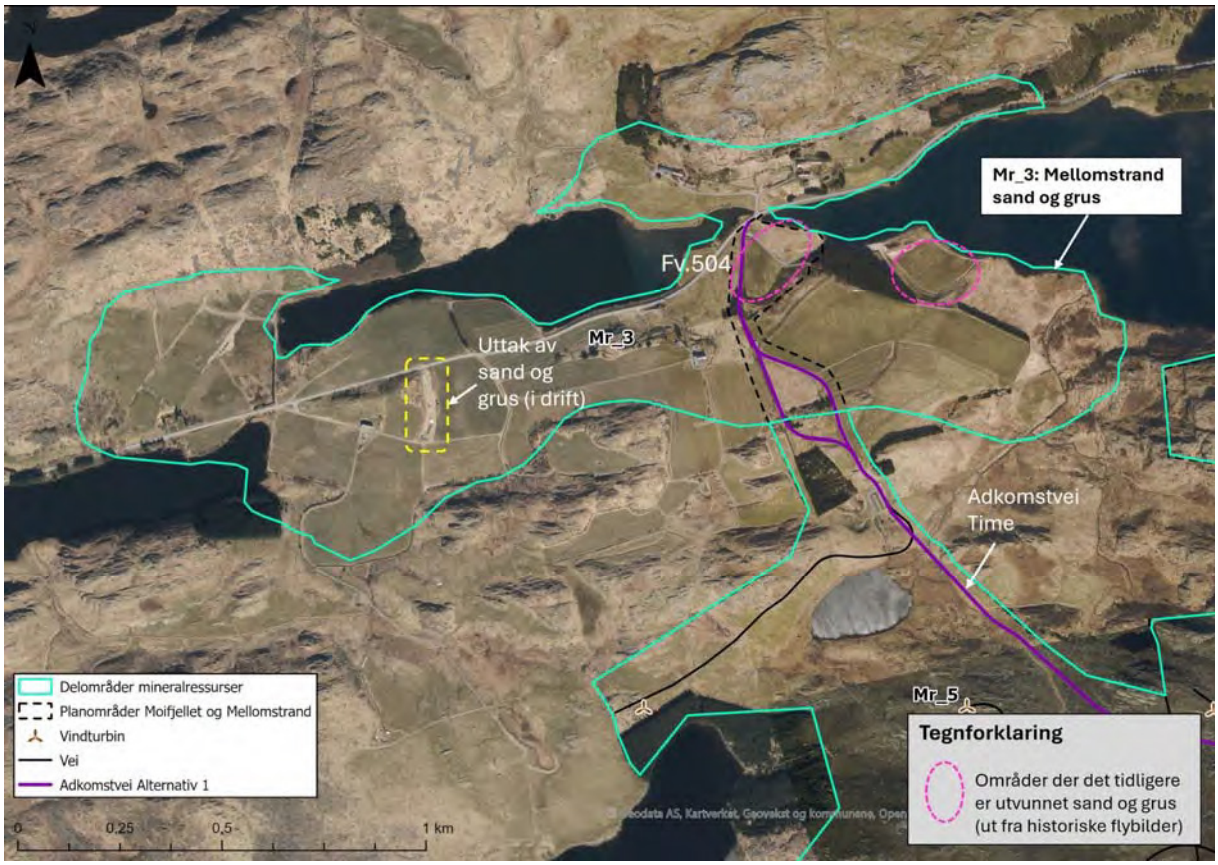
I henhold til grusdatabasen har forekomsten 'liten betydning'. Ut fra avgrensningen av forekomsten i grus og pukkdatabasen er det fortsatt et betydelig areal der det ikke har vært uttak av sand og grus. Det må imidlertid nevnes at det i henhold til det kvartærgeologiske kartet i Figur 8 ikke er breelvavsetninger i hele dette området, men også moreneavsetninger. Det er dermed noe usikkerhet knyttet til om hele delområdet har løsmasseavsetninger som er egnet til sand og grusuttak. Det er vurdert at delområdet har 'noe verdi' som mineralressurs.

Tiltakets påvirkning

Adkomstvei Time vil til dels følge eksisterende anleggsvei i området. Det må påregnes at det kan bli behov for mindre breddeutvidelse av denne veien, men utover det vil det ikke være endringer. Det vurderes at tiltakets påvirkning på forekomsten er ubetydelig. Arealet og volumet av ressursen som vil bli påvirket av eventuell opparbeidelse av en ny vei er ubetydelig ift. størrelse på ressursen.

Tiltakets konsekvens

I henhold til matrisen i Figur 6 vil tiltaket ha ingen/ubetydelig konsekvens for delområdet.



Figur 16. Kart på ortofoto som viser område Mellomstrand, på vestsiden av Moifjellet, der delområde Mr_3 ligger. Omtrentlige områder der det tidligere er tatt ut sand og grus er angitt (basert på historiske flybilder).

7.2.4 Mr_4 Anortositt

Beskrivelse

Delområdet er valgt ut som området innenfor planområdene der berggrunnen er anortositt iht. det berggrunnsgeologiske kartet i Figur 7. Det er ingen registrerte mineralressurser i dette området. Delområdet er imidlertid tatt med i konsekvensutredningen da anortositt på andre steder i Rogaland blir utvunnet som ressurs til naturstein, eller til feltspat (industrimineral). Dette er omtalt i kap. 6. Et typisk bilde av berggrunnen i dette området er vist i vedlegget (Bilde 6).

Verdivurdering

Det er ingen registrert forekomst i delområdet, og det er heller ingenting som tyder på at anortositten i dette området har en vesentlig god kvalitet som naturstein. Under kartlegging av området er det heller ikke funnet industrimineraler eller malm i berggrunnen. Disse forekommer som regel i gabbronorittiske lag, men disse er ikke registrert i dette området. Anortositt er også egnet som råstoff til produksjon av aluminium. Det er imidlertid ingen slik utnyttelse av anortositten i Rogaland per i dag.

Det finnes anortositt i et svært stort område i Sør-Rogaland. Dermed er ikke dette delområdet av en spesiell verdi for anortositt som mineralressurs. Delområdet har en ubetydelig verdi iht. definisjonen i Tabell 1.

Tiltakets påvirkning

Det er vurdert at tiltakets påvirkning kan være noe positivt på delområdet som mineralressurs. Området er vanskelig tilgjengelig, men internveiene i vindkraftverket vil gjøre det mulig å eventuelt ta ut bergmasse i dette området. Samtidig vil nærhet til vindturbiner og høyspentlinjer begrense uttaksmuligheter til mindre områder. I tillegg ligger området langt fra hovedveiene i distriktet, slik at det trolig ikke er økonomisk å starte med masseuttak her, med mindre mineralressursen har stor verdi. Da dette ikke er tilfellet, er det valgt å sette tiltakets påvirkning til 'ubetydelig endring'.

Tiltakets konsekvens

I henhold til matrisen i Figur 6 vil tiltaket ha ingen/ubetydelig konsekvens for delområdet.

7.2.5 Mr_5 Granittisk gneis

Beskrivelse

Delområdet omfatter nesten hele planområdet for både Moifjellet og Mellomstrand vindkraftverk. Det er ingen registrerte forekomster av mineralressurser i delområdet. Det er heller ikke vurdert at løsmassene har noen verdi. Det er en større randmoreneavsetning (Trollhaugen, se Bilde 3), men slike avsetninger er sjeldent brukt til uttak av sand og grus. I tillegg har avsetningen en verdi for geologisk mangfold i området, slik at det neppe er aktuelt å berøre området.

Berggrunnen i området er imidlertid egnet til uttak for pukk. I henhold til det berggrunnsgeologiske kartet er berggrunnen i hele delområdet granitt/granodioritt eller granittiske gneiser. Dette er også bekreftet av feltobservasjoner under befaringene. Det er ikke tatt steinprøver til analyse, men ut fra visuelle observasjoner av mineralinnhold vil berggrunnen være godt egnet til i hvert fall vegformål (se Bilde 1, Bilde 7 og Bilde 8). Det er noe varierende mineralinnhold i gneisen, men overveiende er berggrunnen ganske kvartsrik. Stedvis er det lag med noe økt innhold av mafiske mineraler (biotitt, magnetitt), men ikke i den grad at det forringer kvaliteten vesentlig ift. produksjon av pukk.

Verdivurdering

Det er ingen registrert forekomst i delområdet. Under kartlegging av området er det heller ikke funnet industrimineraler eller malm i berggrunnen. Kvartsrike bergarter kan egne seg til produksjon av pukk til diverse industriformål. Det finnes imidlertid mye kvartsrik berggrunn i Rogaland, og berggrunnen i dette området har dermed ingen spesiell verdi sett i lys av regionen.

Delområdet har en ubetydelig verdi iht. definisjonen i Tabell 1.

Tiltakets påvirkning

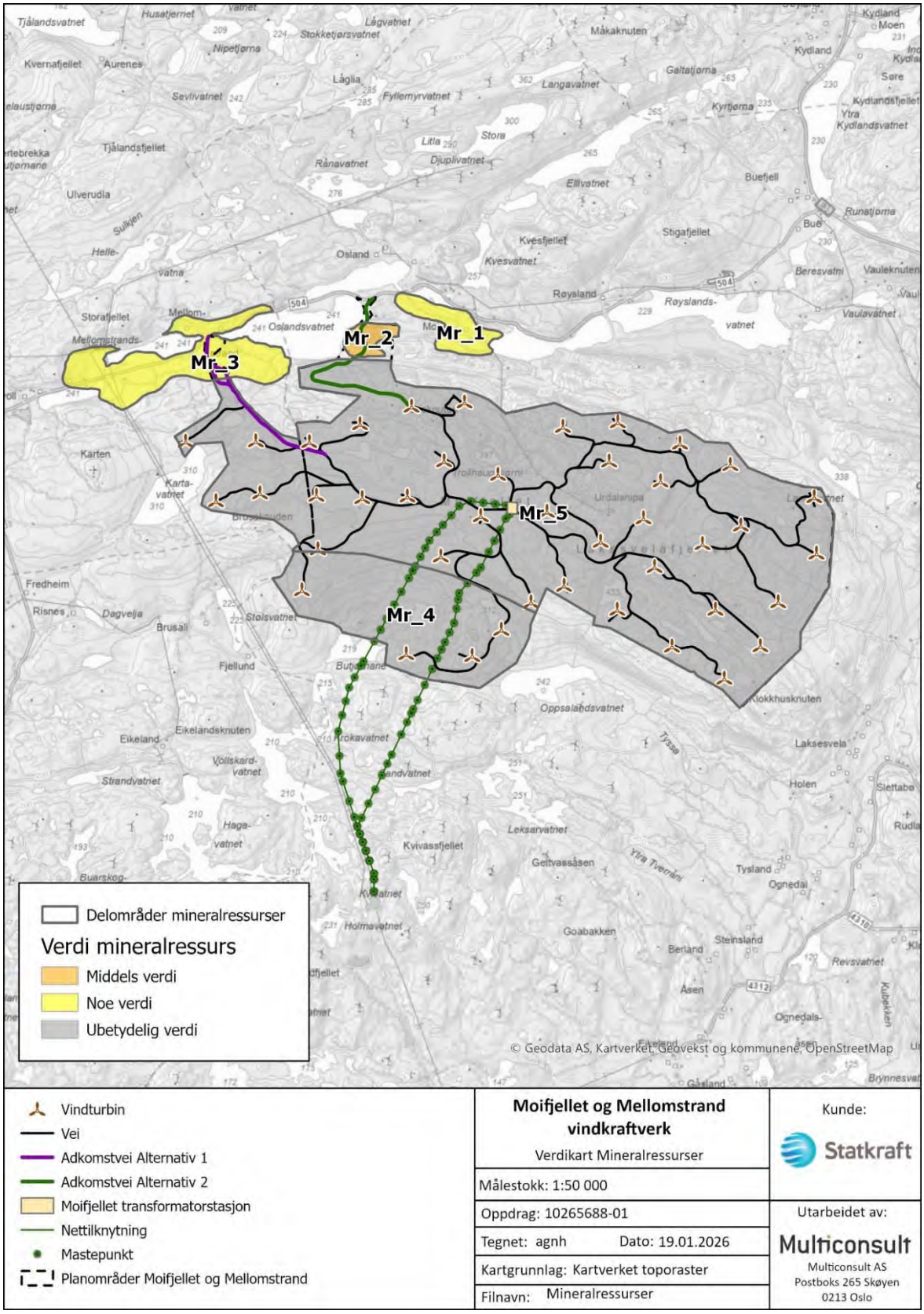
Det er vurdert at tiltakets påvirkning kan være noe positivt på delområdet som mineralressurs. Området er vanskelig tilgjengelig, men internveiene i vindkraftverket vil gjøre det mulig å eventuelt ta ut bergmasse i dette området. Samtidig vil nærhet til vindturbiner begrense uttaksmuligheter til mindre områder. I tillegg ligger området langt fra hovedveiene i distriktet, slik at det trolig ikke er økonomisk å starte med masseuttak her, med mindre mineralressursen har stor verdi. Da dette ikke er tilfellet, er det valgt å sette tiltakets påvirkning til 'ubetydelig endring'.

Tiltakets konsekvens

I henhold til matrisen i Figur 6 vil tiltaket ha ingen/ubetydelig konsekvens for delområdet.

7.3 Verdikart

Et verdikart for delområdene i konsekvensutredning for mineralressurser er vist i Figur 17.



Figur 17. Verdikart for delområdene i konsekvensutredning mineralressurser.

8 Trinn 2: Konsekvenser av alternativer

8.1 Sammenstilling av konsekvenser

Tabell 5 viser en oppsummering av konsekvensutredningen for de ulike delområdene – overført fra Trinn 1 i analysen.

Tabell 5. Oppsummeringstabell for delområdene, vurdert verdi, tiltakets påvirkning, tiltakets konsekvens og alternativer som berører delområdet.

Delområde ID	Navn	Areal (ha)	Verdi	Tiltakets påvirkning	Tiltakets konsekvens på delområdet	Alternativer som berører delområdet
Mr_1	Moi sand og grus	36	Noe verdi	ubetydelig endring	ingen/ubetydelig konsekvens	begge
Mr_2	Moi Pukk steinbrudd	17	Middels verdi	ubetydelig endring	ingen/ubetydelig konsekvens	Alt. 2 (adkomstvei Bjerkreim)
Mr_3	Mellomstrand sand og grus	127	Noe verdi	ubetydelig endring	ingen/ubetydelig konsekvens	Alt. 1 (adkomstvei Time)
Mr_4	Anortositt	269	Ubetydelig verdi	ubetydelig endring	ingen/ubetydelig konsekvens	begge
Mr_5	Granittisk gneis	1455	Ubetydelig verdi	ubetydelig endring	ingen/ubetydelig konsekvens	begge

8.2 Rangering av alternativer

Samlet sett har hvert alternativ ingen/ubetydelig konsekvens på tema mineralressurser. Det er derfor ikke mulig å rangere Alternativ 1 (Moifjellet og Mellomstrand vindkraftverk med adkomstvei Time) og Alternativ 2 (Moifjellet vindkraftverk med adkomstvei Bjerkreim) opp mot hverandre med hensyn til tema mineralressurser som berøres av tiltaket.

9 Konklusjon

Konsekvensutredningen for mineralressurser har fulgt metoden for utredning av ikke-prissatte konsekvenser iht. Statens vegvesen Håndbok V712 [2]. Ved vurdering av verdien av et delområde er det imidlertid tatt hensyn til økonomiske interesser, da spesielt om området er regulert til formål uttak av mineralressurser, og om det er aktiv drift.

Det er identifisert 5 delområder for mineralressurser i influensområdet til vindkraftverket Moifjellet. Av disse er to delområder tatt med for prinsipiell avklaring om berggrunnen i disse områdene kan være egnet som ressurs. Det gjelder delområdene Mr_4 og Mr_5 som dekker hoveddelen av vindkraftverket. Det er vurdert at verdien av disse områdene som mineralressurs er ubetydelig, og at tiltakets påvirkning på disse områdene som mineralressurs kan være noe positivt på grunn av lettere tilkomst ved bygging av veier, men i alt fremdeles ubetydelig.

Tre delområder er tatt med da de har registrerte forekomster av byggeråstoffer (pukk, sand og grus). Av disse er det to delområder der det ikke (lenger) er aktivt uttak av sand og grus. Disse to områdene (Mr_1 og Mr_3) har 'noe verdi' som mineralressurs. Tiltakets påvirkning og konsekvens for disse områdene er ubetydelig. Et delområde (Mr_2, Moi Pukk steinbrudd) er regulert som masseuttak og

er i aktiv drift. Dette område er ikke særlig stort og har kun lokal betydning. Da det er aktiv drift i bruddet er det likevel vurdert at delområdet har 'middels verdi' som mineralressurs. Tiltakets påvirkning er ubetydelig, og derfor er også konsekvensen av tiltaket på delområdet ubetydelig.

Det er ellers funnet at det er ingen utvinningsrettigheter eller undersøkelsesvirksomhet i planområdene til vindkraftverket. Det er heller ikke funnet potensiale for hittil ukjente mineralressurser innenfor planområdene til vindkraftverket. Det er på grunnlag av kartleggingen som er gjort i området, ikke vurdert nødvendig med utdypende geologiske undersøkelser for å avklare potensiale for funn av hittil ukjente mineralressurser.

Tiltaket Moifjellet og Mellomstrand vindkraftverk vil ikke ha noen konsekvens av betydning på mineralressurser i influensområdet til tiltaket sammenlignet med nullalternativet. Det er ingen forskjell mellom alternativene Moifjellet og Mellomstrand vindkraftverk (Alt. 1) og Moifjellet vindkraftverk (Alt. 2) med hensyn til tema mineralressurser.

10 Referanser

[1] Norges vassdrags- og energidirektoratet (brev datert 26.07.2024): Utredningsprogram Moifjellet vindkraftverk. NVE referanse 202309277-100.

[2] Statens vegvesen: Håndbok V712 Konsekvensanalyser. Utgaven 2021.

[3] Norges vassdrags- og energidirektoratet: https://www.nve.no/energi/energisystem/vindkraft-paa-land/kunnskapsgrunnlag-om-virkninger-av-vindkraft-paa-land/mineralressurser/

[4] Norges geologiske undersøkelse (2023a) Berggrunn – Nasjonal berggrunnsdatabase. Tilgjengelig fra: http://geo.ngu.no/kart/berggrunn_mobil/ (hentet: 04.09.2024)

[5] Norges geologiske undersøkelse (2023b) Løsmasser – Nasjonal løsmassedatabase. Tilgjengelig fra: http://geo.ngu.no/kart/losmasse_mobil/ (hentet: 04.09.2024)

[6] Norges geologiske undersøkelse: Kart over mineraler, metaller og naturstein. Tilgjengelig fra: https://geo.ngu.no/kart/mineralressurser_mobil/ (hentet: 01.11.2024)

[7] Norges geologiske undersøkelse: Kart over grus og pukk. Tilgjengelig fra: https://geo.ngu.no/kart/grus_pukk_mobil/https://geo.ngu.no/kart/grus_pukk_mobil/ (hentet: 01.11.2024)

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Vedlegg

Vedlegg 1 – Bilder

Vedlegg 1 – bilder



Bilde 1. Bilde som viser en typisk bergblotning av granittisk gneis. Foliasjonen og lagdelingen er overveiende orientert VNV – ØSØ med ca. 50 - 70° fall mot nord. Dette er samme orientering som de fleste bergryggene på Moifjellet.



Bilde 2. Utsikt over Bjerkreim vindpark, som ligger sør for Moifjellet. Berggrunnen i dette området består av anortositt, og er kjennetegnet av nakne bergknauser. Sørlig del av Moifjellet planområde er synlig fremst i bildet.



Bilde 3. Utsikt fra anleggsveien opp til Urdalsnipa mot nordvest. Trollhaugen, en svær randmorene, er synlig midt i bildet.



Bilde 4. Typisk terreng på Moifjellet. Flate myrområder med mye blokkmateriale, og oppsprukne bergrygger med noe skredur i foten av skråningen.



Bilde 5. Moi Pukk steinbruddet sett mot nord. I forgrunnen er jordbruksarealet der det tidligere er tatt ut sand og grus.



Bilde 6. Anortositt berggrunn i delområde Mr_4 i sørlig del av planområdet.



Bilde 7. Granittisk gneis på Moifjellet.



Bilde 8. Typiske steinprøver fra granittisk gneis på Moifjellet. Begge prøvene har et høyt kvartsinnhold. Til venstre en prøve med et større innhold av biotitt og magnetitt.

Fagrapport:

Folkehelse

Rapport

Moifjellet og Mellomstrand vindkraftverk

OPPDRAGSGIVER

Statkraft Vind Utvikling DA

EMNE

Helsekonsekvensutredning

DATO / REVISJON: 28. mai 2026 / 03

DOKUMENTKODE: 10265688-01-TVF-RAP-003



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Rapport

OPPDRAG	Moifjellet og Mellomstrand vindkraftverk	DOKUMENTKODE	10265688-01-TVF-RAP-003
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SAMMENDRAG

Helsekonsekvensutredningen vurderer hvordan vindkraftverket kan påvirke befolkningen gjennom eksponering for støy, skyggekast, visuelle virkninger og tap av friluftsområder, både enkeltvis og samlet. Det eksisterer per i dag ingen fastsatt metodikk for vurdering av helsekonsekvenser for vindkraft fra myndighetene. Det er derfor valgt å benytte en metodikk for å visualisere samlede helsekonsekvenser basert på en modell som benyttes ved risikovurderinger. Metodikken er benyttet i tidligere helsekonsekvensutredninger og spesielt tilpasset tematikken. Metoden er også drøftet med FHI-Folkehelseinstituttet og kommuneoverlegen i Bjerkreim kommune før den ble tatt i bruk for Moifjellet og Mellomstrand vindkraftverk.

Utredningen viser at beboere og hyttebrukere nærmest vindkraftverket, i områdene Moi/Osland/Røysland og hytten ved Salveshola og ved Høybutjørn er vurdert med høyest sannsynlighet for å oppleve plager fra vindkraftverket.

Med alternativ 1 Moifjellet og Mellomstrand , vil også beboere ved Mellomstrand og Brusali få økt sannsynlighet for å oppleve plager fra vindkraftverket. Disse eiendommene har beregnet støy og skyggekast over anbefalt grenseverdi, samtidig som flere turbiner vil bli synlige fra eiendommene.

Andre eiendommer øst for Røyslandsvatnet ligger ifølge beregningene i områder med støy under grenseverdiene, men skyggekast over grenseverdi. Disse vil dermed også ha noe økt sannsynlighet for å oppleve plage fra vindkraftverket.

Eiendommene i området Bue er beregnet å ligge under grenseverdiene for støy og uten skyggekast. Derimot vil disse eiendommene sannsynligvis bli ekstra eksponert for støy fra eksisterende og fremtidig veitrafikk samtidig som de vil kunne se mange turbiner og hinderlys fra eiendommene. Dette betyr at eiendommene ved Bue også har en noe økt sannsynlighet for plage som følge av en totalsumvirkning fra eksisterende vindkraft, veitrafikk og planlagt vindkraft.

Eiendommene i område Vaule er beregnet å ligge under grenseverdiene for støy og skyggekast, men flere av eiendommene vil få vesentlig visuell påvirkning.

Eiendommer ved Eikeland, Goabakken og Lågali ligger lengre fra planlagt vindkraftverk på Moifjellet og Mellomstrand, og påvirkes i hovedsak av eksisterende vindkraftverk.

Tap av områder for friluftsliv og redusert attraktivitet/eiendomspriser er også knyttet til nærhet til vindkraftverket.

Det er lagt til grunn eksponering fra eksisterende vindkraftverk og andre støykilder i beregningene for de enkelte temaene.

Det må påregnes at en del av befolkningen er plaget også under anbefalte grenseverdier. Når det gjelder andre eksponeringsfaktorer som skyggekast, hinderlys og synlighet er virkningene på samme måte som for støy først og fremst knyttet til plagereaksjoner. Enkelte studier har vist at eksponering for flere av eksponeringsfaktorene kan bidra til økt grad av plage hos mottakerne. Derimot beskriver myndighetene gjennom FHI at det er ingen holdepunkter for en sammenheng mellom støy fra vindturbiner og mental helse eller livskvalitet. Det er lite som tyder på at støy fra vindturbiner på 40-45 dB har en direkte innvirkning på søvn. Det er holdepunkter for at individuelle faktorer, som blant annet holdninger til vindkraftverk og støysensitivitet, spiller en viktigere rolle enn selve støynivået med hensyn til opplevde plager for naboer til vindkraftanlegg skriver FHI i deres veileder for støy fra vindturbiner og virkning på helse (FHI, 2022).

Metoden viser sannsynlighet for plage før gjennomført avbøtende tiltak er vurdert. Med curtailment vil de alle fleste få en lavere sannsynlighet for plage jf. Figur 8-2.

03	28.05.2026	Mindre justering av tekst etter kommentar fra Statkraft	RW		HAVF
02	19.03.2026	Mindre justeringer av tekst etter kommentar fra Statkraft	RW	HAVF	HAVF
01	04.03.2026	Oppdatert etter kommentar fra Statkraft	RW		HAVF
00	05.01.2026	Utkast KU Folkehelse	RW		HAVF
REV.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV

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1 Innledning

Helse er definert som en tilstand av fullstendig fysisk, psykisk og sosialt velvære og ikke bare fravær av sykdom eller lidelser (Regieringen.no).

NVE (2022) skriver at etablering av vindkraftverk i Norge kan ha konsekvenser for folkehelsen, og at det er behov for å utrede mulige helsekonsekvenser tidlig i en planleggingsfase. En utfordring i slike utredninger er å fremstille mulige konsekvenser av både enkeltfaktorer og summen av alle påvirknings-faktorene for folkehelsen. NVE er tydelige på at det ikke er helt avklart hvordan en slik samlet vurdering skal gjennomføres, sett fra myndighetens side.

Kunnskapsgrunnlaget innen helsevirkninger fra vindkraft er fortsatt mangelfullt, selv om det er gjort en del studier spesielt innenfor støy (Jakobsen m.f 2018). Litteraturgjennomgangen gjort i denne utredningen viser at det ikke kan dokumenteres helseeffekter som er direkte relatert til støy fra vind-turbiner når lydnivået er lavere enn grenseverdien på Lden = 45 dB (se kap. **Error! Reference source not found.** for bakgrunnen for grenseverdien). Symptomer som er funnet i forskjellige studier er uspesifikke og kan utløses av flere ulike faktorer. Gitt at kunnskapsgrunnlaget er begrenset kan man heller ikke konkludere med at negative eller uønskede helseeffekter vil være fraværende. Når det gjelder andre eksponeringsfaktorer som skyggekast, hinderlys og synlighet er virkningene på samme måte som for støy først og fremst knyttet til plagereaksjoner. Enkelte studier har vist at eksponering for flere av faktorer kan bidra til økt grad av plage hos mottakerne (Jakobsen, 2018, Pedersen, 2015)

Folkehelseloven og forskrift om miljørettet helsevern har bestemmelser om helsekonsekvens-utredninger i plansaker og ellers for aktuelle forhold som kan påvirke befolkningens helse. Folkehelse-loven er en sektorovergripende lov og skal sikre at det er «helse i alt en gjør». Kommunen har også ansvar for å fremme folkehelse i de oppgaver kommunen er tillagt, og skal medvirke til at dette ivaretas av andre myndigheter.

I denne utredningen er det valgt å benytte en metodikk for å visualisere samlede helsekonsekvenser basert på en modell som benyttes ved risikovurderinger. Metodisk må dette ikke forveksles med en fullstendig risikoanalyse, men heller sees på som en måte å presentere og sammenstille flere eksponeringsfaktorer.

Det er spesifikt belyst og vurdert forhold som

- Helsekonsekvenser fra støy
- Helsekonsekvenser fra skyggekast
- Helsekonsekvenser fra visuell forurensning
- Synergieffekter av samtlige overnevnte eksponeringer.

Metodikken er benyttet i tidligere helsekonsekvensutredninger og spesielt tilpasset tematikken i helsekonsekvensutredning for Tysvær vindpark i 2021 og for Havvindsturbin i Sløvåg i Gulen 2024 og for Re-power prosjekt for Hitra 1 i 2026. Metoden er også drøftet med FHI- Folkehelseinstituttet og kommuneoverlegen i Bjerkreim kommune før den ble tatt i bruk for Moifjellet vindkraftverk.

2 Folkehelse og miljørettet helsevern

Miljøets betydning på helsetilstanden til befolkningen har vært kjent lenge og var et hovedpoeng i sunnhetsloven fra 1860. Allerede den gangen var det en bevissthet om at flere ulike fagområder og disipliner måtte medvirke for å bedre sunnheten i samfunnet.

Kommunehelsetjenesteloven videreførte i 1987 bestemmelsene fra sunnhetsloven, under begrepet miljørettet helsevern (Sosial- og helsedirektoratet 2003). Miljørettet helsevern defineres som de forhold som til enhver tid direkte eller indirekte kan ha innvirkning på helsen, blant annet biologiske, fysiske, kjemiske og sosiale faktorer.

Kommunehelsetjenesteloven ble erstattet av folkehelseloven i 2012. Folkehelseloven gir blant annet alle offentlige institusjoner ansvar for å fremme folkehelse, herunder kommunene, staten og fylkeskommunen. Den tidligere kommunehelsetjenesteloven la mange av oppgavene direkte til helsetjenesten i kommunen, men nå er ansvaret løftet til et overordnet nivå og til alle sektorer og myndigheter. Prinsippet om å fremme folkehelse i alle sektorer (”helse i alt vi gjør”) gjelder for kommuner, fylkeskommuner og stat. Dette innebærer at helsehensyn skal integreres i beslutningsprosesser og for eksempel i utøvelse av rollen som eier av virksomhet og eiendom, arbeidsgiver, utviklingsaktør, tjenesteyter med videre.

Når det gjelder behovet for å ta hensyn til folkehelsen, er det ingen grunn for at det skal være forskjell mellom planlegging gjennomført etter plan- og bygningsloven, energiloven eller om det gjennomføres en lokal, regional eller statlig planprosess. Folkehelseloven er som beskrevet sektorovergripende og skal sikre at det er «helse i alt en gjør». Gjennom loven er det primært kommunen som har et ansvar for å fremme folkehelse i de oppgaver kommunen er tillagt, og skal medvirke til at dette ivaretas av andre myndigheter. Kommunen skal ha oversikt over helsetilstand og påvirkningsfaktorer, og på bakgrunn av dette identifisere eventuelle folkehelseutfordringer i kommunen (Paulssen og Moltumyr 2021).

Det er enhver kommunes rett og plikt til å gjennomføre et tiltak etter folkehelseloven, og til å forsikre seg om at planprosessen og konsesjonsbehandlingen i tråd med energiloven har tatt tilstrekkelig hensyn til folkehelse og formålene om at det skal være «helse i alt vi gjør». St.meld. nr. 34 har riktignok fokus på plan- og bygningsloven når den beskriver folkehelse i planstrategier, men samtidig gir folkehelseloven også staten og sentrale myndigheter konkrete forpliktelser til å arbeide etter «helse i alt vi gjør»-prinsippet i sine planprosesser og konsesjonsbehandlinger. Dette innebærer at staten herunder departementer og direktorater skal bruke virkemidler, blant annet som myndighet, eier, arbeidsgiver og samfunnsutvikler, og har også ansvar for å vurdere konsekvenser av aktuelle tiltak for befolkningens helse.

En av de viktigste faktorene når det gjelder å ta hensyn til folkehelse i planprosesser er medvirkning og deltagelse. Bestemmelsene om medvirkning i planprosesser har kommet inn i lovgivingen i løpet av de siste 20-30 årene, og medvirkning skal ikke bare verne om individuelle rettigheter, men også bidra til kvaliteten på selve planen (Holsten 2000).

Medvirkning er et ideal for både planlegging og folkehelsearbeidet. Innen folkehelse er medvirkning betegnet som en mulighet for å styrke egen identitet, kunne bidra til å definere egne problemer, ha egenskaper og evner til å ta ansvar for eget liv, ha frihet til å selv å bestemme og ha makt og mulighet til å finne løsninger.

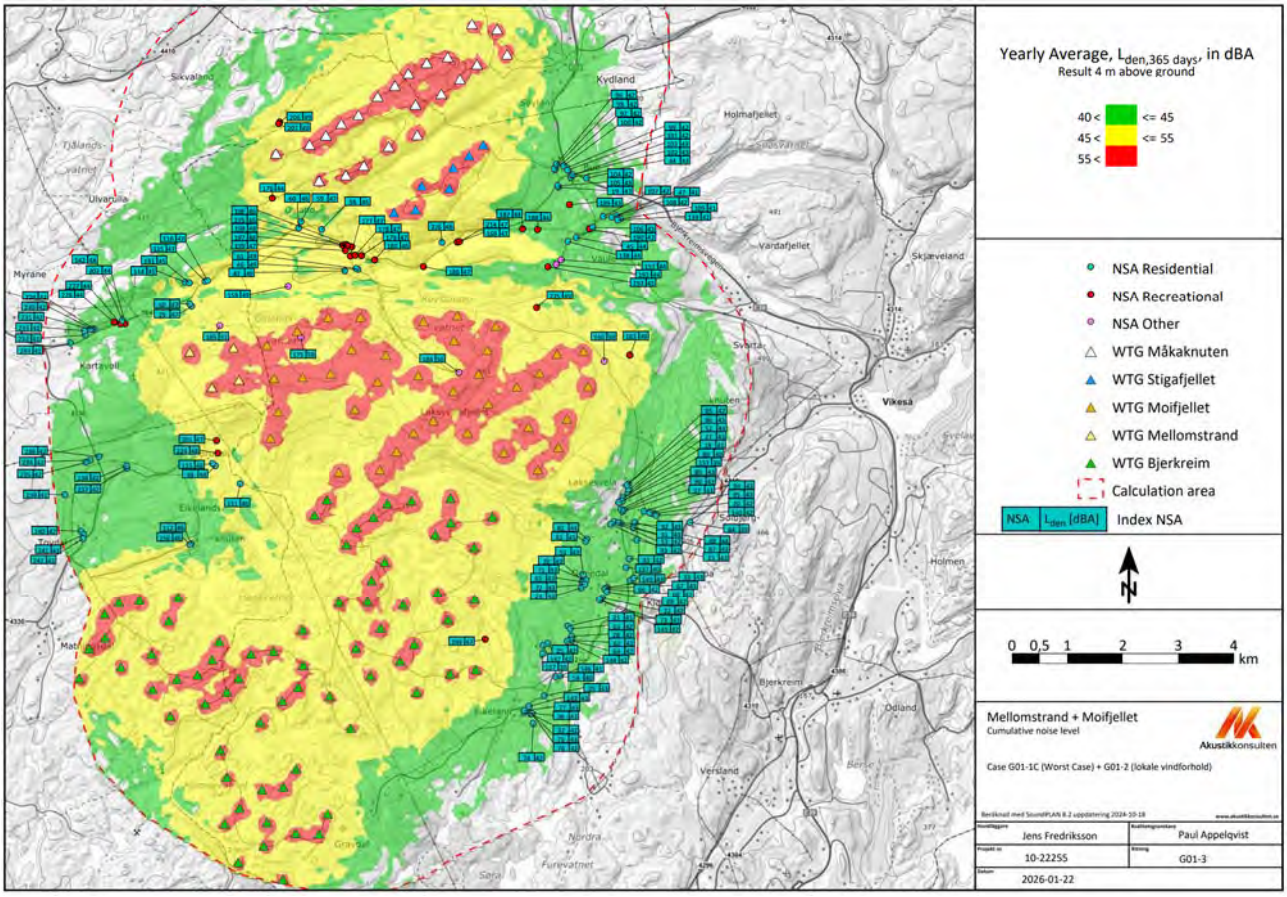
Innen planlegging er medvirkning begrunnet som et demokratisk prinsipp, og omtalt i egen paragraf i plan- og bygningsloven. Loven stiller krav om aktiv opplysningsvirksomhet og at berørte enkeltpersoner og grupper skal gis anledning til å delta aktivt i planprosessen.

Karoline Unnerud (2018) viser i sin masteroppgave til Helgesen & Hofstad 2012, Helgesen et al. 2017 og Schou et al. 2014 som sier at folkehelse kan synes å ha fått økt innpass i kommuners strategiske og overordnede planer, men at det fortsatt er store utfordringer i å lykkes med å innlemme folkehelse i arealplanleggingen.

Denne konsekvensutredningen er derfor ikke et fullstendig grunnlag for å hensynta folkehelsen i prosjektet Moifjellet og Mellomstrand vindkraftverk. Denne utredningen må vurderes som et innspill til den videre planprosess.

3 Støy og helse

Det vises til rapport fra Akustikkonsulten 10-22255-D01 Noise calculation wind farm Moifjellet og Mellomstrand 250318 der støy og støyberegninger er nærmere omhandlet.



Figur 3-1 Beregnet støynivå for omsøkt Moifjellet vindkraftverk inkl sumstøy fra eksisterende vindkraftverk i området.

Beregningsmetode og grenseverdi henger sammen. Grenseverdien er gitt for en bestemt beregnings-metode. Det betyr at ved vurdering av helseplager fra vindturbiner er det beregnede lydnivåer som ligger til grunn for å si når eventuelle helseplager kan oppstå i motsetning til målte lydnivåer.

Helsekonsekvenser av støy > L_{den} 45 dB

I Norge er anbefalt grenseverdi på L_{den} 45 dB for vindkraftverk, jf. *Retningslinje for behandling av støy i arealplaner, T-1442*. Dette nivået samsvarer med anbefalt grenseverdi fra Verdens helseorganisasjon, WHO (2018).

Det kan ikke dokumenteres negative helseeffekter som er direkte relatert til støy fra vindturbiner når lydnivået er lavere enn Lden 45 dB. Symptomer som er funnet i forskjellige studier er uspesifikke og kan utløses av mange forskjellige faktorer. Da man i sin tid ønsket å innføre grenseverdier for støy, var målsetningen å definere et toleransenivå hvor en gitt andel av befolkningen var plaget. I retnings-linjene om støy fra både vindkraft og andre støykilder er det lagt til grunn at en viss andel av befolkningen vil føle seg plaget av støy ved et støynivå tilsvarende grenseverdien, og klagesaker til NVE viser at støy kan være et stort irritasjonsmoment for enkelte naboer til vindkraftverk. Generelt er det

godt dokumentert at plagegraden varierer ikke bare ut ifra fysisk lydtrykk, men også om støyen varierer mye, opplevelsen av prosessen ved etablering av den støyende virksomheten med videre. Mange har gitt uttrykk for at støy fra vindkraftverk er mer irriterende enn støy fra for eksempel biltrafikk. Dette er reflektert i grenseverdien for vindkraftverk, som i Norge er strengere enn for andre støykilder (Jakobsen, 2018) som for eksempel veitrafikkstøy som har grenseverdier på Lden 55 dB utendørs.

I henhold til miljøretningslinjene utviklet av WHO, anbefales det ubetinget å bruke Lden = 45 dB som grense for støy fra vindturbiner. Grunnen til det er at støynivået over denne verdien er forbundet med dokumentert risiko for negative helseeffekter, mens det ikke er funnet signifikant dokumentasjon på negative helseeffekter under Lden = 45 dB (WHO, 2018).

Valget av Lden = 45 dB som støygrense er basert på at støynivåer over denne verdien kan forbindes med negative helseeffekter, og NVE vil normalt sette vilkår om at grenseverdien ikke skal overstiges

Folkehelseinstituttet (FHI)

FHI har oppdatert kunnskapsgrunnlaget for vindturbinstøy og helse på oppdrag fra Norges vassdrags- og energidirektorat (NVE). Flere nye studier er publisert de siste fem årene. Resultater fra disse studiene endrer ikke det store bildet av sammenhengen mellom vindkraftverk og helse, men kunnskapen om sammenhengen mellom støyeksponering og plage er blitt sikrere, og støtter opp under WHOs anbefaling fra 2018.

TremAc-prosjektet 2016-2019

I juni 2020 ble sluttrapporten fra et prosjekt organisert av Institute of Technology fra Karlsruhe (KIT) presentert (Tremac, 2020). Målet med studien var å undersøke objektive kriterier for vibrasjon og støyutslipp fra vindturbiner på land (Acronym TremAc) og varte fra januar 2016 til desember 2019.

Både innen miljøpsykologi og i den miljømedisinske studien fant man konsekvent at vegtrafikkstøy representerer større plage enn vindturbinene for de samme beboerne som deltok i studien.

En konklusjon fra befolkningsundersøkelsene er at et lite antall innbyggere har rapportert opphopning av symptomer som *kan* tilskrives vindturbinstøy. Imidlertid inkluderer disse symptomene uspesifikke plager som også kan ha andre årsaker. På grunn av det lave antallet berørte beboere, kan det ikke gis entydige konklusjoner. Hensynet og sammenligningen av helseparametere alene gir ikke grunnlag for pålitelige konklusjoner om årsakene til en sårbarhet eller mulige årsaks-sammenhenger.

Den miljøpsykologiske studien viste at kun få innbyggere var sterkt plaget av vindturbinstøy. Opplevelsen av støy, plage og symptomer knyttet til vindturbiner var mer tydelig jo mer de berørte beboere følte seg stresset i plan- og byggefasen, og jo mindre de opplevde at interessene deres ble tatt på alvor både i planleggingsfasen og driftsfasen. Prosjekt TremAc trekker også den konklusjonen at funnene viser at det kan være virkningsfullt å sørge for involvering og deltakelse av berørte naboer i tidlig planleggingsfaser, samt ifm. oppfølging av klager (adressering til innbyggere, dialog med fageksperter, god håndtering av støyklager/bekymringer etc.)

3.1 Vurdering for Mellomstrand og Moifjellet vindkraftverk

Basert på tidligere erfaringer er støyprognoser på den konservative siden, det vil si at faktisk kildestøy fra det omsøkte vindkraftverket høyst sannsynlig vil være lavere enn forventet. Dette vil da kunne medføre at støynivået ved husene og hyttene i området blir lavere enn det som er angitt i støyberegningene til Akustikkonsulten (2026).

Flere av boligene og hyttene vil påvirkes av eksisterende vindkraftverk.

I mal for nye vilkår i anleggskonsesjoner for vindkraftverk på land (NVE, 2022) beskrives det at hvor det er overlappende støysoner fra vindkraft og andre kilder, skal det i henhold til T-1442 tas hensyn til sumstøy/samlet belastning.

I denne helsekonsekvensutredningen skal en vurdere den sammensatte og totale eksponeringen for befolkningen. Sumstøy/samlet belastning legges derfor til grunn i helsekonsekvensvurderingen for støy fra eksisterende vindkraftverk. Det er utarbeidet en beregning av sumstøy fra vindkraft og veitrafikkstøy mht. eksisterende og planlagt støy fra E39 (Akustikkonsulten, 2025). I rapporten konkluderes det med at veitrafikkstøyen vil være dominerende sett i lys av at veitrafikkstøy har en betydeligere høyere grenseverdi. Dette betyr at beregnet støynivå for vindkraftverket blir uforandret. I en helsekonsekvensvurdering, må en uansett ta høyde for ulike kilder til plage. I denne utredningen er det derfor gitt en ekstra sårbarhet og usikkerhetsfaktor og vektlegges i den endelige konklusjonen for området ved Bue som har eksisterende og planlagt veitrafikk fra E39.

4 Skyggekast og helse

Det vises til egen rapport (10265688-01-RIEn-RAP-001 – Moifjellet og Mellomstrand vindkraftverk – KU Skyggekast) der skyggekast er nærmere omhandlet.

Hovedbekymringen har tidligere vært knyttet til at skyggekast fra vindturbiner kan utløse anfall hos personer med fotosensitiv epilepsi. Knopper, m.fl. (2014) konkluderer at moderne vindturbiner har for lav omdreiningshastighet til å utgjøre noen risiko for å utløse slike anfall. Studien viser videre at risikoen er svært marginal selv ved langt høyere omdreiningshastigheter.

Virkningene man har funnet av skyggekast er på samme måte som for støy først og fremst knyttet til plagereaksjoner. En studie fra Canada har funnet en eksponerings – responssammenheng mellom beregnede nivåer av støy og andel svært plaget av skyggekast (Michaud m.fl., 2016). Graden av skygge-kastplage var også påvirket av andre eksponeringsfaktorer samt støysensitivitet hos mottakeren. Funnene i denne studien viser at skyggekast fra vindturbiner kan bidra til å forsterke plagegraden fra andre eksponeringer, som for eksempel støy og visuelle virkninger. Det fremgår av Jacobsen m.fl. (2018) at denne mekanismen også er illustrert i en svensk studie (som ikke omhandlet vindturbiner) som fant at plagen ved lave til moderate eksponeringsnivåer økte med antallet miljømessige stressorer man var plaget av, og ved stimulering av flere sanser (Pedersen, 2015).

4.1 Anbefalte grenseverdier

Som beskrevet i konsekvensutredningen finnes ikke egne norske retningslinjer og grenseverdier for skyggekast, men NVE har gitt ut en veileder for beregning av skyggekast og presentasjon av NVE sin forvaltningspraksis, Veileder for beregning av skyggekast og presentasjon av NVEs forvaltningspraksis (Bjerkestrand 2014). Veilederen angir følgende anbefalte grenseverdier for bygninger med bruk som er følsom for skyggekast:

- Realistisk tid med skyggekast < 8 timer per år
- Teoretisk (worst case) tid med skyggekast < 30 timer per år eller 30 minutter per dag.

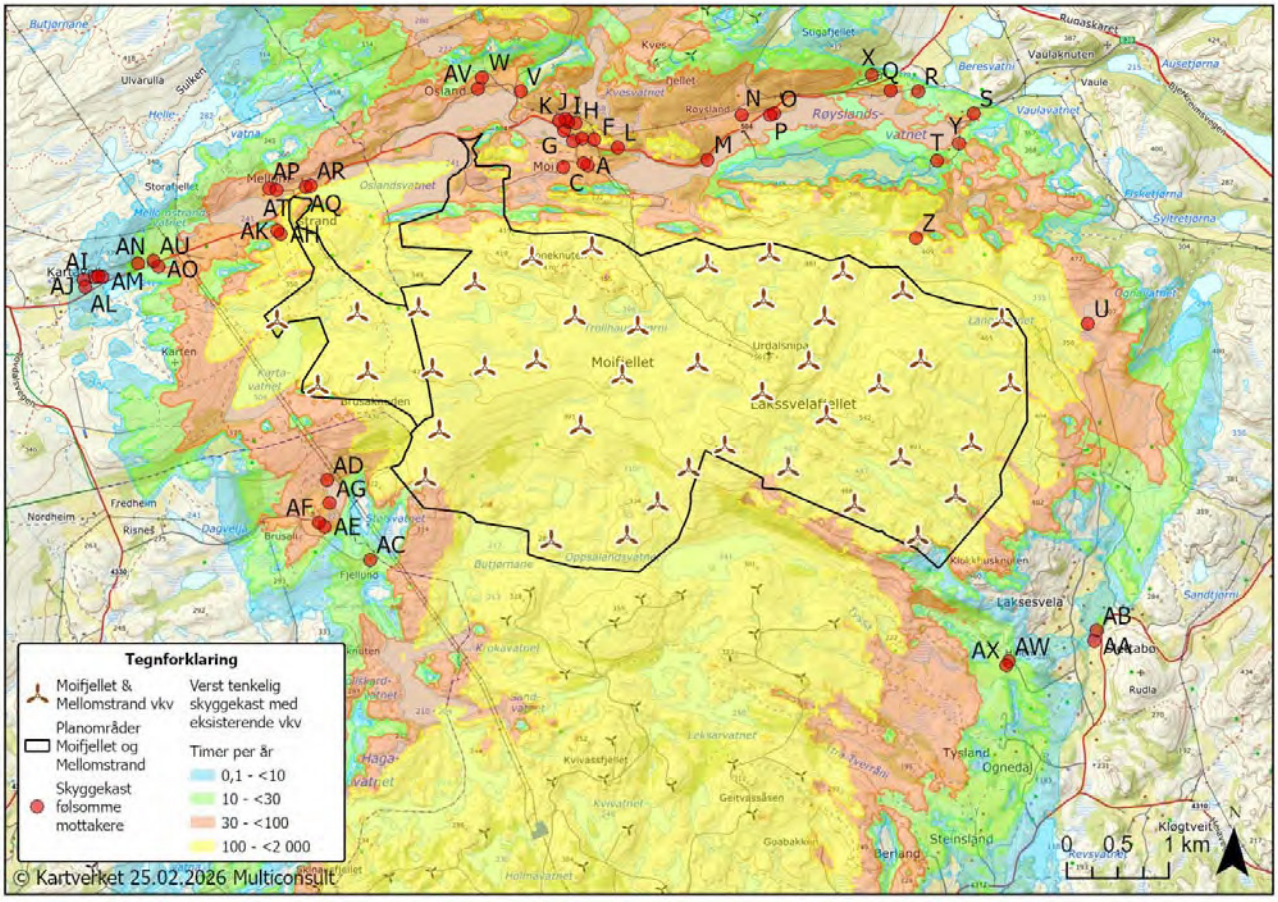
Grenseverdiene kan fravikes i noen tilfeller, for eksempel dersom skyggekast stort sett inntreffer om vinteren ved ei sommerhytte.

Anbefalte grenseverdier for vindkraftverk i Norge er de samme som de tyske retningslinjene for maksimalt teoretisk og faktisk skyggekast. De svenske retningslinjene er også i tråd med de tyske, mens Danmark opererer med en grenseverdi på ti timer faktisk skyggekast og ingen grenseverdier for maksimal teoretisk belastning (Jacobsen m.fl. 2018).

4.2 Vurdering for Mellomstrand og Moifjellet vindkraftverk

Skyggekastanalysen for Moifjellet og Mellomstrand vindkraftverk viser at flere boliger og fritidsbygg i influensområdet vil kunne oppleve betydelig skyggekastbelastning, og i tillegg vil skyggekast kunne berøre viktige friluftsområder. Beregningene viser at skyggekast kan bli en betydelig utfordring for flere mottakere, særlig i områdene nord for Moifjellet.

Beregningene viser at det er 33 mottakere som overskrider NVEs anbefalte grenseverdi.



Figur 4-1. Beregnet skyggekastmottakere for omsøkt Moifjellet og Mellomstrand vindkraftverk.

5 Visuelle virkninger og helse

Visuelle virkninger som omtales i denne rapporten omfatter virkninger som skyldes synlighet fra bebyggelse og oppholdsområder nær et vindkraftverk. I tillegg til synligheten til selve vindturbinene, er også visuelle virkninger knyttet til hinderlysmerking for luftfart inkludert.

5.1 Synlighet

Generelt er det gjort få undersøkelser knyttet til naboenes opplevelse av vindturbinenes synlighet, og hvordan teknologisk utvikling med stadig høyere turbiner virker inn på opplevelsen av vindkraftverk (Jacobsen m.fl. 2018).

Visuelle virkninger var én av eksponeringsfaktorene som ble vurdert i studien til Michaud m.fl. (2016). Funnene i denne studien viser at visuelle virkninger kan bidra til å forsterke plagegraden fra andre eksponeringer som for eksempel støy og skyggekast. Plagegraden synes også å øke med økt eksponering for støy fra vindturbinene.

5.1.1 Faktorer som påvirker synlighet

Vindturbiner er store installasjoner som er synlige over lange avstander. Bevegelsen til de roterende bladene vil også oppleves visuelt forstyrrende, og bidra til å forsterke det visuelle inntrykket av vindturbinene. Omfanget av visuelle virkninger påvirkes blant annet av avstand til vindkraftverket, antall turbiner, plassering i forhold til naturlig utsynsretning, topografi, værforhold og turbinenes farge der turbiner i hvit/lys grå farge gir minst kontrast mot en himmelbakgrunn (Jacobsen m.fl. 2018).

I tilknytning til arbeidet med oppdatering av kunnskapsgrunnlaget for vindkraft i Norge i perioden 2017-2018, utarbeidet Norconsult en rapport om vindkraftverks visuelle påvirkning på naboskap og hvilke momenter som er viktige i den sammenheng (Berg, 2017).

Ifølge Berg (2017), gir begrepene «totaldominans» og «ytre visuell dominanssone» en indikasjon på hvor dominerende et objekt fremstår for en betrakter, med utgangspunkt i objektets størrelse og avstand mellom objektet og betrakteren. Objektet gir en visuell totaldominans når avstanden er så liten at betrakteren ikke kan observere hele objektet, men må bevege blikket for å kunne se alle delene. Dette vurderes normalt til å være tre ganger objektets høyde, som for vindturbinene på Moifjellet og Mellomstrand vil være maksimal 200 meter. Den ytre visuelle dominanssonen er definert som området hvor turbinen ikke lenger er alene om å dominere det visuelle inntrykket, men hvor de øvrige omgivelsene også spiller inn. Sonen er vurdert å gjelde ut til 8-10 ganger høyden på objektet, noe som tilsier en ytre visuell dominanssone på 1,6- 2,0 km for vindkraftverket på Moifjellet og Mellomstrand. Dette er imidlertid en teoretisk vurdering som ikke fanger opp eventuell topografisk skjerming.

Berg (2017) påpeker videre at antallet synlige turbiner er av større betydning for det visuelle inntrykket enn størrelsen på den enkelte vindturbinen. På lang avstand er det vanskelig å skjelne mellom store og små objekter, med mindre det finnes referanseelementer i omgivelsene. Effekten av å se mange turbiner på samme tid vil også forsterkes av vingenes roterende bevegelser fordi det perifere synsfeltet lett oppfatter bevegelse. Store turbiner med sakte rotasjon oppleves normalt som roligere enn mindre vindturbiner med rask rotasjon.

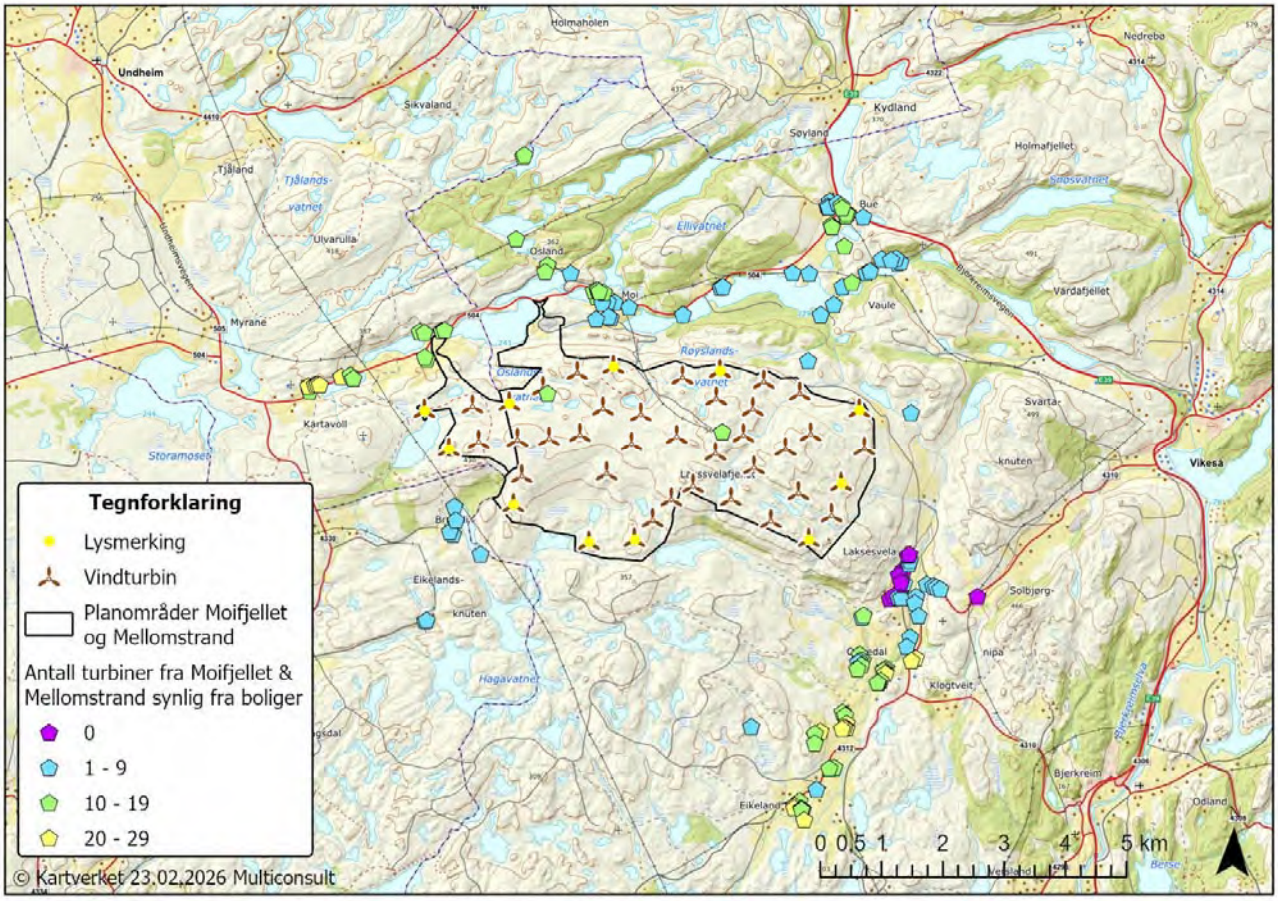
Som nevnt over vil topografien i området være av stor betydning for både synlighet og naboenes opplevelse av de turbinene som er synlige. Ifølge Berg (2017) kan de visuelle virkningene fra et stort antall turbiner bli store i *flate landskap*. S*måkuperte skjærgårdslandskap* kan bidra til større visuell dominans av enkeltturbiner, samtidig som det kan gi noe skjerming og begrense antall synlige turbiner i vindkraftverkets nærområder. *I kuperte landskap* kan topografien bidra til stor grad av innsynsskjerming, slik at vindturbinene knapt er synlige i vindkraftverkets nærområder og de visuelle virkningene for naboer blir beskjedne. I *skoglandskap* kan trærne gi god lokal skjermingseffekt. På lengre avstand kan imidlertid de visuelle virkningene bli store for de som ser vindturbinene rage over skogen.

Berg (2017) fremhever også at det visuelle inntrykket i stor grad påvirkes av betrakterens relative plassering i forhold til vindturbinene, og at en vindturbin som står på et platå rett overfor eller omtrent på samme høyde som betrakteren kan bli oppfattet som mer visuelt dominerende enn en vindturbin som står på et lavere terrengnivå enn der vindturbinen betraktes fra.

5.1.2 Vurdering av Moifjellet og Mellomstrand vindkraftverk

De planlagte turbinene vil kunne få en totalhøyde på 200 m. Teoretisk synlighetskart viser at turbinene vil bli synlig for flere av bygningene i områdene rundt.

Synlighetskartet er vist i **Error! Reference source not found.**, og er basert på vindturbinenes totalhøyde på 200 meter. Kartet viser imidlertid ikke hvor stor del av turbinen som er synlig fra respektiv bebyggelse, og det visuelle inntrykket kan således variere.



Figur 5-1. Teoretisk synlighetskart for Moifjellet og Mellomstrand vindkraftverk.

5.2 Lysmerking og helse

Det finnes svært få studier av hvordan lysmerking påvirker naboer. En undersøkelse fra Danmark fra 2017 så på folks opplevelse av merking med høyintensitetslys. Selv om studien vurderte effekten av høyintensitetslys, vil en del av funnene være relevante også for mellomintensitetslys. Studien fant at en relativt stor andel av respondentene ikke eller i liten grad følte seg plaget av hinderlysene, nærmeste bestemt ca. 70 % i dagslys og ca. 40% etter det er blitt mørkt. For de som følte seg plaget synes den negative oppfatningen i stor grad å være knyttet til hinderlys når det er lite lys eller helt mørkt, og i mindre grad i fullt dagslys (Rudolph m.fl. 2017). Dette kan skyldes at forskjellen i lys-intensitet mellom hinderlysene og den naturlige belysningen oppleves som mindre på dagtid, spesielt i godt vær/fullt solskinn. På kveld/natt blir lysene mye mer dominerende etter hvert som landskapet ellers «forsvinner». Det trekkes også fram at effekten kan oppleves størst i skumring, når man fortsatt ser landskapet, enn i mørket når landskapsrommet blir borte.

Forskjellen til før-situasjonen, som i Norge gjerne er fra et utmarksområde uten eller med lite kunstig belysning, spiller også inn. Sammenlignet med land lenger sør, kan man i Norge også forvente en større forskjell i opplevd plage mellom sommerhalvåret med mye sollys og vinterhalvåret med mye halv-mørke og mørke. Været, og da spesielt lavt skydekke over vindkraftverket, kan også forverre (eller skjule) opplevelsen.

Rudolph m.fl. (2017) fant også at de fleste respondentene synes lysene var mest plagsomme under fritidsaktiviteter som gåturer og stjernekikking. Deler av plagen fra høyintensitets lysmerking knyttes også til opplevelsen av tap av stedsidentitet og stedstilknytning som følge av tap av mørke. Videre hang folks opplevelse i eget hjem sammen med mikrogeografien rundt huset. Trær som skygget mot lysene, husets og spesielt soverommets plassering mot lysene samt om huset lå nær vann (som reflekterer og forsterker effekten), var særlig viktig. Man fant at de som bodde aller nærmest generelt var mindre plaget. Graden av plage hang også nøye sammen med hvor ofte man ble oppmerksom på lysene.

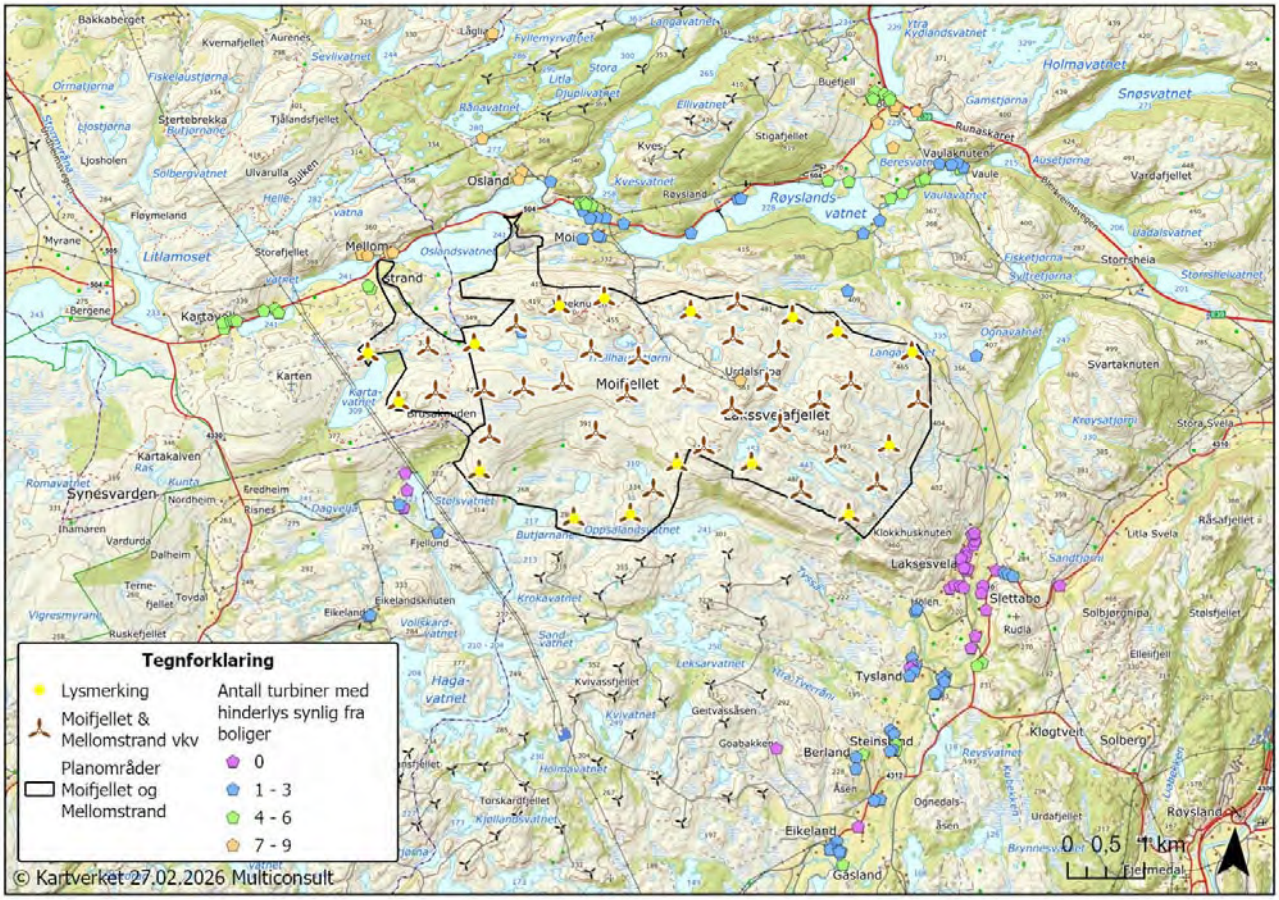
Studien til Rudolph m.fl. (2017) samt det teoretiske synlighetskartet som er utarbeidet for hinderlysene i dette prosjektet indikerer at virkningene for de nærmeste naboene til prosjektet normalt vil være begrenset. For bygninger i lengre avstand fra vindkraftverket vil hinderlysene være mer synlige, noe som også kan øke graden av plage.

5.2.1 Krav til merking

Vindturbiner defineres som luftfartshindre og utløser krav om merking i tråd med forskrift om rapportering, registrering og merking av luftfartshinder.

5.2.2 Vurdering av Moifjellet og Mellomstrand vindkraftverk

For å kunne få en indikasjon på hvor synlige lysene vil kunne være fra nærliggende naboer har Multiconsult utarbeidet et teoretisk synlighetskart for hinderlysene. Da faktisk vertikal spredning ikke er kjent har vi lagt til grunn minimumskravet på 3 grader som en illustrasjon. En annen verdi for vertikal spredning vil påvirke spredningen av lysene og dermed også synligheten.



Figur 5-2. Teoretisk synlighetskart for hinderlys for Moifjellet og Mellomstrand vindkraftverk.

6 Tap av nærområder for friluftsliv

Det finnes mye nasjonal og internasjonal forskning som beskriver den positive betydningen av at vi mennesker har tilgang til natur og oppholder oss i naturen. Trangsrud (2020) viser til at det de siste årene har så og si eksplodert i forskning som viser til denne koblingen. Det å oppholde seg i natur er beskrevet som helsefremmende da det er viktig for vår fysiske og psykiske helse, livskvalitet og kan både forebygge og behandle flere sykdommer.

Friluftsliv er utredet spesifikt i egen rapport utarbeidet av Multiconsult (10265688-01-RIM-RAP-004 Moifjellet og Mellomstrand vindkraftverk – Konsekvensutredning Friluftsliv). Utredningen for tema friluftsliv er utført etter metodikk beskrevet i M-1941, Miljødirektoratets tverrsektorielle veileder for konsekvensutredning på klima- og miljøtema. Utredninger av ikke-prissatte tema er etter håndbok M-1941 basert på en standardisert og systematisk prosedyre for å gjøre vurderinger, konklusjoner og anbefalinger mest mulig objektive, forståelige og etterprøvbare.

Det er få områder i regionen som har like stor grad av tilgjengelighet kombinert med naturopplevelse som Moifjellet og Brusaknuden. Brusaknuden er omtalt som en av de få «fjellturene» tilgjengelig for Time kommune. Et vindkraftverk på Moifjellet og Brusaknuden vil dermed svekke tilbudet av tilsvarende friluftslivsområder i regionen med samme tilgjengelighet som Moifjellet. Det vurderes at tiltaket vil øke belastningen på friluftslivet i regionen noe og det tilsier dermed en skjerpet samlet belastning for temaet innenfor middels negativ konsekvens. (Multiconsult, 2026).

Natur- og friluftsområdene i området Moifjellet og Mellomstrand vil som følge av tiltaket gå tapt i den form det har hatt tidligere. Isolert sett kunne en vurdert konsekvensen kun som følge av dette, men i et folkehelseperspektiv er forholdet mellom friluftsliv og helse noe mer sammensatt.

Håndbok 18 – 2001 Friluftsliv i konsekvensutredninger etter plan- og bygningsloven fra Direktoratet for naturforvaltning er en del år gammel, men beskriver dette på en oversiktlig måte. Håndboken viser til en rekke undersøkelser om effekten av tiltak i friluftsområder og oppsummerer at reaksjonene kan være knyttet til endringer i brukshyppighet, romlig bruk, tidspunkt for bruken (døgn-/uke-/sesongvariasjoner) og aktivitet. Effektene kan altså være at på den ene siden så kan eksisterende brukere slutte å benytte området, men på den andre siden kan tilrettelegging med veier o.l. føre til økt bruk av nye brukere. For planområdet til vindkraftverket kan en se for seg at for eksempel eksisterende brukere slutter å benytte området fordi verdien knyttet til området er borte, f.eks. urørt natur og/eller at vindkraftverket representerer et stressmoment. Og på den andre siden kan en se for seg at veier og tilrettelegging til området vil øke tilgjengeligheten og dermed kunne føre til økt bruk av området. Andre vindkraftverk kan vise til slike effekter, spesielt der det blir tilrettelagt for dette via avbøtende tiltak. Overføringsverdien til Moifjellet og Mellomstrand vindkraftverk er likevel ikke gitt da lokale forhold kan avgjøre om friluftslivet påvirkes i den ene eller andre retningen.

Økt fysisk aktivitet og forebygging av inaktivitet er et viktig mål i folkehelsearbeidet. I den forbindelse trekkes friluftsliv frem som et prioritert område, fordi friluftsliv representerer et samspill mellom naturopplevelse og fysisk aktivitet. Hver for seg har både fysisk aktivitet og naturopplevelse en betydelig helsemessig verdi, og samhandlingen mellom disse gir friluftsliv unike verdier for den enkeltes fysiske og psykiske helse. St.meld. nr. 18 2015-2016 viser til omfattende forskning som viser at folk som bor, lever og bruker natur og grønne områder er mer fysisk aktive og har bedre fysisk og psykisk helse. Friluftsliv representerer også en mer positiv gradient med hensyn på sosial ulikhet i helse sammenlignet med annen form for trening og fysisk aktivitet (Klima- og miljødepartementet, 2015-2016).

Bjørlykhaug og Vetlesen (2020) bruker begrepet «Økologisk sorg» for å beskrive reaksjon på tap av naturmangfold og klimakrisen. Økologisk sorg er en form for individuell og kollektiv sorg som kan arte

seg på forskjellig vis. Hensikten med å beskrive denne formen for reaksjon er ifølge forfatterne å bidra til å kunne:

- Snakke sammen og sette ord på erfaringer knyttet til reaksjoner på det som skjer med natur- og klimakrisen.
- Sette ord på hvorfor stadig flere opplever følelsesmessige og kroppslige reaksjoner knyttet til natur- og klimakrisen og herunder anerkjenne disse reaksjonene.
- Sette ord på ansvarsforhold og løfte frem folkehelsekonsekvensene av klima og naturkrisen.
- Sette ord på at vi kanskje har manglende språk og begrepsbruk til å kommunisere og forstå hva som skjer.

Dette er ytterligere problematisert i det offentlige ordskiftet, spesielt ved at flere aktører påpeker at en må godta nedbygging av natur for å oppnå det «grønne skiftet». Vindkraft generelt blir da også trukket fram som et av flere tiltak som skal bidra til å forebygge ytterligere klimaendring og muliggjøre økt bruk av fornybar energi. Det kan derfor være argumenter for at et vindkraftverk vil kunne bidra til å forebygge opplevelsen av økologisk sorg ved at en satser på ren fornybar energi. Denne utredningen har ikke noe mandat eller er ikke på noen måte i stand til å gå inn i denne diskusjonen, men det kan likevel være nærliggende å benytte begrepet økologisk sorg slik Ashlee Cunsolo og Neville R. Ellis (2018) gjør: at det er en legitim respons på opplevelsen av tap, endring og forventede tap av natur.

Disse forfatterne knytter dette i stor grad til tap av natur som følge av klimaendringer og globale naturkriser, men samtidig viser de til at det er tapet av de nære, personlige og kjente forholdene som har gitt grunnlaget for deres bruk av dette begrepet. Tap og endring av det som kan knyttes til vår opplevelse av identitet, kultur og «hjem». Bjørlykhaug og Vetlesen (2020) bruker overskriften «hjemlengsel hjemme» for å beskrive at en kan oppleve sorg og mer bestemt savn etter det som var kjent og kjært hvis dette blir nedbygd eller endret på en slik måte at en ikke kjenner det igjen på samme måte.

På bakgrunn av dette kan en si at all nedbygging av friluftslivsområder kan påvirke folkehelsen negativt — generelt for befolkningen og spesielt for de brukere som blir berørt i det enkelte tilfelle.

Etablering av Moifjellet og Mellomstrand vindkraftverk representerer en slik nedbygging, og spørsmålet blir da kun hvor stor grad av konsekvensreduserende tiltak det er mulig å gjennomføre. I den sammenheng kan det være hensiktsmessig å sammenligne med andre vindkraftverk, vannkraftutbygginger eller tilsvarende inngrep i naturen som er gjort tidligere. Her er potensialet stort for å kunne gjennomføre avbøtende/konsekvensreduserende tiltak som kan bidra positivt til folkehelsen. Slike tiltak kan ikke brukes som et selvstendig argument for å bygge ned natur, men vil ha betydning for folkehelsen. Det er flere eksempler fra tilrettelagte besøkshytter, sykkel- og skiløyper, stier, steintrapper og veier som har bidratt til økt tilgjengelighet og dermed økt bruken av et område betydelig. Fra store kraftutbygginger på 90-tallet ble det satt av egne fond som skal brukes til friluftsog/eller folkehelsetiltak. Dette er gjort i flere prosjekter og også i vindkraftprosjekter i ettertid. Utforming av slike avbøtende tiltak må gjøres lokalt om de skal ha positiv helsemessig effekt. Innen helsefremmende arbeid brukes et begrep som kalles settingstilnærming (Ottawa-charteret 1986). Denne tilnærmingen vil si at en må ta utgangspunkt i de unike forholdene for det området som berøres samt i de lokale behov, forutsetninger, ressurser og rammer som eksisterer for området. Dette krever en reell medvirkningsprosess som beskrevet tidligere for å få mulig helsemessig positiv effekt.

Tap av rekreasjonsområder kan særlig påvirke områder nær vindkraftverket, da bruken av naturområder typisk øker med nærhet til området.

7 Dagens helsetilstand i Bjerkreim og Time kommune

I utredningsprogrammet til Mellomstrand og Moifjellet vindkraftverk er det beskrevet at helsekonsekvensutredningen skal beskrive dagens helsetilstand og påvirkningsfaktorer i influensområdet. Kommunens og fylkeskommunens oversikt over helsetilstand og påvirkningsfaktorer skal benyttes for å beskrive dagens situasjon.

Helseprofil 2025 for Bjerkreim og Time kommune (FHI, 2025) gir begrenset grunnlag for vurderingene av helsekonsekvenser for vindkraftverket. Profilene fra Helsedirektoratet for 2025 fokuserer i stor grad på sammenhengen mellom klimatiltak og folkehelse, noe som blir for overordnet som grunnlag for vurdering i denne helsekonsekvensutredningen.

Kommuner kan, med hjemmel i folkehelseloven, praktisere andre grenseverdier i vurderingen av eksponering for bl.a. støy eller andre forhold. Dette kan f.eks. være om kommunene har identifisert spesifikke folkehelseutfordringer knyttet til slike temaer. Det er ingen konkret dokumentasjon fra helseprofilene eller folkehelseplanene som beskriver slike tiltak.

Bjerkreim kommune har utarbeidet en plan for folkehelse fra 2020 til 2024 (Bjerkreim 2020-2024). Selv om planen er noen år gammel, viser den til viktige prioriteringer innen drikkevann, friluftsliv, støy og luftforurensing. Det beskrives dessverre ikke vindkraft konkret, men det er et konkret mål i planen om å sikre gode lokalmiljøer med tilgang på friluftsområder og at uteområder ikke overskrider anbefalte støynivåer. Det er spesifikt beskrevet i planen fokus på veitrafikk, men sett i et folkehelseperspektiv vil dette være gjeldene for alle typer støy som kan ha betydning på folks helse.

Time kommune har utarbeidet en plan for folkehelse for 2024 til 2027 (Time 2024-2027). Planen beskriver ikke vindkraft spesielt eller utfordringer med eksponeringer for miljøfaktorer som støy, forurensing, skyggekast eller lignende. Planen viser til at helsetilstanden i Time kommune er generelt god. Sammenligna med landsgjennomsnittet ligger kommunen enten like bra eller bedre an på de fleste indikatorene.

8 Helsekonsekvenser av samlet eksponering

I denne helsekonsekvensutredningen vises det til noe litteratur som beskriver at enkelte faktorer enkeltvis og samlet kan ha en helsemessig betydning. Per i dag foreligger det imidlertid et begrenset kunnskapsgrunnlag for å vurdere helsemessige konsekvenser av vindkraftverk. For enkeltfaktorer som for eksempel støy og skyggekast fra vindkraftverk har myndighetene satt grenseverdier. Det foreligger per i dag heller ingen konkret metodikk eller veiledning for utarbeidelse av en samlet helsemessig konsekvensvurdering av vindkraft. Dette gjør igjen at en helsekonsekvensvurdering av et konkret vindkraftverk nødvendigvis blir noe mangelfull. Etter vår vurdering blir det derfor viktigst å beskrive og synliggjøre at ulike enkelt-faktorer kan ha en mulig helsekonsekvens, enten i samvariasjon med andre faktorer og/eller over tid. Konkret hvilke konsekvenser er det ikke kunnskapsgrunnlag nok til å fastsette.

8.1 Sammenstilling av eksponering for flere enkeltfaktorer

I denne utredningen er det valgt å benytte en metodikk for å sammenstille og visualisere samlede helsekonsekvenser basert på samme modell som ved risikovurderinger. Metodikken innebærer ikke en fullstendig risikoanalyse, kun en sammenstilling og visualisering av samlet vurdering. Formålet med metoden å vise at det er flere og sammensatte årsaker knyttet til risiko for helseplage. Metoden forsøker å vekte de ulike hensynene på en måte som visualiserer og beskriver dette formålet.

Sammenstillingen viser hvordan samlede mulige helsekonsekvenser er vurdert og graderes som funksjon av graden av eksponering og graden av konsekvens.

8.1.1 Graden av eksponering

Graden av eksponering sammenstilles ved å vurdere **styrke, frekvens og varighet** av eksponeringen. Styrken kan variere ut fra flere forhold, herunder avstand til eksponeringskilden, tiltak for å redusere eksponering eller naturlige hindringer som gjør at boligen ikke blir fullt ut eksponert for de aktuelle faktorene. Frekvens og varighet tar hensyn til hvor ofte og hvor lenge eksponeringen forekommer. Det gjøres en vurdering om det er kontinuerlig eksponering, eller om det er noe som gjentas med jevne mellomrom. Eksempelvis vil visuelle faktorer være noe som kan representere en eksponering som er kontinuerlig. Skyggekast vil kun opptre ved ujevne og jevne mellomrom gitt værforhold som sol og dagslys.

I tillegg settes det en verdi på sannsynligheten for om de aktuelle faktorene er reelt til stede og representerer en eksponering. I noen tilfeller vet en med stor grad av sannsynlighet gjennom beregningene av støy, skyggekast, synlighet etc. at den aktuelle boligen blir eksponert for den aktuelle faktoren. I andre tilfeller kan beregningene vise at boligen ligger i et område der den ikke kan se noen vindturbiner, hinderlys e.l. og dermed sannsynligvis ikke bli eksponert for disse faktorene. Det betyr ikke at mulige helsekonsekvenser ikke skal sammenstilles da det alltid er en usikkerhet knyttet til beregningene og hvordan faktiske forhold blir når turbinen er satt i drift.

8.1.2 Graden av konsekvens og usikkerhet

Graden av konsekvens vurderes ut fra alvorlighet. I tillegg til alvorlighet settes det en ekstra faktor for usikkerhet. Graden av konsekvens kan få et endret utfall hvis det er flere ulike forhold som virker samtidig. Metodisk håndteres dette ved usikkerheten gis en verdi fra 0 til 2. Kunnskapsgrunnlaget er ikke tilstrekkelig til å fastsette dette på en sikker måte, og forholdet håndteres derfor som en av flere usikre forhold.

Det gis også en ekstra konsekvens om det er flere risikofaktorer som for eksempel stammer fra andre kilder. Det kan være andre støykilder eller forurensningskilder som kan påvirke områdene som vurderes i denne helsekonsekvensutredningen.

8.1.3 Helsekonsekvensvurderinger som funksjon av eksponering, konsekvens og usikkerhet

I det følgende gjøres det en samlet kvalitativ vurdering av alle de enkelte temaene støy, skyggekast, hinderlys og synlighet. Den samlede vurderingen graderes deretter med en fargekode grønn, gul, oransje eller rød, hvor rødt representerer høyest samlet mulig helsekonsekvens og grønt representerer liten eller ingen mulig helsekonsekvens.

Figur 8-2 nedenfor viser hvordan samlet mulig helsekonsekvens fremkommer og graderes som funksjon av sannsynlighet for og grad av eksponering og alvorlighetsgrad.

Vurdering av eksponeringen gjøres etter formelen: T*B*(F+V)*0,5 der:

T = sannsynlig reell eksponering

B = grad av eksponering

F = frekvens

V = varighet

Konsekvens settes etter vurdering av helsekonsekvens og eventuell usikkerhet: H+U. Graden av konsekvens defineres på en skala fra 1-5, der 1 er ingen negativ helsepåvirkning/ingen plage og der 5 er økt sannsynlighet for alvorlige helseproblemer.

Samlet vurdering av mulig helsekonsekvens gjøres da etter sammenstilling av eksponering på den ene siden og graden av konsekvens og usikkerhet på den andre siden.

Formlene over skal bidra til å vise hvordan de ulike faktorene spiller inn på vurdering av samlet mulig helsekonsekvens. Metoden skal som nevnt visualisere at det er sammensatte årsaker som spiller inn på vurderingene av mulig helsekonsekvens, herunder ulike usikkerheter. Formlene som benyttes gir et forsøk på å vekte disse forholdene på en visuell og systematisk måte for å få frem dette formålet. Metodikken kan også være et grunnlag for videre diskusjon og utvikling for senere bruk i helsekonsekvensvurderinger.

8.2 Metode for vurdering av de ulike faktorene

8.2.1 Graden av tilstedeværelse

Faktor	Sannsynlig reelt til stede
0,1	Beregninger tilsier at faktoren ikke er til stede
1	Beregningene tilsier at faktoren er til stede

8.2.2 Graden av eksponering

Graderingen benytter en skala fra 0 til 5, der 0 betyr ingen eksponering og at man har full kontroll på alle forhold som forhindrer eksponering for støy, skyggekast, visuelle forhold eller hinderlys selv om boligen kan være lokalisert i et område der man teoretisk kan bli utsatt for eksponering. Med naturlige barrierer menes for eksempel avstand, landskapsformer eller synligheten av anlegget. Avbøtende tiltak kan være støyskjerming eller redusert hastighet på vindturbinene om natten. Gradering 5 betyr høy eksponering og ingen avbøtende tiltak eller kompensasjon eller andre barrierer mot aktuell eksponering.

Gradering	Vurdering av styrke for eksponering
0	Fullt ut isolert fra eksponering for alle de aktuelle faktorene. Dokumenterbart og uten usikkerhet. Ingen vindturbiner er synlige eller ligger utenfor område der det er beregnet støynivå
1	Ligger i område med beregnet støy under 40 dB(A). Det er ikke skyggekast. Ingen turbiner eller hinderlys er synlige
2	Beregnet støynivå over 40 dB(A) og under på 42 dB(A) Beregnet skyggekast er under grenseverdien 1-9 Vindturbiner kan være synlige 1- 3 hinderlys vil kunne bli synlige
3	Beregnet støynivå er under grenseverdien på 45 dB(A), men ligger mellom 42 og 45 dB. Beregnet skyggekast under grenseverdi 10- 19 Vindturbiner vil bli synlig. 4- 6 hinderlys vil kunne bli synlige
4	Beregnet støynivå er over grenseverdien på 45 dB(A). Det vil gjennomføres konkrete og dokumenterbare avbøtende tiltak for å redusere helsekonsekvensen. Beregnet teoretisk skyggekast er over grenseverdi. Det vil gjennomføres konkrete og dokumenterbare avbøtende tiltak for å redusere helsekonsekvensen. Ligger utenfor minsteavstanden på fire ganger totalhøyden på turbin. 20- 10 vindturbiner være synlige fra eiendommen. 7- 9 hinderlys vil kunne bli synlige
5	Beregnet støynivå over grenseverdien på 45 dB(A). Beregnet teoretisk og faktisk skyggekast over grenseverdi Opptil alle turbiner og hinderlys kan være synlige. Ligger innenfor minsteavstanden på fire ganger totalhøyden på turbin Ingen naturlige barrierer eller iverksatte avbøtende tiltak.

8.2.3 Gradering av frekvens for eksponering

Eksponeringsgrad	Frekvens	
1	Månedlig eller sjeldnere	Ikke skyggekast
2	Flere ganger i måneden	0,1 til 10 timer pr. år med skyggekast
3	Ukentlig	10 til 30 timer pr. år med skyggekast
4	Flere dager i uken	30 til 100 timer pr. år med skyggekast
5	Daglig	Over 100 timer pr. år med skyggekast

8.2.4 Gradering av varighet av eksponeringen

Eksponeringsgrad	Varighet	
1	Under 5 minutter	Ikke skyggekast
2	5 minutt-1 time	Opptil 30 minutter pr. dag med skyggekast
3	1-8 timer	Mellom 30 og 60 minutter pr. dag med skyggekast
4	8-12 timer	Mellom 60 og 120 minutter pr. dag med skyggekast
5	Hele døgnet	Over 120 minutter med skyggekast pr. dag

8.2.5 Gradering av helsekonsekvens

Gradering	Antagelse av graden av helsekonsekvens
1	Økt sannsynlighet for å oppleve plage. Kortvarig negativ helsepåvirkning.
2	Økt sannsynlighet for helsepåvirkning, men uten varige følger.
3	Økt sannsynlighet for helsepåvirkning med varige følger.
4	Økt sannsynlighet for alvorlig helsepåvirkning.
5	Betydelig sannsynlighet for alvorlig helsepåvirkning.

8.2.6 Gradering av usikkerhet og/eller flere sammensatte eksponeringer

Gradering	Usikkerhet
0	Normal usikkerhet som er beskrevet i konsekvensutredningen. Kun ett tema over gult nivå.
1	Usikkerhet som for eksempel flere støykilder og andre eksponeringer som ikke er omhandlet i konsekvensutredningen. Flere tema over gult nivå.
2	Betydelig usikkerhet

8.2.7 Andre tilleggsfaktorer / Tap av naturområder og friluftsliv som enkeltfaktorer

Tap av natur- og friluftslivsområder kan være en tilleggsfaktor som kan bidra til den samlede vurderingen av mulige helsekonsekvenser av virkningene fra vindkraftverket. Denne faktoren lar seg ikke vurdere på samme måte som de andre faktorene nevnt over, da det ikke finnes noen oversikt over hvem som opplever at naturmiljøet blir forringet og hvordan dette konkret oppleves. Metoden legger opp til at dette kunne blitt lagt til grunn som en av flere usikre forhold jf. kapittel 6.2.6, men det finnes ingen kunnskap eller oversikt som gir grunnlag for å sette en slik verdi på konkrete boliger eller områder.

8.3 Helsekonsekvensvurdering for et utvalg av bygninger/eiendommer

Denne helsekonsekvensutredningen tar utgangspunkt i eksisterende kunnskap og beregninger som er gjort for planlagt vindkraftverk på Moifjellet og Mellomstrand. Vurdering og sammenstilling av samlet helsekonsekvens omfatter derfor kun de områdene og boligene som er vurdert i konsekvensutredningen for prosjektet. Det er videre valgt å avgrense utvalget av boliger til det området som sannsynligvis blir mest berørt av støy, skyggekast og synlighet og dermed mulig også mottakere med den mest sammensatte og komplekse eksponeringen.

Boliger og hytter med tilnærmet lik beregnet eksponering for de ulike faktorene er sammenstill i samme tabell under.

ID-merkingen for den enkelte eiendom er hentet fra støyberegningene (Akustikkonsulten 10-22255-D01).

Bygninger 175, 184

Disse bygningene ligger i umiddelbar nærhet til turbinene og vil kunne bli eksponert for betydelig støy og skyggekast vurdert etter gjeldende retningslinjer. Det vil ikke iverksettes noen tiltak for å redusere eksponeringen for disse eiendommene da det er gjort avtale om innløsing av disse ved etablering av vindkraftverket.

Tabell 8-1. Helsekonsekvensvurdering av bygningene 175 og 184.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	175, 184	1	5	5	4	22,5	1	3	4	
Skyggekast		1	5	5	5	22,5	1	3	4	
Hinderlys		1	5	5	5	20	1	2	3	
Synlighet		1	5	5	5	20	1	2	3	
Samlet kvalitativ vurdering	NVE skriver i Rapport 2018/72 at de anbefaler en minsteavstand på fire ganger vindturbinens totalhøyde knyttet til konsesjonsbehandlinger (Jakobsen m.f 2018). Bygningene ligger nærmere planlagte turbiner enn det NVE på generelt grunnlag anbefaler om 4 ganger turbinens totalhøyde Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Alle bygningene ligger mao. Derfor over anbefalte grenseverdier i henhold til de beregningene som er gjennomført for støy. Bygningene ligger over anbefalte grenseverdier i henhold til de beregningene som er gjennomført for skyggekast. Store deler av vindparken vil kunne være synlig fra disse eiendommene I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens. Det er ikke planlagt avbøtende tiltak for støy og skyggekast knyttet til disse eiendommene, men derimot vil disse bli innløst om vindkraftverket blir realisert.									

Bygninger 115 og 116

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 10 og 19 turbiner er synlige fra eiendommene og 7-9 Hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, nord-vest for planlagt vindpark. Disse eiendommene blir mer påvirket med alternativ 1 som inkluderer Mellomstrand.



Tabell 8-2. Helsekonsekvensvurdering av bygningene 115 og 116.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	115 og 116	1	4	5	4	18	1	3	4	
Skyggekast		1	4	5	4	18	1	3	4	
Hinderlys		1	4	5	5	20	1	2	3	
Synlighet		1	3	5	5	15	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 7 til 9 hinderlys fra bygningene. Boligene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi. vest									

Bygninger 50 og 29

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 10 og 19 turbiner er synlige fra eiendommene og 4-6 Hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, nord-vest for planlagt vindpark. Disse eiendommene blir mer påvirket med alternativ 1 som inkluderer Mellomstrand.



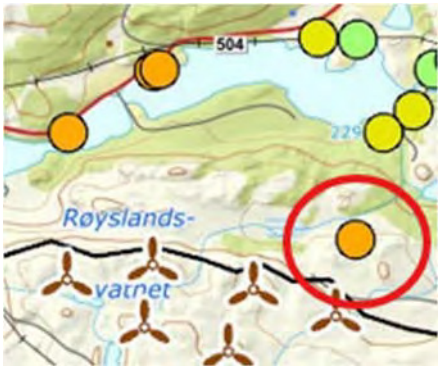
Tabell 8-3. Helsekonsekvensvurdering av bygningene 50 og 29.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	50 og 29	1	4	5	4	18	1	3	4	
Skyggekast		1	4	5	4	18	1	3	4	
Hinderlys		1	4	5	5	20	1	2	3	
Synlighet		1	3	5	5	15	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 7 til 9 hinderlys fra bygningene. Boligene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygningen 225

Bygningen har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1- 9 turbiner er synlige fra eiendommene og 1-3 Hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger i nord-øst for planlagt vindpark. Denne eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



Tabell 8-4. Helsekonsekvensvurdering av bygning 225.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B*(F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	225	1	4	5	4	18	1	3	4	
Skyggekast		1	4	5	5	20	1	3	4	
Hinderlys		1	2	5	5	10	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 1 til 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1 til 3 hinderlys fra bygningene. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygningen 163

Bygningen har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1- 9 turbiner er synlige fra eiendommen og 1-3 Hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger øst for planlagt vindpark. Denne eiendommen får ingen ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



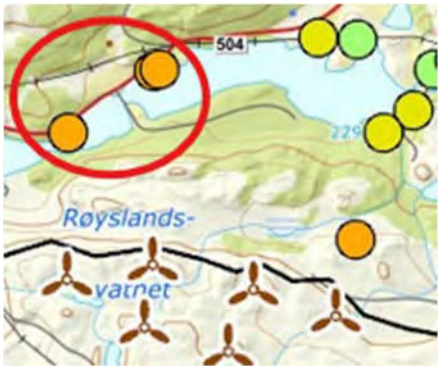
Tabell 8-5. Helsekonsekvensvurdering av bygning 163.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B*(F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	163	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	4	16	1	3	4	
Hinderlys		1	2	5	5	10	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 1 til 9 turbiner vil være synlig fra eiendommen En vil sannsynligvis kunne se 1 til 3 hinderlys fra bygningen. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygninger 186, 226, 169 og 214

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommene og 4 - 6 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, nord for planlagt vindpark. Disse eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



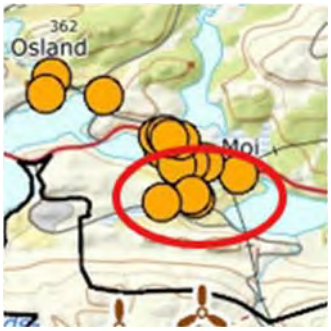
Tabell 8-6. Helsekonsekvensvurdering av bygningene 186, 226. 169 og 214.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B*(F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	186, 226. 169 og 214	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	4	16	1	3	4	
Hinderlys		1	3	5	5	15	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1 til 3 hinderlys fra bygningene. Eiendommene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygninger 43, 46, 61, 180, 177, 178 og 179

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommene og 1-3 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, nord for planlagt vindpark. Disse eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



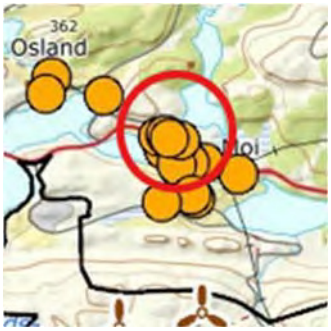
Tabell 8-7. Helsekonsekvensvurdering av bygningene 43, 46, 61, 180 177, 178, 179.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	43, 46, 61, 180 177, 178, 179	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	4	16	1	3	4	
Hinderlys		1	2	5	5	10	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1 til 3 hinderlys fra bygningene. Eiendommene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygninger 195, 196, 199, 197, 198 og 177

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 10 - 19 turbiner er synlige fra eiendommene og 4- 6 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, nord for planlagt vindpark. Disse eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



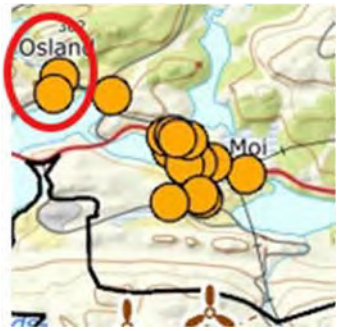
Tabell 8-8. Helsekonsekvensvurdering av bygningene 195, 196, 199, 197, 198 177.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	195, 196, 199, 197, 198 177	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	4	16	1	3	4	
Hinderlys		1	3	5	5	15	1	2	3	
Synlighet		1	3	5	5	15	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 4 til 6 hinderlys fra bygningene. Eiendommene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygninger 60 og 59

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 10 - 19 turbiner er synlige fra eiendommene og 7- 9 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, Ved Osland nord for planlagt vindpark. Disse eiendommen får litt ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



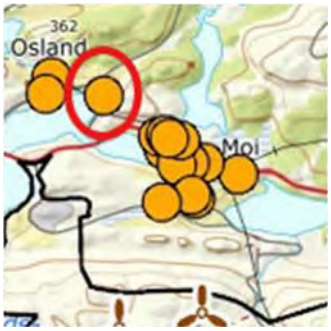
Tabell 8-9. Helsekonsekvensvurdering av bygningene 60 og 59

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	60, 59	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	3	14	1	3	4	
Hinderlys		1	4	5	5	20	1	2	3	
Synlighet		1	3	5	5	15	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 7 til 9 hinderlys fra bygningene. Eiendommene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygningen 58

Bygningen har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1- 9 turbiner er synlige fra eiendommen og 1- 3 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger i tilnærmet samme område, Ved Osland nord for planlagt vindpark. Eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



Tabell 8-10. Helsekonsekvensvurdering av bygning 58.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B*(F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	58	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	3	14	1	3	4	
Hinderlys		1	2	5	5	10	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningen viser at opp mot 9 turbiner vil være synlig fra eiendommen En vil sannsynligvis kunne se 1 til 3 hinderlys fra bygningene. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygninger 201 og 224

Bygningene har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommene og ingen hinderlys vil bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i samme område, Ved Brusali sør for planlagt vindpark. Disse eiendommene får ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



Tabell 8-11. Helsekonsekvensvurdering av bygningene 201 og 224.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B*(F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	201, 224	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	3	14	1	3	4	
Hinderlys		1	1	5	5	5	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningene viser at opp mot 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis ikke kunne se hinderlys fra bygningene. Eiendommene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygningen 113

Bygningen har beregnet støy over 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommen og 1- 3 hinderlys vil bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger ved Brusali sør for planlagt vindpark. Eiendommen får ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



Tabell 8-12. Helsekonsekvensvurdering av bygning 113.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	113	1	4	5	4	18	1	3	4	
Skyggekast		1	4	4	3	14	1	3	4	
Hinderlys		1	2	5	5	10	1	2	3	
Synlighet		1	2	5	5	10	1	2	3	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningen viser at opp mot 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1- 3 hinderlys fra bygningen. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, herunder både støy, synlighet og skyggekast som er merkbare og/eller ligger over anbefalt grenseverdi.									

Bygninger 111, 112 og 156

Bygningene har beregnet støy over 45 dB, beregnet skyggekast under grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommene og 1- 3 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, ved Brusali og Eikeland, sør-vest for planlagt vindpark. Disse eiendommen får litt ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand, men er per i dag allerede påvirket av eksisterende vindkraftverk



Tabell 8-13. Helsekonsekvensvurdering av bygningene 111, 112 og 156.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	111, 112 og 156	1	4	5	4	18		3	3	
Skyggekast		1	3	3	2	7,5		3	3	
Hinderlys		1	2	5	5	10		2	2	
Synlighet		1	2	5	5	10		2	2	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast under anbefalte grenseverdier. Beregningene viser at opp mot 1- 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1 til 3 hinderlys fra bygningene. Eiendommene kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det ikke til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, da det er kun støy som er over anbefalt grenseverdi.									

Bygninger 114 og 141

Bygningene har beregnet støy under 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 10 - 19 turbiner er synlige fra eiendommene og 7- 9 hinderlys kan bli synlige.

Dette er et område som kan forventes å bli en del påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommene ligger i tilnærmet samme område, nord-vest for planlagt vindpark. Disse eiendommene blir mer påvirket med alternativ 1 som inkluderer Mellomstrand.



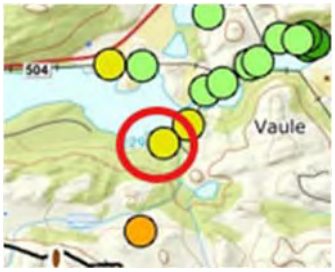
Tabell 8-14. Helsekonsekvensvurdering av bygningene 114 og 141.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	114 og 141	1	3	5	4	13,5		3	3	
Skyggekast		1	4	4	4	16		3	3	
Hinderlys		1	3	5	5	15		2	2	
Synlighet		1	4	5	5	20		2	2	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen under 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningen viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 7- 9 hinderlys fra bygningen. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det ikke til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, da det er kun skyggekast som er over anbefalt grenseverdi.									

Bygningen 193

Bygningen har beregnet støy under 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommen og 1- 3 hinderlys vil bli synlige.

Dette er et område som kan forventes å bli noe påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger øst for Røyslandsvatnet. Eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



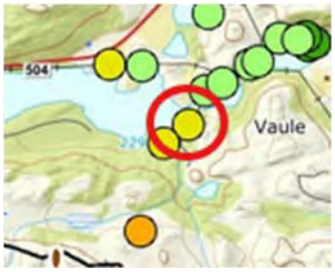
Tabell 8-15. Helsekonsekvensvurdering av bygning 193.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	193	1	3	5	4	13,5		3	3	
Skyggekast		1	4	4	3	14		3	3	
Hinderlys		1	2	5	5	10		2	2	
Synlighet		1	2	5	5	10		2	2	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen under 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningen viser at opp mot 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1- 3 hinderlys fra bygningen. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det ikke til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, da det er kun skyggekast som er over anbefalt grenseverdi.									

Bygningen 191

Bygningen har beregnet støy under 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 1 - 9 turbiner er synlige fra eiendommen og 1- 3 hinderlys vil bli synlige.

Dette er et område som kan forventes å bli noe påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger øst for Røyslandsvatnet. Eiendommen får lite ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



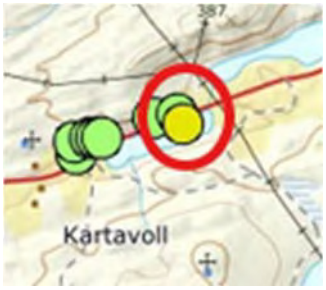
Tabell 8-16. Helsekonsekvensvurdering av bygning 191.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	191	1	3	5	4	13,5		3	3	
Skyggekast		1	4	3	3	9		3	3	
Hinderlys		1	2	5	5	10		2	2	
Synlighet		1	2	5	5	10		2	2	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen over 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningen viser at opp mot 9 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 1- 3 hinderlys fra bygningen. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det ikke til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, da det er kun skyggekast som er over anbefalt grenseverdi.									

Bygningen 202

Bygningen har beregnet støy under 45 dB, beregnet skyggekast over grenseverdi og det er beregnet at mellom 10 - 19 turbiner er synlige fra eiendommen og 4- 6 hinderlys vil bli synlige.

Dette er et område som kan forventes å bli noe påvirket av planlagt vindkraftverk på Moifjellet og Mellomstrand. Eiendommen ligger øst for Mellomstrand vindkraftverk, ved Kartavoll. Eiendommen får ekstra påvirkning med alternativ 1 som inkluderer Mellomstrand.



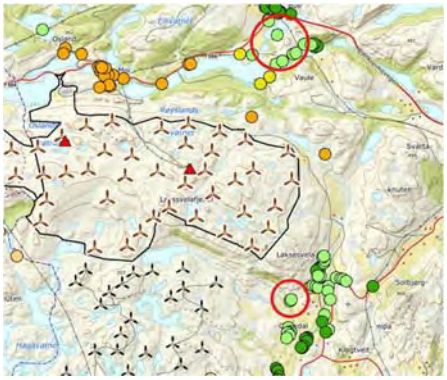
Tabell 8-17. Helsekonsekvensvurdering av bygning 202.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B*(F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	202	1	3	5	4	13,5		3	3	
Skyggekast		1	4	3	3	12		3	3	
Hinderlys		1	3	5	5	15		2	2	
Synlighet		1	3	5	5	15		2	2	
Samlet kvalitativ vurdering	Bygningen ligger innenfor et område med et beregnet støynivå fra vindturbinen under 45 dB (A). Bygningen ligger innenfor et område med beregnet skyggekast over anbefalte grenseverdier. Beregningen viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 4- 6 hinderlys fra bygningen. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det ikke til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, da det er kun skyggekast som er over anbefalt grenseverdi.									

Bygninger 45, 189, 104, 105, 81

Bygningene har beregnet støy under 45 dB, beregnet skyggekast under grenseverdi og det er beregnet at mellom 10- 19 turbiner er synlige fra eiendommen og 4- 6 hinderlys vil bli synlige

Disse bygningene ligger i tilnærmet samme område, nord-øst for vindkraftverket. Bygning 81 er øst for Moifjellet ved Holen. For disse eiendommene vil ikke alternativ 1 med Mellomstrand vindkraftverk ha betydning med hensyn til støy, skyggekast og synlighet.



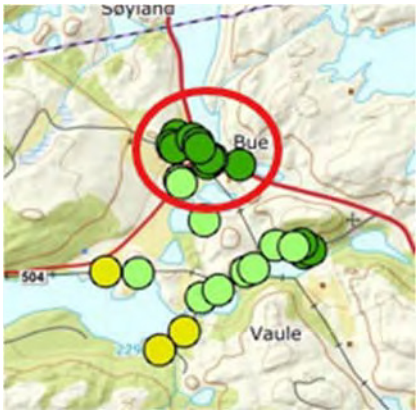
Tabell 8-18. Helsekonsekvensvurdering av bygningene 45, 189, 104, 105, 81.

Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	45, 189, 104, 105, 81	1	3	5	4	13,5		3	3	
Skyggekast		1	2	2	2	4		3	3	
Hinderlys		1	2	5	5	10		2	2	
Synlighet		1	3	5	5	15		3	3	
Samlet kvalitativ vurdering	Bygningene ligger innenfor et område med et beregnet støynivå fra vindturbinen under 45 dB (A). Bygningene ligger innenfor et område med beregnet skyggekast under anbefalte grenseverdier. Beregningene viser at opp mot 19 turbiner vil være synlig fra eiendommene En vil sannsynligvis kunne se 4- 6 hinderlys fra bygningen. Eiendommen kan være utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. I denne vurderingen legges det ikke til grunn en ekstra usikkerhetsfaktor med hensyn til at det er flere sammensatte faktorer som har høy samlet helsekonsekvens, da det er kun skyggekast som er over anbefalt grenseverdi.									

Bygninger ved Bue 96, 98, 97, 100, 99, 101, 103, 102, 44, 104, 105, 189 og 19

Disse bygningene ligger ved Bue og har beregnet støy under grenseverdi, og det er ikke skyggekast fra Moifjellet og Mellomstrand vindkraftverk. Det er beregnet at mellom 10- 19 turbiner er synlige fra eiendommen og 7- 9 hinderlys vil bli synlige

Støynivået er beregnet til mellom 41 og 43 dB i området



Tabell 8-19. Helsekonsekvensvurdering av bygningene 96, 98, 97, 100, 99, 101, 103, 102, 44, 104, 105, 189 og 19.

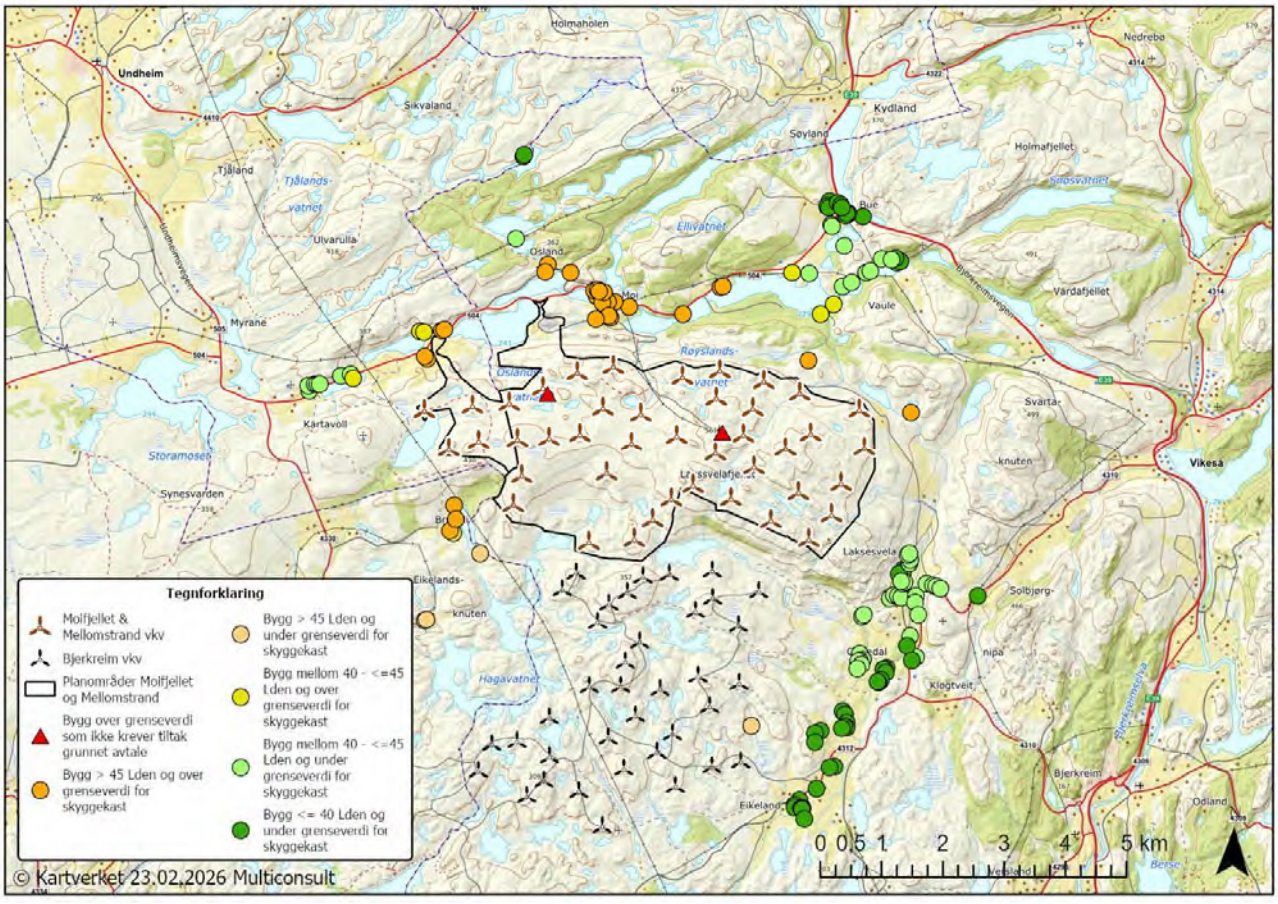
Eksponering							Konsekvens			Samlet HK
Tema	Bygning	(T) Tilstede-værelse	(B) Eks-ponering	(F) Frekvens	(V) Varighet	T*B* (F+V)*0,5	(U) Usikkerhet /sårbarhet	(H) Helse-konsekvens	U+H	
Støy	96, 98, 97, 100, 99, 101, 103, 102, 44, 104, 105, 189 og 19	1	2	5	4	9	1	3	4	
Skyggekast		1	1	1	1	1	1	3	4	
Hinderlys		1	4	5	5	20	1	2	3	
Synlighet		1	3	5	5	15	1	3	4	
Samlet kvalitativ vurdering	Eiendommene ligger innenfor et område med et beregnet støynivå fra vindturbinen under grenseverdien på 45 dB (A). Eiendommene ligger innenfor et område uten skyggekast. Beregningene viser at opp mot 19 turbiner vil være synlig fra eiendommene, og 7- 9 hinderlys vil bli synlige. Noen av eiendommene er utsatt for andre støykilder fra eksisterende vindkraftverk, noe som er lagt til grunn i beregnet støynivå. Disse eiendommene er sannsynligvis også bli berørt av støy fra E39 og planlagt ny E39 forbi Bue. I denne vurderingen legges det derfor inn en ekstra usikkerhetsfaktor da det er flere faktorer for eksponering for dette området, sammenlignet med tilsvarende eiendommer som ligger under anbefalt grenseverdier. Enkeltvis og samlet gir dette grunnlag for å vurdere en grad av usikkerhet og sårbarhet knyttet til disse boligene og hyttene. Det vil iverksettes avbøtende tiltak for støy og skyggekast slik at grenseverdiene overholdes.									

Oppsummering av samlet mulig helsekonsekvens for et utvalg bygninger

Resultatet fra utredningen viser at beboere og hyttebrukere nærmest vindkraftverket, i områdene Moi/Osland/Røysland og hytten ved Salveshola og ved Høybutjørn som er vurdert med høyest sannsynlighet for å oppleve plager fra vindkraftverket.. Disse eiendommene har beregnet støy og skyggekast over anbefalt grenseverdi, samtidig som flere turbiner og hinderlysvil bli synlige fra eiendommene. Med alternativ 1 som inkluderer Mellomstrand, vil også beboere ved Mellomstrand få økt sannsynlighet for å oppleve plager fra vindkraftverket

I utredningen er det tatt hensyn til de ulike faktorene og vurdert disse opp mot mulige tilleggskonsekvenser av samlet eksponering og usikkerhet som ligger i vurderingen. Dette betyr ikke at beboerne i disse områdene vil oppleve plage, eller at alle vil oppleve situasjonen likt da dette i stor grad er subjektive opplevelser. Det er spesielt usikkerheten knyttet til flere og sammensatte eksponeringer som bidrar til å øke helsekonsekvensen for dette området der disse hyttene og boligene er lokalisert. Eksempelvis vises boligene ved Bue som grønne i Figur 8-1 nedenfor, men ligger i gul sone i Figur 8-2. Dette fordi området sannsynligvis vil bli ekstra eksponert for støy fra eksisterende og fremtidig veitrafikk samtidig som de vil kunne se mange turbiner og hinderlys fra eiendommene.

Når det gjennomføres avbøtende tiltak for å forhindre at det blir overskridelser av grenseverdier, vil dette føre til lavere sannsynlighet for plage. I denne modellen vil det føre til at de flyttes lengre ned og mot grønt område i Figur 8-2 nedenfor.



Figur 8-1. Viser boliger og hytter rundt Moifjellet og Mellomstrand vindkraftverk med beregnet støy og skyggekast.

Eksponeringskategori	Konsekvens og usikkerhet					
		1	2	3	4	5
	5 (21-25)				175, 184	
	4 (16-20)				115, 116, 50, 29, 225, 163, 186, 226, 169, 214, 43, 46, 41, 180, 177, 178, 179, 195, 196, 199, 197, 198, 177, 60, 59, 58, 201, 224, 113	
	3 (11-15)			193, 191, 202, 45. 189, 104, 105, 81	111, 112, 156, 114, 141	
	2 (6-10)			Kartavoll, Vaule og Laksesvela/ Slettabø til Eikeland	Bue 96, 98, 97, 100, 99, 101, 103, 102, 44, 104, 105, 189 og 19	
	1 (0-5)					

Figur 8-2. Samlet vurdering av mulig helsekonsekvens for ulike boliger og hytter/ fritidsboliger. X-aksen viser graden av helsekonsekvens. Ved stor usikkerhet og ved flere sammensatte eksponeringsfaktorer vil konsekvensne øke. Y-aksen viser grad av eksponering, herunder varighet og frekvens på eksponeringen. Eksempelvis vil beregnet høyt støynivå eller stor synlighet, gi høyere eksponeringskategori.

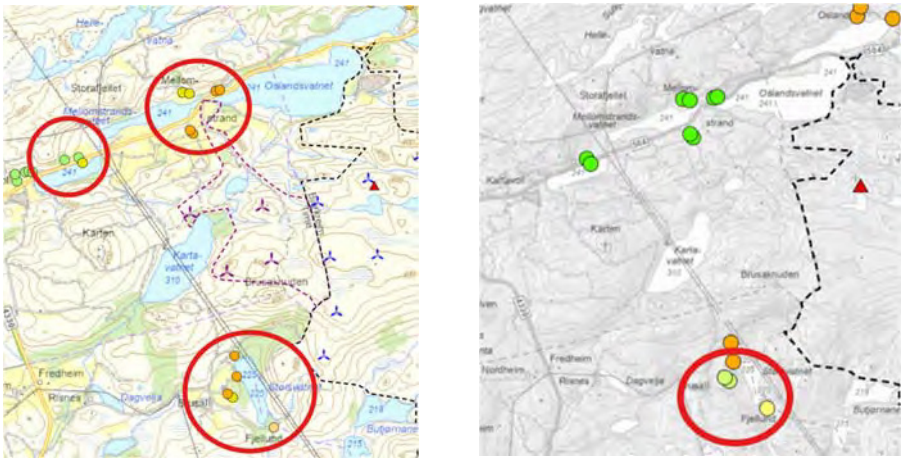
Befolkningen som ifølge beregningene eksponeres for støynivåer under 40 dB, og som har boliger og hytter lengre fra vindkraftverket, har en betydelig lavere sannsynlighet for å oppleve samme plage-grad med påfølgende mulig helsekonsekvens enn de som bor nærmere vindturbinene. Avstanden til vindturbinene er med andre ord av stor betydning. Vindkraftverk kan gi virkninger for naboer selv om avstanden til bebyggelse er større. Det skal ifølge, NVE, legges særlig vekt på nabovirkninger når boliger/hytter påvirkes av både støy, skyggekast og visuelle virkninger. Samtidig eksponering for støy og visuelle forstyrrelser kan forsterke graden av plage. Turbinenes synlighet kan bidra til økt irritasjon over lyden fra dem, og omvendt (Jakobsen m.f 2018).

9 Sammenligning mellom alternativ 1 og alternativ 2

Med alternativ 1 som inkluderer Mellomstrand, vil det bli fem flere eiendommer som har beregnet støy over grenseverdien på 45 dB. Syv flere eiendommer har beregnet skyggekast over grenseverdien som følge av alternativet som inkluderer Mellomstrand. Figur 9-1 under viser forskjellen mellom alternativene ved Mellomstrand og Brusali. Til venstre er det vist at boligene 116, 115, 50 og 29 ved Mellomstrand har beregnet støy og skyggekast over grenseverdien som følge av alternativ 1. Boligene 114 og 141 har beregnet støynivå akkurat på grenseverdien, men har beregnet skyggekast over grenseverdien som følge av alternativ 1.

Ved Brusali har bolig 113 beregnet støy over grenseverdien som følge av alternativ 1 som inkluderer Mellomstrand vindkraftverk.

Bolig 202 ved Kartavoll har beregnet skyggekast over grenseverdien som følge av alternativ 1 som inkluderer Mellomstrand vindkraftverk.



Figur 9-1. Viser utsnitt av kart med støy og skyggekast for alternativ 1 og alternativ 2. Alternativ 1 er kartet til venstre og Alternativ 2 er kartet til høyre.

10 Konklusjon

Resultatet fra utredningen viser at beboere og hyttebrukere nærmest vindkraftverket, i områdene Moi/Osland/Røysland og hytten ved Salveshola og ved Høybutjørn er vurdert med høyest sannsynlighet for å oppleve plager fra vindkraftverket. Med alternativ 1 som inkluderer Mellomstrand, vil også beboere ved Mellomstrand få økt sannsynlighet for å oppleve plager fra vindkraftverket. Disse eiendommene har beregnet støy og skyggekast over anbefalt grenseverdi, samtidig som flere turbiner vil bli synlige fra eiendommene. Med alternativ 1 som inkluderer Mellomstrand, vil også eiendommene ved Brusali få økt sannsynlighet for plage.

Andre eiendommer øst for Røyslandsvatnet ligger ifølge beregningene i områder med støy under grenseverdiene, men skyggekast over grenseverdi. Disse vil dermed også ha noe økt sannsynlighet for å oppleve plage fra vindkraftverket.

Eiendommene i område Bue vil ikke ha skyggekast og er beregnet å ligge under grenseverdiene for støy. Derimot vil disse eiendommene sannsynligvis bli ekstra eksponert for støy fra eksisterende og fremtidig veitrafikk samtidig som de vil kunne se mange turbiner og hinderlys fra eiendommene. Dette betyr at eiendommene ved Bue også har en noe økt sannsynlighet for plage ifølge denne utredningen.

Eiendommene i område Vaule er beregnet å ligge under grenseverdiene for støy, men flere av eiendommene vil få vesentlig visuell påvirkning.

Eiendommer ved Eikeland, Goabakken og Lågali ligger litt lengre fra planlagt vindkraftverk sammenlignet med andre eiendommer som er omhandlet her. Men, på grunn av nærhet til eksisterende vindkraftverk er disse i hovedsak påvirket av disse.

Det er støyforholdene det ofte er knyttet noe usikkerhet til da det erfaringsvis kan være litt vanskelig å beregne støy fra vindturbiner helt nøyaktig. Kritikere til vindkraft generelt trekker konkret frem usikkerheten knyttet til støy og beregning av støy fra vindturbiner. Dette er kjent og må legges til grunn i planlegging da det kun er tiltak ved kilden og kildestøy som potensielt kan redusere støynivået. Usikkerheten i kildestøy er ifølge Statkraft ivaretatt ved at det er lagt til grunn et konservativt anslag for beregningene.

På bakgrunn av disse vurderingene er det ansett som sannsynlig at beboere fra de nærmeste hyttene og boligene vil kunne utsettes for noe ekstra plage. Derimot beskriver myndighetene gjennom FHI at det er ingen holdepunkter for en sammenheng mellom støy fra vindturbiner og mental helse eller livskvalitet. «*Det er lite som tyder på at støy fra vindturbiner på 40-45 dB har en direkte innvirkning på søvn. Det er holdepunkter for at individuelle faktorer, som blant annet holdninger til vindkraftverk og støysensitivitet, spiller en viktigere rolle enn selve støynivået med hensyn til opplevde plager for naboer til vindkraftanlegg*» skriver FHI i deres veileder for støy fra vindturbiner og virkning på helse (FHI, 2022).

Kunnskapsgrunnlaget knyttet til både metode for vurdering av helsevirkninger samt eventuelle faktiske helsevirkninger fra vindkraft er fortsatt mangelfullt selv om det er gjort en del studier spesielt innenfor støy. Litteraturgjennomgangen gjort i denne utredningen viser at det ikke kan dokumenteres helseeffekter som er direkte relatert til støy fra vindturbiner når lydnivået er lavere enn L_{den} 45 dB. Symptomer som er funnet i forskjellige studier er uspesifikke og kan utløses av flere ulike faktorer. Gitt at kunnskapsgrunnlaget er begrenset kan man heller ikke konkludere med at det foreligger holdepunkter for å si at negative eller uønskede helseeffekter vil være fraværende. Det må påregnes at en del av befolkningen er plaget også under anbefalte grenseverdier.

God involvering i tidlig plan-fase, oppfølgingskampanjer og overvåking av støyen fra vindturbinene synes å være den mest effektive metoden for å forhindre mulige støyplager og klager i ettertid (Verbundprojekt, 2020) og (TØI, 2015).

Avbøtende tiltak gjennom produksjonstilpasninger vil kunne forhindre at boliger og hytter får skyggekast over grenseverdi, noe som igjen vil føre til lavere sannsynlighet for plage. Det samme kan også gjelde boliger og hytter som har beregnet støynivå over tiltaksgrensen.

Når det gjelder andre eksponeringsfaktorer som skyggekast, hinderlys og synlighet er virkningene på samme måte som for støy først og fremst knyttet til plagereaksjoner. Enkelte studier har vist at eksponering for flere av eksponeringsfaktorene kan bidra til økt grad av plage hos mottakerne.

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Fagrapport:

Landskap

RAPPORT

Moifjellet og Mellomstrand vindkraftverk

OPPDRAGSGIVER

Statkraft Vind Utvikling DA

EMNE

Konsekvensutredning landskap

DATO / REVISJON: 13.05.2026 / 04

DOKUMENT KODE: 10265688-LARK-RAP-001



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Forside: Moisenderen og Moifjellet, med Moifjellet vindkraftverk og tilhørende internveier sett fra Brusaknuden (Visualisering: EVAH og HBJ, Multiconsult).

Foto, illustrasjoner og figurer: Multiconsult om annet ikke er oppgitt.

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REPORT

OPPDRAG	**Moifjellet og Mellomstrand vindkraftverk**	DOKUMENTKODE	10265688-01-LARK-RAP-001
EMNE	Konsekvensutredning landskap	TILGJENGELIGHET	Åpen
OPPDRAGSGIVER	**Statkraft**	OPPDRAGSLEDER	Håvard Finanger
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STED	Bjerkreim og Time kommuner	ANSVARLIG ENHET	10234054 Naturressurser midt

04	13.05.2026	Konsekvensutredning landskap – versjon 04 med Moifjellet og Mellomstrand vindkraftverk som alternativ i rapporten	ANV	EVAH/HBJ	HAVF
03	26.01.2026	Konsekvensutredning landskap – versjon 03 med Moifjellet og Mellomstrand vindkraftverk som alternativ i rapporten - førsteutkast	ANV	EVAH	HAVF
02	04.07.2025	Konsekvensutredning landskap – versjon 02	ANV	PNP	HAVF
01	10.03.2025	Konsekvensutredning landskap – versjon 01	ANV	EVAH	HAVF
00	04.03.2025	Konsekvensutredning landskap	ANV	EVAH	HAVF
	14.02.2025	Konsekvensutredning landskap - førsteutkast	ANV	EVAH	HAVF
RE.V.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV

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0 Sammendrag

0.1 Innledning

Statkraft er Europas største leverandør av fornybar energi gjennom vannkraft, vindkraft og solkraft, og har en ambisjon om å bidra til en mer bærekraftig framtid ved å levere mer fornybar energi. Statkraft mener at et Moifjellet og Mellomstrand vindkraftverk vil ha store fordeler ut ifra en teknisk-økonomisk vurdering, og kan gi et samfunnsmessig viktig bidrag til å dekke opp noe av behovet for mer fornybar kraft i Norge og Europa.

Planområdet ligger i både Bjerkreim kommune (Moifjellet) og i Time kommune (Mellomstrand), med hver sin prosess for områderegulering etter plan- og bygningsloven. Konsesjonssøknad for Moifjellet vindkraftverk ble sendt 23.3.2025. Tiltaket inkluderer i utgangspunktet også nettilknytningen utenfor planområdene for områderegulering, da denne inngår i tiltaket og krever konsesjon fra NVE, men er unntatt fra plan- og bygningslovbehandling. En egen konsesjonssøknad for nettanlegget ble sendt 30.6.2025.

Konsekvenser utredes i henhold til planprogram fastsatt av Bjerkreim kommune og Time kommune, og utredningsprogram fastsatt av NVE.

0.2 Alternativer som utredes

Konsekvensutredningen for Moifjellet og Mellomstrand vindkraftverk har to alternativer:

1. **Alternativ 1, Moifjellet og Mellomstrand vindkraftverk**, omfatter planområdet for Moifjellet i Bjerkreim kommune og planområdet for Mellomstrand i Time kommune, med adkomstvei fra Mellomstrand i Time kommune.
2. **Alternativ 2, Moifjellet vindkraftverk**, omfatter planområdet for Moifjellet i Bjerkreim kommune, med adkomstvei vest for Moi i Bjerkreim kommune.

I forbindelse med konsekvensutredningene for Moifjellet vindkraftverk i 2024 ble også alternativene for nettraséer utredet, og ble omsøkt i egen konsesjonssøknad for nettanlegg sendt 30.6.2025. Det er tre alternativer for nettilknytning: A vestre, B østre og C midt. Konsekvensutredningen for alternativene for nettilknytning viste at alternativ B var marginalt foretrukket, grunnet hensyn til naturmangfold. Se konsesjonssøknaden for nettilknytning for nærmere informasjon. Konsekvensutredningen beskrevet videre i denne rapporten omhandler derfor kun produksjonsanlegget for vindkraft, beskrevet nærmere i kapittel 0.2.2 og 0.2.3.

0.2.1 Alternativ 0

Nullalternativet er sammenligningsgrunnlaget for konsekvensutredningen. Dette settes til forventet situasjon i 2030, som er året vindkraftverket kan være satt i drift. Nullalternativet inkluderer nåværende miljøtilstand samt vedtatte planer i og nær planområdene som det er grunn til å tro vil bli gjennomført. Det forventes da at fv. 504 er oppgradert iht. vedtatt detaljregulering, at steinbruddet i «Moi brudd og massetak» er noe videreutviklet iht. sin detaljregulering, og at skulpturen MUTE er satt opp på Karten. Nullalternativet settes på denne bakgrunn til likt med dagens miljøtilstand, med tillegg av disse tiltakene.

0.2.2 Alternativ 1

Alternativ 1 omfatter:

- Et todelt planområde på totalt 17,5 km2, bestående av planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune på 16,0 km2, og planområdet for områderegulering av Mellomstrand vindkraftverk Time kommune på 1,4 km2.
- Adkomstvei i Time kommune, fra fv. 504 øst for Mælandsvatnet og til internveinett vest for Legetjørn, med rigg- og lagerområde langs denne. Det er to like lange varianter for framføring, alternativ i) går på deler av strekningen i ny trasé vest for eksisterende vei, alternativ ii) følger eksisterende grusvei.
- Utredningsløsning med 38 vindturbiner i Bjerkreim kommune og fire i Time kommune.
- Tilhørende kranoppstillingsplasser, internveier, jordkabler, driftsbygg og transformatorstasjon.

0.2.3 Alternativ 2

Alternativ 2 omfatter:

- Planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune
- Adkomstvei i Bjerkreim kommune, fra fv. 504 øst for Oslandsvatnet, gjennom «Moi brudd og massetak» og opp Stigafjellet til internveinett ved Joneknuten, med midlertidig rigg- og lagerområde nede i «Moi brudd og massetak».
- Utredningsløsning med 38 vindturbiner i Bjerkreim kommune.
- Tilhørende kranoppstillingsplasser, internveier, jordkabler, driftsbygg og transformatorstasjon.

0.2.4 Andre vurderte alternativer

Se konsesjonssøknaden for Moifjellet vindkraftverk for nærmere omtale av skrinlagte, tidligere alternativer for adkomstvei.

0.3 Utredningskrav og kunnskapsgrunnlag

Konsekvenser for tema landskap utredes i henhold til utredningsprogrammet som er fastsatt av Norges vassdrags- og energidirektorat (NVE) og planprogram fastsatt av Bjerkreim- og Time kommuner. Landskapet er beskrevet, verdisatt og vurdert påvirkning og konsekvens på basert på eksisterende informasjon, innhentet data, synlighetsanalyser, 3D-modell og annen kartdata, samt egen befaring av deler av influensområdet og bilder fra denne. Det er utarbeidet visualiseringer i form av fotomontasjer (samt en modellvisualisering) av ulike fastsatte punkt i utredningsprogrammet, samt fra tilleggspunkt som ble sett på som nyttige visualiseringsstandpunkt for utredningen.

0.4 Konsekvensutredning

Influensområdet for tema landskap følger grensen for synlighetsanalyse på 30 km, fastsatt av NVE. Influensområdet er delt inn i 9 delområdetyper, som er beskrevet og verdisatt. For videre utredning av påvirkning og konsekvens er delområdetypene delt inn i delområder innenfor ulike avstander fra tiltaket, kalt synlighetssoner. Det er delt opp i 5 ulike synlighetssoner: inntil 600 meter (synlighetssone 1), 600 meter – 2 km (synlighetssone 2), 2-5 km (synlighetssone 3), 5-14 km (synlighetssone 4), 14-20 km (synlighetssone 5) og 20-30 km (synlighetssone 6). Inndelingen innenfor de ulike synlighetssonene gir totalt 30 delområder.

Konsekvensgraden for de to ulike alternativene er lik både på delområdenivå og samlet konsekvensgrad. Ett delområde får alvorlig konsekvens (---) av utbyggingen, 5 delområder får middels konsekvens (--), 10 delområder får noe konsekvens (-) og de resterende 14 delområdene får

ubetydelig konsekvens (0). Delområdene tettest på tiltaket får de største negative konsekvensene. Delområdet innenfor synlighetssone 1 (inntil 600 meter), som vil si tiltaksområdet og en sone rundt, får alvorlig konsekvens (---). Dette delområdet vil ved utbygging gå fra å være et område med noen inngrep og et mindre areal med inngrepsfri natur sone 2 (1-3 km fra inngrep) til å domineres av vindturbiner med en totalhøyde på 200 meter. Moifjellet og Mellomstrand vindkraftverk vil stedvis sett fra dette delområdet oppleves som en forlenget del av Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk, noe som vil kunne forsterke tiltaket visuelt i negativ retning. Delområdene i synlighetssone 2 og 3 ligger tett på tiltaksområdet og Moifjellet og Mellomstrand vindkraftverk påvirker flere av delområdene svært negativt visuelt, spesielt fra dallandskapet nord for tiltaksområdet og i høyereliggende områder. Her vil man fra flere steder kunne se eksisterende turbiner i dag i ulike synsretninger, men med Moifjellet og Mellomstrand vindkraftverk i tillegg, vil det visuelle inntrykket bli forsterket og man vil nå få turbiner på flere kanter. Fra synlighetssone 4 begrenses de negative virkningene noe grunnet avstand til tiltaket. Moifjellet og Mellomstrand vindkraftverk vil forsterke inntrykket av eksisterende vindkraftverk, og kunne oppleves som et sammenhengende og stort vindkraftverk med eksisterende vindkraft som ligger rundt. Fra synlighetssone 5 vil Moifjellet og Mellomstrand vindkraftverk stedvis kunne oppleves som at det fortetter eksisterende vindkraftverk, uten at det samlet sett vil få større utstrekning, og at disse ekstra lagene med nye turbiner i samme område ikke påvirker landskapet i like stor grad som fra andre synspunkter, hvor det vil kunne oppleves som en forlenget og forsterkende del av eksisterende vindkraftverk.

Når det kommer til det fysiske inngrepet og de visuelle virkningene med tanke på turbinene kommer alternativ 1 – Moifjellet og Mellomstrand vindkraftverk noe dårligere ut, da alternativet består av fire ekstra turbiner mot vest. Det er turbin MS 04 som kommer spesielt dårlig ut av disse fire ekstra turbinene da denne ligger lavere i terrenget og ned mot en annen type landskap (jordbrukslandskap) enn resten av turbinene. Det er spesielt delområdene tettest på vindkraftverket som får de største visuelle virkningene av de fire ekstra turbinene. Når man kommer noe mer på avstand og ser flere av turbinene samlet, oppleves de to alternativene mer like.

Når det gjelder de fysiske og visuelle virkningene for adkomstvei er det alternativ 2- Moifjellet (med adkomstvei fra Bjerkreim) som kommer dårligst ut, da denne er lenger og ligger dårligere i terrenget enn veiadkomsten til alternativ 1 (fra Time).

Totalt sett er det altså små forskjeller, men alternativ 1 – Moifjellet og Mellomstrand vindkraftverk er rangert noe over alternativ 2 – Moifjellet vindkraftverk grunnet at adkomstveien er kortere og ligger bedre i terrenget. Totalt sett blir konsekvensen for tema landskap på middels negativ konsekvens for begge alternativer.

Tabell 0-1: Oppsummering av konsekvenser per delområde og samlet konsekvensgrad.

Synlighetssone	Delområder	Alt. 0	Alternativ 1 – Moifjellet og Mellomstrand vindkraftverk	Alternativ 2 - Moifjellet vindkraftverk
Sone 1	Delområde KF-1-1	0	Alvorlig konsekvens (---)	Alvorlig konsekvens (---)
Sone 2	Delområde JD-2-1	0	Middels konsekvens (--)	Middels konsekvens (--)
	Delområde KF-2-1	0	Middels konsekvens (--)	Middels konsekvens (--)
Sone 3	Delområde IF-3-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JD-3-1	0	Middels konsekvens (--)	Middels konsekvens (--)
	Delområde K-3-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde KF-3-1	0	Middels konsekvens (--)	Middels konsekvens (--)

Synlighetssone	Delområder	Alt. 0	Alternativ 1 – Moifjellet og Mellomstrand vindkraftverk	Alternativ 2 - Moifjellet vindkraftverk
Sone 4	Delområde IF-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JD-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JS-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde K-4-1	0	Middels konsekvens (--)	Middels konsekvens (--)
	Delområde K-4-2	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde K-4-3	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde KF-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde VK-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
Sone 5	Delområde EKS-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde IF-5-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JD-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde JS-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde K-5-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde KF-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde LV-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde VK-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
Sone 6	Delområde IF-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde JD-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde JS-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde K-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde KF-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde KS-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde SIKS-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Samlet vurdering	Ubetydelig konsekvens	Middels negativ konsekvens	Middels negativ konsekvens
	Begrunnelse for samlet konsekvensgrad	Nullalternativet har per definisjon ingen konsekvens.	Innenfor influensområdet på 30 km har 6 delområder fått middels konsekvens, 10 har fått noe konsekvens og de resterende 14 har fått ubetydelig konsekvens. Det er delområdene tettes på tiltaket som har fått høyest konsekvensgrad, og det er også disse som vektlegges høyest i vurderingen av samlet konsekvensgrad. Samlet konsekvensgrad blir middels negativ konsekvens.	Innenfor influensområdet på 30 km har 6 delområder fått middels konsekvens, 10 har fått noe konsekvens og de resterende 14 har fått ubetydelig konsekvens. Det er delområdene tettes på tiltaket som har fått høyest konsekvensgrad, og det er også disse som vektlegges høyest i vurderingen av samlet konsekvensgrad. Samlet konsekvensgrad blir middels negativ konsekvens.
	Rangering	1	2	3

Synlighetssone	Delområder	Alt. 0	Alternativ 1 – Moifjellet og Mellomstrand vindkraftverk	Alternativ 2 - Moifjellet vindkraftverk
	Begrunnelse for rangering	Nullalternativet har per definisjon ingen konsekvens.	De største konsekvensene er knyttet til de fysiske påvirkningene av vindturbinene med tilhørende veier, samt de visuelle virkningene av vindturbinene, spesielt i delområdene tettest på- og i tiltaksområdet. Vindturbinene i dette alternativet påvirker området noe mer i negativ retning visuelt og fysisk enn alternativ 2, da det er 4 ekstra turbiner i vest. Disse kommer tett på høydedrag og turmål i nærområdet. Veiadkomsten til alternativ 1 fra Time er bedre enn veiadkomsten til alternativ 2 fra Bjerkreim, da denne er kortere, bedre tilpasset terrenget og med mindre inngrep.	De største konsekvensene er knyttet til de fysiske påvirkningene av vindturbinene med tilhørende veier, samt de visuelle virkningene av vindturbinene, spesielt i delområdene tettest på- og i tiltaksområdet. Veiadkomsten til alternativ 2 fra Bjerkreim er verre enn veiadkomsten til alternativ 1 fra Time, da denne er lengre, dårligere tilpasset terrenget og med større inngrep.

0.5 Midlertidige virkninger

Tema landskap omhandler de permanente virkningene for landskapet i driftsfasen for tiltaket. De midlertidige inngrepene i anleggsperioden vektlegges derfor ikke i denne utredningen.

I perioder vil utbyggingen gi inngrep som vil framstå som sår i landskapet og som vil ha betydelig nærvirkning for berørte områder. Omfanget av virkninger vil imidlertid variere gjennom byggeperioden.

0.6 Usikkerhet

Ved vurdering av konsekvenser for landskap knytter det seg alltid en viss usikkerhet til hvor vidt landskapsverdiene i området er godt nok fanget opp og vurdert korrekt. Verdiene er fastsatt på bakgrunn av innhentet data, 3D-modell, flyfoto, befaring i deler av influensområdet og bilder av området.

Påvirkningen er i hovedsak vurdert basert på teoretiske synlighetsanalyser, 3D-modell samt bilder over området og topografisk kart, og vurderes som relativt sikre.

I denne vurderingen vurderes kunnskapsgrunnlaget for landskap som godt med tanke på å kunne vurdere verdi, påvirkning og konsekvens av tiltaket.

0.7 Avbøtende tiltak

Det viktigste avbøtende tiltaket for tema landskap er å ikke ha større behov for avbøtende tiltak; altså å følge tiltakshierarkiets høyeste prioriteter «unngå skadevirkninger» og «begrense skadevirkninger». Det vil for tema landskap si at landskapsarkitekt må være med i hele prosessen ved planleggingen av vindkraftverket, fra plassering av turbiner, kraftledningsmaster og massetak til prosjektering av internveier, turbinoppstillingsplasser og adkomstveier. Eksempelvis er veiene som hovedregel lagt utenfor myr, vannforekomster og overgangssoner i høydelag.

Selv om det er stort fokus på tiltakshierarkiet i planleggingen av vindkraftverk vil det likevel som oftest være behov for noen generelle avbøtende tiltak for utbygging av vindkraftverk:

- Plassering av turbiner, massetak, turbinoppstillingsplasser og veier i landskapet må hele tiden vurderes videre i prosessen for å få til et best mulig resultat med minst mulig påvirkning på landskap og miljø, også på stedet under bygging.
- I anleggsfasen er det avgjørende å unngå terrengskade ved kjøring og transport. En detaljplan vil sikre at nødvendige miljø- og landskapshensyn i arbeidet blir ivaretatt, herunder blant annet sikring av vegetasjon i utbyggingsperioden og revegetering og istandsetting av berørte arealer i etterkant av utbyggingen.
- Eventuelle andre anlegg i tilknytning til vindkraftverket bør gjøres ut fra en vurdering av topografi, landskapskarakter og byggeskikk i området. Det bør etterstrebes lokal forankring i materialbruk og utforming av tilhørende anlegg.

Et spesifikt landskapsmessig avbøtende tiltak som kan foreslås for alternativ 1 - Moifjellet og Mellomstrand vindkraftverk er å ta bort turbin MS 04 inkl. tilkomstvei i sin helhet. Denne oppleves spesielt negativ visuelt og fysisk da den ligger et stykke unna de andre turbinene i vindkraftverket, i tillegg til at denne ligger ned mot Kartavatnet og påvirker et landskap som ligger noe lavere i terrenget og går noe over mot jordbrukslandskap.

Et annet viktig avbøtende tiltaket vil være behovsstyring av hinderlys, noe som vil kunne medføre en endring av betydning for tiltakets påvirkning og konsekvens i mørket.

En gjennomføring av de foreslåtte avbøtende tiltakene vil redusere den negative påvirkningen av tiltaket på landskapet, spesielt for de mest nærliggende delområdene (deler av JD-2-1, KF-2-1 og K-3-2), men dette vil ikke bli utslagsgivende for den totale konsekvensgraden for tema landskap (som er satt til middels negativ konsekvens).

1 Begrunnelse av tiltaket

1.1 Bakgrunn for tiltaket og tiltaksbeskrivelse

Norges vassdrags- og energidirektorat (NVE) forventer i sin langsiktige kraftmarkedsanalyse (LA25) en økning av kraftforbruket i Norge fram mot 2050 på 56 TWh eller ca. 42 %. Dette er noe lavere enn Norges vassdrags- og energidirektorat (NVE) forventet i LA23 (omtalt i tidligere KU for Moifjellet), som følge av usikkerhet om utviklingen i ny norsk industri. Det økte forbruket forventes dekt hovedsakelig av havvind og vindkraft på land, der sistnevnte forventes å vokse med om lag 17 TWh i Norge fram mot 2050.

Det ble i 2005 meldt oppstart for et «Moi-/Laksesvelafjellet vindkraftverk» med et planområde på 11,9 km^2. NVE ga konsesjon i 2009, i en felles behandling av sju vindkraftsøknader i samme region. Av de øvrige fikk tre konsesjon og tre fikk avslag. For Moi-/Laksesvelafjellet vindkraftverk reduserte NVE planområdet og maksimal installert effekt ift. konsesjonssøknaden, og ga vilkår om bl.a. for- og etterundersøkelser for hubro og trekkende rovfugl. Det var omsøkt inntil 180 MW for 57 vindturbiner, NVE reduserte til 150 MW, tilsvarende 47–48 vindturbiner.

NVEs konsesjonsvedtak i 2009 ble påklaget for alle de sju vindkraftverkene. I juli 2012, etter klagebehandling, valgte Olje- og energidepartementet (OED) å ikke gi konsesjon til Moi-/Laksesvelafjellet vindkraftverk.

Statkraft er Europas største leverandør av fornybar energi gjennom vannkraft, vindkraft og solkraft, og har en ambisjon om å bidra til en mer bærekraftig framtid ved å levere økt mengde fornybar energi. Statkraft mener at et Moifjellet og Mellomstrand vindkraftverk vil ha store fordeler sett fra et teknisk-økonomisk ståsted, og kan gi et samfunnsmessig viktig bidrag til å dekke opp noe av behovet for mer fornybar kraft i Norge og Europa. Samtidig vil flere forhold som trekkes fram i begrunnelsen for avslaget i 2012 fortsatt gjelde. Statkraft har på grunnlag av ny kunnskap siden 2012, og en ny konsekvensutredning, forsøkt å finne en oppdatert utbyggingsløsning der fordelene klart overstiger ulempene, slik at planmyndigheten stadfester en områderegulering og konsesjonsmyndigheten innvilger konsesjon.

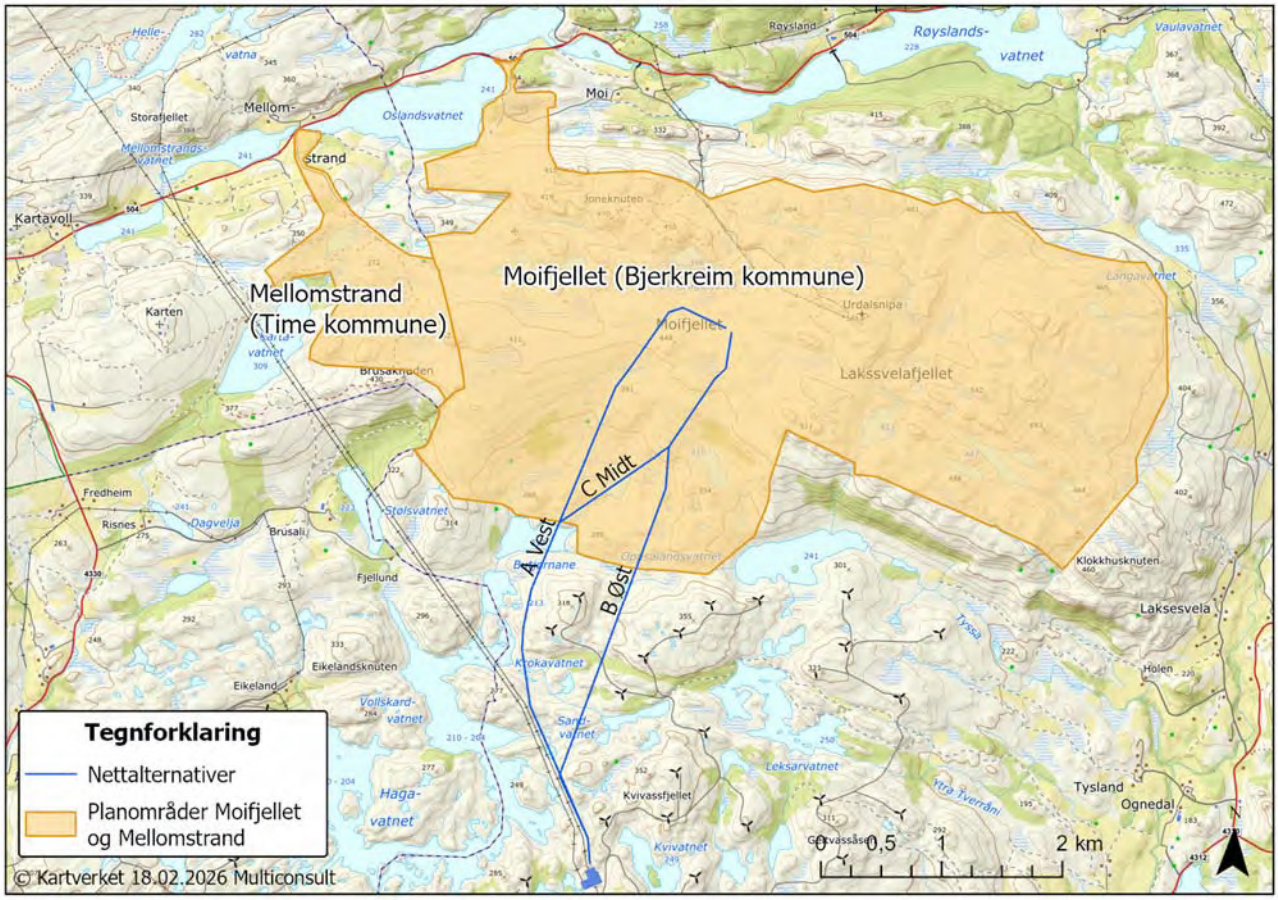
En positiv holdning fra kommuner og grunneiere står sentralt når Statkraft nå velger å søke på nytt om et vindkraftverk på Moifjellet og Mellomstrand.

1.2 Prosjektmål

Målet med prosjektet er å øke fornybar energiproduksjon i Norge samtidig som miljøkonsekvensene reduseres til et minimum.

1.3 Planområdene

De to tilliggende planområdene ligger i henholdsvis Bjerkreim kommune (Moifjellet) og i Time kommune (Mellomstrand), med hver sin prosess for områderegulering etter plan- og bygningsloven.



Figur 1-1. Planområder for Moifjellet og Mellomstrand vindkraftverk. Omsøkte alternativer for nettilknytning mot Bjerkreim transformatorstasjon i sør er vist til orientering.

1.4 Utredningskrav

Konsekvenser utredes i henhold til utredningsprogrammet fastsatt av NVE og planprogrammet fastsatt av Bjerkreim- og Time kommuner. I utredningsprogrammet/ planprogrammet er utredningskrav for fagtema landskap omtalt slik:

1.4.1 NVE – utredningsprogram for Moifjellet vindkraftverk:

Tiltakshaver skal:

- *Beskrive landskap og landskapsverdier i plan- og influensområdet og vise dette på kart. Beskrivelsene skal illustreres med fotografier.*
- *Vurdere tiltakets virkninger for landskap og landskapsverdier, herunder virkninger knyttet til skjæringer, fyllinger og massetak og viser eksempler på veier og oppstillingsplasser fra bygde vindkraftverk i tilsvarende terreng.*
- *Utarbeide teoretisk synlighetskart som viser vindkraftverkets synlighet inntil henholdsvis 30 kilometer fra planområdet.*
- *Beskrive og vurdere hvordan eventuelle lys- og solblink kan påvirke tredjepart.*
- *Utarbeide visualiseringer som gir et representativt inntrykk av tiltakets visuelle virkninger på nær avstand (opp til ca. 2-3 km) og midlere avstand (fra ca. 3-10 km). Fotostandpunktene og -retning skal vises på et oversiktskart. Visualiseringene skal illustrere selve tiltaket, herunder vindturbiner, transformatorer, internveier mm. og gi en god forståelse av de planlagte*

inngrepene. Tiltaket skal minimum visualiseres fra følgende steder:
– Vaule, Bjerkreim kommune
– Moi, Bjerkreim kommune
– Laksesvela, Bjerkreim kommune
– Osland, Bjerkreim kommune
– Bue, Bjerkreim kommune
– Røysland, Bjerkreim kommune
– Ognedal, Bjerkreim kommune
– Saglandsbakken, Bjerkreim kommune
– Vikesdalslia, Bjerkreim kommune
– Karten, Time kommune
– Brusaknuden, Time kommune
– Ulvarudlå, Time kommune
– Synesvarden, Time kommune
– Brusali, Hå Kommune
– Kydland/Søyland,Gjesdal kommune
– De tre KULA-områdene som ligger rundt planområdet

- *Beskrive og vurdere visuelle virkninger knyttet til lysmerkingen av vindturbinene.*

Metode:

Utredningen skal gjennomføres med anerkjent metodikk etter gjeldende veileder fra Miljødirektoratet og Riksantikvaren, og NVE veileder 1/2015 Veileder for vurdering av landskapsvirkninger ved utbygging av vindkraftverk. Klassifiseringen i NiN landskap skal brukes som referanse. Omfang av feltarbeid og faglig kvalifikasjonskrav for utreder skal beskrives.

Visualiseringene skal utføres som fotomontasjer og/eller 3D-visualisering. Utreder skal velge ut representative fotostandpunkt utover de som er spesifisert i dialog med samrådsgruppen, jf. Kapittel 0 punkt 2. Aktuelle fotostandpunkt kan være ved bebyggelse, ferdselsårer, friluftslivsområder, utkikkspunkt, turistattraksjoner og kulturmiljøer der tiltaket kan bli synlig.

Synlighetsmodellering for aktuelle layouter med spesifisering av synlighet på 1, 5, 10, 20 og 30 km avstand. Modelleringen skal gjøres utfra totalhøyde på turbinene (til vingetuppen) og i navhøyde (begrenset til turbiner med hinderbelysning).

Dersom det eksisterer relevante LIDAR-data for plan- og influensområdet, skal disse benyttes i utredningen.

Utredning for landskap skal koordineres med andre relevante temautredninger, som kulturminner og kulturmiljø, friluftsliv og reiseliv.

1.4.2 Bjerkreim kommune - planprogram:

- *Tiltakshaver skal kort redegjøre for metoder og datagrunnlag som er benyttet i utredningene. Kommunen forutsetter at tiltakshaver samordner fagutredninger som utfyller hverandre eller som må sees i sammenheng for å kunne belyse konsekvensene, eksempelvis landskap og friluftsliv.*
- *Når det stilles krav om visualisering skal dette utføres som 3D visualisering og modellering. Fotomontasjer bør unngås så langt det er mulig. Dersom fotomontasjer benyttes må disse gjengi tiltakets målestokk på en tilnærmet korrekt måte.*

- *Tiltakshaver skal beskrive og vurdere hvordan tiltaket vil påvirke landskap og landskapsverdier, og utarbeide visualiseringer som gir et representativt inntrykk av tiltakets visuelle virkninger, samt teoretiske synlighetskart for avstander ut til 30 km. Fotomontasjer godkjennes ikke som 3D-visualisering.*
- *Basert på forslag til utredningsprogram og de innkomne høringsuttalelsene, har NVE fastsatt i utredningsprogrammet at det skal som et minimum lages visualiseringer fra følgende steder:*
  1. Vaule, Bjerkreim kommune
  2. Moi, Bjerkreim kommune
  3. Laksesvela, Bjerkreim kommune
  4. Osland, Bjerkreim kommune
  5. Bue, Bjerkreim kommune
  6. Røysland, Bjerkreim kommune
  7. Ognedal, Bjerkreim kommune
  8. Karten, Time kommune
  9. Brusaknuden, Time kommune
  10. Ulvarudlå, Time kommune
  11. Synesvarden, Time kommune
  12. Brusali, Hå Kommune
  13. Kydland/Søyland,Gjesdal kommune
  14. De tre KULA-områdene som ligger rundt planområdet
  15. Saglandsbakken, Bjerkreim kommune
  16. Vikesdalslia, Bjerkreim kommune
- *Det stilles krav om minst to visualiseringer av eksempel på veg med korrekt bredde og tilhørende oppstillingsplass og turbin (vist med skråningsutslag).*

1.4.3 Time kommune - planprogram:

Forslagsstiller skal:

- *Gi en beskrivelse av landskap og landskapsverdier i plan- og influensområdet, og vise dette på kart.*
- *Vurdere tiltakets virkninger for landskap og landskapsverdier, herunder virkninger knyttet til skjæringer, fyllinger og masseuttak.*
- *Utarbeide et teoretisk synlighetskart som viser vindkraftverkets synlighet inntil 30 kilometer fra planområdet.*
- *Utarbeide visualiseringer som gir et representativt inntrykk av tiltakets visuelle virkninger på nær avstand (opp til ca. 2-3 km) og midlere avstand (fra ca. 3-5 km). Fotostandpunktene og -retning skal vises på et oversiktskart. Tiltaket skal minimum visualiseres fra følgende steder:*
  - *Mellomstrand*
  - *Ulvarudlå*
  - *Karten*
  - *Brusali*
  - *Brusaknuden*

- *KULA Høg-Jæren/ Synesvarden landskapsvernområde*

- *Beskrive og vurdere visuelle virkninger knyttet til lysmerkingen av vindturbinene.*

Metode:

Utredningen skal gjennomføres med anerkjent metodikk etter gjeldende KU-veileder fra Miljødirektoratet og Riksantikvaren, og NVE veileder 1/2015 Veileder for vurdering av landskapsvirkninger ved utbygging av vindkraftverk. Visuelle virkninger skal også vurderes for andre relevante temaer, som for eksempel kulturmiljø og friluftsliv.

Klassifiseringen i NiN landskap skal brukes som referanse.

Omfang av feltarbeid og faglig kvalifikasjonskrav for utreder skal beskrives.

Visualiseringene skal utføres som fotomontasjer og/eller 3D-visualisering. Fagutreder skal velge ut representative fotostandpunkt. Synlighetsmodellering for aktuelle layouter med spesifisering av synlighet på 1 og 5 km avstand. Modelleringen skal gjøres utfra totalhøyde på turbinene (til vingetuppen) og i navhøyde (begrenset til turbiner med hinderbelysning).

2 Metode

Formålet med konsekvensutredninger er å sikre at hensynet til miljø og samfunn blir synliggjort i utarbeidelse av planer og tiltak. Forskrift om konsekvensutredninger (KU-forskriften) (1) fastsetter krav til innhold i en konsekvensutredning.

I henhold til KU-forskriften § 17 skal utredninger følge anerkjent metodikk og utføres av personer med relevant faglig kompetanse. I dette kapittelet beskrives metodikken i fagrapporten og fagkompetansen som ligger til grunn.

2.1 Definisjoner, avgrensning og hjelpemidler

2.1.1 Definisjon av landskap

I Miljødirektoratets veileder M-1941 beskrives tema landskap slik:

Utredning av landskap handler om en helhetlig, romlig og visuell vurdering av alle aspektene et landskap består av, og sammenhengen mellom komponentene i dette landskapet, samt områdets eller tiltakets forhold til omgivelsene. Utredningen omfatter faktorer fra andre fagtema, men setter ikke verdi på for eksempel turstier eller bygninger. Slike forhold fra andre fagtema settes inn i en helhetlig analyse av landskapet.

2.1.2 Tiltaksområde

Tiltaksområdet omfatter alle områder som blir direkte påvirket av den planlagte utbyggingen med tilhørende aktiviteter. Det er her fotavtrykket til det planlagte tiltaket vil stå, og vil endre landskapets form og innhold fysisk.

2.1.3 Influensområde

Influensområdet omfatter tiltaksområdene og en sone rundt disse der det kan forventes fysiske og visuelle virkninger ved en eventuell utbygging. Denne sonen inkluderer både områder som får nær- og fjernvirkninger av utbyggingen, også utover tiltaksområdet. Størrelsen på influensområdet avhenger av synligheten av tiltaket, som igjen er avhengig av en rekke faktorer:

- Terrengformer og landskapsrom
- Standpunkt, avstand
- Lysforhold, årstider og vær
- Bakgrunn – kontrast eller silhuettvirkning
- Fargesetting
- Vegetasjon

Influensområdet for denne utredningen er satt til 30 km, som NVE i utredningsprogrammet for Moifjellet vindkraftverk har fastsatt som avstanden teoretisk synlighetskart skal utarbeides til.

2.1.4 Synlighet og synlighetssoner

NVE utarbeidet i 2007 veilederen «Visualisering av planlagte vindkraftverk» (2). Der skriver de litt om ulike avstander til vindturbinene, og har oppsummert noen generelle erfaringer rundt betydning av avstand til vindkraftverk. I denne veilederen er det vist en typisk dimensjon for vindturbin, som har

en totalhøyde på 130 meter, altså 70 meter lavere enn turbinene i Moifjellet vindkraftverk. De generelle vurderingene er her:

De nærmeste 3-400 meter: *«Man må løfte blikket for å fange hele synet av en vindturbin. Men så sant det ikke er tåke, har sikten lite betydning for opplevelsen av turbinene i nærsonen. Detaljeringer ved turbinenes utforming og farge kan oppfattes.»*

Vindkraftverkets nærområde, opptil ca.2-3 km: *«Her kan man tydelig oppfatte turbinenes store dimensjoner sammenlignet med de eksisterende landskapselementer. Turbinene kan være et dominerende element i landskapet.»*

Midlere avstand, fra ca. 2-3 km til ca. 10-12 km: *«Her vil siktforholdene spille en viktig rolle. Også her vil turbinenes utforming oppfattes, men detaljer sløres. Størrelsen på turbinene oppfattes ikke alltid klart, fordi det er vanskelig å vurdere avstanden til dem. Terrengform og vegetasjon vil påvirke det visuelle inntrykket, og mange steder skjule turbinene helt eller delvis. Men erfaring fra Hitra og Smøla viser at vindturbinene oppfattes som tydelige landskapselementer og setter sitt preg på opplevelsen av landskapet på om lag 10-12 kilometers avstand, selv der terrengform og vegetasjon bidrar til å dempe det visuelle inntrykket.»* Som referanse har vindturbinene på Hitra en totalhøyde på 112 meter (Hitra 1 vindpark fra 2004), og på Smøla er totalhøyden på 108 meter, som er henholdsvis 88 og 92 meter lavere enn vindturbinene på Moifjellet.

Lang avstand, over ca. 10-12 km: *«Turbinenes synlighet er helt avhengig av værforholdene. Det er særlig når det er store fargekontraster at vindturbinene kan være godt synlig på avstander over 15-20 kilometer. Grått vær vil ofte føre til at turbinene forsvinner mot himmelen, mens sikten i klarvær ofte vil sløres av dis. På lange avstander vil jordkrummingen påvirke synligheten.»* (2)

Hvordan man oppfatter et vindkraftverk avhenger av ulike faktorer som er vist i tabellen under. Disse faktorene spiller inn når det videre skal fastsettes hvilken påvirkning utbyggingen av vindkraftverk vil ha på landskapskarakteren.

Tabell 2-1 Hvordan vindkraftverket oppfattes er avhengig av blant annet disse faktorene.

Mennesket	- Ulike interesser og brukere knyttet til landskap - Ulik opplevelse av tiltaket, innstilling til vindkraft og vindturbinenes visuelle uttrykk
Vindkraftverket	- Vindturbinenes konstruksjon, form, proporsjoner, farge, størrelse og høyde - Størrelse vindkraftverk, antall vindturbiner og innbyrdes avstand - Oppstilling, geometrisk mønster, komposisjon, visuell forankring - Bevegelse, samvirkning, lyssetting, skyggekast, refleks
Landskapet	- Avstand, høyde over havet - Standpunkt, del av synsfelt, bakgrunn, forgrunn - Vær, sikt, lysforhold - Kumulativ effekt andre vindkraftverk, attraksjon, landskapsbildets helhet

På NVEs nettside, i deres digitale veileder «Identifisering av utredningsområder for havvind» (3), er det listet opp ulike synlighetsnivåer som er brukt i studier. Det er seks ulike nivåer og disse er:

- «***Synlighetsnivå 1:*** *Objektet er synlig etter lengre, nøye kikking.*
- ***Synlighetsnivå 2:*** *Objektet er synlig idet betrakteren ser i den generelle retningen til objektet, ellers sannsynlig at objektet ikke blir observert.*

- ***Synlighetsnivå 3:*** *Objektet er synlig etter et kort blikk i riktig retning og det er usannsynlig at det ikke blir observert.*
- ***Synlighetsnivå 4:*** *Objektet er tydelig synlig, men det tiltrekker seg ikke sterk visuell oppmerksomhet og dominerer heller ikke utsikten.*
- ***Synlighetsnivå 5:*** *Objektet tiltrekker seg den visuelle oppmerksomheten for betraktere som ser i riktig retning. Oppmerksomhet trekkes av objektets sterke kontrast fra landskapet i form, linje, farge, tekstur, lys eller bevegelse.*
- ***Synlighetsnivå 6:*** *Objektet dominerer utsikten fordi det tar opp det meste av den visuelle rekkevidden. Sterke kontraster med landskapet i form, linje, farge, tekstur, lys, eller bevegelse kan bidra til den visuelle dominansen av objektet.»* (3).

I den ene studien opplyser NVE om at det ble konkludert med at *«(…) vindkraftverk til havs var lett synlige ved ulike vær- og siktforhold ved avstander under 35 kilometer. Ved avstander under 14 kilometer ville vindkraftverk være dominerende elementer. Ved avstander over 35 kilometer ble synlighetsnivå av et vindkraftverk målt til nivå 2 og 1 i skala for synlighetsnivå»* (3). Som nevnt i tabell 2-1 har vindkraft på land litt andre momenter som påvirker synligheten enn vindkraft til havs, så synlighetsnivåene vil variere noe grunnet disse.

I 2017 skrev Norconsult en rapport på visuelle virkninger av vindkraftverk på oppdrag fra NVE (4). Der nevner de to grenser for visuell dominans av vindturbiner som er definert i rapporten *«Vindkraften i landskapet. Del 2. Visuelle frågor i samband med storskalig vindkraftutbyggnad»*, utarbeidet av Bergsjö, A. e. i 1980. Avstanden for visuell totaldominans er her satt til 3 ganger høyden på objektet. De har også definert en ytre visuell dominanssone: *«(…) ut til dit turbinen ikke lenger er alene om å dominere det visuelle inntrykket, men hvor de øvrige omgivelsene også spiller inn»* (4). Denne sonen er satt til 8-10 ganger høyden på objektet.

I utredningsprogrammet for Moifjellet vindkraftverk skriver NVE at de ønsker synlighetsmodellering med spesifisering av synlighet på 1, 5, 10, 20 og 30 km. De skriver også at visualiseringene som skal utarbeides ifm. utredningen skal vise visuelle virkninger nær avstand (som er opp til ca.2-3 km – lik vurderingen i veilederen fra 2007) og midlere avstand (som er fra ca.3-10 km – også lik vurderingen i veilederen fra 2007). For å finne soner for synlighet tilpasset denne utredingen kobler vi grensene som er fastsatt av NVE i utredningsprogrammet opp mot funnene nevnt i de tre NVE-publikasjonene. «Nær avstand» vil dekke både «visuell totaldominans» og «ytre visuell dominanssone» i Norconsult-rapporten. «Midlere avstand» nevnt i utredningsprogrammet går som sagt ut til 10 km, og synlighetsnivået NVE ønsker markert på 5 km er da også innenfor det som kalles «midlere avstand». Sonen fra 2-5 km blir kalt «midlere avstand nivå 1». I havvindrapporten nevnes det at 14 km er grensen for hvor vindkraftverket ville være dominerende elementer. Derfor settes det en sone som går fra 5 km til 14 km i denne rapporten, og sonen kalles «midlere avstand nivå 2». Synlighetssonen mellom 14 og 20 km er utenfor grensen hvor vindkraftverket basert på rapportene det er henvist til vil oppleves som dominerende elementer. Sonen kalles «lang avstand». I havvindrapporten kom de fram til at avstander på under 35 km var lett synlige ved ulike vær- og siktforhold, og at avstander over 35 km går inn under synlighetsnivå 1-2. I denne rapporten går grensen på 30 km, og synlighetssonen mellom 20 og 30 km kalles «fjern avstand».

Inndeling i nivåer av visuell synlighet (heretter kalt synlighetssoner) blir i denne rapporten satt til:

- Synlighetssone 1: Inntil 600 meter – visuell totaldominans – nær avstand nivå 1
- Synlighetssone 2: 600 meter - 2 km (2000 meter) - ytre visuell dominanssone – nær avstand nivå 2

- Synlighetssone 3: 2-5 km - midlere avstand nivå 1
- Synlighetssone 4: 5-14 km - midlere avstand nivå 2
- Synlighetssone 5: 14-20 km - lang avstand
- Synlighetssone 6: 20-30 km - fjern avstand

Disse sonene vil bli brukt i påvirkningsdelen av KU-en, for å vurdere synligheten og påvirkningen av tiltaket i de ulike delområdene innenfor de ulike sonene, og videre til å vurdere konsekvensgraden de ulike delområdene innenfor de ulike sonene får. I tillegg er 10 km markert med stiplet linje for å spesifisere hvor denne grensen går, etter ønske fra NVE.

Se de ulike synlighetssonene og delområdene for utredningen på kartet i figur 5-29.

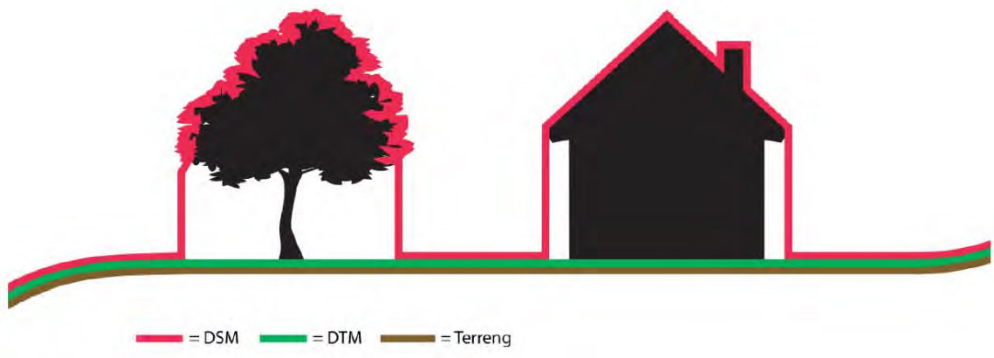
2.1.5 Teoretisk synlighetsanalyse

Det er utarbeidet teoretiske synlighetsanalyser for vindturbiner på Moifjellet iht. turbinutlegg A03 med totalhøyde på 200 meter og for Mellomstrands 4 turbiner med en totalhøyde på 200 meter. Det er også utarbeidet teoretiske synlighetsanalyser for eksisterende vindturbiner i omkringliggende vindkraftverk innenfor influensområdet på 30 km. Synlighetsanalysene er basert på DTM-data (terrengmodell). Det vil si at de ikke fjerner ev. lokal skjerming fra eksisterende vegetasjon og bebyggelse. Dette er en noe mer konservativ beregning av visuell synlighet av tiltakene enn et synlighetskart basert på DOM-data (overflatemodell), hvor vegetasjon og bygninger i modellen vil skjerme for synligheten omtrent slik som det vil gjøre i virkeligheten. Ved bruk av DOM kan områder med skog vise synlighet som egentlig er fra toppen av trærne der ingen (normalt) oppholder seg, og vegetasjon vil også blokkere synligheten fullstendig selv om man i realiteten vil kunne se noe gjennom den.

Øyehøyde i de teoretiske synlighetsanalysene er satt til 180 cm over terreng. Antallet synlige turbiner vil avhenge av terreng og om man ser oppover eller nedover mot tiltaket.

Merk at antall turbiner synlige fra et punkt ikke betyr at man ser 100% av disse turbinene, da det er turbinenes høyeste punkt som er lagt inn i analysen (totalhøyden på turbinene).

Når det gjelder avgrensning av synlighet per turbin er denne satt til 30 km (influensområdet), selv om turbinen i prinsippet *kan* være synlig utenfor denne sonen. Dette gjelder også for de eksisterende turbinene som ligger innenfor influenssonen på 30 km, her er avgrensningen av synligheten av disse beregnet ut til 30 km fra hver enkelt, men deretter begrenset til Moifjellet og Mellomstrands influensområde på 30 km.



Figur 2-1: Illustrasjonen viser forskjellen mellom overflatemodell (DOM (her DSM)) og terrengmodell (DTM), og hvordan de ulike scanningene oppfatter de ulike elementene (5).

2.1.6 Fotorealistiske visualiseringer

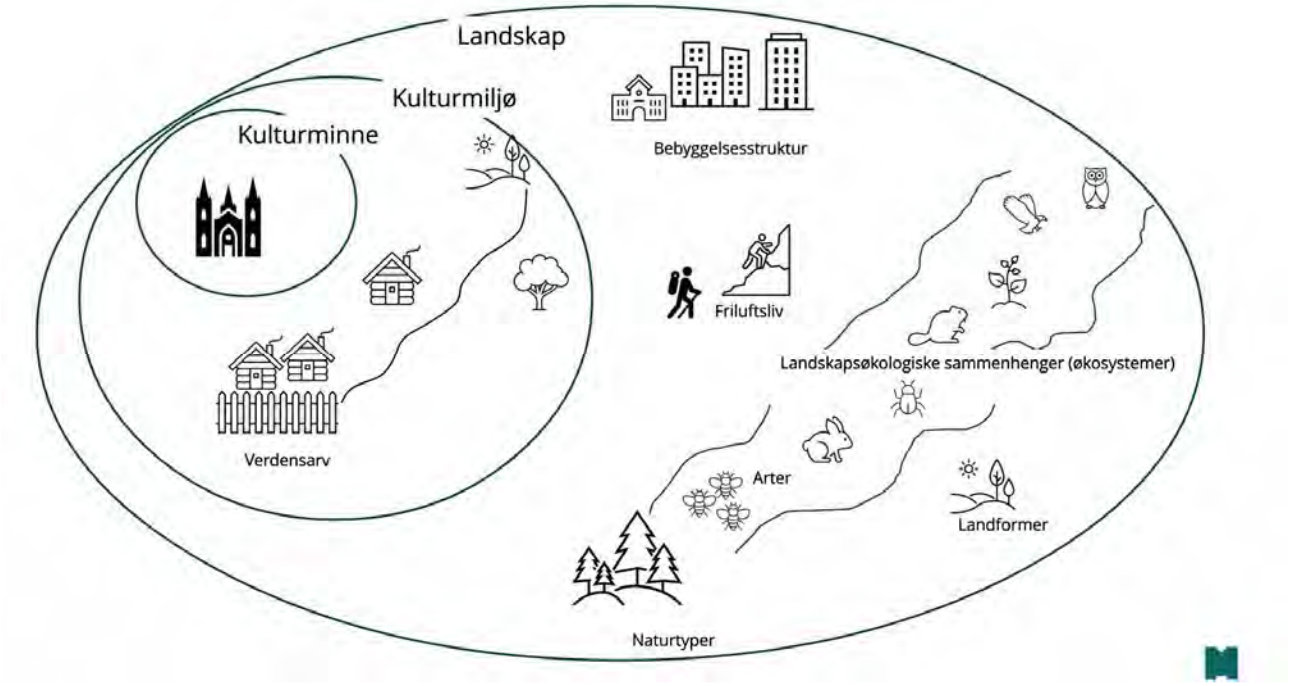
For en mest mulig realistisk framstilling av de visuelle virkningene av et vindkraftverk er det viktig å benytte egnende verktøy og metoder som kan benyttes for å fremstille visualiseringene så virkelighetstro som mulig. I denne konsekvensvurderingen er NVEs veileder «*Visualisering av planlagte vindkraftverk»* og dataprogrammet WindPro benyttet for utarbeidelse av de fotorealistiske visualiseringene. Visualiseringene er basert på bilder tatt med et 50 mm normalobjektiv (tilsvarende 35 mm film) for å gi et mest mulig realistisk og representativt bilde av vindkraftverket og av karakteristiske trekk ved landskapet. Bildesensoren i mange digitale kamera er mindre en formatet på en 35 mm film. Bildeutsnittet som dekkes av et digitalt kamera med en bestemt brennvidde på objektivet er derfor mindre enn for et filmbasert kamera. Ved å multiplisere brennvidden på det digitale kameraet som benyttes til fotografering med en viss faktor (for eksempel 1,6) kan brennvidden oversettes til 35 mm filmformat. Enkelte av visualiseringene er satt sammen til et panoramabilde der hvert bilde er fotografert med lik eksponering og med omtrent en tredjedel overlapp mellom hvert bilde. Visualiseringer i panoramaformat er ofte nødvendige for å gi en framstilling av utbredelsen av vindkraftverket og forholdet til landskapet omkring. Dimensjonene på turbintypen som benyttes i visualiseringene samsvarer med omsøkte utbyggingsløsning. Det er også utarbeidet fotorealistiske visualiseringer som viser eksempelveier og hvordan disse kan tilpasses terrenget.

2.1.7 Avgrensning mot andre fagtema

I en konsekvensutredning skal konsekvenser telles kun én gang. Det er viktig at det kun er romlige og visuelle egenskaper i landskapet som verdsettes innenfor fagtema landskap. Verdier som er verdsatt i andre fagutredninger skal ikke verdsettes i landskapsutredningen. Dette for å unngå dobbelttelling av verdier, som er viktig å unngå.

De fagtemaene som grenser tettest inn mot landskap som fagtema er:

- Kulturmiljø
- Verdensarv
- Friluftsliv
- Naturmangfold



Figur 2-2: Illustrasjon for å vise sammenhengen mellom de ulike tilgrensende fagtema underbygger landskapet som en større helhet. Hentet fra veileder M-1941 (6)

Kulturmiljø

Under utredningstema kulturarv skal landskapets kulturhistoriske betydning vurderes.

I landskapsutredningen vil kulturmiljøer inngå i vurdering av forhold i landskapet som sammen med andre faktorer danner grunnlag for å sette landskapskarakter. Verdsetting skjer ved å sette de forhold fagtemaet omfatter inn i en helhet, og vurdere de *visuelle* aspektene ved områdene/registrereringene som tilhører kulturmiljø. Se oversikt over de visuelle forholdene ved landskapet som inngår i fagtema Landskap i tabell 2-3.

Friluftsliv

Under tema friluftsliv vurderes områders betydning for friluftsliv ut fra verdiriterier knyttet til brukerfrekvens, regionale/nasjonale brukere, opplevelseskvalitet, symbolverdi, funksjon, egnethet og tilrettelegging.

Friluftslivsområder i landskapsutredningen vil inngå i vurdering av forhold i landskapet som sammen med andre faktorer danner grunnlag for å sette landskapskarakter. Verdsetting skjer ved å sette de forhold fagtemaet omfatter inn i en helhet, og vurdere de *visuelle* aspektene ved områdene/registreringene som tilhører friluftsliv. Se oversikt over de visuelle forholdene ved landskapet som inngår i fagtema Landskap i tabell 2-3.

Naturmangfold

I fagutredningen for naturmangfold settes det verdi på naturvernområder, arter, naturtyper, landskapsøkologiske sammenhenger eller geologiske forekomster (geotoper).

Områder med naturmangfold i landskapsutredningen vil inngå i vurdering av forhold i landskapet som sammen med andre faktorer danner grunnlag for å sette landskapskarakter. Verdsetting skjer ved å sette de forhold fagtemaet omfatter inn i en helhet, og vurdere de *visuelle* aspektene ved

fremtoningen av naturmangfold i landskapet. Se oversikt over de visuelle forholdene ved landskapet som inngår i fagtema Landskap i tabell 2-3.

Verdensarv

Områder som står på UNESCOS liste over verdensarv, skal utredes etter internasjonalt regelverk. Områder eller elementer fra UNESCO- listen over verdens kultur- og naturarv som inngår i område for landskapsutredning skal omtales i utredningen, men ut over dette inngå i vurdering av forhold i landskapet som sammen med andre faktorer danner grunnlag for å sette landskapskarakter

2.2 Inndeling i delområdetyper og delområder

Influensområdet deles inn i **delområdetyper og delområder**, basert på eksisterende og innhentet kunnskap om landskapet i området. Størrelse og innhold for delområdene er tilpasset det detaljeringsnivået som anses hensiktsmessig i den enkelte sak. En hovedregel etter M-1941 er at delområdene skal være mest mulig enhetlige (ha tilnærmet lik funksjon, karakter og visuell fremtoning). Delområder med utgangspunkt i landskapstyper i NiN-landskap og NIJOS kan justeres og deles inn i mindre delområder. Det er også anledning til å slå sammen flere delområder til ett delområde. Avgrensning av delområder bør i tillegg justeres i forhold til romlige forhold og landskapets skala eller arealbruk, som typisk kommer frem ved befaring. Trinn 1 i konsekvensutredningen innebærer inndeling i delområder (her delområdetyper), og vurdering av verdi, påvirkning og konsekvens for hvert delområde (kap.5). For hver delområdetype gjennomgås ulike karakteristika ved landskapet, som vist i tabell 2-2.

Følgende forhold ved landskapet inngår som grunnlag for inndeling i delområdetyper og beskrivelse av landskapskarakter, og vises i tabell 2-2.

- Geologi, landformer og vannforekomster
- Romlige forhold og skala
- Distinkte naturelementer
- Natursammenhenger
- Vegetasjonsdekke og vegetasjonsbruk
- Aktive naturprosesser
- Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk
- Arealbruk
- Bebyggelsespreg
- Historie og stedsidentitet

Tabell 2-2: Oversikt over forhold ved landskapet som kan brukes for å beskrive fremtoning, helhet og sammenheng i landskapet (6). Denne brukes og fylles ut i konsekvensutredningen senere i rapporten.

Forhold ved landskapet	Beskrivelse	Forhold som er viktigst for landskapskarakteren
Geologi, landformer og vannforekomster	Landskapets hovedformer og småformer (topografi). Hav, kystlinjer, vann og vassdrag.	
Romlige forhold og skala	Landskapsrom, landskapets dimensjoner og skala	

Distinkte naturelementer	Framtredende landformer og landskapselementer. F.eks geologiske formasjoner, orienteringspunkter, enkeltstående særpregede trær, spesielle elvedrag mm.	
Natursammenhenger	Natursammenhenger, f.eks. større naturpregede områder, blå-grønne strukturer i naturområder eller i bebygde områder og mot tilgrensende områder	
Vegetasjonsdekke og vegetasjonsbruk	Mosaikk, mønstre og variasjon i vegetasjonen. Form- og strukturdannende vegetasjon. Vegetasjon med kulturelle eller historiske referanser	
Aktive naturprosesser	F.eks. ras og skredaktivitet, endringer som følge av vann- og isbevegelser i landskapet. Vegetasjonsutvikling, naturlige suksesjoner.	
Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Pågående rurale aktiviteter som preger landskapet; oppdyrking, tilplanting, rydding av nye beiter, etablering av samdrifter, havbruksanlegg osv. Skjøtsels- og driftsformer.	
Arealbruk	Differensiering av bolig, næring, transformasjonsområder, parkområder, andre oppholdsarealer, omfang av infrastruktur som veg og gate. Brudd og overganger mellom de ulike områdene.	
Bebyggelsespreg	Områdekarakter, gatestruktur, dimensjoner og variasjoner på bebyggelse, silhuettlinjer, bygde landemerker/landskapselementer, tekniske installasjoner og fremtredende bygninger.	
Historie og stedsidentitet	Synlige kulturminner, kulturmiljø, tradisjonelle kulturlandskap, møteplasser osv. Historiske aktiviteter og bruk som har satt spor i landskapet gjennom tidene, som fjernet/nedfalls bebyggelse, og spor av ferdsel og opphold. Endret, fjernet, og/eller rester av fjernede naturelement, f.eks. gamle elvefar. Allment kjente kulturelle referanser lokalt og/eller nasjonalt. Litteratur, billedkunst, historiske hendelser, osv.	
Landskapskarakter		

2.3 Verdisetting av delområder

Verdi for hvert delområde er vurdert etter åtte verdikriterier med tilhørende verdiskala (se tabell 2-3).

Tabell 2-3:Verditabell for landskap iht. M-1941 (6).

Verdikriterier	**Uten betydning for KU**	**Noe verdi**	**Middels verdi**	**Stor verdi**	**Svært stor verdi**
Inngrepsgrad	Områder uten innslag av natur.	Naturpreget, men med overvekt av menneskelig aktivitet, bebyggelse og infrastruktur.	Noe inngrep. Sammenhengende naturområde i lokal skala. Naturpreget med spredt bebyggelse og infrastruktur.	Få inngrep. Stort sammenhengende naturlandskap i regional skala. Naturlandskap hvor det f.eks. er enkelte bygninger og kraftledninger.	Uten inngrep. Stort sammenhengende naturlandskap i nasjonal skala. Landskap som ikke, eller i svært liten grad, er preget av menneskelig aktivitet, bebyggelse og infrastruktur.
Naturvariasjon	Naturlandskap uten variasjoner.	Naturlandskap med lite variasjon.	Naturlandskap med noe naturvariasjon og flere landskapstyper.	Naturlandskap med stor naturvariasjon over korte avstander og med	Naturlandskap med svært stor naturvariasjon over korte avstander og

Verdikriterier	Uten betydning for KU	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
				høyt antall landskapstyper.	med høyt antall landskapstyper.
Distinkte elementer	Landskap uten distinkte landskapselementer.	Landskapstype eller landskapselement som er synlig, men uten spesiell betydning for landskapet.	Landskapstype eller landskapselement som har stor betydning for landskapskarakteren.	Karakteristisk landskapstype eller landskapselement som setter tydelig preg på landskapet.	Karakteristisk landskapstype eller landskapselement som definerer landskapet.
Mangfold	Landskap uten variasjon av natur- og kulturverdier.	Landskap med variasjon med innhold av en eller få elementer fra natur, friluftsliv, kultur og landbruk.	Landskap som er mangfoldig og har et tydelig preg av flere elementer fra natur, friluftsliv, kultur og landbruk.	Landskap som er svært mangfoldig med et markant preg av elementer fra både natur, friluftsliv, kultur og landbruk.	Landskap som er svært mangfoldig med et og unikt markant preg, av elementer fra både natur, friluftsliv, kultur og landbruk.
Særpreg	Vanlig forekommende landskap uten særpreg.	Vanlig forekommende landskap med noe særpreg.	Særpregede landskap med flere innslag av eksempelvis inngrep, arealbruk, bebyggelse og elementer som forstyrrer særpreget.	Særpregede landskap med få, ikke dominerende, negative brudd og/eller kontraster.	Unike og intakte særpregede landskap.
Sammenhenger	Landskap uten kjente sammenhenger mellom elementer eller historiske spor.	Landskap med sammenhenger mellom elementer eller historiske spor som er viktige kun i lokal sammenheng.	Landskap med sammenhenger mellom elementer eller historiske spor som er viktige i regional sammenheng.	Landskap med sammenhenger mellom elementer eller historiske spor som er viktige i regional sammenheng.	Landskap med tydelige sammenhenger mellom elementer eller historiske spor som er viktige i internasjonal eller nasjonal sammenheng.
Tilhørighet/ identitet	Områder som det ikke er knyttet spesiell tilhørighet til.	Områder med betydning for en bydel eller mindre gruppe, «hverdags-landskapet».	Områder med lokal betydning, «hverdags-landskapet».	Områder med regional betydning.	Områder med internasjonal/ nasjonal betydning.
Visuell karakter	Landskapet domineres av tilfeldighet, fragmentering, monotomi og/eller uoversiktlighet.	Landskapet er ubalansert, til dels uoversiktlig, mindre strukturert, og har svake sammenhenger i utforming.	Landskapet fremstår balansert, lesbart, oversiktlig og strukturert.	Landskapet preges av bevisst formgivning, farge- og materialbruk, lesbare sammenhenger og godt totalinntrykk.	Landskapet preges av bevisst og gjennomført formgivning, farge- og materialbruk, god lesbarhet, logiske sammenhenger, og har et unikt visuelt totalinntrykk.

I tillegg skal noen områder og landskap alltid ha *svært stor verdi* og *stor verdi* (se tabell 2-4).

Tabell 2-4: Delområder som inneholder hele eller deler av følgende områder skal ha denne verdien (6).

Verdikriterier	Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
Landskapsvernområder og nasjonalparker					Alltid svært stor verdi
Kulturmiljøer og landskap av nasjonal interesse (tidligere KULA)				Alltid stor verdi	
Utvalgte kulturlandskap i jordbruket				Alltid stor verdi	
Verdifulle kulturlandskap				Alltid stor verdi	

Alle delområder er verdisatt og fremstilt i verdikart med tilsvarende fargekoder, se kapittel 5. En utdyping og forklaring av verdiskalene er vist i tabell 2-5.

Tabell 2-5:Verdiskala med forklaring på verdisettingen i verditabellen iht. M-1941 (6).

Verdiskala	Forklaring
Svært stor verdi	Landskap av internasjonal eller nasjonal betydning.
Stor verdi	Landskap av nasjonal betydning, eller betydning over gjennomsnittet i regional sammenheng.
Middels verdi	Landskap av regional betydning og/eller betydning over gjennomsnittet i lokal sammenheng.
Noe verdi	Vanlig forekommende landskap. Landskap av lokal betydning.
Uten betydning	Landskap uten, eller med få, visuelle verdier, og liten betydning både i regional og lokal sammenheng.

2.4 Vurdering av påvirkning for delområder

Påvirkning for hvert delområde er vurdert etter hvordan planen/tiltaket påvirker landskapskarakteren og/eller de verdiene som var utslagsgivende for verdsettingen av landskapet i delområdet.

Påvirkning er vurdert for fem påvirkningsfaktorer, og er gradert etter en femdelt skala fra *forbedret* til *sterkt forringet* (tabell 2-6).

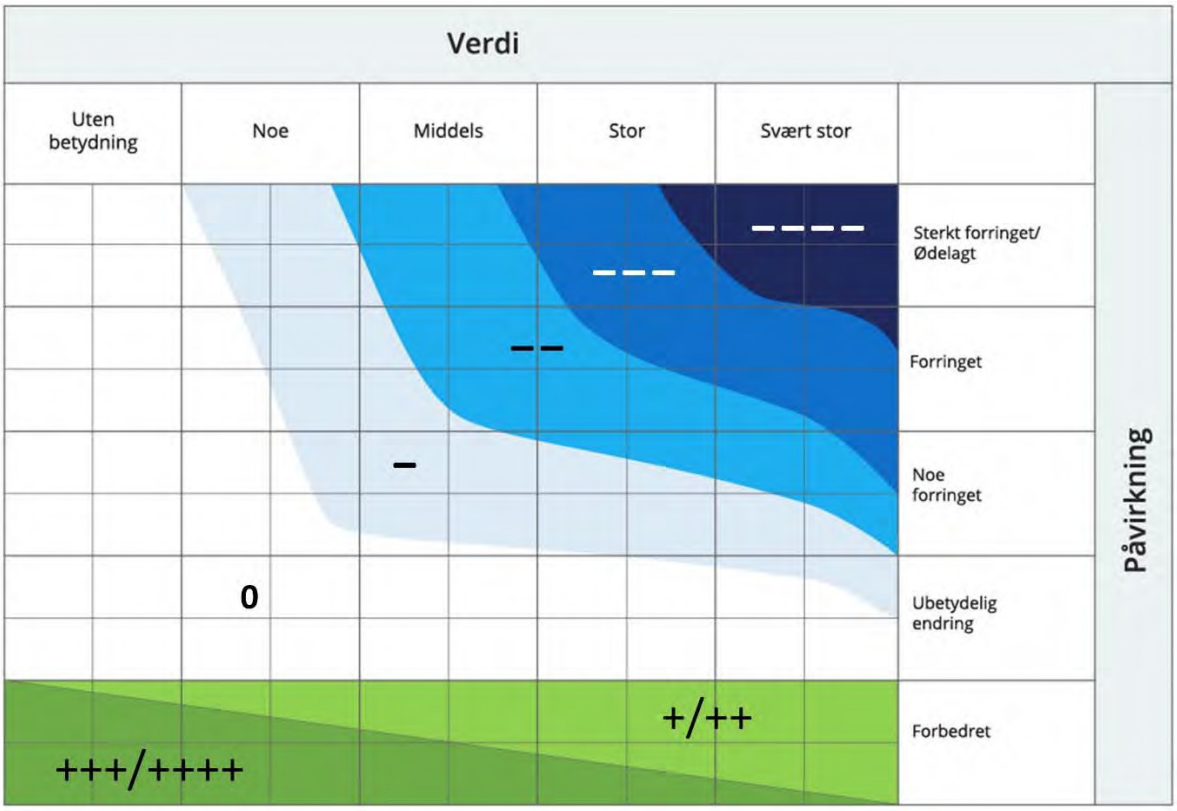
Tabell 2-6: Påvirkningstabell for landskap iht. M-1941. Tabellen viser kriterier for å vurdere påvirkning på landskapet. For hver påvirkningsgrad er det tilstrekkelig at ett punkt oppfylles (6)

Påvirknings-faktorer	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Synlighet	Tiltaket er istandsatt slik at det faller naturlig inn i landskapsbildet. Tiltaket fremhever landskapskvaliteter innen planområdet og/eller i omgivel-sene. Tiltaket har blitt et positivt blikkfang. Tiltaket medfører istandsetting av ødelagt/sterkt forringet landskap.	Tiltaket har samme fremtoning i landskapsbildet som før inngrepet.	Tiltaket medfører noe økt synlighet i brudd med tiltakets nære omgivelser. Tiltakets fjernvirkning er liten eller ikke påvirket.	Tiltaket medfører vesentlig økt synlighet i landskapet i nære omgivelser. Tiltakets fjernvirkning er negativ i noen grad i form av skjemmende inngrep og/eller bygde elementer.	Både tiltakets nær- og fjernvirkning er negativ, og skjemmer landskapet visuelt i stor grad i form av skjemmende inngrep og/eller bygde elementer.

Fragmentering	Tiltaket skaper nye eller bygger opp ødelagte landskaps-sammenhenger, og/eller fremhever kvaliteter knyttet til helhet, struktur og lesbarhet.	Tiltaket medfører ikke endringer i landskaps-sammenhenger eller kvaliteter knyttet til helhet, struktur eller lesbarhet.	Tiltaket bryter delvis med landskaps-sammenhenger. Tiltaket medfører noe forringelse av kvaliteter knyttet til helhet og struktur, og har dårlig lesbarhet.	Tiltaket bryter landskaps-sammenhenger. Tiltaket skaper et uryddig og uoversiktlig landskap i utrednings-området.	Tiltaket bryter viktige landskaps-sammenhenger innad og ut over utrednings-området. Tiltaket skaper et uryddig og uoversiktlig landskap uten struktur.
Skala	Tiltaket har en god tilpasning til skalaen i landskapet, eller framhever denne.	Tiltaket er tilpasset skalaen i landskapet, eller er underordnet denne.	Tiltaket dominerer noe over landskap-ets skala, og/eller er ikke tilpasset landskapets skala.	Tiltaket dominerer i stor grad, og/eller er i brudd, over landskapets skala.	Tiltaket dominerer over landskapets skala og/eller er i vesentlig brudd med landskapets skala.
Formgivning	Tiltaket tilfører verdi til et monotont eller forringet landskap. Tiltaket er forankret i landskapet ved hjelp av formgiv-ning, farge- og materialbruk, og har et balansert uttrykk.	Tiltaket har samme formspråk som førsituasjonen.	Tiltaket gir et ubalansert inntrykk. Tiltaket har tilfeldig formgivning og materialbruk. Tiltaket bidrar til et monotont eller uryddig inntrykk.	Tiltaket mangler bevisst formgivning, farge og/eller materialbruk. Tiltaket bidrar til et monotont eller kaotisk uttrykk.	Tiltaket mangler forankring i landskapet, og formgivning, farge og/eller materialbruk er uheldig. Tiltaket gir et monotont eller kaotisk uttrykk.
Tilhørighet/ identitet	Tiltaket ivaretar og/eller forsterker tilhørighet/identitet i området. ' Tiltaket har gitt nytt og positivt innhold i et ubetydelig eller negativt ladet sted.	Tiltaket medfører ingen endring av tilhørighet, identitet eller brukeropp-levelse, gjenskapt eller kompensert.	Tiltaket fører til at tilhørighet, identitet eller brukeropp-levelse er noe brutt eller forstyrret.	Tiltaket fører til at tilhørighet, identitet eller brukeropp-levelse er brutt eller forstyrret i en slik grad at dagens referanser ikke er gjenkjennbare. Tiltaket fremstår uten sammenheng med historisk og/ eller følelsesmessig tilhørighet og identitet.	Tiltaket har ødelagt tilhørighet, identitet eller brukeropp-levelse. Tiltaket oppleves som fremmed i landskapet.

2.5 Vurdering av konsekvensgrad for delområder

Konsekvensgrad for delområdene fremkommer ved å sammenstille verdivurderingen med vurderingen av tiltakets påvirkning i en konsekvensvifte (figur 2-3). Konsekvensen for hvert delområde er gradert fra *stor/svært stor positiv konsekvens* (+++/++++) til *svært stor negativ konsekvens* (----) (tabell 2-7). Konsekvensgrad for delområdene tas med videre i vurdering av konsekvens av alternativer.



Figur 2-3: Konsekvensvifte iht. M-1941 (6)

Tabell 2-7: Skala og veiledning for konsekvenssetting i delområder iht. M-1941 (6).

Skala	Forklaring
Svært stor konsekvens **----**	Den mest alvorlige konsekvensgraden som kan oppnås for delområdet. Brukes kun for delområder med stor eller svært stor verdi.
Stor konsekvens **---**	Alvorlig konsekvensgrad for delområdet.
Middels konsekvens **--**	Middels konsekvensgrad for delområdet.
Noe konsekvens **-**	Noe konsekvensgrad for delområdet.
Ubetydelig konsekvens **0**	Ingen eller ubetydelig konsekvensgrad for delområdet.
Noe/betydelig positiv konsekvens **+/++**	Forbedring (+) eller betydelig forbedring (++)
Stor/svært stor positiv konsekvens **+++/++++**	Stor forbedring (+++) eller svært stor forbedring (++++). Brukes i hovedsak der områder med ubetydelig eller noe verdi får en svært stor verdiøkning som følge av tiltaket.

2.6 Vurdering av konsekvens for alternativer

Vurdering av **konsekvens av alternativer** og **rangering av alternativer** utgjør trinn 2 av konsekvensutredningen (kap. 6). Samlet konsekvens av hvert alternativ er bestemt gjennom en sammenstilling av konsekvensgrad for delområdene.

Konsekvensen av hvert alternativ er gradert fra *stor positiv konsekvens* til *kritisk negativ konsekvens* etter kriteriene i M-1941 (tabell 2-8). Høye negative konsekvensgrader vil bety at planen/tiltaket kan være i konflikt med nasjonale og vesentlige regionale interesser for klima- og miljø, og kan være grunnlag for innsigelse (7).

Etter en samlet vurdering av alternativene, er alternativene rangert fra best (1) til verst med hensyn til hva som gir minst negative konsekvenser, ev. størst positive konsekvenser for friluftslivet. Det er anledning til å rangere flere alternativer likt, dersom de er gitt lik konsekvens. Samlet vurdering og rangering av alternativer er begrunnet.

I fagrapporten er det også gjort greie for: indirekte virkninger av planen/tiltaket, usikkerhet i konsekvensutredningen, midlertidige virkninger og vurderinger av avbøtende tiltak. Avbøtende tiltak som er sikret gjennom plankart og bestemmelser i plan eller som er innarbeidet i det omsøkte tiltaket presenteres i tiltaksbeskrivelsen (kap.3.3.3), og er inkluderte i vurdering av konsekvensgrad. Andre avbøtende tiltak presenteres avslutningsvis i rapporten (kap. 6.2).

Tabell 2-8: Kriterier for vurdering av samlet konsekvens for landskap (6).

Konsekvens	Kriterier for samlet vurdering
Kritisk negativ konsekvens	Tiltaket medfører kritisk skade på landskapet innenfor influensområdet. Brukes kun for områder med registreringskategorier som er gitt stor eller svært stor verdi. • Overvekt av delområder med konsekvensgrad svært alvorlig konsekvens (4 minus).
Svært stor negativ konsekvens	Konsekvensgrad svært stor negativ betyr at gjennomføring av alternativet medfører forringelse eller ødeleggelse av nasjonalt viktig landskap. Brukes kun for områder med registreringskategorier som er gitt stor eller svært stor verdi. • Overvekt av delområder med konsekvensgrad alvorlig konsekvens (3 minus). • Flere delområder har konsekvensgrad svært alvorlig (4 minus).
Stor negativ konsekvens	Tiltaket medfører stor konsekvens for landskapet innenfor influensområdet. • Overvekt av delområder med konsekvensgrad betydelig (2 minus). • Flere delområder med konsekvensgrad alvorlig (3 minus). • Ett delområde kan ha konsekvensgrad svært alvorlig.
Middels negativ konsekvens	Tiltaket medfører betydelig konsekvens for landskapet innenfor influensområdet. • Overvekt av delområder har konsekvensgrad noe konsekvens (1 minus). • Flere delområder har konsekvensgrad betydelig (2 minus). • Ett delområde kan ha konsekvensgrad alvorlig (3 minus). • Ingen delområder er gitt svært alvorlig konsekvensgrad.
Noe negativ konsekvens	Tiltaket medfører noe konsekvens for landskapet innenfor influensområdet. Lite konflikt med landskap innenfor influensområdet. Delområder har lave konsekvensgrader. • Overvekt av konsekvensgrad noe konsekvens (1 minus) og ubetydelig konsekvens (0). • Maks ett delområde kan ha konsekvensgrad betydelig (2 minus). • Ingen delområder er gitt konsekvensgrad svært alvorlig (4 minus) eller alvorlig (3 minus).
Ubetydelig konsekvens	Tiltaket/alternativet vil ikke medføre vesentlige endringer for landskapet i 0-alternativet. • Overvekt av ubetydelig konsekvens (0). • Ett delområde kan inneholde konsekvensgrad noe konsekvens (1 minus). • Ingen delområder er gitt svært alvorlig (4 minus), alvorlig (3 minus) eller betydelig (2 minus) konsekvensgrad.

Konsekvens	Kriterier for samlet vurdering
Positiv konsekvens	Benyttes i områder som er gitt ubetydelig eller noe verdi som får noe eller betydelig verdiøkning som følge av tiltaket. Tiltaket/alternativet er en forbedring for landskapet i forhold til 0-alternativet. • Overvekt av delområder med positiv konsekvensgrad (1 eller 2 pluss). • Kan kun inneholde delområder med noe negativ konsekvensgrad (1 minus) oppveies klart av områdene med positiv konsekvensgrad.
Stor positiv konsekvens	Benyttes i områder som er gitt ubetydelig eller noe verdi som får en svært stor verdiøkning som følge av tiltaket. Stor forbedring for landskapet i forhold til 0-alternativet. • Overvekt av delområder med svært stor miljøforbedring (4 pluss). • Overvekt av delområder med svært positiv konsekvensgrad. • Kan kun inneholde delområder med lav negativ konsekvensgrad, delområder med negativ konsekvensgrad oppveies klart av områdene med positiv konsekvensgrad.

2.7 Besvarelse av utredningskrav

Utredningskravene er besvart ved at relevant metodikk er brukt (håndbok M-1941), der delområder er fastsatt ved hjelp av NiN landskap, beskrevet, verdsatt og vist på kart og i foto. Videre er det vurdert påvirkning og konsekvens for delområdene og for de ulike alternativene i sin helhet. Som beskrevet i kapittel 4 Kunnskapsgrunnlaget er landskapsvernområder, kulturmiljø og landskap av nasjonal interesse (tidligere KULA og NB!) og verdifulle kulturlandskap tatt ut som egne delområder da disse etter metodikken automatisk får en fastsatt verdi. Det er også innhentet informasjon om landskapet gjennom befaringer, synlighetsanalyser, 3D-modell og ulike andre databaser og dokumenter nevnt i kapittel 4. Som beskrevet i kapittel 4.2 Befaring og fotostandpunkt er alle fastsatte fotostandpunkt i de ulike utredningsprogrammene visualisert, bort sett fra Vikedalslia (se forklaring for hvorfor dette fotostandpunktet ikke er visualisert i kapittel 4.2Befaring og fotostandpunkt). Utrederne har også tatt med andre representative fotostandpunkt i utredningen. Videre er aktuelle avbøtende tiltak og samlet belastning vurdert, samt lysmerking av vindturbinene. Beskrivelse og vurdering av hvordan eventuelle lys- og solblink kan påvirke tredjepart er gjort under konsekvensutredning folkehelse, rapport 1065688-01-TVF-RAP-002.

3 Tiltaksbeskrivelse og alternativer

3.1 Føringer og planer for området

3.1.1 Kommuneplan

Gjeldende plan i Bjerkreim kommune er i hovedsak kommuneplanens arealdel 2014–2016, vedtatt 23.9.2015, mens gjeldende plan i Time kommune i hovedsak er kommuneplanens arealdel 2018–2030, vedtatt 15.6.2021. Det meste av arealet i begge kommuner er utlagt til landbruks-, natur- og friluftsformål samt reindrift (LNFR-område, men ikke reindrift i området). Arealformål bruk og vern av sjø og vassdrag samt råstoffutvinning inngår også. Deler inngår i hensynssoner for drikkevann (Hagavatnet med nedbørfelt i sørvestre del av planområdet), vassdrag, skredfare, kulturminner og høyspenningsanlegg.

3.1.2 Gjeldene reguleringsplaner

Nordvestre del av planområdet i Time kommune er i berøring med reguleringsplanene «Masseuttak ved Oslandsvatnet» vedtatt 14.12.2004 og «Detaljregulering for fv. 504 Buevegen, Osland–Skrettingland vedtatt 3.10.2023. For førstnevnte er masseuttaket utført og avsluttet.

På nordsida av fjellet i Bjerkreim kommune omfatter planområdet hele gjeldende reguleringsplan «Moi brudd og massetak» vedtatt 27.11.2006 og oppdatert 18.1.2024. Her ligger et steinbrudd drevet av Risa AS hvor det produseres pukk og grus. Vest og sør i det regulerte området er det et avsluttet uttak av sand og grus som dels er i bruk til jordbruk og dels av bedriften Archer AS som produserer sprengstoffprodukter til offshore oljeindustri.

Se nærmere omtale i fagutredning mineralressurser vedrørende steinbrudd og mineralressurser.

3.2 Dagens miljøtilstand og nullalternativet (alternativ 0)

Nullalternativet er sammenligningsgrunnlaget for konsekvensutredningen, og er forventet situasjon i influensområdet i sammenligningsåret dersom tiltaket ikke blir gjennomført. Sammenligningsåret er året tiltaket kan være realisert, iht. tidsplanen er dette i 2030. Nullalternativet inkluderer nåværende miljøtilstand samt vedtatte planer for området som det er grunn til å tro vil bli gjennomført fram til sammenligningsåret.

Moifjellet og Mellomstrand vindkraftverk ligger inn mot møtepunktet mellom Bjerkreim kommune i øst, Time kommune i nordvest og Hå kommune i sørvest. Området inngår i Høg-Jæren, de høyereliggende (over ca. 120 moh.) heiområdene med mye nakent fjell og sparsomt morenedekke like øst for det flate Låg-Jæren, Norges største lavslette med mektig morenedekke og intensiv landbruksdrift. Planområdet og landskapet rundt er preget av relativt fattige lyngheier med småskala jordbruksarealer i dalene. Bebyggelsen består av spredte gårder av varierende størrelse og mindre tettsteder. E39 går øst for planområdet. En 300 kV og en 132 kV kraftledning går parallelt vest for planområdet. I sør ligger Bjerkreim vindpark søndre klynge med 70 vindturbiner, i nord Stigafjellet vindkraftverk med 7 vindturbiner og Måkaknuten vindkraftverk med 22 vindturbiner, i vest Høg-Jæren vindkraftverk med 32 vindturbiner. Moifjellet er høyere enn det nærmeste omlandet, særlig mot Mellomstrand og Låg-Jæren i vest og sør, og man må ca. 15 km mot øst og nord før fjellene blir enda høyere. Bjerkreimsenderen på Urdalsnipa, sentralt og høyeste punkt (561 moh.) i planområdet, er synlig fra et stort omland. Fjellet er preget av langsgående, knudrete rygger fra sørøst mot nordvest, mest markert i øst, med et titalls mindre vatn spredd utover. Sørvestre del av planområdet inkluderer et lavereliggende areal omkring 300 moh. mellom Moifjellet og Bjerkreim vindpark søndre klynge. Planområdet i Time kommune går fra lyngkledde hauger omkring 400 moh. i sørøst til

jordbruksarealer ned mot Mælandsvatnet (241 moh.) og fv. 504 i nordvest. Fra fylkesveien går det en landbruksvei oppover i planområdet. Det er etablert vei og kraftledning opp til Bjerkreimsenderen, en 123 meter høy, regional hovedsender med tilhørende bygg og oppstillingsplass. I øvrige hæyereliggende deler av planområdet er det lite inngrep. Avstander til veier og kraftledninger mv. gjør at det er et gjenværende INON-område sone 2 (1–3 km fra tyngre inngrep) på 3,65 km^2 sør for Urdalsnipa, hovedsakelig mot sørvest.

Utover reguleringsplaner beskrevet i 3.1.2 er det ikke vedtatte eller andre forslag til planer for nye utbygginger i planområdet. Omkring planområdet er det i Bjerkreim kommune utlagt arealer til framtidig næringsvirksomhet og til nåværende og framtidig, offentlig eller privat tjenesteyting nord for Røyslandsvatnet. I Time kommune er det et par reguleringsplaner for massetak ved Kartavoll, og det er gitt byggetillatelse til en skulptur (MUTE) på Karten. I Hå kommune er det ikke nærliggende reguleringsplaner eller utbyggingsformål i arealdelen (utenom areal for Bjerkreim vindpark).

Det er såpass kort tid fram til 2030 at det ikke forventes merkbare endringer i området som følge av klimaendringer. Det forventes fram til sammenligningsåret 2030 at fv. 504 oppgraderes iht. vedtatt detaljregulering, at steinbruddet i «Moi brudd og massetak» blir noe utviklet iht. sin detaljregulering og at skulpturen MUTE er satt opp på Karten, men ellers ikke særlige endringer innenfor eller inntil planområdet. Nullalternativet settes på denne bakgrunn til likt med dagens miljøtilstand, med tillegg av disse tiltakene.

3.3 Alternativer som utredes

Det er to alternativer for Moifjellet og Mellomstrand vindkraftverk:

1. Alternativ 1 Moifjellet og Mellomstrand vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune og planområdet for Mellomstrand i Time kommune, med adkomstvei fra Mellomstrand i Time kommune.
2. Alternativ 2 Moifjellet vindkraftverk, omfatter planområdet for Moifjellet i Bjerkreim kommune, med adkomstvei vest for Moi i Bjerkreim kommune.

Alternativene som utredes framkommer av kartene i figur 3-1og figur 3-2.

Konsekvensene av alternativ 1 synliggjør sumvirkningene av Moifjellet og Mellomstrand vindkraftverk. Differansen mellom de to alternativene gir tilleggsvirkningene Mellomstrand vindkraftverk tilfører det allerede omsøkte Moifjellet vindkraftverk.

Det er utarbeidet en utredningsløsning for utbygging etter alternativ 1 og alternativ 2 som er grunnlaget for konsekvensutredningen, og som beskriver en realistisk, teknisk gjennomførbar utbygging basert på tilgjengelig teknologi i dag. Utredningsløsningen inkluderer turbinposisjoner, sjablongmessige (ikke tilpassete) kranoppstillingsplasser, planlagte veilinjer, samt mulige/foreløpige plasseringer av transformatorstasjon, driftsbygg, massetak og rigg-/lageområder.

Det presiseres at nettilknytningen med sine tre alternative framføringer ikke inngår i tiltaket som konsekvensutredes, da denne er omsøkt i en separat nettkonsesjonssøknad.

3.3.1 Alternativ 1 Moifjellet og Mellomstrand vindkraftverk

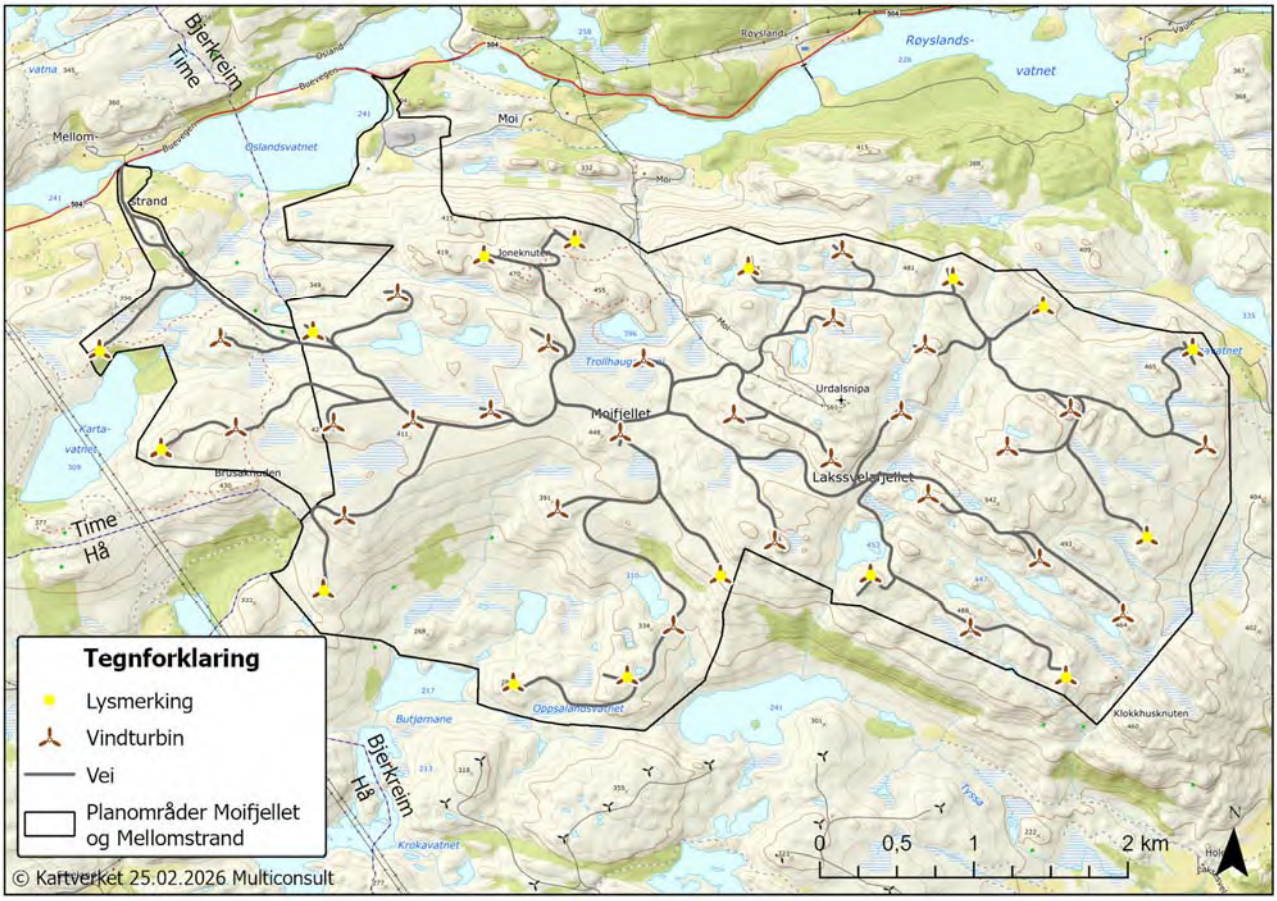
Moifjellet og Mellomstrand vindkraftverk omfatter et todelt planområde på totalt 17,5 km^2, bestående av planområdet for områderegulering av Moifjellet vindkraftverk i Bjerkreim kommune på 16,0 km^2, og planområdet for områderegulering av Mellomstrand vindkraftverk i Time kommune på 1,4 km^2. Planområdene ligger i Rogaland fylke.

Lokasjonen er valgt på bakgrunn av særdeles gode vindforhold, ledig kapasitet i strømnettet, korte avstander til ilandføringssted, offentlig vei og tilknytningspunkt til kraftnettet, samt moderat terrengkompleksitet. Det ligger eksisterende vindkraftverk mot nord, sør og vest.

Utredningsløsningen som ligger til grunn for konsekvensutredningen omfatter:

- Adkomstvei i Time kommune, fra fv. 504 øst for Mælandsvatnet og til internveinett vest for Legetjørn, med midlertidig rigg- og lagerområde langs denne. De første ca. 0,8 km vil gå gjennom innmark, mens øvre del vil være en ny vei i utmark. Det vurderes to ulike, alternative traséer for adkomstveien:
    - i: Fortsette rett fram i ny trasé fra sving ved landbruksbygg, for så å dreie tilbake inn på eksisterende vei før plantefelt med sitkagran. Total lengde 2,1 km.
    - ii: Følge eksisterende vei så langt denne går. Total lengde 2,1 km.
- Internveier med ca. 33 km i Bjerkreim kommune og 3 km i Time kommune (inkl. tilknytning til internvei i Bjerkreim)
- 42 vindturbiner med opptil 200 m totalhøyde, med fundamenter og kranoppstillingsplasser
- Jordkabler i internveier fra vindturbiner fram til ny Moifjellet transformatorstasjon
- Sentral transformatorstasjon på Moifjellet
- To alternative plasseringer for driftsbygg:
    - Langs adkomstvei i Mellomstrand / Time kommune
    - Sentralt oppe på Moifjellet, øst på Botnabringane
- Masseuttak/steinbrudd for veier og plasser

Totalt berørt areal (inkludert adkomstvei) før istandsetting er 1055–1140 dekar. Etter istandsetting er det anslått til 310–360 dekar permanent areal. Av dette omfatter Mellomstrand vindkraftverk 122–130 dekar før istandsetting og 32–38 dekar etter istandsetting.



Figur 3-1: Alternativ 1 Moifjellet og Mellomstrand vindkraftverk. Forventet perimeter hinderlysmerking er vist.

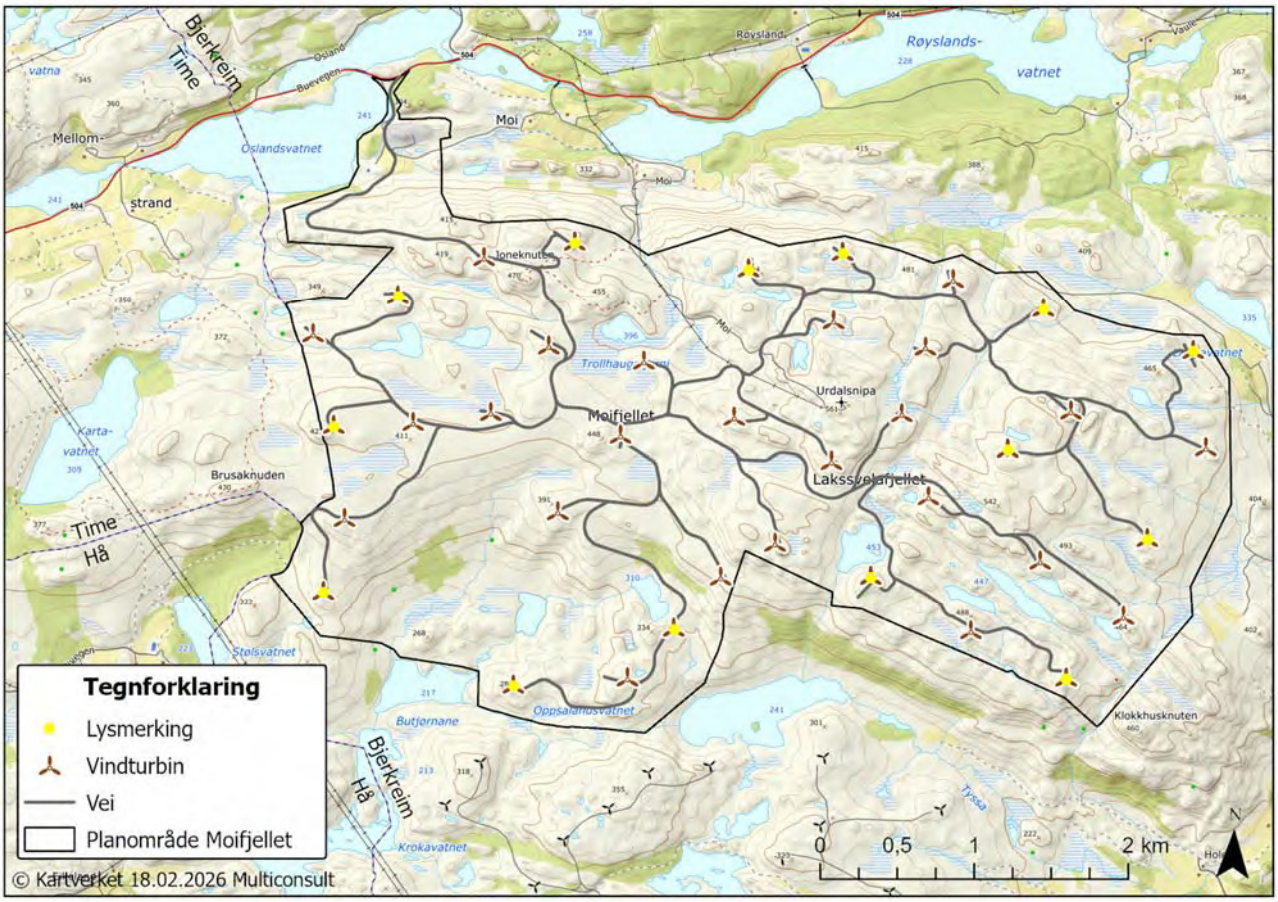
3.3.2 Alternativ 2 Moifjellet vindkraftverk

Moifjellet vindkraftverk omfatter et planområde for områderegulering på totalt 16,0 km^2 i Bjerkreim kommune, Rogaland fylke. Lokasjonen er valgt på bakgrunn av særdeles gode vindforhold, ledig kapasitet i strømnettet korte avstander til ilandføringssted, offentlig vei og tilknytningspunkt til kraftnettet, samt moderat terrengkompleksitet. Det ligger eksisterende vindkraftverk mot nord, sør og vest.

Utredningsløsningen som ligger til grunn for konsekvensutredningen omfatter:

- Adkomstvei i Bjerkreim kommune, fra fv. 504 øst for Oslandsvatnet. Omkring 350 m vil kunne følge dagens vei inn til «Moi brudd og massetak», like øst for Oslandsvatnet, hvor det også er aktuelt å plassere midlertidig rigg- og lagerområde. Total lengde vil bli ca. 2,6 km fram til internveinettet.
- Internveier ca. 33 km
- 38 vindturbiner med opptil 200 m totalhøyde, med fundamenter og kranoppstillingsplasser
- Jordkabler i internveier fra vindturbiner fram til ny Moifjellet transformatorstasjon
- Sentral transformatorstasjon på Moifjellet
- Sentralt driftsbygg på Moifjellet, øst på Botnabringane
- Masseuttak/steinbrudd for veier og plasser

Totalt berørt areal (inkludert adkomstvei) før istandsetting er ca. 1050 dekar. Etter istandsetting er det anslått til ca. 370 dekar permanent areal (ca. 2,2 % av planområdet).



Figur 3-2: Alternativ 2 Moifjellet vindkraftverk. Forventet perimeter hinderlysmerking er vist.

3.3.3 Andre vurderte alternativer

Se konsesjonssøknaden for Moifjellet vindkraftverk for nærmere omtale av skrinlagte, tidligere alternativer for adkomstvei.

3.3.4 Anleggsgjennomføring

Anleggsperioden er beregnet til to år. Det første året vil benyttes til etablering av veier, kranoppstillingsplasser og fundamenter, det andre året til turbinmontasje, idriftsettelse, testing og istandsetting. Etablering av transformatorstasjon og luftledning vil skje parallelt med annet anleggsarbeid, og er beskrevet i separat konsesjonssøknad for nettanlegg.

Midlertidig riggområde og midlertidig lagerområde for turbinkomponenter vil fortrinnsvis bli plassert ved adkomstveien, grå arealer vil bli benyttet så langt det er mulig. Midlertidig brakkerigg for personell vil avklares nærmere som del av anskaffelsesprosessen og i dialog med aktuelle leverandører.

3.3.5 Merkekrav for turbiner

Hinderlys

Etter luftfartshinderforskriften (8) skal luftfartshinder med en høyde på 60 m eller mer merkes med hinderlys. Formålet med kravet til hinderlys er å gi luftfartøy viktig visuell informasjon om hvor et

hinder som kan utgjøre en fare for luftfarten, befinner seg. Dette er særlig viktig informasjon for piloter ved flyging i mørket samt på dagtid under varierende meteorologiske forhold.

Luftfartstilsynet setter i forskrift av 15. juli 2014 (BSL-E 2.1.) (endret 01.01.2026) krav om rapportering, registrering og merking av luftfartshinder for å ivareta luftfartssikkerheten. Det har lenge vært krav til lysmerking av turbiner gjeldende bruk av lav-, mellom- eller høyintensitetslys avhengig av høyden på turbinene. I 2024 skjerpet Luftfartstilsynet merkekravene til vindturbiner ved at det ble innført krav om merking av tårnene med horisontale fargebånd (såkalte «magebelter») med reflekterende kontrastfarge på øvre del av turbintårnene. For turbiner over 150 m totalhøyde til vingespiss, stilles det også krav om lysmerking på mellomliggende nivå. Dvs. lys på selve tårnet, i tillegg til lys på nacellen. Lysene på nacellen kan være mellomintensitet (heretter MI), eller høyintensitetslys (heretter HI) avhengig av høyden på turbinen (se tabellen nedfor). Lysene på mellomnivå på tårnet skal være lavintensitet (heretter LI) type B (fast rødt lys, 32 cd1).

Forskrift om rapportering, registrering og merking av luftfartshinder - Lovdata

Merking av luftfartshinder i vindkraftverk

Tabell 3-1: Tabellen viser krav til lys nacellen fra forskrift BSL E 2-1.

Turbinstørrelse	**Nacellelys**	**Fargebånd/magebelte**	**Lys på mellomnivå**
Opp til 150 m totalhøyde	MI Type B eller C, Fast eller blinkende rødt lys, 2 000 cd	Ja	Nei
Over 150 m totalhøyde	HI type B, Blinkende hvit lys, Dagslys 100 000 cd/Skumring 20 000cd/ Mørket 2000cd	Ja	Ja – LI type B, fast rødt lys, 32 cd

I utgangspunktet skal alle vindturbiner merkes med lys og fargebånd, men dersom et vindkraftverk består av 5 eller fler vindturbiner, kan anleggseier søke om perimetermerking. Ved godkjent perimetermerking fra Luftfartstilsynet skal kun ett utvalg turbiner, som danner vindparkens perimeter (yttergrense), merkes med lys og fargebånd. Avhengig av lysstyrken på hinderlysene på nacellen er det forskjellige krav til maksimal avstand mellom merkede turbiner. Dersom turbinene er merket med MI skal avstanden mellom merkede turbiner være maks 900 meter og ved bruk av HI maks 1500 m.

I forskriftens §24 Overgangsbestemmelser (11) står det at «Eier av luftfartshinder omfattet av forskriftens § 15 (3) plikter å utføre merking av luftfartshinderet innen 31. desember 2027». I §24(12) står det at *«Luftfartshinder omfattet av forskriftens § 16 (3) og § 16 (4) skal merkes med hinderlys på mellomliggende nivå innen 31. desember 2027»*. Det vil si at eksisterende turbiner også vil bli omfattet av disse merkingskravene, og at de innen 31.12.2027 vil ha tilsvarende merking og lys som fremtidige, nye vindkraftverk.

De senere årene har Luftfartstilsynet også åpnet for bruk av behovsstyrte hinderlys. Dvs. at lysene i utgangspunktet er avslått og kun tennes ved behov, altså når luftfartøy nærmer seg. Dette er en ønsket funksjonalitet for mange vindkrafteiere, naboer og vertskommuner. Det har vært flere utfordringer ifm. oppfyllelse av funksjonskrav for behovsstyrte hinderlys. Ved siste oppdatering av forskriften, i januar 2026, ble kravene til behovsstyrte hinderlys noe tydeligere, men det er fortsatt en del usikkerhet. Det finnes ingen forhåndsgodkjente tekniske løsninger og det er derfor usikkert hvordan kravene til teknisk utstyr skal oppfylles. Videre er det usikkert hvordan systemene skal

driftes og vedlikeholdes, og hvorvidt kostnadene for innkjøp og drift er økonomisk forsvarlige og om systemene dermed er mulig å ta i bruk.

Statkraft jobber videre med å avklare usikkerheter og se om det er mulig å komme frem til sikkerhetsmessig gode løsninger som også er enkle og rimelige å installere og drifte, slik at det blir lettere å evt. forplikte seg til bruk av behovsstyret hinderlys, og dermed redusere de visuelle virkningene av hinderlysene. Statkraft er i dialog med Fornybar Norge, Luftfartstilsynet og representanter for luftromsbrukerne for å vurdere mulige forbedringer.

På det nåværende tidspunktet er usikkerheten fortsatt for stor til å forplikte seg til bruk av behovsstyrte lys. Videre er det også usikkert hvordan Luftfartstilsynet vil definerer perimeteren til Moifjellet og Mellomstrand vindkraftverk, all den tid prosjektet ligger tett på spesielt Bjerkreim vindkraftverk. I den videre beskrivelsen er det valgt å legge til grunn en verste falls tilnærming når det gjelder antall lys/merkede turbiner og at lysene alltid er på.

Av forskriftens vedlegg 2 framgår det videre at:

- lyset skal være hvitt og blinke 40-60 ganger per minutt (0,67 til 1 Hz)
- på dagtid (med bakgrunnsbelysning over 500 candela/m2) skal maksimal lysintensitet være 100 000 candela +/- 25%
- i demring og skumring (med bakgrunnsbelysning 50-500 candela/m2) skal maksimal lysintensitet være 20 000 candela +/- 25%
- om natta (med bakgrunnsbelysning under 50 candela/m2) [står feilaktig 500 i forskriften, bekreftet av Luftfartstilsynet] skal maksimal lysintensitet være 2000 candela +/- 25%. Dette tilsvarer kravet hele døgnet for turbiner under 150 m.
- horisontalt samt 3-7 grader oppover skal det lyses med full styrke, 100%
- 1 grad under horisontal planet skal det lyses med minst 50% og maksimalt 75% av minimum lysstyrke for dag/kveld/natt, dvs. 37,5% til 56,25% av maksimal lysintensitet.
- 10 grader under horisontalplanet skal det maksimalt lyses med 3% av maksimal lysstyrke

Tabell 3-2: Minimumsavstand for når ulike lysterskler trer inn avhengig av høydeforskjell i terreng ved turbinpunkt til betrakter i terreng nedenfor.

Høydedifferanse terreng (m)	**0**	**50**	**100**	**150**	**200**	**250**	**300**
Under 1° (maks 1000cd)	8480 m	11 344 m	14 209 m	17 073 m	19 938 m	22 802 m	25 667 m
Under 10° (ubetydelig)	839 m	1123 m	1406 m	1690 m	1973 m	2257 m	2540 m

Horisontale fargebånd

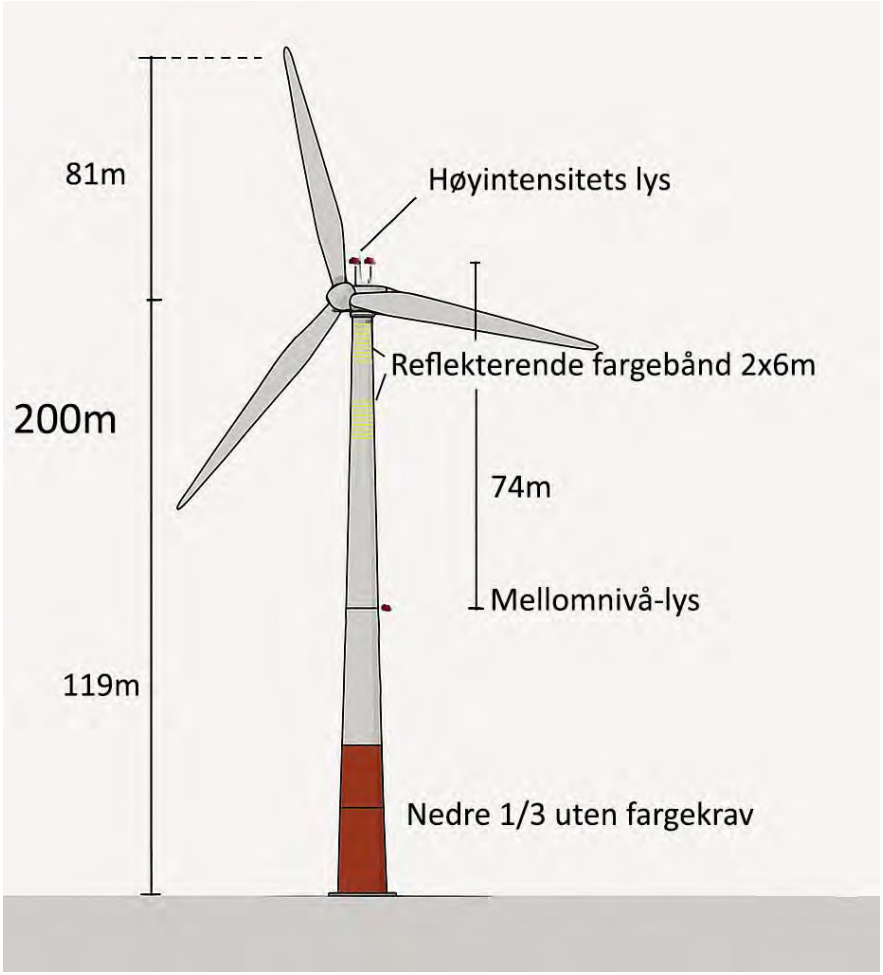
I forskriftsendringen ifra januar 2024 kom det nytt krav til fargemerking av vindturbiner. Det følger av nåværende forskrift at vindturbiner skal merkes med to horisontale fargebånd med reflekterende farge på mellomliggende nivå. Dersom tilsynet har godkjent perimeter for lysmerking, er det tilstrekkelig at magebelter plasseres på turbinene som utgjør perimeteret.

Tabellen under viser kravene til fargebåndene. For mer info om fargekoder m.m. se forskriftens vedlegg 1.

Tabell 3-3: Tabellen viser krav til høyden på fargebånd på turbintårn

Høyde på turbin	Bredde på fargebånd	Reflekterende
60 til 200 m	2 x 6 m med 6 m imellom	Ja
Over 200 m	2 x 10 m med 10 meter imellom	Ja

Figurene som følger under, viser eksempler på fargebånd fra Luftfartstilsynet. Den første figuren illustrerer både fargebånd, lys på mellomnivå og kontrastfarge på nederste 1/3 av tårnet.



Figur 3-3: Formelle rammer for merking av eksempelturbin for Moifjellet og Mellomstrand vindkraftverk, jf. krav fra Luftfartstilsynet.

Bildene under er fra en NRK-sak om Guleslettene vindkraftverk, som var det første prosjektet til å gjennomføre merking på en turbin. De har valgt gul reflekterende farge på båndet, som er en mulighet iht. fargekodene i vedlegg 1 i forskriften.



Figur 3-4: Bildene viser fargebånd utført med gul reflekterende farge på vindturbiner i Guleslettene vindkraftverk. Foto: NRK.

3.3.6 Fremtidig hindermerking ved utbygging av Moifjellet og Mellomstrand vindkraftverk

Dagens situasjon i området rundt planområdet for Moifjellet og Mellomstrand vindkraftverk

I området rundt planområdet for Moifjellet og Mellomstrand vindkraftverk er det i dag flere andre etablerte vindkraftverk: Bjerkreim, Skinansfjellet og Gravdal i sør/sørvest, og Stigafjellet og Måkaknuten i nord. Alle disse fem vindkraftverkene ble satt i drift i 2020 og de har alle turbiner merket med hinderlys HI type B med hvitt blinkende lys og lysstyrke som avhenger av

bakgrunnsbelysning. Lysstyrken følger nacellelys for turbinstørrelse over 150 m totalhøyde i tabell 3-1. Det er bekreftet at det pr. i dag ikke er lys på mellomnivå eller fargebånd/kontrastbånd på vindturbinene på Stigafjellet og Måkaknuten. Dette antas å være gjeldende også for de øvrige nevnte vindkraftverkene i nærheten. Som beskrevet i kapittel 3.3.5 vil det bli krav om lys på mellomnivå på disse også innen 31.12.2027. Se tabell under (tabell 3-4) for høyde på turbinene i vindkraftverkene rundt, og antall turbiner merket med HI type B.

Tabell 3-4: Høyde på turbiner og antall turbiner merket med hinderlys HI type B i vindkraftverkene tett på Moifjellet og Mellomstrand vindkraftverk.

Vindkraftverk	Høyde turbiner	Antall turbiner med HI type B	Totalt antall turbiner
Bjerkreim	190 m	9	37
Skinansfjellet	190 m	4	18
Gravdal	190 m	4	15
Stigafjellet (felles perimetermerking med Måkaknuten)	180 m	3	7
Måkaknuten (felles perimetermerking med Stigafjellet)	190 m	8	22
Totalt		**28**	**99**

Merkekrav

Turbinene i et eventuelt nytt Moifjellet og Mellomstrand vindkraftverk vil være høyere enn 150 m til vingespiss. Da følger det av forskriften at de merkepliktige turbinene må merkes med to stykk HI-hinderlys på nacellen, to stykk fargebånd på mellomnivå med enten 6 eller 10 meters høyde avhengig av turbinens totalhøyde, samt LI-lys på mellomliggende nivå. Det skal ikke være mer enn 75 m mellom lysene. Dvs. at dersom lysene på nacellen blir over 150 høye, må det etableres lys på to mellomnivåer. For Moifjellet og Mellomstrand er utredningen basert på en turbin med totalhøyde på 200 m og rotordiameter på 81 m. Dette gir en navhøyde på 119 m. Normalt sitter hinderlysene på nacellen ca. 5 meter over navhøyden, noe som gir lyshøyde på 124 m. Det betyr at turbinene kun skal ha ett lys på mellomliggende nivå.

For utredning av turbiner med totalhøyde opp til 200 m, som er tilfellet her, skal det altså antas to 6 meter høye fargebånd på mellomliggende nivå med 6 meter imellom, to stykk HI-lys type B på nacellen og lys på ett mellomliggende nivå (LI-lys type B), omtrent midt på tårnet.

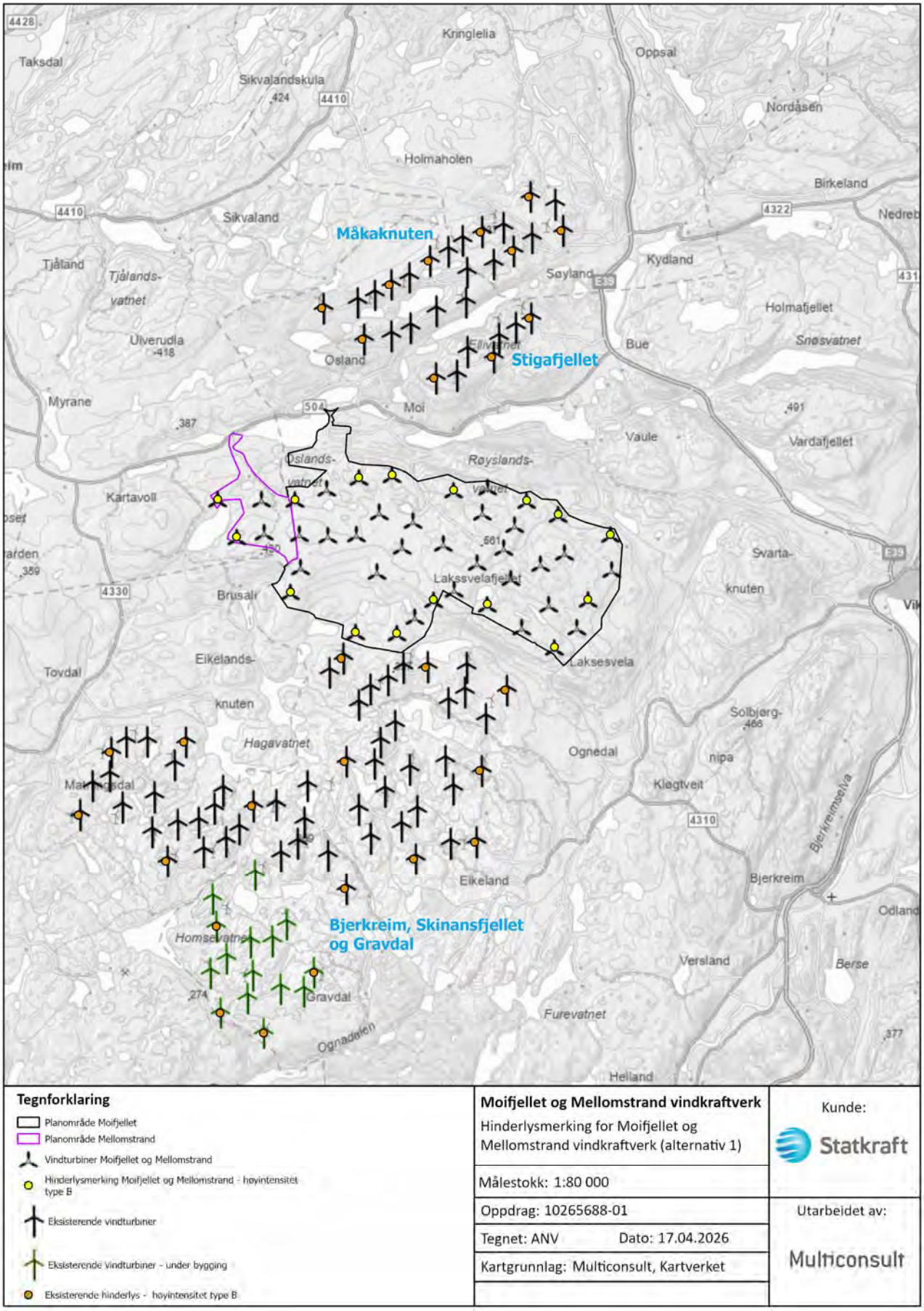
Perimetermerking

Statkraft har angitt lysmerking som skal oppfylle Luftfartstilsynets krav. For perimetermerking for Moifjellet og Mellomstrand vindkraftverk (alternativ 1), som gir merking av 16 turbiner med HI type B (blinkende hvitt lys), se figur 3-1. For perimetermerking for Moifjellet vindkraftverk (alternativ 2), som gir merking av 14 turbiner med HI type B (blinkende hvitt lys), se figur 3-2. Det blir de samme turbinene som er vist med HI-lys type B som får lys på mellomliggende nivå (LI type B) og fargebånd.

For perimetermerking av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sammen med eksisterende perimetermerking for vindkraftverkene i området rundt, se figur 3-5.

Dagens situasjon sett med og uten Moifjellet og Mellomstrand vindkraftverk

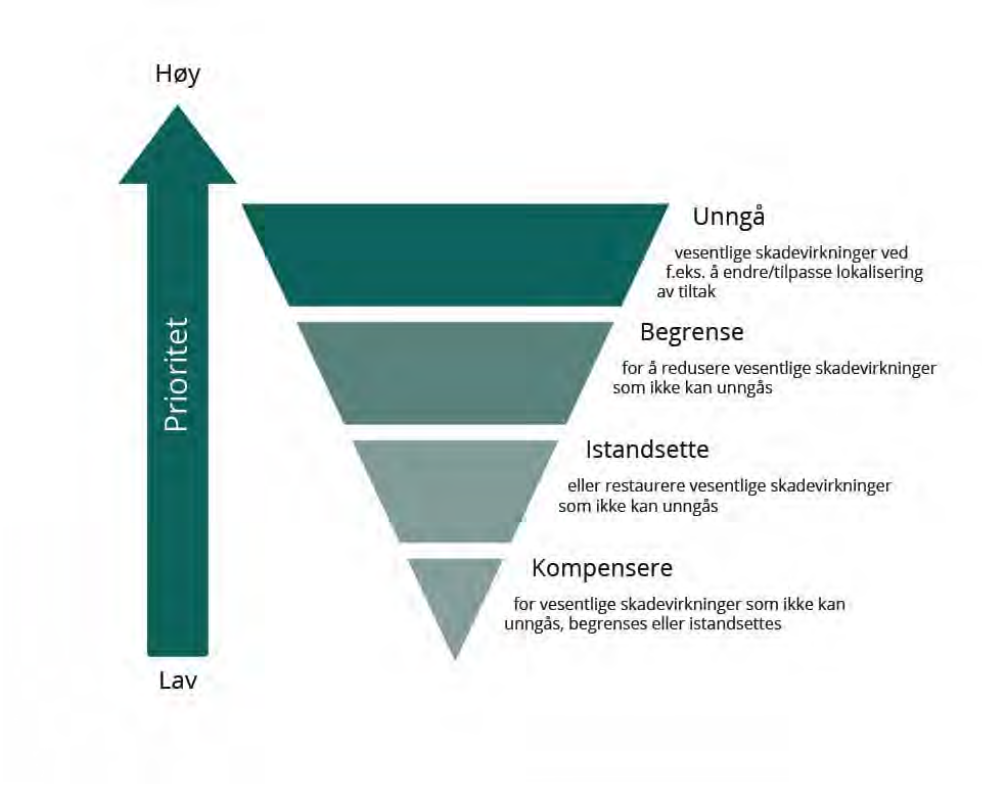
Dagens lysmerking i området rundt planområdet består av 28 turbiner med HI type B med hvitt blinkende lys og lysstyrke som avhenger av bakgrunnsbelysning. Dette antallet vil kunne øke til 44/42 i relativt nær fremtid med forventet hinderlysmerking ved en utbygging av henholdsvis Moifjellet og Mellomstrand vindkraftverk (alternativ 1) eller Moifjellet vindkraftverk (alternativ 2). I tillegg vil Moifjellet og Mellomstrand vindkraftverk (alternativ 1) eller Moifjellet vindkraftverk (alternativ 2) få lys på mellomnivå, LI type B, som er fast rødt lys (lysstryke 32 cb). Ifølge forskriften vil de eksisterende vindkraftverkene i området få krav om å ha lys på mellomnivå på plass innen 31.12.2027. På sikt vil hinderlysmerkingen med en eventuell utbygging av Moifjellet og Mellomstrand vindkraftverk være lik for alle de 44/42 vindturbinene.



Figur 3-5: Hinderlysmerking for Moifjellet og Mellomstrand vindkraftverk samt hinderlysmerking ifm. vindkraftverkene i området rundt.

3.4 Avbøtende tiltak som er lagt til grunn i konsekvensutredningen

Forskrift om konsekvensutredninger setter krav til hvordan forebygge skadevirkninger av et tiltak. Jamfør § 23 skal konsekvensutredningen «beskrive de tiltakene som er planlagt for å unngå, begrense, istandsette og hvis mulig kompenseres for vesentlige skadevirkninger for miljø og samfunn både i bygge- og driftsfasen». Det er en forutsetning at de skadebegrensende tiltakene som presenteres er *relevante* og *realistiske* jf. § 19. Tiltakshierarkiet (se figur 3-6) skal ligge til grunn ved vurdering av skadebegrensende tiltak.



Figur 3-6 Tiltakshierarkiet. Først og fremst skal man unngå skadevirkninger for miljø og klima. Der det ikke er mulig skal man begrense skaden, deretter istandsette arealer. Kompensasjon er siste utvei (6).

I dette prosjektet er det lagt opp til følgende avbøtende tiltak i prosjekteringen som er relevant for tema landskap:

Atkomstveier og internveier i vindparken
Foreløpig veiutlegg er etablert ut fra en tverrfaglig vurdering og med en helhetlig tenkning i forhold til samla inngrep, for å finne gode traseer med hensyn til funksjon og design på naturens premisser. Tilgjengelig og innhentet informasjon med hensyn til de ulike miljøtemaene har ligget til grunn for utforming, sammen med en forståelse for landskapets kapasitet og begrensninger veid opp mot teknisk kravspesifikasjon. Eksempelvis er veiene som en hovedregel lagt utenom myr, vannforekomster og overgangssoner i høydelag (unngå skadevirkning).

En vurdering av differensiert bruk av transport, med ulike tekniske krav, er vurdert for internveisystemet for å begrense miljøpåvirkning i de vanskeligst tilgjengelige områdene (begrense skadevirkning).

Detaljutforming av veiene vil i videre planarbeid tilpasses tubinleverandørens transportkrav og vil kunne justeres og optimaliseres for ytterligere å begrense ulemper i forhold til ytre miljø (begrense skadevirkning).

Massetak
I prosjekteringen er massebalanse vurdert opp mot behovet for ekstra masseuttak og massetransport.

Massetak er primært lagt som utvidelse av veitraseen på utfordrende strekk der dette vil bidra til en bedre veilinje, både funksjonelt og med hensyn til langsiktig landskapstilpasning (begrense skadevirkning). Foreløpig masseregnskap basert på fylling og skjæring, med en konservativ utvidelsesfaktor på 1.5 viser at foreløpig veiutlegg er massebalansert. Denne beregningen tar høyde for skjæringer i tiltenkte masseuttak i linja, men uten overskuddet det vil gi å flate ut skjæringene. Dette prinsippet vil ha stor fleksibilitet i forhold til behov. Et masseoverskudd regnes som nødvendig ettersom det må forventes at deler av massene som tas ut vil være masser som ikke er egnet til bygging av vei. Disse massene vil bli benyttet til arrondering av terreng i områder med større bearbeiding (kompensere).

Kranoppstillingsplasser
Turbinleverandørene har standard konfigurasjon for hvordan en kranoppstillingsplass skal være utformet. Målet med denne er å ivareta plass til kran som skal montere den store hovedkranen, som igjen skal brukes til montering av selve vindturbinen, samt nødvendig lagring av komponenter som inngår i monteringen og konteinere med annet nødvendig utstyr til denne operasjonen. Arealet på standardkonfigurasjonene er gjerne større enn det som er nødvendig, for å tilfredsstille spesifikke preferanser fra ulike transportfirma. Blad tar spesielt stor plass og disse vil derfor ikke bli tilgodesett med areal ved den enkelte turbin, men vil bli levert direkte til montering, alternativt via et mellomlager (begrense skadevirkning). Videre er det erfart gjennom tidligere utbygginger at utforming av arealet er noe fleksibelt, slik at formen til en viss grad kan tilpasses terrenget (begrense skadevirkning). Typisk vil hjørner, som vanskeliggjør tilpassing kunne erstattes med annet tilgjengelig areal i det ønskede planet.

I tillegg er differensiert bruk av kraner for montering vurdert ved de kranoppstillingsplassene der terrenget er mest utfordrende (begrense skadevirkning).

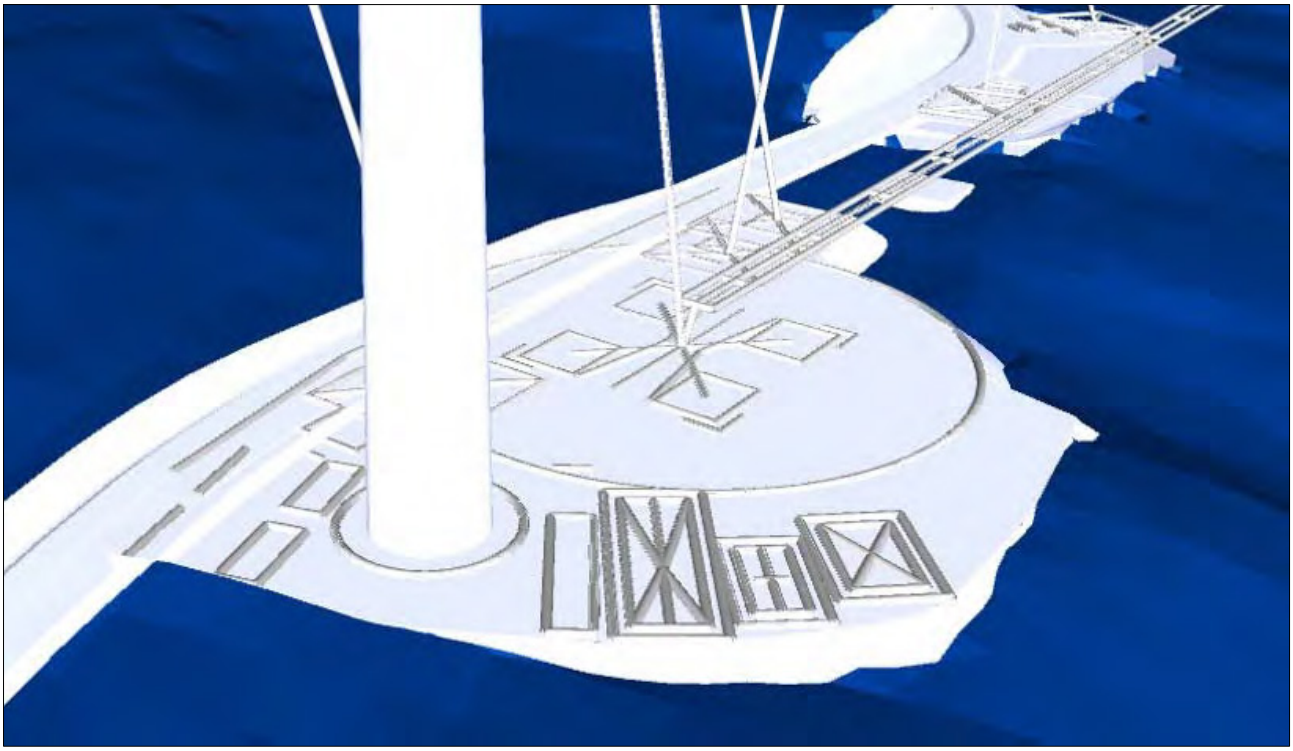
Hvordan dette er tenkt gjennomført er vist ved eksempler fra utbygginger som har hatt ulik tilnærming til hvordan kranoppstillingsplassene skal utformes og etableres. Se bilder under.



Figur 3-7: Turbinblad levert direkte til montering. (Øyfjellet Vindkraftverk).



Figur 3-8: Fra anlegg der behov for oppstillingsplass ble avklart begrenset til en pr. turbin, samtidig som begrenset tilkomst til turbin ble akseptert, slik at denne kunne legges på et annet nivå enn kranoppstillingsplanet. Mindre sammenhengende flater og færre avhengigheter bidrog til at arrangementet ved den enkelte turbin ble enklere å tilpasse terreng. (Øyfjellet vindkraftverk).



Figur 3-9: Illustrasjonen viser eksempel fra et anlegg der plassering av ulike komponenter til mellomlagring er nøye planlagt. Dette muliggjør en mindre og mer organisk formet kranoppstillingsplass som lettere kan tilpasses terreng. (Odal vindkraftverk).



Figur 3-10: Bildene viser hvordan bygging av et hjørne i en standardkonfigurasjon medfører et unødvendig og skjemmende inngrep i et terreng med store muligheter for tilpassing. Bedre forståelse av behov og arbeidsoperasjoner gjør slike inngrep til tilbakelagt, men ikke glemt historie.

4 Kunnskapsgrunnlaget

4.1 Eksisterende kunnskap – oversikt

I dette kapittelet er det gitt en beskrivelse av hvilke datakilder som ligger til grunn for områdebeskrivelsen og verdivurderingen. Det er også gjort en vurdering av hvor godt dette datagrunnlaget er. Desto bedre datagrunnlaget/-kvaliteten er, desto mindre usikkerhet er det knyttet til påvirknings- og konsekvensvurderingene.

Datagrunnlaget blir klassifisert i fire grupper:

Klasse	Beskrivelse
1	Svært godt datagrunnlag
2	Godt datagrunnlag
3	Middels godt datagrunnlag
4	Mindre tilfredsstillende datagrunnlag

Følgende hovedkilder til informasjon ligger til grunn for utredningen:

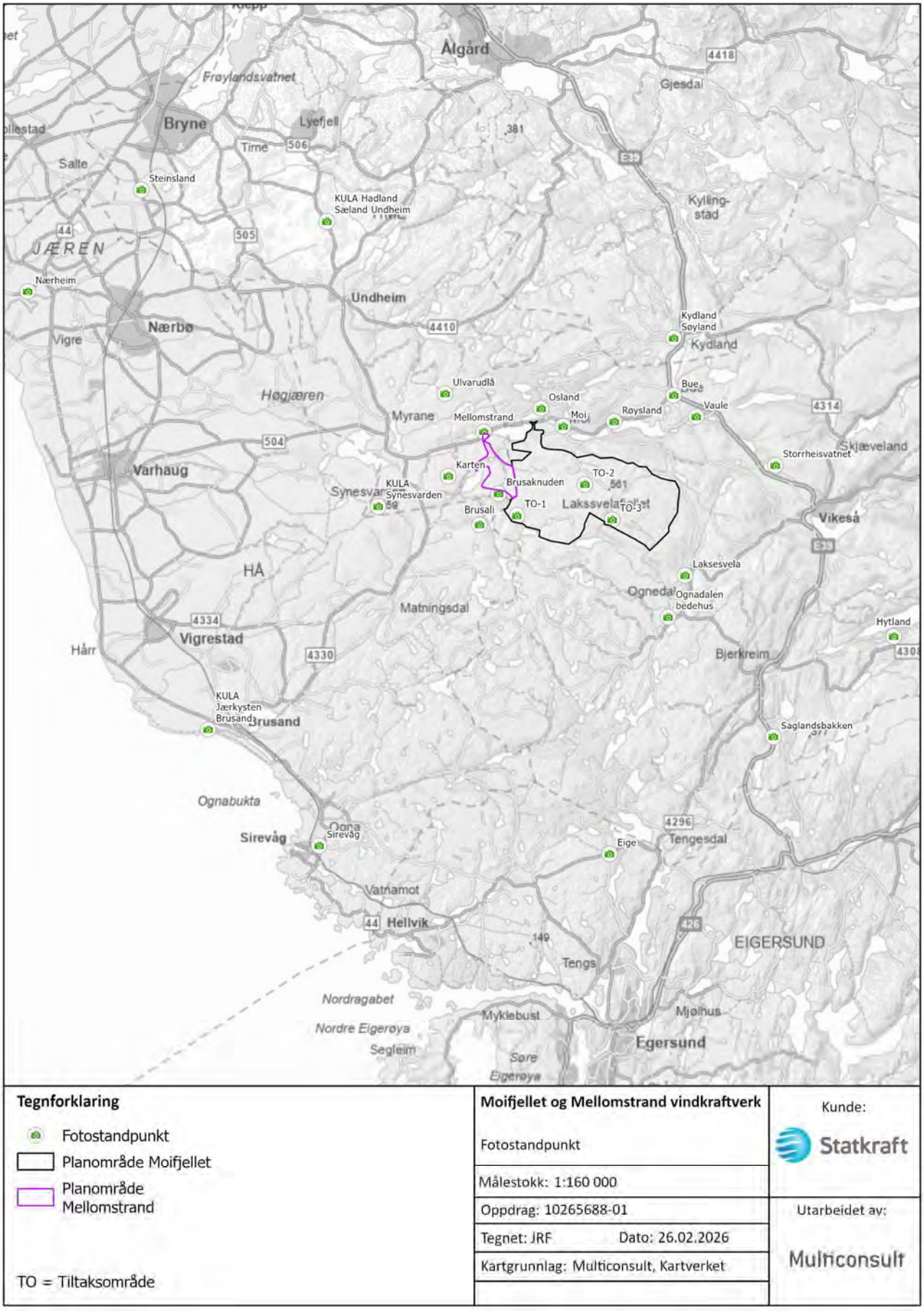
- Beskrivelse av de tekniske planene og oversiktskart
- Befaring i området
- Dokumenter
  - NIBIOs (NIJOS) beskrivelse av *landskapsregion 15. Lågfjellet i Sør-Norge, 18. Heibygdene i Dalane og Jæren, 19. Jæren og Lista.*
  - Artsdatabankens NiN Landskap
  - Stavanger Turistforening - Vakre landskap i Rogaland
- Kartdata:
  - NIJOS inndeling i landskapsregioner og underregioner
  - NiN Landskap kart
  - Norgeskart, samt ortofoto på nett
  - Kilden, NIBIO
  - Naturbase, Miljødirektoratet
  - Kommunekart.com 3D
  - Stavanger Turistforening - Vakre landskap i Rogaland
- Visualiseringer:
  - Fotovisualiseringer
  - Synlighetsanalyser

Grunnlaget for vurderingen, herunder også datagrunnlaget, vurderes å være godt.

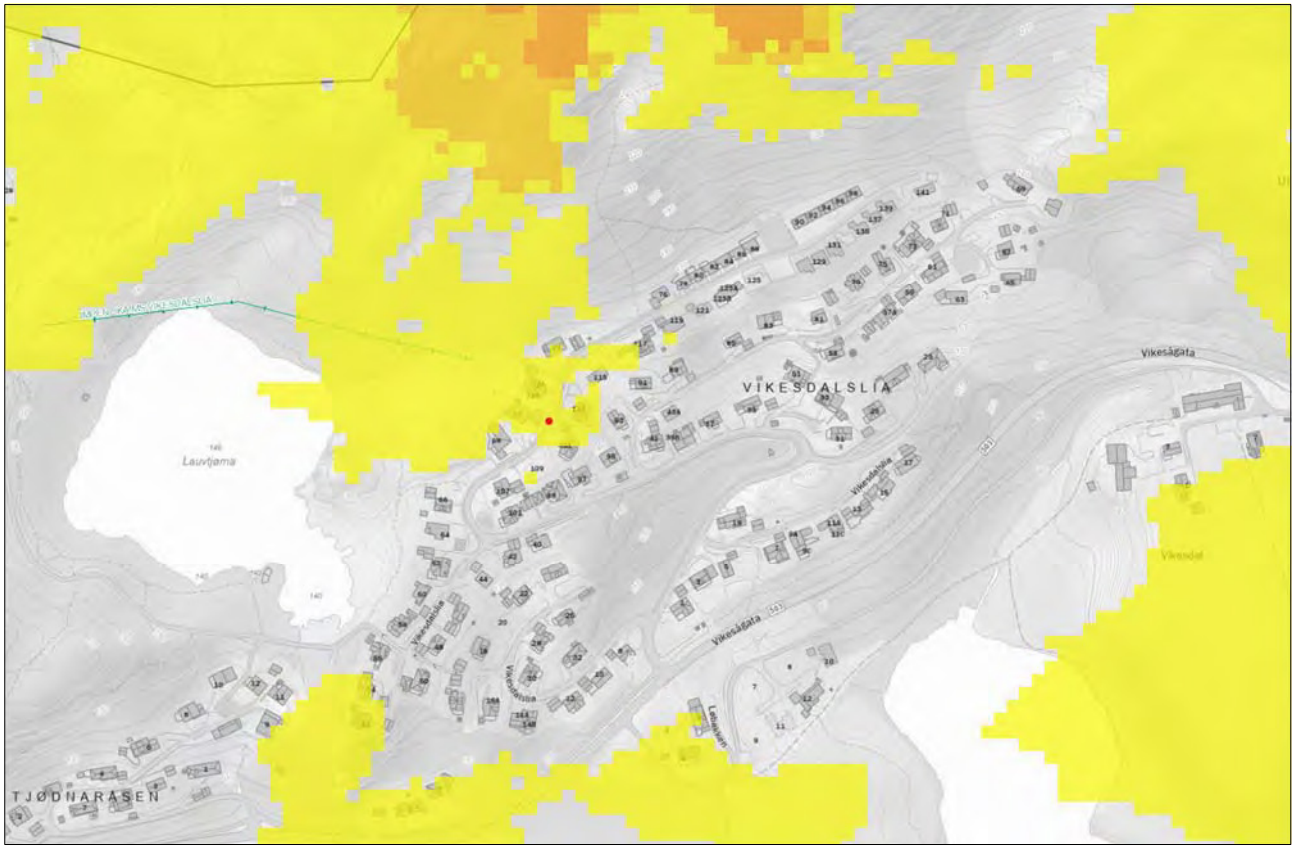
4.2 Befaring og fotostandpunkt

Moifjellet og utvalgte steder i influensområdet ble befart 25. og 26. juni og 16. november 2024. Alle ønskede fotostandpunkt for visualiseringer ble befart, i tillegg til punkter valgt ut av utreder basert på blant annet foreliggende synlighetsanalyser. Befaringen 25. juni ble foretatt sammen med utreder for fagtema kulturmiljø og befaring 26. juni ble foretatt sammen med utreder for fagtema friluftsliv. Befaringen 16. november ble foretatt av utreder for tema landskap. Det er tatt et nytt fotostandpunkt i 2026 fra stedet Mellomstrand mot Mellomstrands 4 turbiner, men ellers er det ikke foretatt ny befaring da befaringene i 2024 dekker området for Mellomstrand.

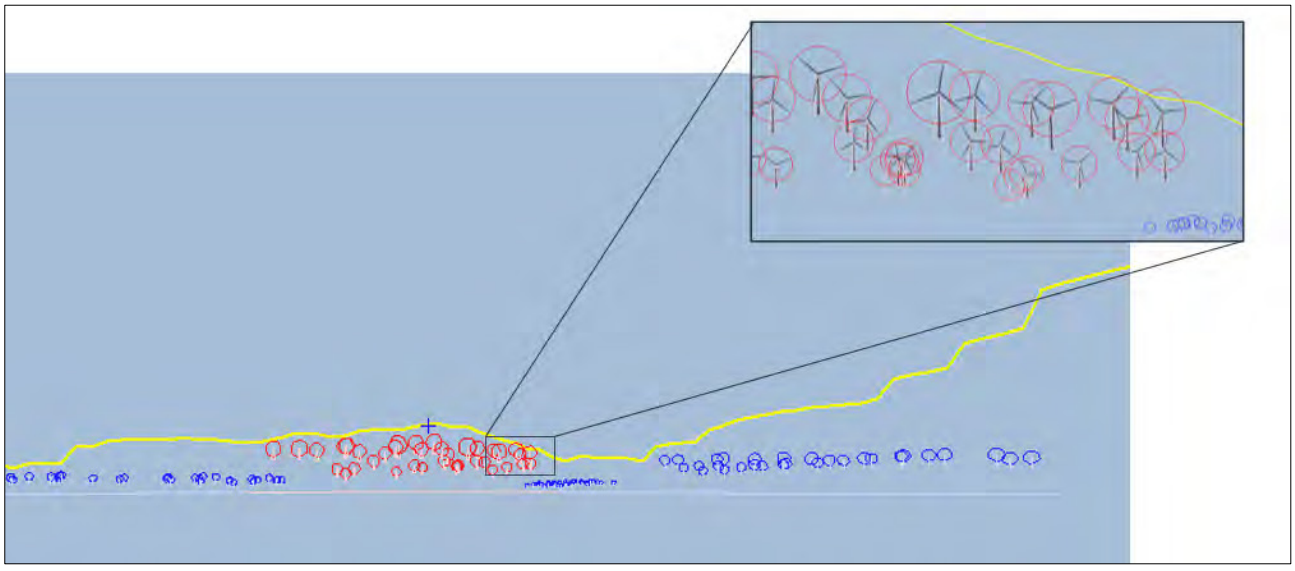
Se kart i figur 4-1 for fotostandpunkt for de ulike visualiseringene i utredningen. Se også kart i kapittel 5.3 for fotostandpunkt for de ulike visualiseringene i sammenheng med delområdene og konsekvensgrad. Alle nevnte fotostandpunkt i de ulike utredningsprogrammene er visualisert, med unntak av Vikedalslia. Dette punktet er ikke visualisert fordi graden av synlighet herfra er veldig lav. Teoretiske synlighetskart samt windPRO-modell viser at det kun er toppen av vingen på 2 turbiner som vil bli synlig i et svært begrenset område i Vikedalslia. Se figur 4-2 og figur 4-3.



Figur 4-1: Kart over fotostandpunkt for de ulike visualiseringene.



Figur 4-2: Kart som viser områder hvor 2 turbiner (gul farge) er synlige fra Vikedalslia. Rød prikk viser standpunktet i windPRO-modellutsnittet i figuren under.



Figur 4-3: Utsnitt fra windPRO-modell som viser at 2 turbiner kan få vinger som så vidt er synlige over terreng sett fra Vikedalslia (rødt punkt i kartet i figuren over). Gul strek er terrenget, røde turbiner er Moifjellet/Mellomstrand, mens blå turbiner er eksisterende vindkraftverk i området.

4.3 Landskapsregioner

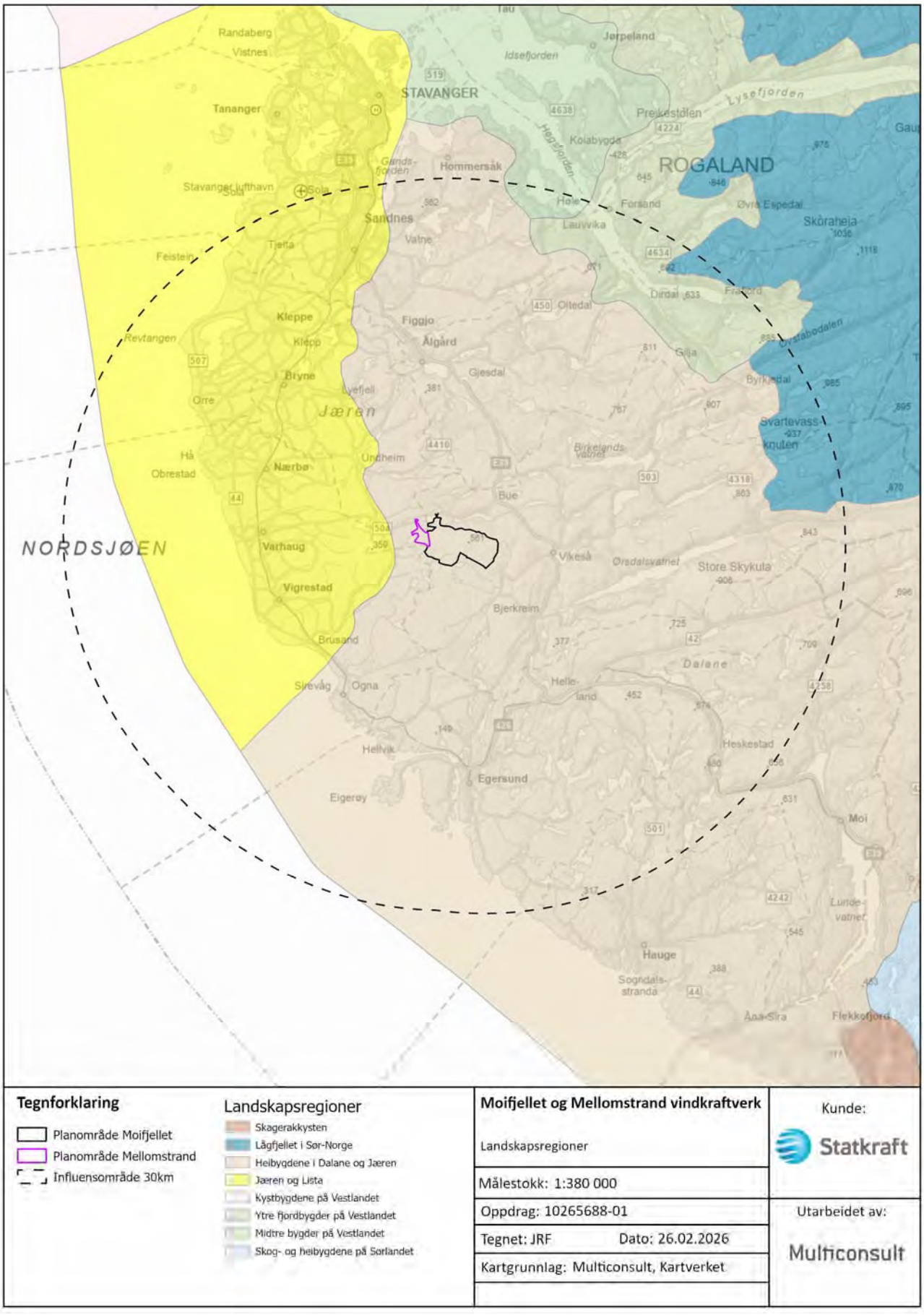
Influensområdet på 30 km går over fem ulike landskapsregioner:

- 15. Lågfjellet i Sør-Norge
- 18. Heibygdene i Dalane og Jæren
- 19. Jæren og Lista

- 21. Ytre fjordbygder på Vestlandet
- 22. Midtre bygder på Vestlandet

Tiltaksområdet ligger innenfor region *18. Heibygdene i Dalane og Jæren*, som også er regionen som er størst innenfor influensområdet. Region *19. Jæren og Lista* dekker også en stor del av influensområdet. Region *15. Lågfjellet i Sør-Norge* dekker et lite hjørne i øst. Region *21. Ytre fjordbygder på Vestlandet* og *22. Midtre bygder på Vestlandet* dekker en liten del hver i nordøst, og ved hjelp av teoretisk synlighetsanalyse vil disse to regionene utgå. For beskrivelse av de ulike landskapsregionene, se mer info om dette på NIBIOs nettside: https://www.nibio.no/tema/landskap/landskapskart/nasjonalt-referansesystem-for-landskap/landskapsregioner.

Se kart som viser de ulike landskapsregionene innenfor influensområdet i figur 4-4.



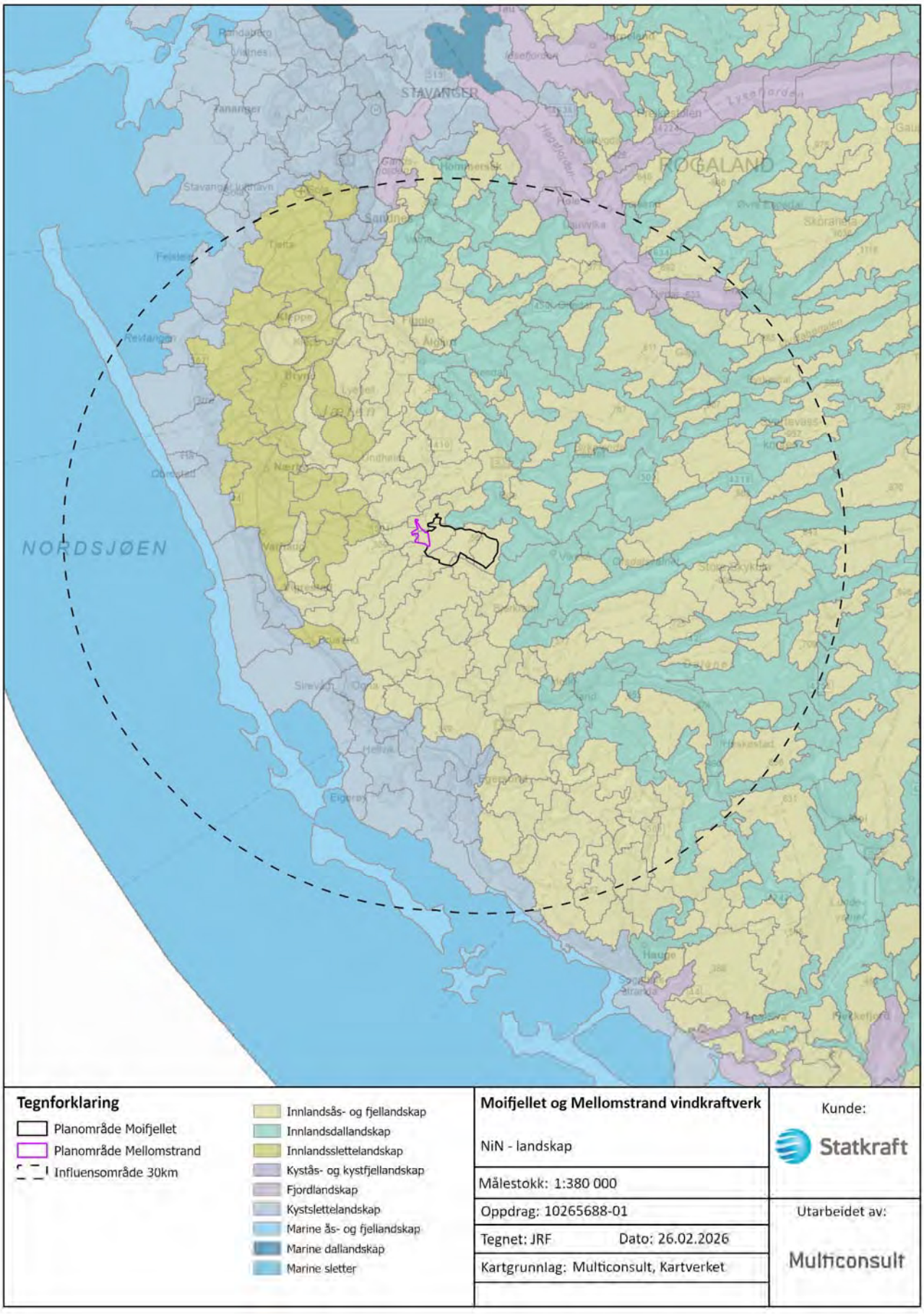
Figur 4-4: Kart over landskapsregioner innenfor influensområdet.

4.4 Landskapstyper - Naturtyper i Norge landskap (NiN landskap)

Det er flere NiN landskap hovedtyper innenfor influensområdet. Disse er:

- Innlandsås- og fjellandskap
- Innlandsdallandskap
- Innlandsslettelandskap
- Fjordlandskap
- Kystslettelandskap
- Marine ås- og fjellandskap (under vann)
- Marine sletter (under vann)

For mer info om de ulike hovedtypene, se info om NiN landskap på artdatabankens nettside: https://artsdatabanken.no/nin/landskap. For kart over de ulike hovedtypene innenfor influensområdet, se figur 4-5.



Figur 4-5: NiN-landskap hovedtyper innenfor influensområdet.

4.5 Verneområder

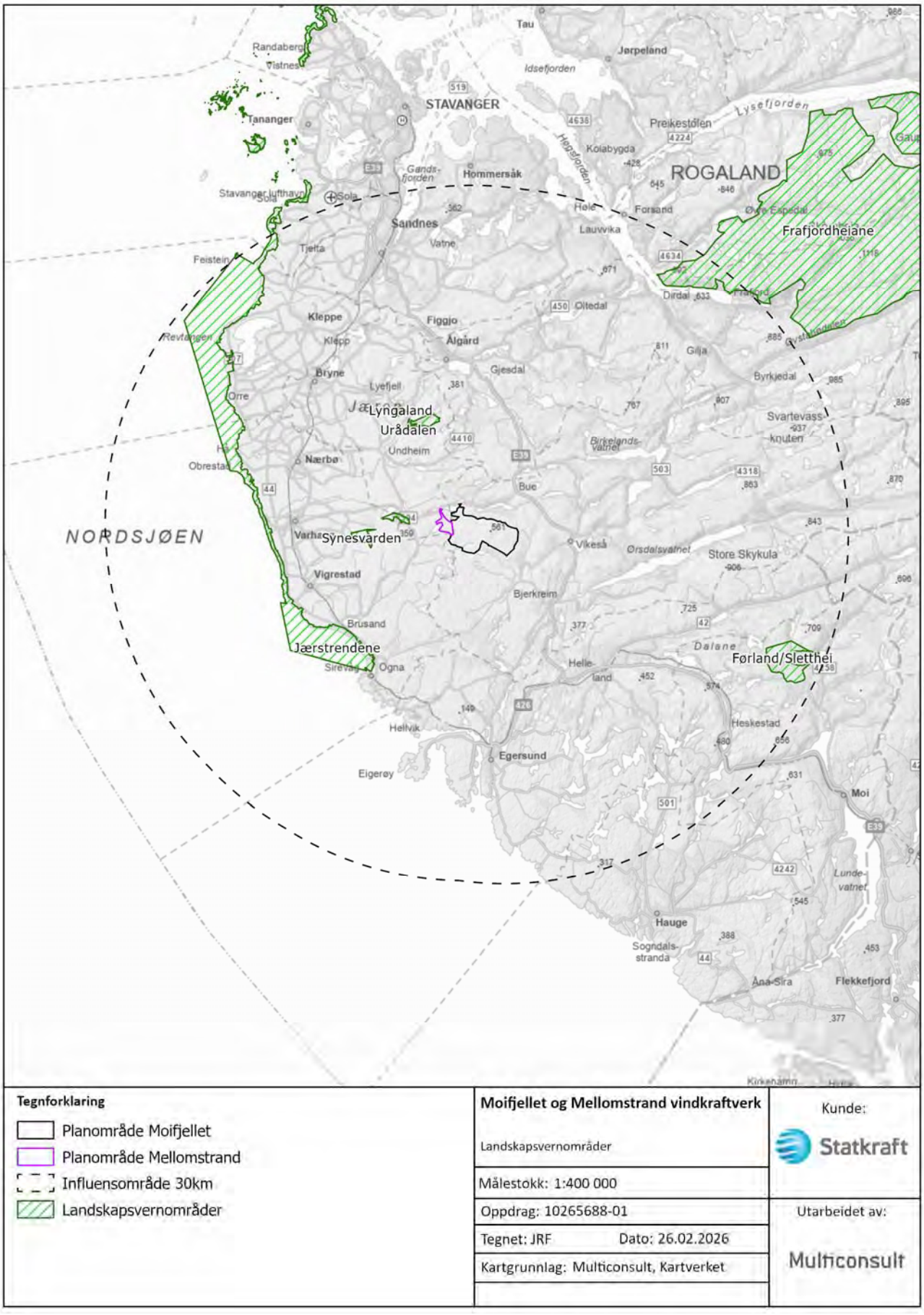
Landskapsvernområder er natur- eller kulturlandskap med stor økologisk, kulturell eller opplevelsesmessig verdi. Til landskapet regnes også kulturminner som bidrar til landskapets egenart. Verneformen brukes ofte for å ta vare på kulturlandskap i aktiv bruk.

Bevaring av landskapsbildet og landskapsopplevelsen er en sentral målsetting ved opprettelse av landskapsvernområder. I noen landskapsvernområder er også bestemte deler av dyre- eller plantelivet vernet (9)*.*

Det er 8 landskapsvernområder innenfor influensområdet. Disse får i henhold til metoden i M-1941 automatisk svært stor verdi. De er tatt ut som egne delområder, eller slått sammen med KULA-områder, da disse ofte overlapper noe. KULA-områder får etter metoden alltid stor verdi, så om et KULA-område og et landskapsvernområde slås sammen til et delområde får dette delområdet svært stor verdi. For kart over de 8 landskapsregionene, se figur 4-6.

Tabell 4-1: Oversikt over verneområder innenfor influensområdet.

Navn verneområde	**Areal**	**Beskrivelse**
Jærstrendene landskapsvernområde	95 5219,5 daa Landareal: 17 400 daa Sjøareal: 78 700 daa	*Verneformål: Egenartet natur- og kulturlandskap* (10)
Søndre Frøyland landskapsvernområde med fuglefredning	446 daa	*Verneformål: Formålet med vern av landskap, fugleliv og biotop er å bevare eit vakkert og eigenarta landskapsbilete med Tangen som eit dominerande og geologisk verdifullt element, og samstundes verne om forekomstane av trekkande, overvintrande og hekkande fugl i området* (11).
Lyngaland landskapsvernområde	377 daa	*Verneformål: Formålet med vernet er å ta vare på eit kulturlandskap frå folkevandringstida* (12).
Urådalen landskapsvernområde	1940 daa	*Verneformål: Egenartet natur- og kulturlandskap* (13).
Synesvarden landskapsvernområde	2627 daa	*Verneformål: Jærsk hei-, myr- og utmarksbeitelandskap* (14).
Synesvarden landskapsvernområde med plantelivsfredning	14 000 daa	*Verneformål: Formålet med vernet er å ta vare på et større jærsk hei-, myr- og utmarksbeitelandskap med et spesielt dyre- og planteliv, kulturminne, kvartærgeologiske landskapsformer og område med stor verdi for naturopplevelse* (15).
Førland/Sletthei landskapsvernområde	8000 daa	*Verneformål: Tørrheiar, homogene fuktheiar, heiegardsmiljø* (16).
Frafjordheiane landskapsvernområde	418 600 daa	*Verneformål: Føremålet med vernet av Frafjordheiane er, etter verneføreskrifta sin §2: - å ta vare på eit representativt, særprega og vakkert landskap, med bratte fjord- og dalsider via lågheiar opp til glattskurt høgfjell. - å ta vare på vatn og vassdrag, viktige leveområde for eit særmerkt plante-og dyreliv, geologiske landskapsformer, samt beite- og stølslandskap med automatisk freda og nyare tids kulturminne. - å ta vare på ein særmerkt alm-/lindeskog med stor variasjon, storfrytledominert bjørkeskog, frisk fattigeng, nordvendte berg og urar, og elvar og flaumelvefar med oseaniske mosesamfunn i Røssdalen. I tillegg heiter det at "Allmenta skal ha høve til naturoppleving gjennom utøving av tradisjonelt og enkelt friluftsliv med lita grad av teknisk tilrettelegging"* (17).



Tegnforklaring

- Planområde Moifjellet
- Planområde Mellomstrand
- Influensområde 30km
- Landskapsvernområder

Moifjellet og Mellomstrand vindkraftverk	Kunde: Statkraft
Landskapsvernområder	
Målestokk: 1:400 000	
Oppdrag: 10265688-01	Utarbeidet av:
Tegnet: JRF Dato: 26.02.2026	Multiconsult
Kartgrunnlag: Multiconsult, Kartverket	

Figur 4-6: Landskapsvernområder innenfor influensområdet.

4.6 Kulturmiljø og landskap av nasjonal interesse (tidligere KULA og NB!), verdifulle kulturlandskap og utvalgte kulturlandskap

Kulturmiljø og landskap av nasjonal interesse bygger videre på de to registrene KULA-registeret (Kulturhistoriske landskap av nasjonal interesse) og NB!-registeret (Kulturmiljøer av nasjonal interesse i byer og tettsteder). De tidligere NB!-registrerte områdene dekkes under tema kulturmiljø, mens de tidligere KULA-områdene dekkes under tema landskap. Det er i denne utredningen valgt å beholde navnet KULA for disse områdene. Det er ingen utvalgte kulturlandskap innenfor influensområdet, så denne typen landskap beskrives ikke.

Info om KULA-prosjektet: *Prosjektet Kulturhistoriske landskap av nasjonal interesse (KULA) har hatt som mål å synliggjøre hvordan bosettinger, næringer og ferdsel har preget landskapet. Viktige faser og hendelser i historien, historiske strukturer og ulike etniske og sosiale gruppers bruk av landskapet har satt sine spor. Fra og med 2023 inngår KULA i den felles oversikten Kulturmiljø og landskap av nasjonal interesse.*

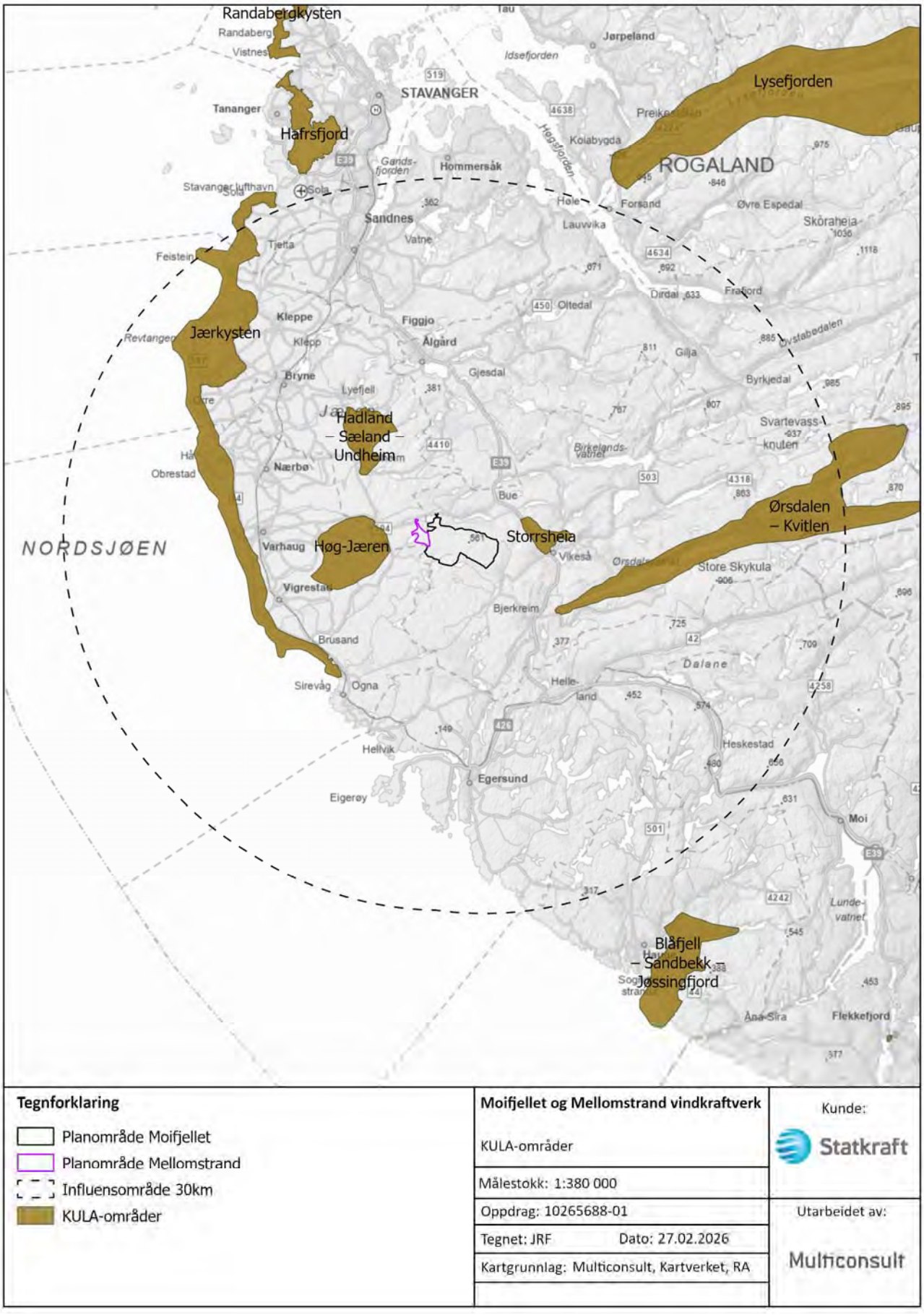
Oversikten skal videreføre målsettingen til KULA-prosjektet. Den skal være et kunnskapsgrunnlag, som skal sikre bærekraftig forvaltning av kulturmiljø i by, tettsted og landskap av nasjonal interesse. Oversikten tar i tillegg til KULA, utgangspunkt i NB!-registeret. Oversikten skal også inkludere flere kulturmiljø, som på bakgrunn av geografisk plassering, art eller størrelse har falt utenfor de etablerte registrene. Det kan blant annet være uthavner, fiskevær, industriområde, militæranlegg og kanalanlegg (18).

Info om verdifulle kulturlandskap: *Forvaltningsmessig høyt prioriterte kulturlandskapsområder med både biologiske og kulturhistoriske verdier. Dette omfatter blant annet de høgest prioriterte områdene i Nasjonal registrering av verdifulle kulturlandskap, og utgjør 10-30 områder i hvert fylke, totalt ca. 300 områder i landet* (19).

Det er 5 KULA-områder innenfor influensområdet og 4 verdifulle kulturlandskap. KULA-områder får i henhold til metoden i M-1941 automatisk stor verdi, og disse er tatt ut som egne delområder. Som nevnt i kapittel 4.5 får KULA-områder som blir slått sammen med landskapsvernområder til ett delområde svært stor verdi, siden landskapsvernområder automatisk får svært stor verdi. KULA-områder overlapper også ofte med verdifulle kulturlandskap, som etter metoden også automatisk får stor verdi. Der de ikke overlapper tas også verdifulle kulturlandskap ut som egne delområder. For kart over de 5 KULA-områdene og de 4 verdifulle kulturlandskapene, se figur 4-7 og figur 4-8.

Tabell 4-2: Oversikt over KULA-områder innenfor influensområdet.

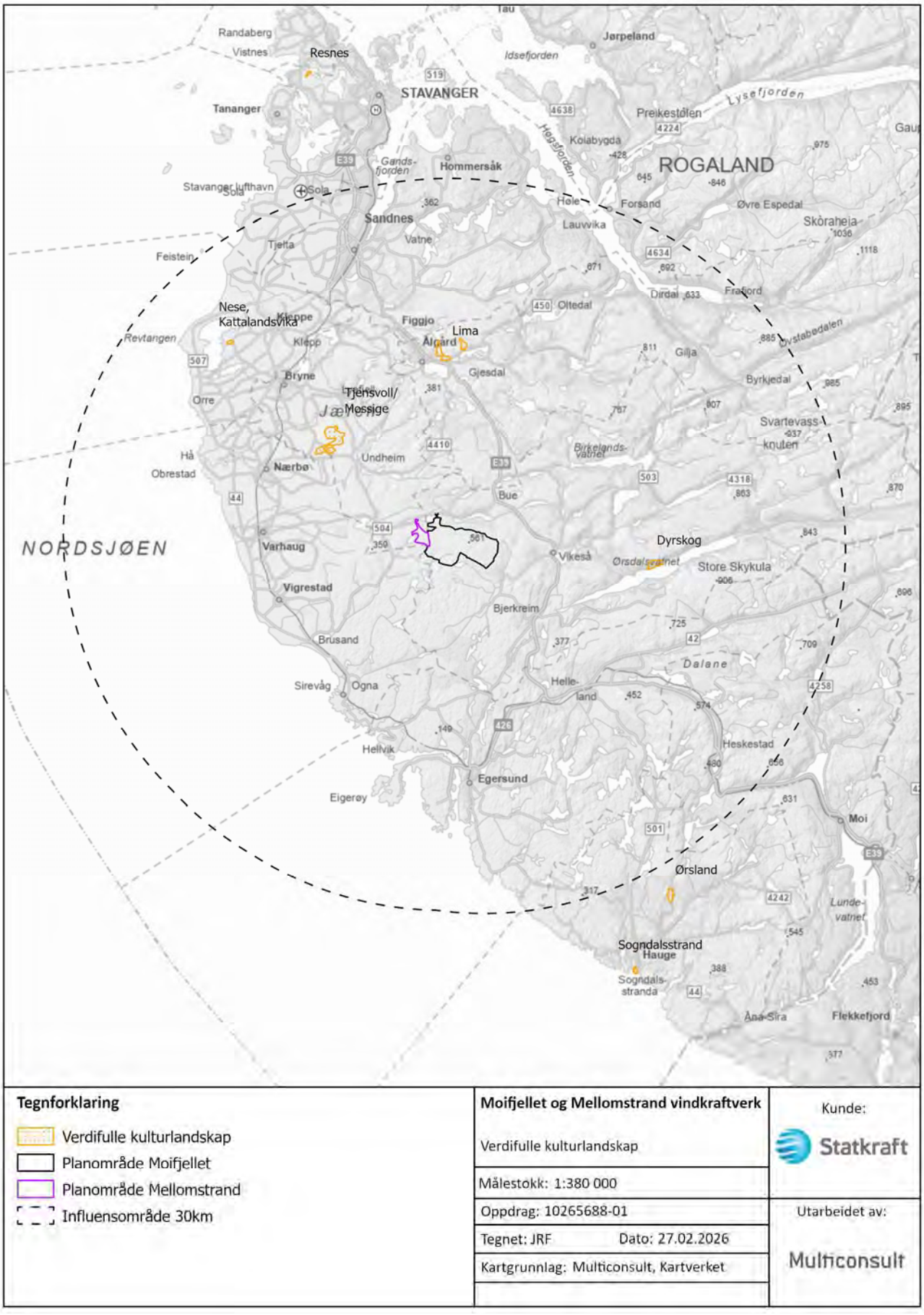
Navn KULA-område	Nasjonal interesse
Jærkysten (K520)	*Jærkysten er et særmerkt kystnært jordbrukslandskap på Norges største lavlandsslette. Den lange kystlinja har en lang og rik historie om jordbruk og fiske, kommunikasjon, forsvar og makt. Dette kommer godt til syne gjennom det flate jordbrukslandskapet, steingardene, strandgravfeltene, fyrene, middelalderkirkestedene og sporene etter tyskernes forsvarsverk fra andre verdenskrig. Det særprega flate jordbrukslandskapet viser utviklinga av jordbruket fram til dagens moderne driftsformer, med mange og rike kulturspor og stor tidsdybde* (20).
Hadland-Sæland-Undheim (K522)	*Rogaland er det største jordbruksfylket i Norge og Jæren står i en særstilling. Den vestlige og sørvestlige delen av landskapet er representativt for det industrielle jordbruket på Jæren. På gårdene Hadland og Lyngaland nord og øst for Håånå, finnes store sammenhengende fornminnefelt i et tradisjonelt kulturbeite og lyngheilandskap. De store sammenhengende gårdsanleggene, grav- og røysfeltene fra jernalder, i kombinasjon med kulturmark, kystlynghei og naturbeitemark gjør området øst for Håelva unikt. Mot sør i området ligger Knudaheio som er et historisk minnesmerke, sentralt i Arne Garborgs forfatterskap og viktig for Høg-Jærens og Jærens plass i den nasjonale historien. Den tette eikeskogen i fjellsiden som avgrenser landskapet mot øst er et sjeldent eksempel på det tidligere skogkledte Jæren. Kontrastene og tidsdybden i området er stor og illustrerer på en god måte jordbruks- og kulturhistorien på Jæren* (21).
Høg-Jæren (K524)	*Kystlyngheiene er blant de eldste kulturlandskapene vi har, og resultat av bruken av områdene til beite hele året. De er en del av en felles europeisk kystkulturarv, og landskapstypen er i dag sterkt trua. Kystlyngheiene langs Norskekysten hadde i tida før oppdyrkingen sin aller største utbredelse på Jæren, og landskapet som omtales her representerer i dag det største gjenværende sammenhengende lyngheilandskapet i regionen. Det er ett av de største, også i nasjonal sammenheng. Sporene etter tidligere tiders bruk, blant annet til støling, stakking av høy, torvsanking og beite, er mange* (22).
Storrsheia (K523)	*Sammenlignet med resten av landet, er gårdsanlegg med synlige strukturer et særtrekk for Rogaland. Også i nordisk sammenheng utgjør dette et særtrekk. I dette området nord og vest for Vikeså finnes en unik konsentrasjon av store og godt synlige gårdsanlegg i et sammenhengende landskap. De forhistoriske ødegårdene fra eldre jernalder består av en rekke ulike synlige elementer som vitner om den forhistoriske gårdens organisering og landskapsbruk. Strukturene og sammenhengene er særlig tydelige og godt bevarte på gårdsanleggene i dette landskapet og Uadal karakteriseres som en av de best bevarte forhistoriske ødegårdene fra jernalder i hele Sør-Norge. Ødegårdene har et stort kunnskapspotensial og høy opplevelsesverdi* (23).
Ørsdalen-Kvitlen (K521)	*Landskapet representerer ulike former for jordbruk- og ressursutnyttelse, fra marginale strandagårder og fjellgårder, til de grøderike moene i Ørsdalen. Landskapet har lang landbrukshistorisk kontinuitet. Dette er synlig ved de mange kulturlandskapselementene, fra forhistoriske rydnings- og gravrøyser til de karakteristiske geilene på strandagardene og fjellgårdene, og fram til dagens moderne jordbrukslandskap i Ørsdalen. Landskapet har stor grad av sammenheng og helhet, uten store moderne tiltak. De bratte fjellene og den grønne dalen med det rolige elveløpet ned til Ørsdalsvatnet, utgjør et kontrastfullt og vakkert landskap. Her er sammenhengene mellom natur- og kulturforhold framtredende og kulturminnene godt synlige i landskapet* (24).



Figur 4-7: KULA-områder innenfor influensområdet.

Tabell 4-3: Oversikt over verdifulle kulturlandskap innenfor influensområdet.

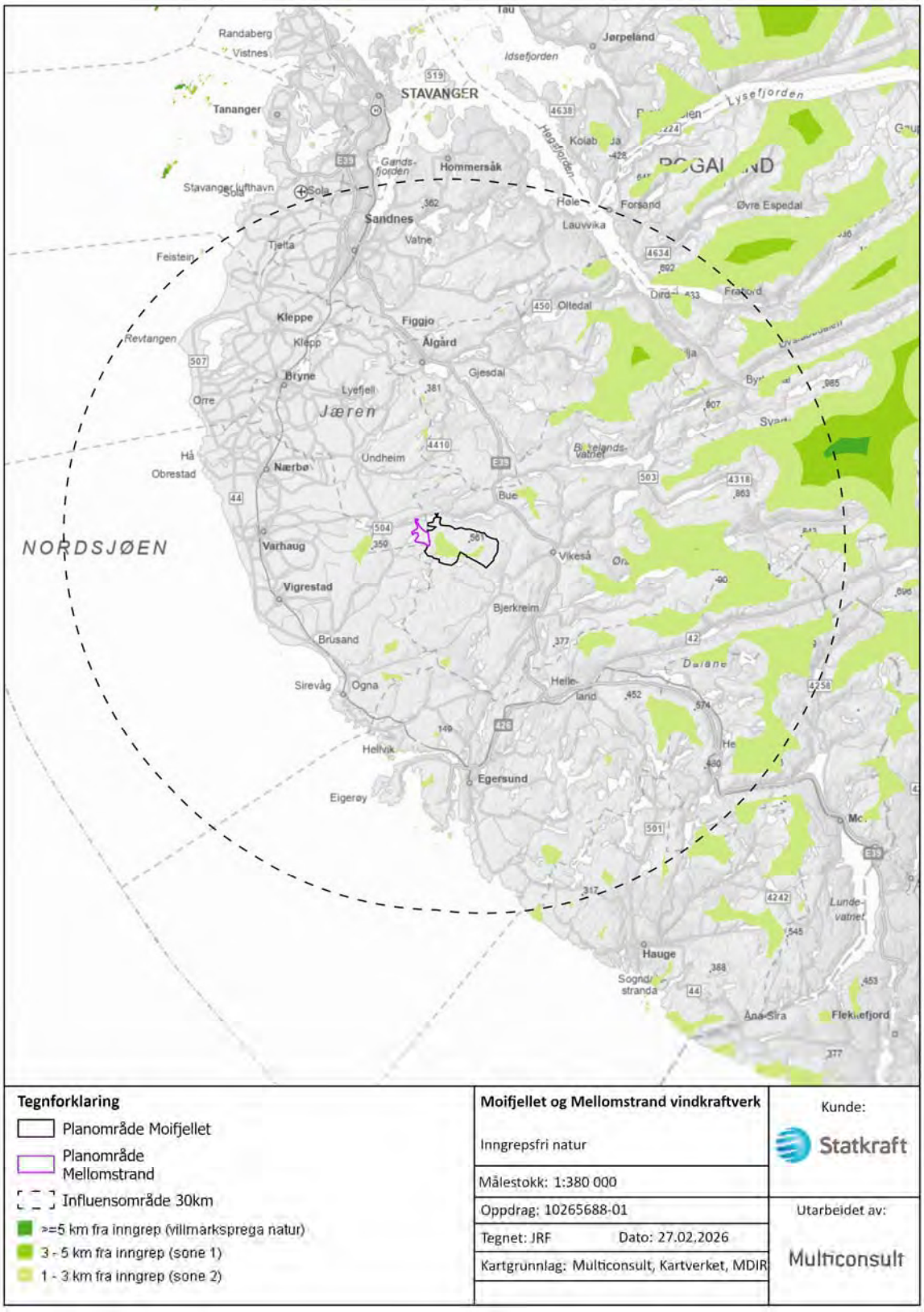
Navn verdifulle kulturlandskap	**Areal**	**Beskrivelse**
Nese, Kattlandsvika	138,8 daa	*Åpent, særpreget dødis/morenelandskap med røsslyng, fuktmark og delvis oppgjødslet aktivt beite (storfe/småfe). Storslått storskalalandskap typisk flat-jæren, tilknyttet åpent vann og våtmark i vest, myr og særegent morenelandskap m/fornminner i øst over* (25).
Lima	1057,8 daa	*Tradisjonelt, tett tun med 6 bygninger, i skråning ned mot Limavatnet. Mange kulturspor i innmark og utmark. Landskapet åpent og intensivt beitet, med mindre skoger, m.a. eik- og hassel. Fukthei i utmark. Åpent landskap rundt Limavatnet, storskala* (26).
Tjensvoll/Mossige	2466,9 daa	*Bølgende heilandskap med bjørke- og eikebeiteskog i de lavere partiene i vest og grashei/fukthei på de høyere partiene i øst. Rundt de to gårdstunene er det fulldyrket. All inn- og utmark er inngjerdet av steingjerder* (27).
Dyrskog	607,4 daa	*På nordsiden av Ørsdalvatnet i en bratt sørvendt skråning ligger Dyrskog med naust ved vatnet, frukttre, beite og eng på begge sider av en smal traktorvei som går opp til tunet og husene, beite og styvingstre ovenfor husene, bekk med steinstem og kvernhus* (28).



Figur 4-8: Verdifulle kulturlandskap innenfor influensområdet.

4.7 Inngrepsfri natur

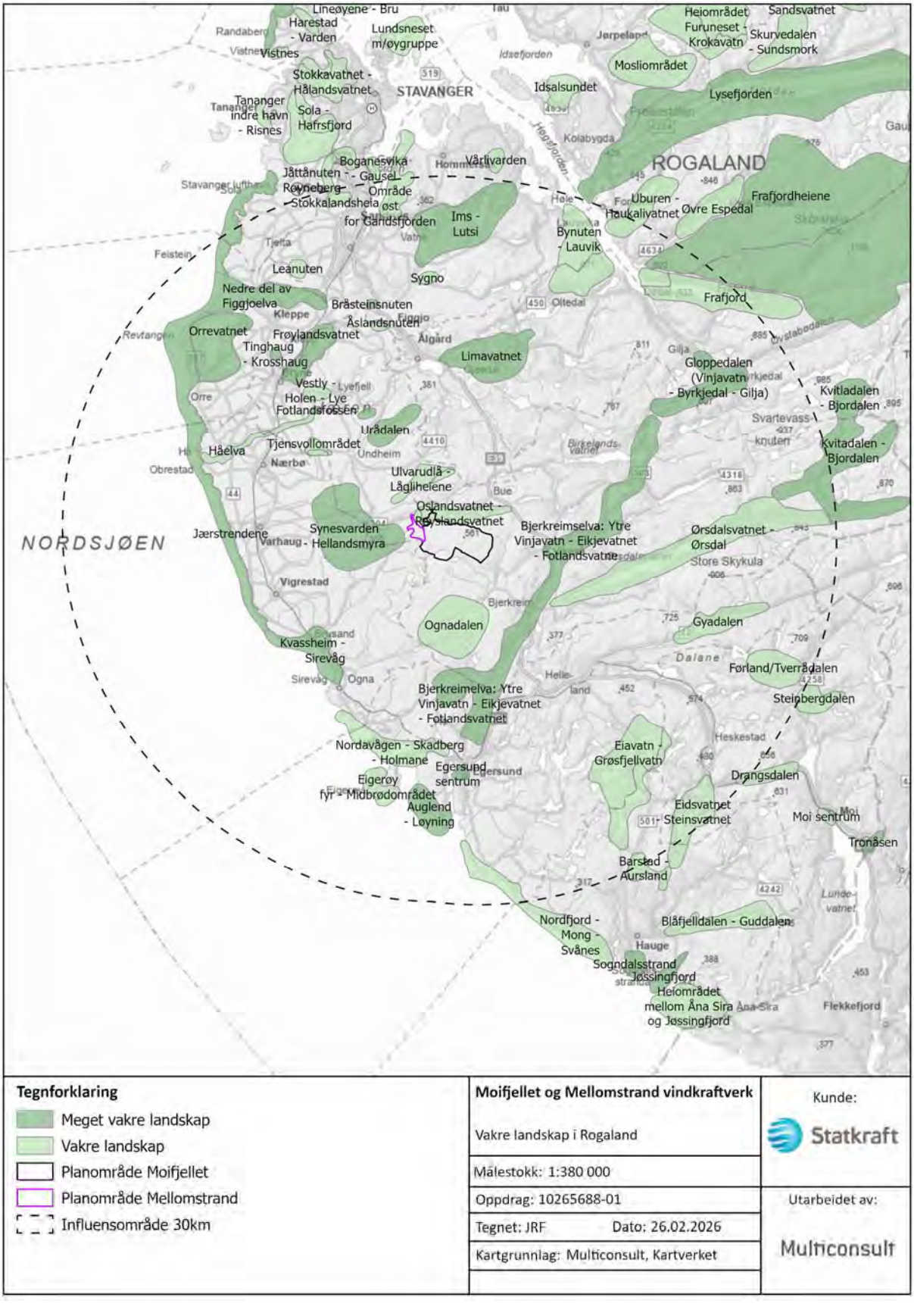
Det er få områder med inngrepsfri natur (sone 2 – 1-3 km fra inngrep) igjen i Bjerkreim og Time kommune, hvorav det ene området er på Moifjellet (se figur 4-9). Dette området vil forsvinne helt ved en eventuell utbygging av Moifjellet og Mellomstrand vindkraftverk.



Figur 4-9: Områder med inngrepsfri natur innenfor influensområdet. Et område ligger innenfor tiltaksområdet.

4.8 Vakre landskap i Rogaland

Det er flere «Vakre landskap i Rogaland» innenfor influensområdet, se figur 4-10. Disse er nærmere beskrevet under beskrivelsene av delområdetypene.



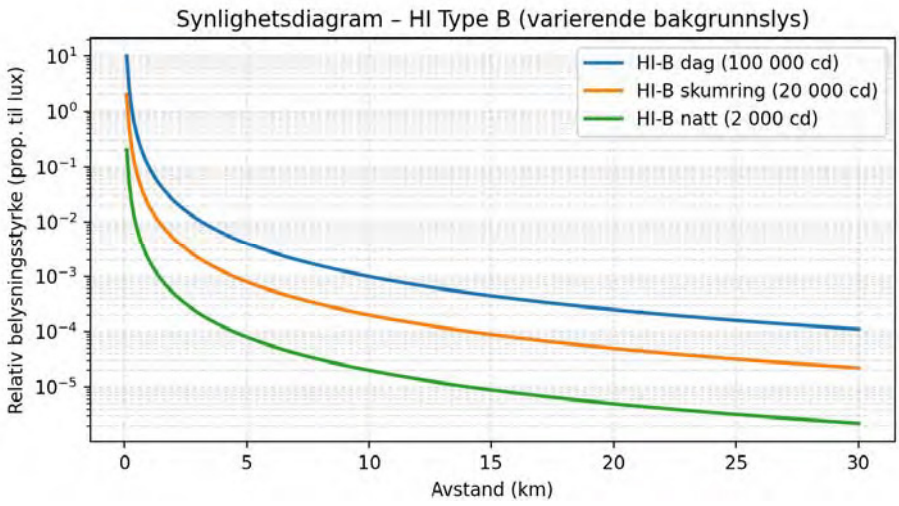
Figur 4-10: Kart over "Vakre landskap i Rogaland" som ligger innenfor influensområdet.

4.9 Visuelle virkninger av hinderlys

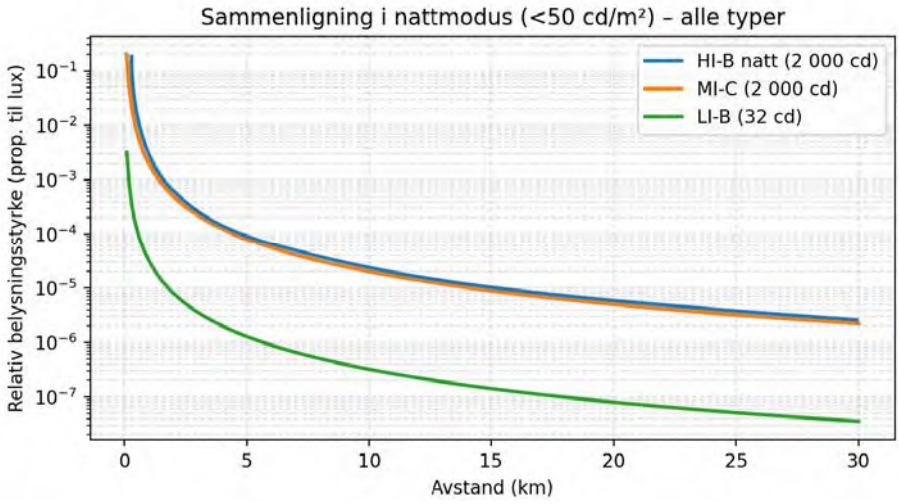
Hinderlys vil, slik hensikten er, øke et vindkraftverks synlighet i landskapet. Under følger et skrivebordsstudie for opplevd synlighet og erfaringer fra andre eksisterende vindkraftverk. For krav til merking av Moifjellet og Mellomstrand vindkraftverk, se kapittel 3.3.6.

4.9.1 Opplevd synlighet

Det er gjort et skrivebordsstudie for å vurdere opplevd synlighet for ulike hinderlys, der det differensieres med hensyn til lysintensitet for blinkende HI sett opp mot ulik bakgrunnsluminans (Vedlegg 1). Vurderte lystyper er: HI Type B, MI Type C og LI Type B, med bakgrunnsluminans iht. ICAO Annex 14. Vesentlige funn er vist i figur 4-11 og figur 4-12. Figurene viser relativ belysningsstyrke (E ∝ cd / d2). Atmosfærisk demping, terrengskjerming og siktforhold er ikke tatt med i beregningen.



Figur 4-11: Figuren viser synlighetsdiagram for HI Type B, fordelt på dagslys, skumring og nattemørke.



Figur 4-12: Figuren viser en sammenligning i nattmodus for HI-B, MI-C og LI-B, der HI og MI er sammenfallende.

HI vil i dagslys være synlige innenfor en større sektor enn dagens lys. Med endra bakgrunnsbelysning skal intensiteten i lysene reduseres. I mørkret vil HI ha samme intensitet som dagens MI merking, på 2000cd.

Ettersom HI skal være blinkende vil det likevel medføre endringer i visuelle egenskaper sett opp mot fast lys:

- Raske endringer i lysstyrke gjør at hjernen oppfatter dem mye tydeligere enn jevnt lys
- Synlighet over store avstander øker ved at hvert blink fungerer som et "signal"
- Bedre synlighet i perifert syn ettersom vi lettere registrerer endringer i lys i sidesynet

Synlighet er tolket for ulik lysintensitet og ulik bakgrunnsluminans, for ulike synlighetssoner, som beskrevet i kapittel 2.1.4.

I sonen som ligger nedenfor 10° vinkling fra lyskilden regnes påvirkningen som ubetydelig. I sonen som ligger nedenfor 1° vinkling fra lyskilden vil lysstyrken være 1000cd eller mindre på natta.

Tabell 4-4: Tabellen beskriver synlighet for ulike lystyper i dagslys (>500 cd/m²).

Sone	HI Type B (dagslys 100 000cd)	MI Type C (2000 cd)	LI Type B (32 cd)
0–700 m	Ekstremt sterkt/blendende	Synlig	Nær usynlig
700 m–2 km	Svært dominerende og tydelig	Lite synlig	Usynlig
2–5 km	Svært synlig	Nær usynlig	Usynlig
5–14 km	Tydelig blink	Usynlig	Usynlig
14–20 km	Synlig i klart vær	Usynlig	Usynlig
20–30 km	Svakt, men detekterbart	Usynlig	Usynlig

Tabell 4-5: Tabellen beskriver synlighet for ulike lystyper i skumring (50–500 cd/m²).

Sone	HI Type B (skumring 20 000cd)	MI Type C (2000 cd)	LI Type B (32 cd)
0–700 m	Meget sterkt, dominerende	Tydelig	Lite synlig
700 m–2 km	Svært tydelig	Synlig	Nær usynlig
2–5 km	Svært synlig	Synlig i klart vær	Usynlig
5–14 km	Synlig	Lite synlig	Usynlig
14–20 km	Synlig blink	Nær usynlig	Usynlig
20–30 km	Svakt, men detekterbart	Usynlig	Usynlig

Tabell 4-6: Tabellen beskriver synlighet for ulike lystyper i mørket (<50 cd/m²).

Sone	HI Type B (mørket 2000cd)	HI Type B (1000cd)	MI Type C (2000 cd)	LI Type B (32 cd)
0–700 m	Kraftig blink	Svært tydelig	Kraftig	Tydelig
700–2 km	Svært tydelig	Meget tydelig	Meget synlig	Lite synlig
2–5 km	Synlig	Synlig	Synlig	Nær usynlig
5–14 km	Synlig blink	Lite synlig	Lite synlig	Usynlig
14–20 km	Svakt, men detekterbart	Svakt, men detekterbart	Nær usynlig	Usynlig
20–30 km	Nær usynlig	Nær usynlig	Usynlig	Usynlig

4.9.2 Erfaring av opplevelse av hinderlys internasjonalt

Det er ikke tvil om at høyintensitets hinderlys til tider oppfattes som svært plagsomt, (29), (30).

Folks negative oppfatning synes i stor grad å være knyttet til hinderlys når det er lite lys eller helt mørkt, og i mindre grad i fullt dagslys selv om hinderlysene da lyser atskillig sterkere (30). Forskjellen i lysintensitet mellom hinderlysene og den naturlige belysningen oppleves nok mindre på dagtid, spesielt i godt vær/fullt solskinn. På kveld/natt blir lysene mye mer dominerende etter hvert som landskapet ellers «forsvinner», til tross for at lysstyrken i hinderlysene trappes ned. Det trekkes også fram at effekten kan oppleves størst i skumring, når man fortsatt ser landskapet, enn i mørket når landskapsrommet blir borte (31). Forskjellen til før-situasjonen, som i Norge gjerne er fra et utmarksområde uten eller med lite kunstig belysning, spiller også inn. I Norge vil det også være å forvente en ekstra stor forskjell i opplevd plage, sammenlignet med land lengre sør, mellom sommerhalvåret med mye sollys og vinterhalvåret med mye halvmørke og mørke. Været, og da spesielt lavt skydekke over vindkraftverket, kan også forverre opplevelsen.

For utendørs friluftslivsaktiviteter er det på denne bakgrunn rimelig å forvente en viss forskjell mellom aktiviteter/områder som brukes mest når det er mye sol om sommeren, typisk bading, og aktiviteter som utføres under dårligere lysforhold, slik som skigåing utenfor lysløyper, turgåing om høsten, nærturer ettermiddag/kveld og i særdeleshet stjernekikking/opplevelsen av mørk natt. Rudolph m.fl. (2017) knytter deler av plagen fra høyintensitets lysmerking til opplevelsen av tap av stedsidentitet og stedstilknytning som følge av tap av mørke.

4.9.3 Erfaring av opplevelse av hinderlys fra Odal vindkraftverk

Det er først de aller siste årene vi har fått vindkraftverk i Norge med høyintensitets hinderlys og dermed kunnet erfare dette selv fra bygde anlegg. Odal vindkraftverk har tilsvarende HI merking som er aktuelt vindturbiner for Moifjellet og Mellomstrand vindkraftverk. I 2023 ble det foretatt en undersøkelse av hvordan naboer til vindkraftverket opplever hinderlysene som er montert på et utvalg av vindturbinene i vindkraftverket (32). Undersøkelsen dekker et representativt utvalg og feilmargin er beregnet å være 10 %.

Spørsmål i undersøkelsen omhandlet trivsel, tilhørighet, stedlig identitet og eventuell endret opplevelse eller adferd grunnet utbygging og oppstart av vindkraftverket med merking med hinderlys. Informantene var hytteeiere og fastboende innenfor en avstand på 20 km, med god utsikt til vindkraftverket.

Få opplyste at de blir veldig plaget, men mange uttrykte at de tror andre er mer plaget enn de blir selv. Generell trivsel omtrent et halvt år etter at vindkraftverket ble etablert var lavere enn før. Noen fant lysmerkingen problematisk og intens, og endret adferd og gjorde tiltak for å unngå negativ påvirkning fra lysmerkingen. Den generelle holdningen til vindkraftverk påvirker opplevelsene til en viss grad, men også informanter som er positive til vindkraftverk, fant aspekter ved lysmerkingen problematisk. Noen opplyste at de liker den «nye» utsikten, mens andre tror at de de kommer til å venne seg til den.

Resultatene tyder på at grad av eksisterende lysforurensing i nær tilknytning til bolig påvirker opplevelsen av lysene fra vindkraftverket mer enn avstand og antall lys som sees. Der det er mørkt i nærheten av en eiendom, oppleves lysene fra vindkraftverket som sterkere og mer forstyrrende enn ved boliger hvor det er mye annen lysforurensning (gatelys etc.) nær boligen. For boliger som ligger nær større flater med vann, oppleves økt intensitet av lys fra vindkraftverk siden lysene fra vindkraftverket blir reflektert i vannflaten. Lysene vil også oppleves som mer forstyrrende når man slapper av, samt når man oppholder seg utendørs og spesielt når man søker ut i naturen.

5 Trinn 1: Beskrivelse, verdi, påvirkning og konsekvens for delområder

5.1 Influensområdet og inndeling i delområder

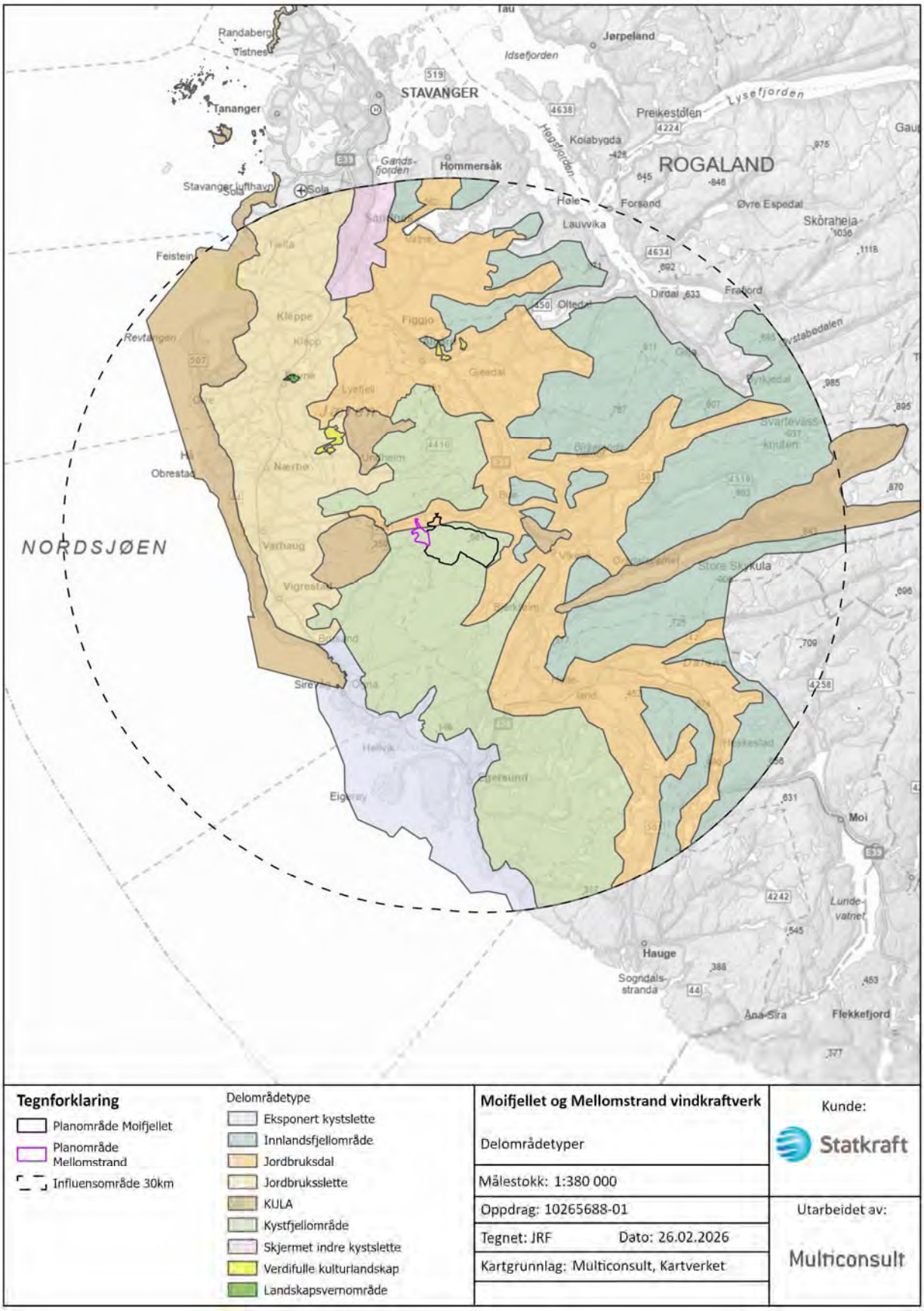
Influensområdet for denne utredningen er satt til 30 km. Synlighetsanalysen er et viktig hjelpemiddel for å konkretisere influensområdet, ettersom blant annet store terrengvariasjoner, bebyggelse og vegetasjon mange steder begrenser eksponering innenfor teoretisk influensområde. Ved hjelp av synlighetsanalysen er influensområdet begrenset til områdene hvor tiltakene er synlige. Influensområdet på 30 km og områder hvor tiltaket ikke er synlig kan sees i kartet i figur 5-2.

Influensområdet er delt inn i 9 ulike delområdetyper, som beskrives i kapittel 5.2. Inndeling i delområder er tilpasset skalaen for utredningen med 30 km influensområde. Delområdene følger hovedsakelig NiN landskap, landskapets hovedtyper, med justeringer der det er hensiktsmessig. «Vakre landskap i Rogaland» er tatt med i delområdene. KULA-områder, landskapsvernområder og verdifulle kulturlandskap er tatt ut som egne delområder. Som beskrevet i kapittel 2.1.4, deles influensområdet opp i synlighetssoner i tillegg til delområdetyper. Disse sonene brukes til å dele opp delområdetypene i delområder innenfor de ulike sonene. Deretter vil det vurderes påvirkningen av tiltaket innenfor disse delområdene, og videre vil konsekvensgraden vurderes.

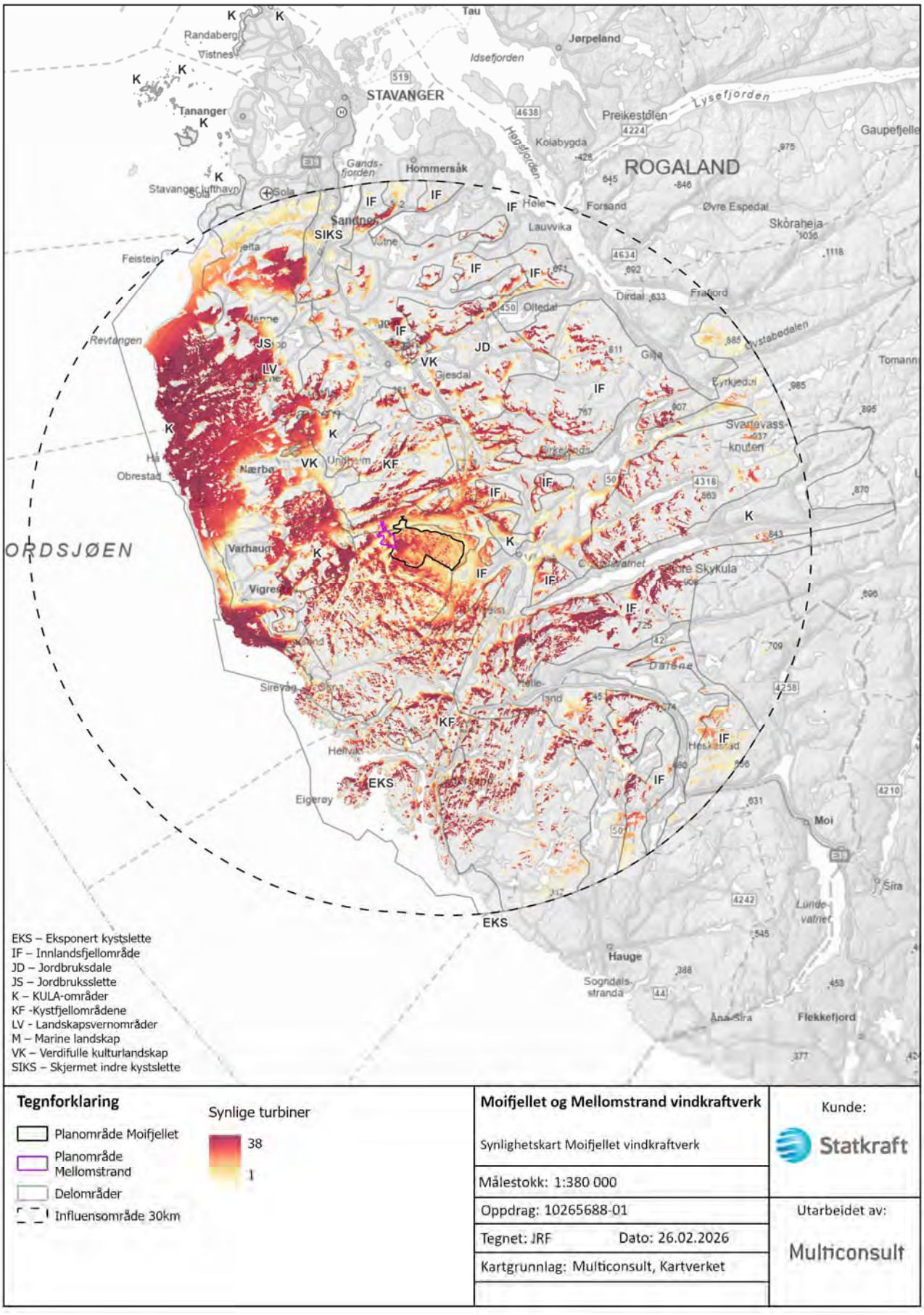
De 9 ulike delområdetypene består av:

- EKS – Eksponert kystslette
- IF – Innlandsfjellområde
- JD – Jordbruksdal
- JS – Jordbruksslette
- K – KULA-områder
- KF -Kystfjellområdene
- LV - Landskapsvernområder
- VK – Verdifulle kulturlandskap
- SIKS – Skjermet indre kystslette

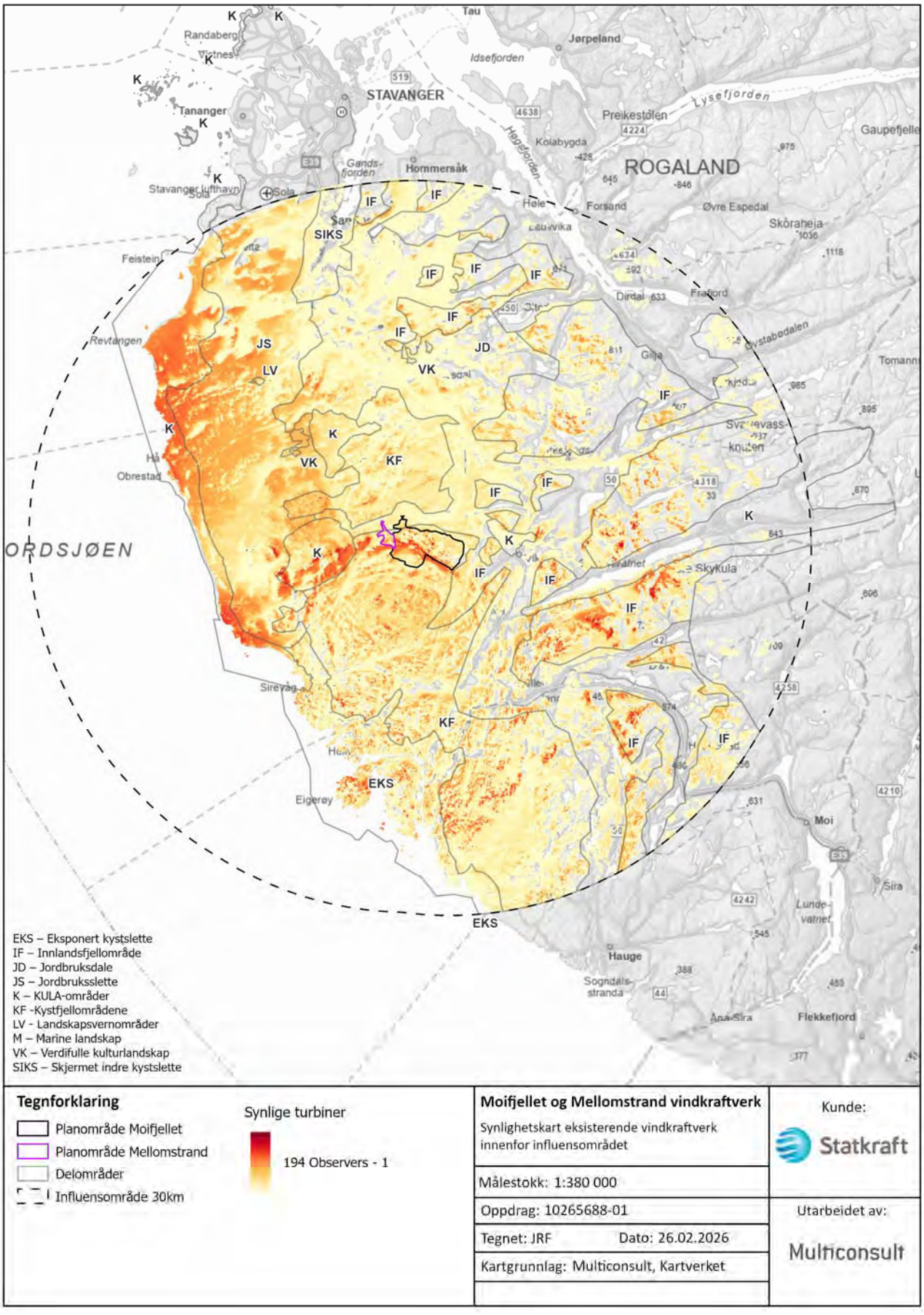
For de ulike delområdetypene se kartet i figur 5-1. Se synlighetskart over alternativ 2 - Moifjellet vindkraftverk i figur 5-2, synlighetskart over eksisterende vindkraftverk innenfor influensområdet i figur 5-3 og synlighetskart som viser områder som i dag ikke er visuelt påvirket av vindkraftverk, men som vil bli visuelt påvirket av alternativ 2 - Moifjellet vindkraftverk i figur 5-4. Se synlighetskart som viser områder som ikke blir visuelt påvirket av alternativ 2 - Moifjellet vindkraftverk, men som vil bli visuelt påvirket av de 4 turbinene for Mellomstrand i alternativ 1 i figur 5-5.



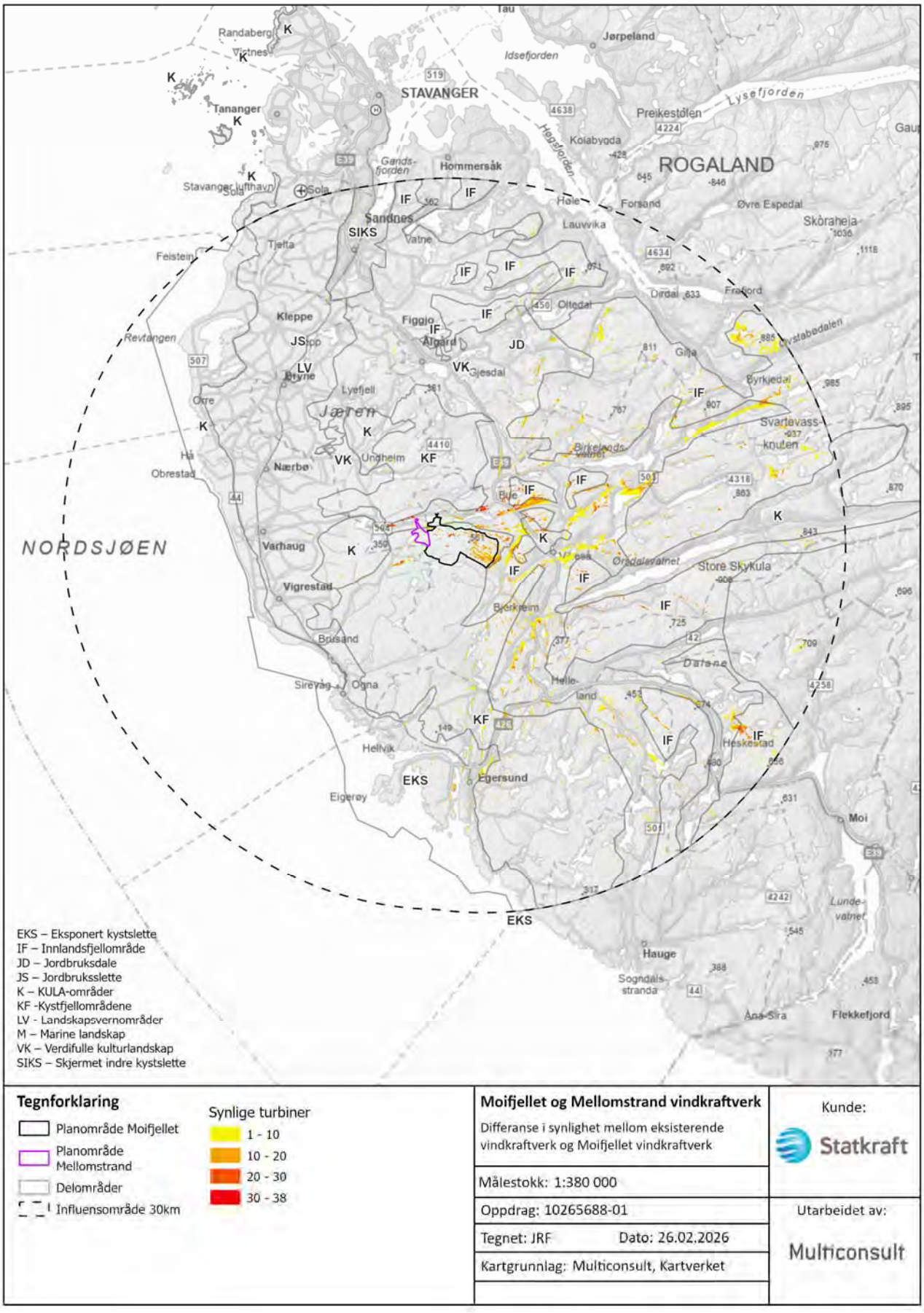
Figur 5-1: Kart over tiltaksområdet, influensområdet, samt de ulike delområdetypene.



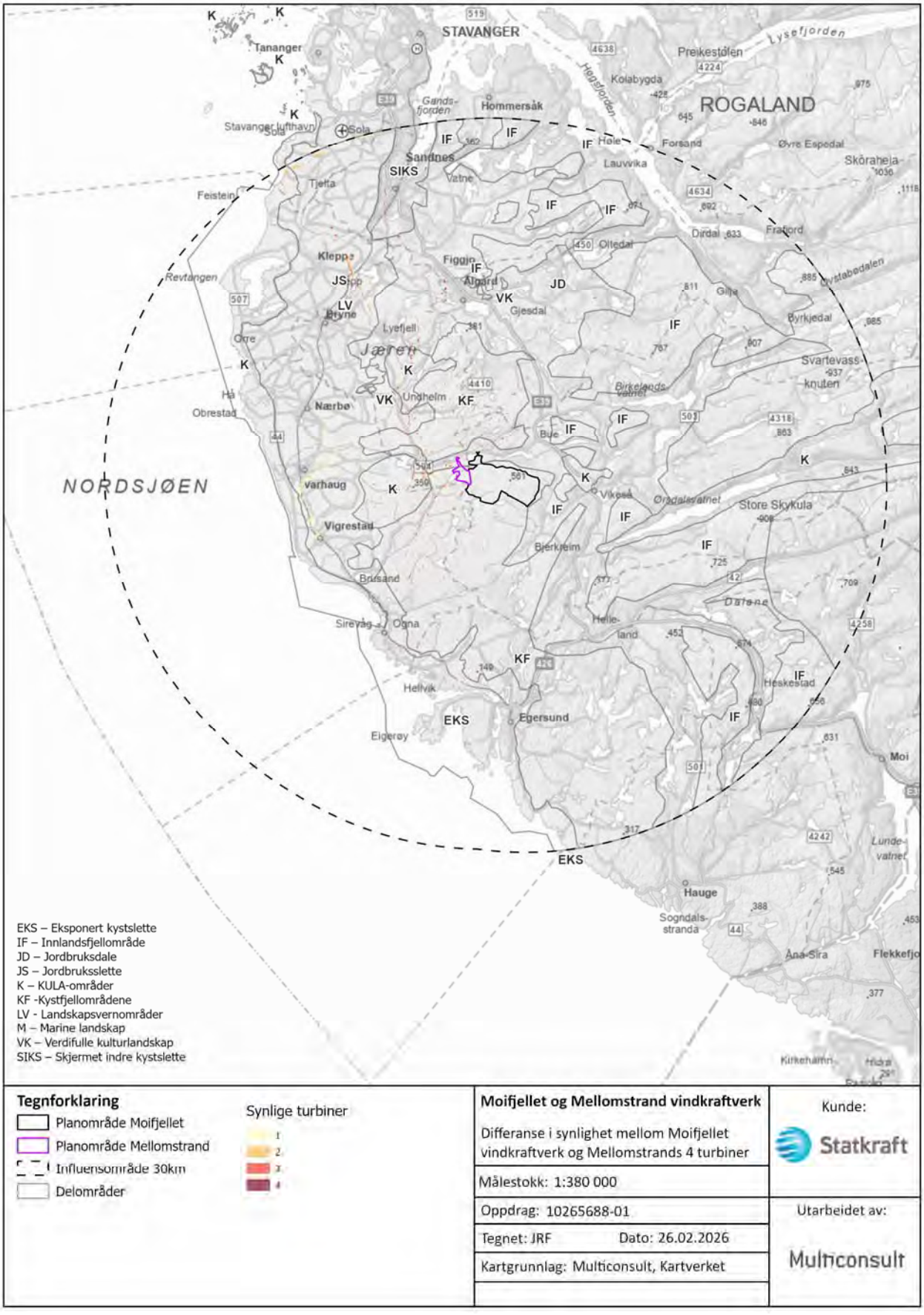
Figur 5-2: Synlighetskart for alternativ 2 - Moifjellet vindkraftverk innenfor influensområdet på 30 km, med delområdegrenser.



Figur 5-3: Synlighetskart over eksisterende vindkraftverk innenfor Moifjellet og Mellomstrand vindkraftverks influensområdet på 30 km, med delområdegrenser.



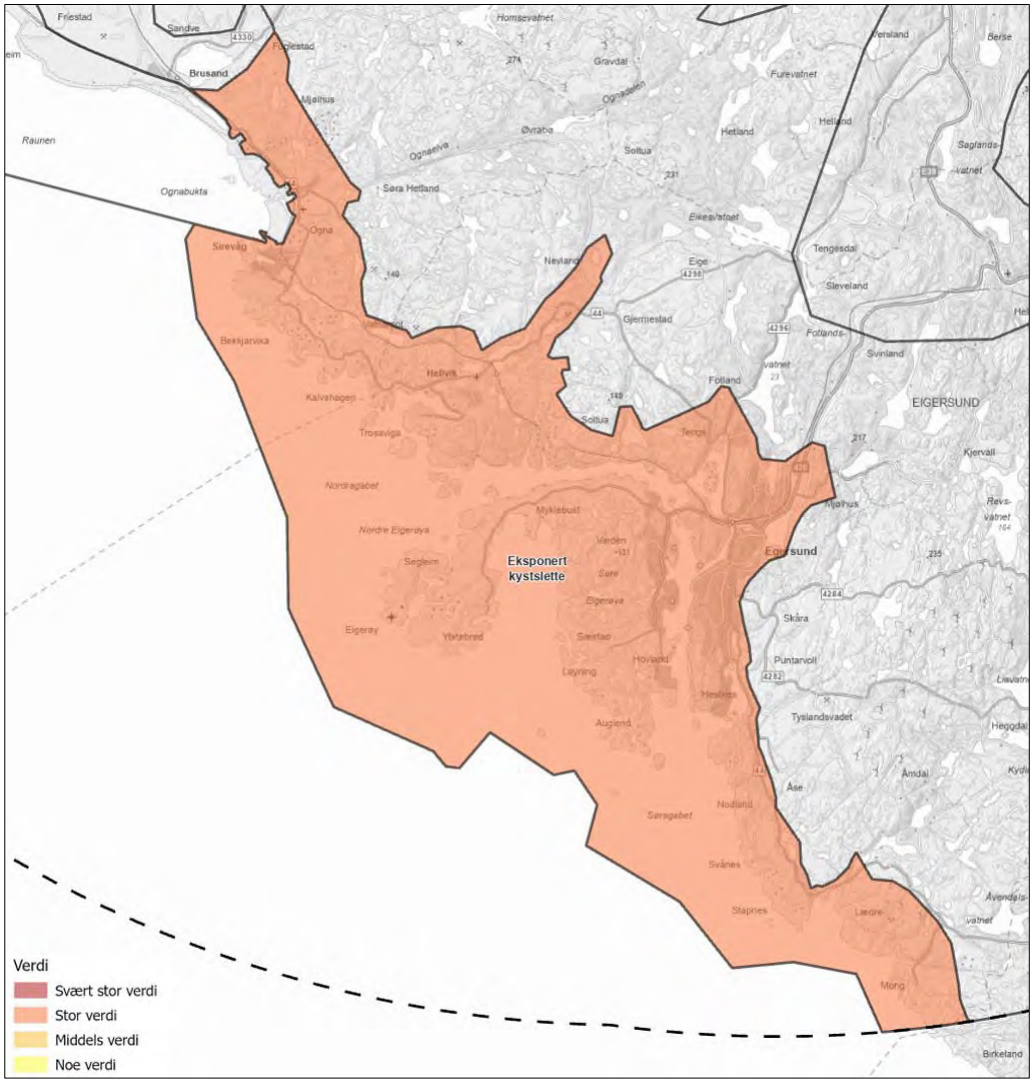
Figur 5-4: Synlighetskart som viser områder som i dag ikke er visuelt påvirket av eksisterende vindkraftverk, men som vil bli visuelt påvirket av alternativ 2 - Moifjellet vindkraftverk.



Figur 5-5: Synlighetskart som viser områder som ikke blir visuelt påvirket av alternativ 2 - Moifjellet vindkraftverk, men som vil bli visuelt påvirket av de 4 turbinene for Mellomstrand i alternativ 1.

5.2 Delområdetyper – beskrivelse og verdivurdering

5.2.1 Delområdetype EKS – Eksponert kystslette



Figur 5-6: Kart over delområdetype EKS – Eksponert kystslette, som får stor verdi.



Figur 5-7: Eigerøya med småkupert terreng, knudrete bergart og små vann, kystlynghei og jordbruksarealer.



Figur 5-8: Egersund sentrum, eldre bebyggelse innenfor tidligere NB!-register-område (nå Kulturmiljø og landskap av nasjonal interesse).

Tabell 5-1:Beskrivelse av forhold ved landskapet samt landskapskarakter for delområdetype EKS – Eksponert kystslette.

Forhold ved landskapet	Beskrivelse	Forhold som er viktigst for landskapskarakteren
Geologi, landformer og vannforekomster	Delområdetypen ligger innenfor NIJOS landskapsregion 18. Heibygdene i Dalane og Jæren, med en liten del i nord som ligger innenfor landskapsregion 19. Jæren og Lista, og i hovedsak innenfor NiN landskaps hovedtype Kystslettelandskap. Området består av en eksponert kystslette som ligger vent ut mot havet i vest. Terrengformene i delområdetypen varierer fra slakt til småkupert. Bergartene oppleves knudrete og har relativt høy entropi. Det er flere små- og mellomstore vann innimellom terrengformene.	X
Romlige forhold og skala	Det slake til småkuperte terrenget skaper stedvis lange siktlinjer og smårom. Tett på kysten er det åpent, oversiktlig og eksponert.	
Distinkte naturelementer	Den knudrete berggrunnen mot kysten i sør, samt alle øyer, holmer og skjær som ligger her utpreger seg.	
Natursammenhenger	Det er flere sammenhengende områder med kystlynghei i delområdetypen. Det ligger fire hele- samt deler av ett «Vakre landskap» innenfor delområdetypen: To (Auglend-Løyningen og Egersund sentrum) av de fire hele områdene har blitt kategorisert som «meget vakre landskap» (****), mens de resterende (Nordavågen-Skadberg-Holmane, Eigerøy fyr - Midbrøområdet og Nordfjord-Mong-Svånes) har blitt kategorisert som «vakre landskap» (***). Områdene består av verdifulle kystmiljø, områder med lite inngrep, variert og særpreget kulturlandskap og intakt eldre bygningsmønster.	X
Vegetasjonsdekke og vegetasjonsbruk	Størstedelen av arealet i delområdet er ikke-tresatte arealer, men det er også spredte områder med bar-, løv- og blandingsskog av varierende størrelse innimellom kystlyngheiområder, bebyggelse og jordbruksareal.	
Aktive naturprosesser	Det er noen registrerte skredhendelser langs veiene i delområdetypen.	
Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Det er større sammenhengende områder med jordbruksarealer på Eigerøya. Nordover langs kysten er det spredte og mer sammenhengende jordbruksarealer.	X
Arealbruk	Deler av landskapet i delområdetypen er tydelig preget av menneskelig arealbruk, både i form av bebygde arealer og bystruktur, og store, sammenhengende arealer med gårds- og jordbruksområder. Store deler av den mest eksponerte kysten og øyene er preget av mindre menneskelig aktivitet, med eksponert fjell, lyngvegetasjon og skogsområder innimellom.	X
Bebyggelsespreg	Det er en god del bebyggelse i delområdetypen, og denne spenner fra tettbygde byområder med enebolig-, rekkehus- og leilighetsbebyggelse til hyttefelt til mer spredte områder med gårdsbruk.	
Historie og stedsidentitet	Det er registrert flere funn av kulturminner og SEFRAK-bygninger i delområdet, som vitner til bruk av området langt tilbake i tid, blant annet steinalderboplasser og flere marine løsfunn. De tettbygde områdene av Egersund sentrum i sør er registrert som kulturmiljø (tidligere NB!-Registeret).	
Landskapskarakter for delområdetypen	Området består av en eksponert kystslette som vender ut mot havet i vest, med terreng som varierer fra slakt til småkupert og knudrete bergarter med høy entropi. Det finnes flere små- og mellomstore vann og området har flere sammenhengende kystlyngheiområder, men også spredte bar-, løv- og blandingsskogsområder. Jordbruksarealer er mest konsentrert på Eigerøya og langs kysten. Bebyggelsen varierer fra tettbygde byområder til spredte gårdsbruk. Det er registrert flere kulturminner og SEFRAK-bygninger i delområdetypen, inkludert steinalderboplasser og marine løsfunn, med Egersund sentrum i sør registrert som kulturmiljø.	

Tabell 5-2. Verdivurdering av delområdetype EKS – Eksponert kystslette.

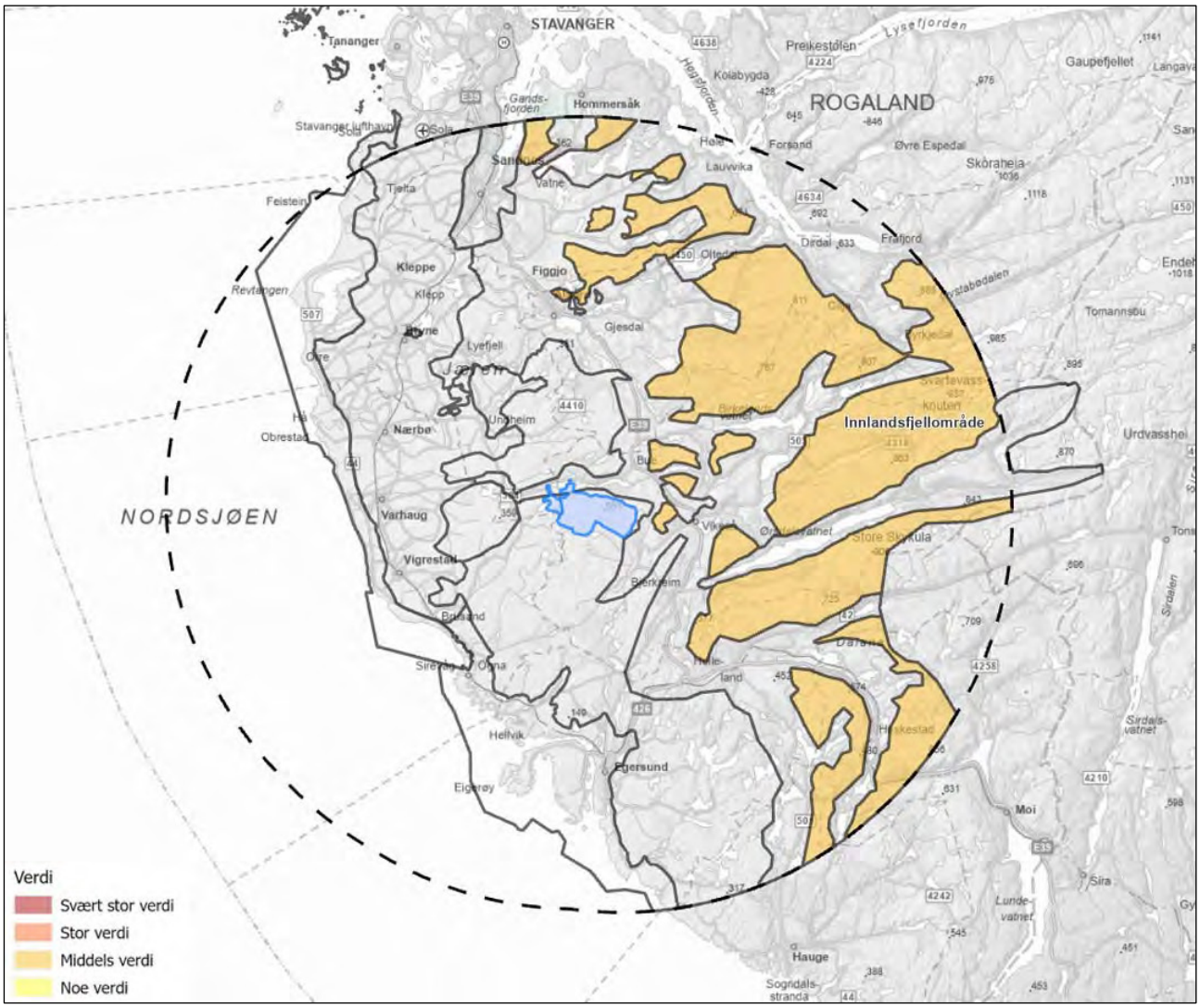
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
			▲	

Inngrepsgrad: Middels verdi
Naturvariasjon: Middels verdi
Distinkthet: Stor verdi
Mangfold: Stor verdi
Særpreg: Middels verdi
Sammenhenger: Middels verdi
Tilhørighet/identitet: Middels verdi
Visuell karakter: Middels verdi

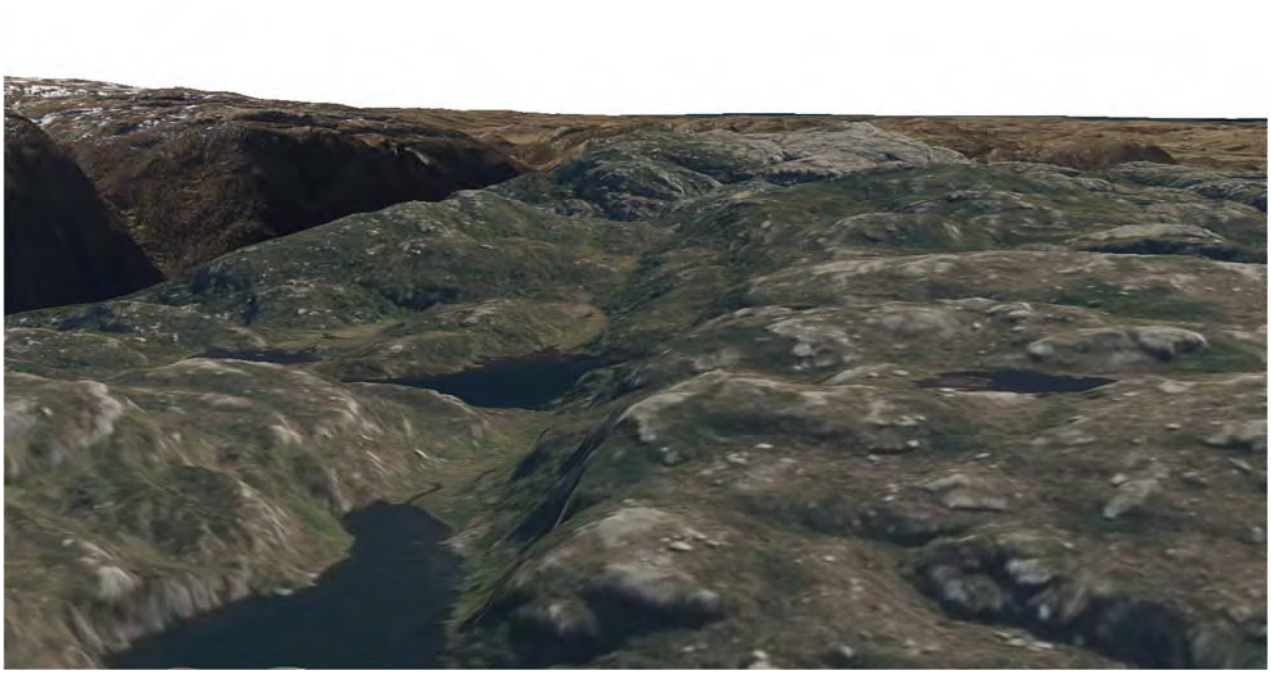
Verdien av delområdet vurderes til å være **stor verdi.**

Begrunnelse: Delområdetypen er mangfoldig og har karakteristiske landskapstyper med åpne eksponerte arealer mot kysten, med kystlynghei og jordbruksarealer, samt flere øyer, holmer og skjær.

5.2.2 Delområdetype IF -Innlandsfjellområde



Figur 5-9: Kart over delområdetype IF – Innlandsfjellområde, som får middels verdi. Blått markert areal er tiltaksområdet.



Figur 5-10: Utsnitt fra 3D-modell som viser det kuperte terrenget i delområdetypene, med flere små- og middelsstore vann.

Tabell 5-3: Beskrivelse av forhold ved landskapet samt landskapskarakter for delområdetype IF - Innlandsfjellområde.

Forhold ved landskapet	**Beskrivelse**	**Forhold som er viktigst for landskapskarakteren**
Geologi, landformer og vannforekomster	Delområdetypen ligger i hovedsak innenfor NIJOS landskapsregion 18. Heibygdene i Dalane og Jæren, og NiN landskaps hovedtype innlandsås- og fjellandskap. Landskapet består av kupert terreng, med bergkoller i varierende høyde, fra slakt til middels kupert. Mye småformer innad i de større kuperingene, og berggrunnen er i hovedsak knudrete og har relativt høy entropi. Det er også noen smale, grunne og/eller nedskårede dalområder innad i delområdetypen. Det er flere små- og middelsstore vann innimellom terrengformene, og disse opptrer ofte tett, og er forbundet gjennom korte elve- og bekkeløp. Det er også stedvis myrområder i delområdetypen.	X
Romlige forhold og skala	Små- og mellomstore vann innimellom det kuperte terrenget skaper rom i mindre og større landskapsrom. På høydene er det flere steder lange siktakser i ulike retninger.	X
Distinkte naturelementer	De små- og middelsstore vannene er markante naturelement.	X
Natursammenhenger	Det er lite vegetasjon i delområdetypen, og vegetasjonen som finnes er ofte lav og skrinn med nakent berg innimellom, noe som bryter opp vegetasjonen og gjør den mindre sammenhengende. Det er noen sammenhengende skogspartier i de lavereliggende dalområdene. Deler av ett «Vakkert landskap» (Område øst for Gandsfjorden) ligger innenfor delområdetypen i nord. Dette er kategorisert som «vakre landskap» (***), og består av en dominerende fjellprofil, med flere gode utsiktspunkter, som preger landsaksbildet for store deler av Sandnes og Stavanger.	

Vegetasjonsdekke og vegetasjonsbruk	Delområdetypen har hovedsakelig skrint og flekkvist vegetasjonsdekke, og noen områder med kystlynghei. I de noe lavereliggende dalpartiene innad i landskapsregionen er det partier med løv-, bar- og blandingsskog.	
Aktive naturprosesser	Det er lite aktive naturprosesser i delområdetypen. En aktiv naturprosess som kan nevnes er at skoggrensen generelt i landet kryper høyere oppover.	
Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Det er noen få jordbruksarealer i delområdetypen, i hovedsak innmarksbeite, men det er også noen arealer med fulldyrket- og overflatedyrket jord.	
Arealbruk	Det er totalt sett lav arealbruksintensitet i delområdetypen. Det er noen spredte gårdsbruk i delområdetypen. Ellers går det noen kraftledningstraser, traktorveier, veier i forbindelse med hytter og hyttefelt og turveier i ulike retninger inn i og gjennom områdene. Av større tekniske inngrep finnes det et mindre vindkraftverk med tilhørende veianlegg i ett område.	
Bebyggelsespreg	Det er totalt sett lite bebyggelse i delområdetypen, noen områder med fritidsbebyggelse i form av hyttefelt, noe spredt fritidsbebyggelse, og noen gårdsanlegg, hovedsakelig spredte.	
Historie og stedsidentitet	Det er registrert kulturminner i delområdetypen som vitner til bruk av området langt tilbake i tid, både i form av rester fra bosetningsområder og støler og eldre veifar. Det er flere turruter i delområdetypen, og områdene er de nærmeste fjellturområdene for de store byene i Rogaland.	
Landskapskarakter for delområdetypen	Delområdetypen består av kupert terreng med knudrete berggrunn. Det finnes mange små- og middelsstore vann, og stedvis myrområder. Vegetasjonen er hovedsakelig sparsom og flekkvis, med noen skogspartier i dalene og noen områder med kystlynghei. Arealbruken er totalt sett lav, med større tekniske inngrep i form av vindkraftverk i et område, og ellers noen spredte gårdsbruk og hyttefelt og kraftledningstraseer som krysser områdene. Kulturminner i delområdetypen vitner til bruk av området langt tilbake i tid. Turruter vitner til bruk av områdene i dag.	

Tabell 5-4. Verdivurdering av delområdetype IF – Innlandsfjellområdene.

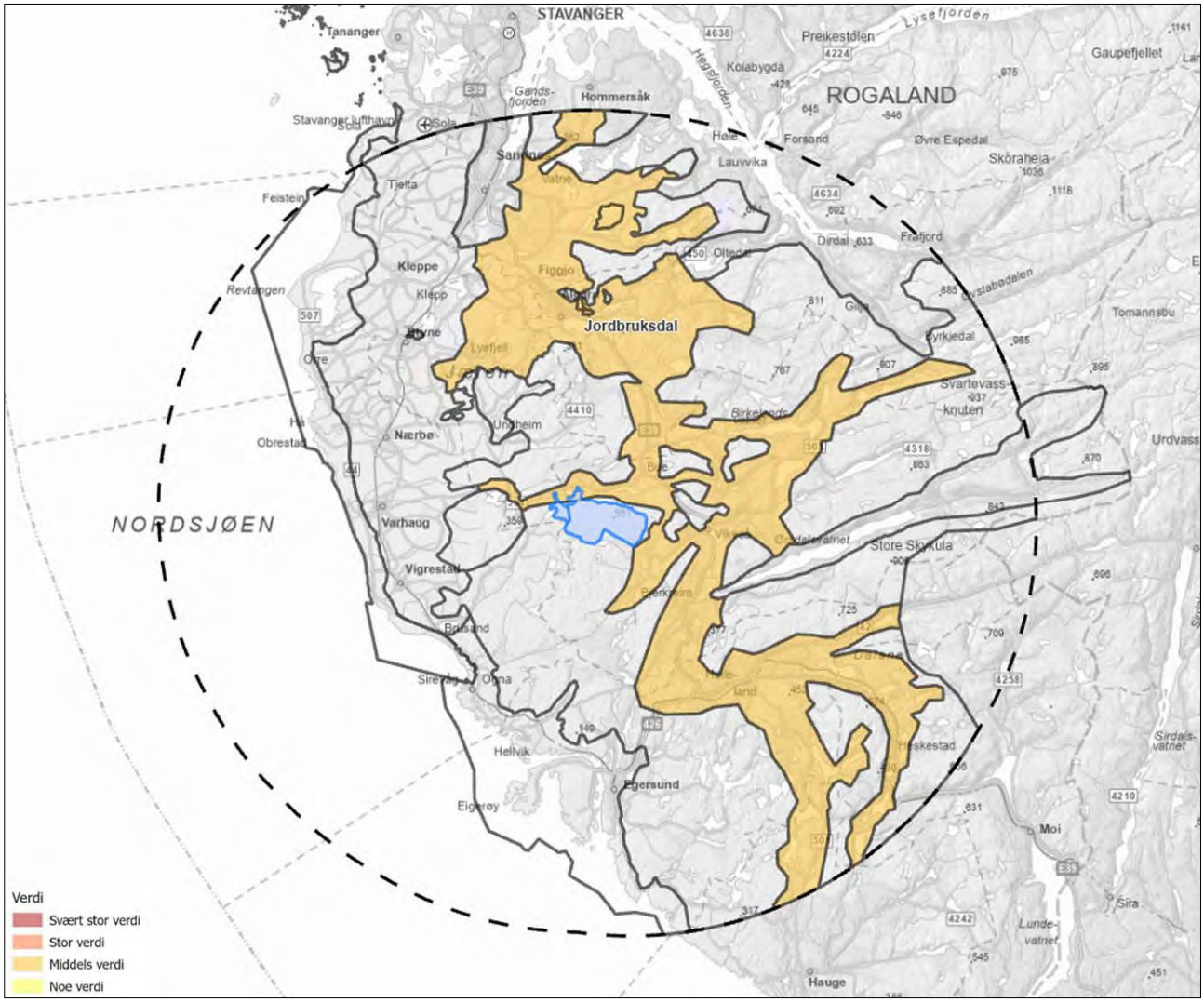
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
		▲		

Inngrepsgrad: Middels verdi
Naturvariasjon: Noe verdi
Distinkthet: Middels verdi
Mangfold: Noe verdi
Særpreg: Middels verdi
Sammenhenger: Middels verdi
Tilhørighet/identitet: Middels verdi
Visuell karakter: Middels verdi

Verdien av delområdet vurderes til å være **middels verdi.**

Begrunnelse: Delområdetypen består i stor grad av store sammenhengende og karakteristiske innlandsfjellområder med gode visuelle kvaliteter.

5.2.3 Delområdetype JD - Jordbruksdalene



Figur 5-11: Kart over delområdetype JD – Jordbruksdalene, som får middels verdi. Blått markert areal er tiltaksområdet.



Figur 5-12: Dalområdene mot Vikeså sett nord for Ausetjørna. Området i forgrunnen og rundt vannet er del av det «Vakre landskapet» Oslandsvatnet-Røyslandsvatnet.



Figur 5-13: Kulturlandskap ved Bue, sett mot Bjerkreimsenderen/Moisenderen på toppen av Moifjellet.

Tabell 5-5:Beskrivelse av forhold ved landskapet samt landskapskarakter for delområdetype JD - Jordbruksdalene.

Forhold ved landskapet	Beskrivelse	Forhold som er viktigst for landskapskarakteren
Geologi, landformer og vannforekomster	Delområdetypen består av i hovedsak av store, sammenhengende og relativt åpne dallandskap med stedvis slakt- til middels kupert terreng, og innlandsfjellområder som avgrensning og inndeling. Stedvis dominerer større og mindre vann dalbunnen. Det er også noen områder med myr.	X
Romlige forhold og skala	Delområdetypen har varierende romlige forhold, fra åpne og langstrakte dalområdet med lange siktakser til mindre rom delt opp av interne terrengformer og skogsområder samt avgrensningen mot innlandsfjellområdene.	X
Distinkte naturelementer	Det er flere registrerte områder for geologisk naturarv i delområdetypen, med blant annet endemorener, støtsidemorener og lesidemorener, som bidrar til økte visuelle kvaliteter i de åpne og jordbrukdspregede dalområdene.	
Natursammenhenger	Delområdetypen består av en mosaikk av jordbruksarealer og større og mindre skogsområder. Stedvis vanndekt areal i dalbunnen skaper blågrønne strukturer i jordbruksarealet. Det «Vakre landskapet» Limavatnet, og deler av det store og sammenhengende området Bjerkreimselva ligger i delområdetypen. Begge områdene har blitt kategorisert som «meget vakre landskap» (****). Verdiene ligger blant annet i særpreget kvartærgeologi, jordbrukslandskap og landskapsformer.	X
Vegetasjonsdekke og vegetasjonsbruk	Delområdet består av en mosaikk av større og mindre skogsområder og jordbruksarealer. De skogdekte områdene består av en blanding av barskog-, løvskog- og blandingsskogsområder.	
Aktive naturprosesser	Det er registrert noen skredhendelser i delområdetypen, spesielt i tilknytning til veiene som går gjennom dalområdene.	
Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Delområdetypen domineres av småkupert og bølgende jordbrukslandskap, som varierer mellom fulldyrka jord, overflatedyrka jord og innmarksbeite.	
Arealbruk	Delområdetypen domineres av jordbruksareal med tilhørende gårdsbygninger, med noen skogområder og myrområder innimellom. Det er også større tettbebygde strøk i delområdetypen, som Ålgård og Vikeså. Større og mindre veier går gjennom området i forskjellige retninger. Toglinjen går fra sør til nordøst. Kraftledninger av ulike spenningsnivå krysser delområdet i forskjellige retninger. Skurvenuten vindkraftverk med to turbiner ligger nord i delområdetypen, nært Ålgård.	
Bebyggelsespreg	Bebyggelsen ligger hovedsakelig i tilknytning til jordbruksarealene, men det er også noen tettstedsområder, blant annet Ålgård og Vikeså, i delområdetypen.	
Historie og stedsidentitet	Området er rikt på kulturhistorie og innehar mange registrerte funn av kulturminner. Det er gjort funn blant annet bosetningsområder, gårdsanlegg, gravrøyser og redskaper helt tilbake til steinalderen. Funnene viser til at området har vært bebodd og brukt i kulturhistorisk sammenheng langt tilbake i tid.	
Landskapskarakter for delområdetypen	Delområdetypen består av store, åpne dallandskap med slakt til kupert terreng, avgrenset av innlandsfjell. Det inneholder en mosaikk av jordbruksarealer og skog, med stedvis vanndekte arealer som skaper blågrønne strukturer. Landskapet varierer fra åpne daler med lange siktakser til mindre rom delt av terrengformer og skog. Geologisk naturarv som endemorener og lesidemorener gir visuelle kvaliteter. Området er rikt på kulturhistorie, med flere registrerte kulturminner langt tilbake i tid.	

Tabell 5-6. Verdivurdering av delområdetype JD - Jordbruksdalene.

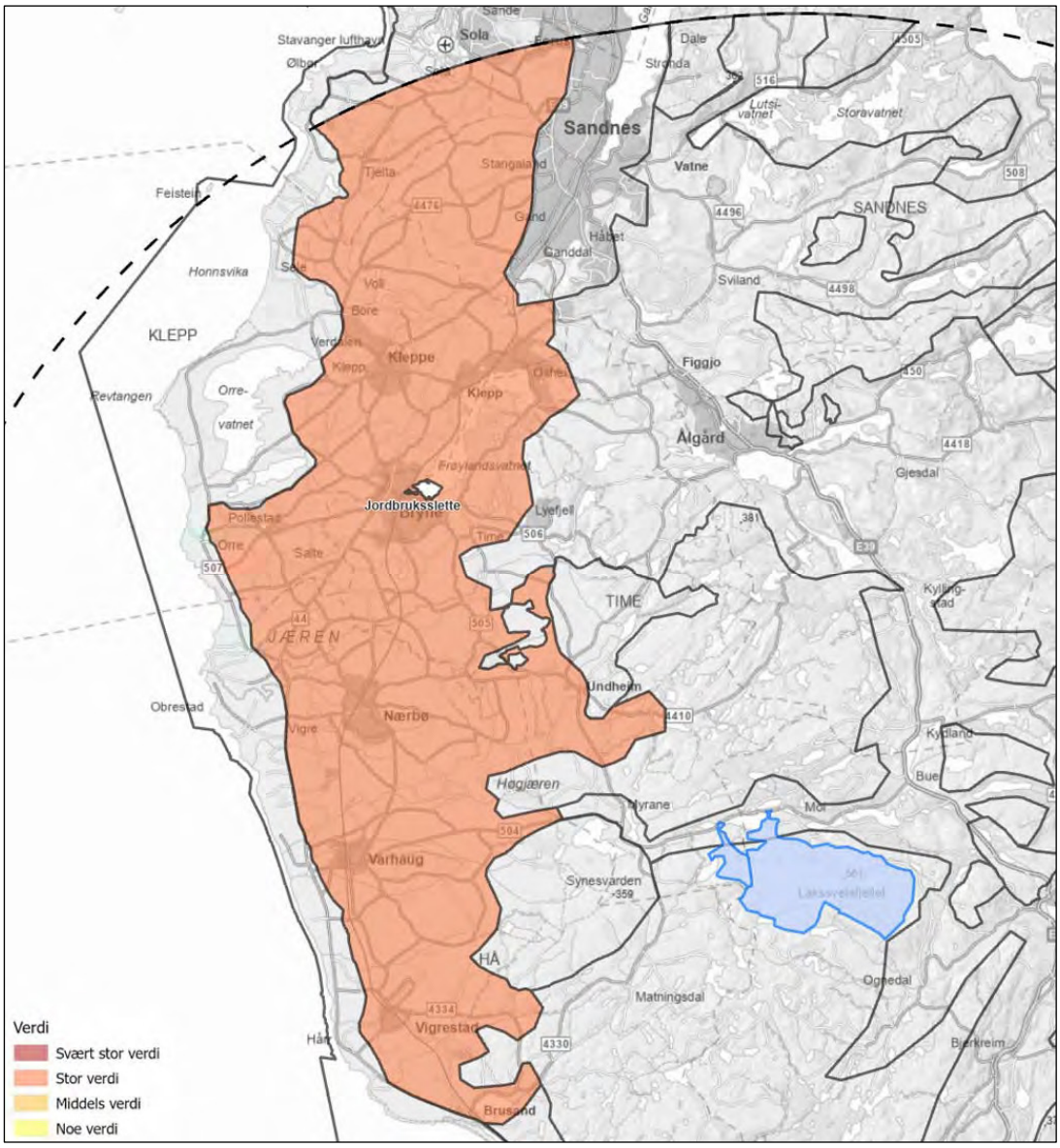
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
		▲		

Inngrepsgrad: Noe verdi
Naturvariasjon: Middels verdi
Distinkthet: Middels verdi
Mangfold: Middels verdi
Særpreg: Middels verdi
Sammenhenger: Middels verdi
Tilhørighet/identitet: Middels verdi
Visuell karakter: Middels verdi

Verdien av delområdet vurderes til å være **middels verdi.**

Begrunnelse: Delområdetypen oppleves som et særpreget landskap, som er lesbart og oversiktlig, med landskapstyper og landskapselement som har stor betydning for landskapskarakteren.

5.2.4 Delområdetype JS - Jordbruksslette



Figur 5-14: Kart over delområdetype JS - Jordbruksslette, som får stor verdi. Blått markert areal er tiltaksområdet.



Figur 5-15: De karakteristiske steingardene i jordbruksslettelandskapet.



Figur 5-16: Bølgende jordbrukslandskap.

Tabell 5-7:Beskrivelse av forhold ved landskapet samt landskapskarakter for delområdetype JS – Jordbruksslette.

Forhold ved landskapet	Beskrivelse	Forhold som er viktigst for landskapskarakteren
Geologi, landformer og vannforekomster	Delområdetypen ligger i innenfor NIJOS landskapsregion 19. Jæren og Lista, og hovedsakelig innenfor NiN landskaps hovedtype Innlandsslettelandskap. Delområdetypen er et stort sammenhengende område innenfor influensområdet. Området er hovedsakelig flatt og åpent med noen stedvise utpregede høyder. Fem vann av ulik størrelse ligger spredt i området. Det er noen få elvestrekninger og flere spredte myrområder, sistnevnte med høyest tetthet i sørvest.	X
Romlige forhold og skala	Delområdet utgjør et stort sammenhengende åpent landskap med lange siktlinjer til havet i vest. Jordbrukslandskapets geometri forsterkes av de karakteristiske steingjerdene. Bare stedvis brytes det flate landskapet av noe mer kuperte formasjoner.	X
Distinkte naturelementer	Leanuten og Bærheinmsnuten-Stokkaheia nord i delområdetypen er spesielle geologiske formasjoner, i form av støt- og lesidemorene. Det er ofte naturverdier knyttet til de vanndekte arealene i delområdetypen.	
Natursammenhenger	Det er noen sammenhengende områder med kystlynghei i sørvest. Det ligger flere «Vakre landskap» og deler av disse i delområdetypen, både av kategorien «meget vakkert landskap» (**** - Nedre del av Figgjoelva, Tinghaug/Krosshaug og Frøylandsvatnet) og «vakkert landskap» (*** - Leanuten, Vestly-Holen-Lye, Håelva og Tjensvollområdet). Verdiene i disse områdene går på blant annet vegetasjon i tilknytning til elveløp, markerte terrengformer i åpent og flatt landskap, kulturlandskap med historisk verdi, tradisjonelt beitelandskap, engvegetasjon og artsrik botanikk.	
Vegetasjonsdekke og vegetasjonsbruk	Høydedragene i delområdetypen er i hovedsak skogkledt, og disse er dominert av barskog. Ellers er det mindre spredte områder med løvskog og barskog, samt noen få områder med blandingsskog. Det er også områder med åpen fastmark i området.	
Aktive naturprosesser	Det er få aktive naturprosesser i delområdetypen.	
Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Delområdetypen domineres av en mosaikk av jordbruksareal som er delt opp av de karakteristiske steingjerdene.	X
Arealbruk	Delområdetypen domineres av jordbruksareal med tilhørende gårdsbygninger, med noen skogområder og myrområder innimellom. Jordbruksarealet består hovedsakelig av fulldyrka jord, men det er også en del områder med innmarksbeite. Det er også større tettbebygde strøk og byer i delområdetypen, som Nærbø og Bryne. Større og mindre veier går gjennom området i forskjellige retninger. Toglinjen går fra sør til nordøst. Kraftledninger av ulike spenningsnivå krysser delområdet i forskjellige retninger. Høg-Jæren vindkraftverk ligger helt sørøst.	X
Bebyggelsespreg	Bebyggelsen i delområdet domineres av spredt gårdsbebyggelse, med enebolig-, rekkehus- og leilighetsbebyggelse i byer og tettsteder.	X
Historie og stedsidentitet	Området er rikt på kulturhistorie og innehar mange registrerte funn av kulturminner, hvorav flere er synlige i landskapet. Det er lett å se en sammenheng i kulturhistorien i dette landskapet.	
Landskapskarakter for delområdetypen	Delområdetypen består av et stort, flatt og åpent landskap med noen høyder og spesielle geologiske formasjoner, vann, elver og myrområder, og har lange siktlinjer til havet. Området domineres av jordbrukslandskap med karakteristiske steingjerder, og preges også av andre menneskelige inngrep i form av byer og tettsteder, veier, toglinje og kraftledninger. Høg-Jæren vindkraftverk ligger i sørøst. Området er rikt på kulturhistorie. Det har også naturverdier i naturen, men få natursammenhenger.	

Tabell 5-8. Verdivurdering av delområdetype JS - Jordbruksslettene.

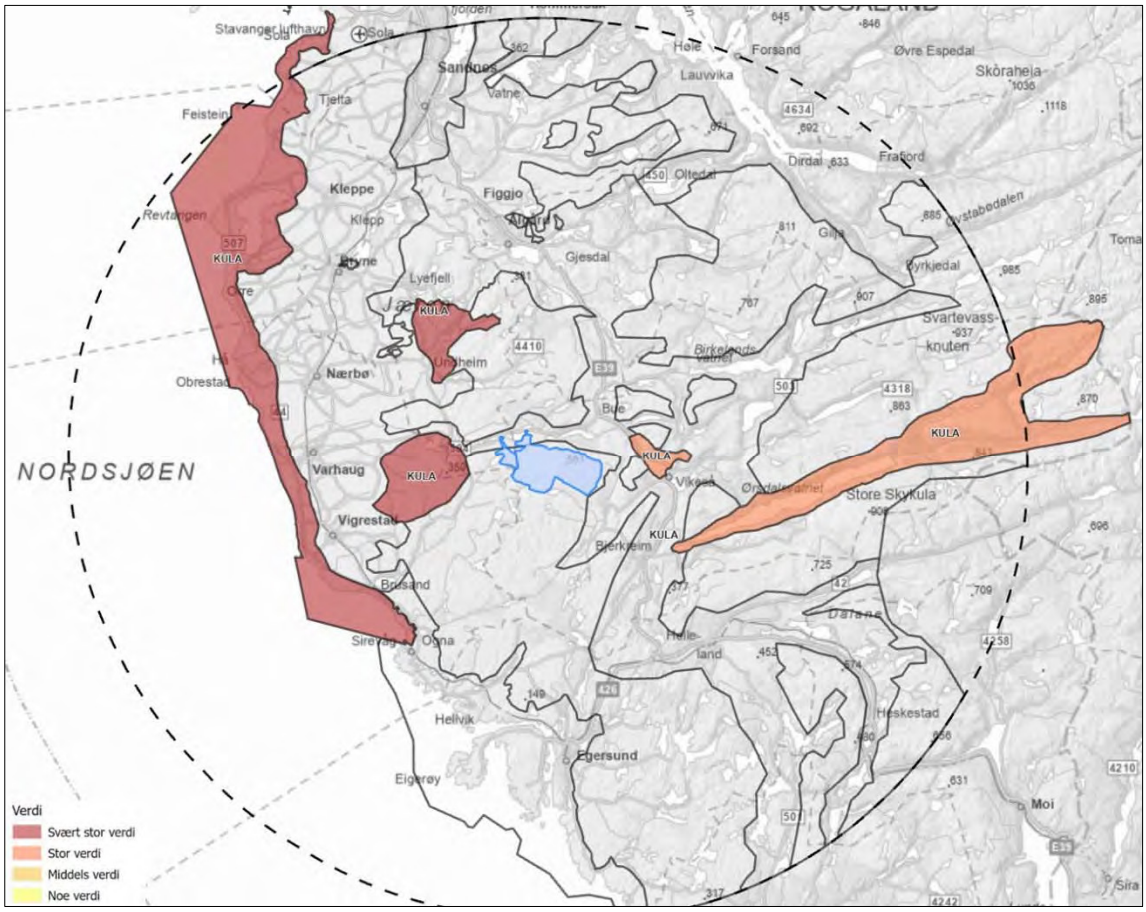
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
			▲	

Inngrepsgrad: Noe verdi
Naturvariasjon: Middels verdi
Distinkthet: Stor verdi
Mangfold: Stor verdi
Særpreg: Middels verdi
Sammenhenger: Stor verdi
Tilhørighet/identitet: Stor verdi
Visuell karakter: Middels verdi

Verdien av delområdet vurderes til å være **stor verdi.**

Begrunnelse: Delområdetypen består i hovedsak av en unik, karakteristisk og mangfoldig landskapstype hvor landskapets kulturhistoriske utvikling er tydelig synlig i landskapet.

5.2.5 Delområdetype K – KULA-områder



Figur 5-17: Kart over delområdetype K – KULA-områder, som får stor og svært stor verdi. Blått markert areal er tiltaksområdet.

KULA-områdene tas ut som egne delområder da disse automatisk får stor verdi. Områder fra det tidligere NB!-registeret tas ikke med, da disse går inn under tema kulturmiljø. Der KULA-områdene overlapper med landskapsvernområder slås disse sammen og området får automatisk svært høy verdi. For beskrivelse av KULA-områdene se kapittel 4.6, og for beskrivelse av landskapsvernområdene, se kapittel 4.5. KULA-områdene med verdi listes opp under:

KULA Jærkysten og Jærstrendene landskapsvernområde:

Området får automatisk **svært stor verdi**.

KULA Høg-Jæren og Synesvarden landskapsvernområde og Synesvarden landskapsvernområde med plantelivsfredning:

Området får automatisk **svært stor verdi**.

KULA Hadland-Sæland-Undheim, Lyngaland landskapsvernområde og Urådalen landskapsvernområde:

Området får automatisk **svært stor verdi**.

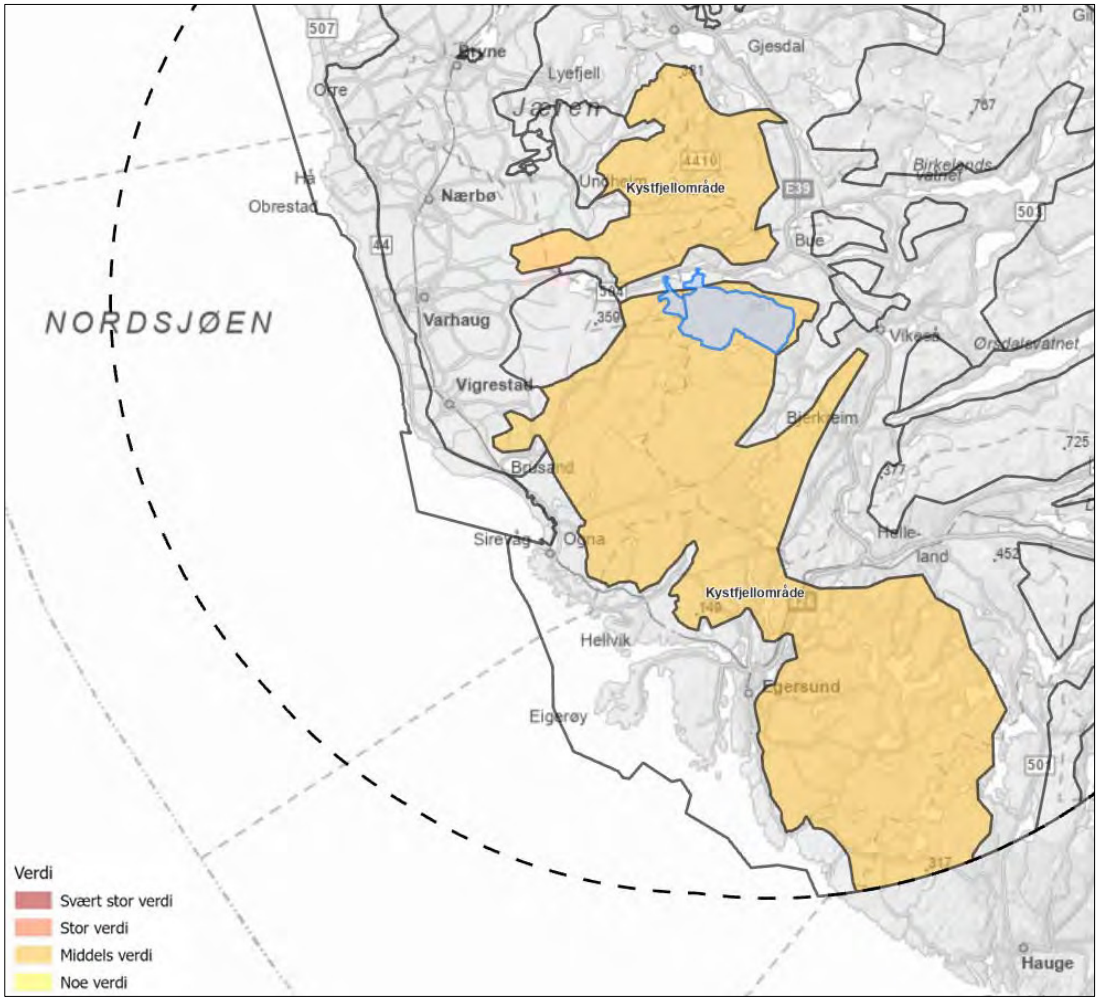
KULA Ørsdalen og Kvitlen og Dyrskog verdifulle kulturlandskap:

Området får automatisk **stor verdi**.

KULA Storrsheia:

Området får automatisk **stor verdi**.

5.2.6 Delområdetype KF - Kystfjellområde



Figur 5-18: Kart over delområdetype KF – Kystfjellområde, som får middels verdi. Blått markert areal er tiltaksområdet, som i hovedsak ligger innenfor denne delområdetypen.



Figur 5-19: Delområdetypen Kystfjellområde i forgrunnen, med små- til middels kupert terreng, vanndekte områder og kystlynghei. Utsyn mot delområdetype Jordbruksslette og havet i bakkant.



Figur 5-20: Små- til middels kupert kystfjellområde med kystlynghei. Bilde tatt fra turmålet Brusaknuden mot Moisenderen/Bjerkreimsenderen.

Tabell 5-9: Beskrivelse av forhold ved landskapet samt landskapskarakter for delområdetype KF - Kystfjellområde.

Forhold ved landskapet	Beskrivelse	Forhold som er viktigst for landskapskarakteren
Geologi, landformer og vannforekomster	Delområdetypen ligger i hovedsak innenfor NIJOS landskapsregion 18. Heibygdene i Dalane og Jæren, og NiN landskaps hovedtype innlandsås- og fjellandskap. Landskapet består av kupert terreng, med bergkoller i varierende høyde, fra slakt til middels kupert. Mye småformer innad i de større kuperingene, og berggrunnen er i hovedsak knudrete og har relativt høy entropi med flere løse større og mindre steiner i terrenget. Det er flere små- og middelsstore vann innimellom terrengformene, og disse opptrer ofte tett, og er forbundet gjennom korte elve- og bekkeløp. Det er også flere myrområder i delområdetypen.	X
Romlige forhold og skala	Små- og mellomstore vann innimellom det kuperte terrenget skaper rom i mindre og større landskapsrom. På høydene er det flere steder lange siktakser i ulike retninger, både vestover og ut mot havet og østover og inn i landet.	X
Distinkte naturelementer	De små- og middelsstore vannene er markante naturelement. Små og større løse steiner er fremtredende landskapselementer.	X
Natursammenhenger	Deler av Moifjellet er et av få gjenværende områder i Bjerkreim kommune med inngrepsfri natur sone 2 (1-3 km fra inngrep). Sammenhengende kystlyngheiområder bidrar til at kystfjellandskapet oppleves frodig. Det er noen sammenhengende skogspartier i de lavereliggende områdene. Det ligger ett «Vakre landskap» og deler av fire «Vakre landskap» i delområdetypen. To av områdene er kategorisert som «meget vakre landskap» (**** - Urådalen og Bjerkreimelva) og de resterende tre som «vakre landskap» (*** - Ulvarudlå-Lågliheiene, Oslandsvatnet-Frøylandsvatnet og Ognadalen). Verdiene ligger blant annet i heikarakter, karakteristiske landformer og et variert landskapsbilde.	X
Vegetasjonsdekke og vegetasjonsbruk	Delområdetypen består hovedsakelig av kystlynghei og myr, med noen skogsområder innimellom. Barskog dominerer, men det er også større områder med løvskog og noen områder med blandingsskog.	
Aktive naturprosesser	Det er lite aktive naturprosesser i delområdetypen.	
Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Det er noen spredte og sammenhengende gårds- og jordbruksarealer i delområdetypen, både fulldyrket- og overflatedyrket jord og innmarksbeite.	
Arealbruk	Det er totalt sett lav arealbruksintensitet i delområdetypen. Av større tekniske inngrep ligger både Måkaknuten, Stigafjellet, Egersund, Bjerkreim og Skinansfjellet og Gravdal vindkraftverk med tilhørende veianlegg i delområdetypen. Av annen arealbruk er det noen spredte gårdsbruk og veier, og det går noen kraftledningstraser og traktorveier gjennom området, samt veier i forbindelse med hytter og hyttefelt. Det går også turveier i delområdetypen.	
Bebyggelsespreg	Det er totalt sett lite bebyggelse i delområdetypen, noen områder med gårdsanlegg, fritidsbebyggelse i form av hyttefelt og noe spredt fritidsbebyggelse.	
Historie og stedsidentitet	Det er registrert kulturminner i delområdetypen som vitner til bruk av området langt tilbake i tid, både i form av rester fra bosetningsområder, gårdsanlegg og fangstinnretninger.	

Landskapskarakter for delområdetypen	Delområdetypen består av kupert terreng med knudrete berggrunn og mange småformer og innslag av små og større løse steiner. Små- og middelsstore vann er spredt i landskapet, ofte forbundet med korte elve- og bekkeløp. Det finnes også myrområder. Kystlynghei dominerer vegetasjonen, og gir en delområdetypen en frodig karakter. Det er innslag av barskog, løvskog og blandingsskog i lavereliggende områder. Området har lav arealbruksintensitet, med spredte gårds- og jordbruksarealer, kraftledninger og traktorveier. Det er noen områder med større tekniske inngrep i form av vindkraftverk Kulturminner vitner om historisk bruk av området.

Tabell 5-10. Verdivurdering av delområdetype KF – Kystfjellområdene.

Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
		▲		

Inngrepsgrad: Noe verdi
Naturvariasjon: Middels verdi
Distinkthet: Middels verdi
Mangfold: Middels verdi
Særpreg: Middels verdi
Sammenhenger: Middels verdi
Tilhørighet/identitet: Middels verdi
Visuell karakter: Middels verdi

Verdien av delområdet vurderes til å være **middels verdi.**

Begrunnelse: Delområdetypen består av karakteristisk kystfjellandskap med sammenhengende områder med kystlynghei som gir gode visuelle kvaliteter. Større tekniske inngrep i form av vindkraftverk trekker verdien noe ned.

5.2.7 Delområdetype LV - Landskapsvernområder



Figur 5-21: Kart over delområdetype LV - Landskapsvernområde, som får svært stor verdi. Blått markert areal er tiltaksområdet.

Landskapsvernområdene innenfor influensområdet på 30 km tas ut som egne delområder, da disse automatisk får svært stor verdi. Der de overlapper med KULA-områdene vil de bli slått sammen med KULA-området og hele området får da svært stor verdi. For beskrivelse av landskapsvernområdene, se kapittel 4.5. Det blir bare et eget delområde for landskapsvern:

Søndre Frøyland landskapsvernområde med fuglefredning:

Området får automatisk **svært stor verdi**.

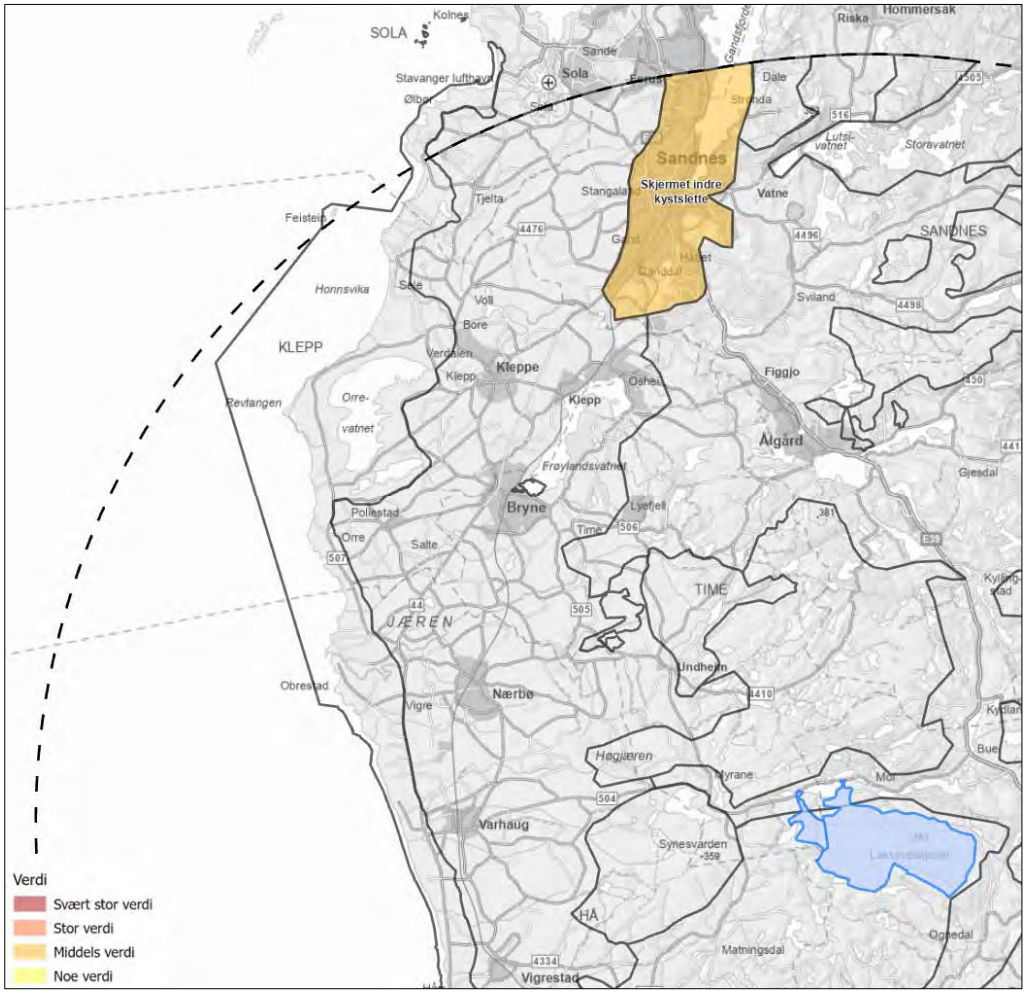
5.2.8 Delområdetype M – Marine landskap

Marine landskap er landskap som i sin helhet er dekt av hav og som mangler kystlinje.

Hovedtypene i marine landskap er definert på grunnlag av landformvariasjon på havbunnen. Det er et stort behov for mer kunnskap om marin naturvariasjon. Hovedtypene er foreløpig ikke delt videre inn i grunntyper på grunn av mangel på data om marin naturvariasjon (33).

De marine landskapene innenfor influensområdet på 30 km er derfor ikke vurdert under tema landskap. Overgangen mellom land og hav er tatt inn i delområdene KULA Jærkysten og Eksponert kystslette, og disse vil være mest utslagsgivende for konsekvensgraden. Fra havområdene lenger ut er det ikke så mange som oppholder seg, og disse er derfor ikke like relevante for KU tema landskap. Disse områdene er i tillegg på lang avstand til tiltaket (ca.14-30 km – synlighetssone 5 og 6), hvor blant annet turbinenes synlighet er helt avhengig av værforholdene (se beskrivelse av de ulike synlighetssonene i kapittel 2.1.4).

5.2.9 Delområdetype SIKS -Skjermet indre kystslette



Figur 5-22: Kart over delområdetype SIKS – Skjermet indre kystslette, som får middels verdi. Blått markert areal er tiltaksområdet.



Figur 5-23: Bildet viser Vågen, innerst i Gandsfjorden, med båthavn og tettbebyggelse ned mot sentrum i bakkant.

Tabell 5-11: Beskrivelse av forhold ved landskapet samt landskapskarakter for delområdetype SIKS – Skjermet indre kystslette.

Forhold ved landskapet	**Beskrivelse**	**Forhold som er viktigst for landskapskarakteren**
Geologi, landformer og vannforekomster	I avgrensningen av delområdet i sør-sørøst er delområdetypen noe kupert. Ellers består området av slakt og noe bølgende terreng som heller noe ned mot Gandsfjorden i nordøst. Stokkalandsvatnet ligger sør i delområdet og deler av Gandsfjorden ligger i nordøst.	X
Romlige forhold og skala	Det svakt bølgende landskapet som heller mot Gandsfjorden i nordøst samt de kuperte delene av delområdet i sør-sørøst gir stedvis vidt utsyn og lange siktlinjer. Bebyggelse og vegetasjon innad i delområdetypen skaper mindre rom i det ellers slakt bølgende landskapet.	
Distinkte naturelementer	Stokkalandsvatnet oppleves som et distinkt naturelement i det ellers tettbygde området.	
Natursammenhenger	Vegetasjonen i området er spredt. Stokkalandsvatnet er en blågrønn struktur i utkanten i det bebygde arealet. Deler av det «Vakre landskapet» «Området øst for Gandsfjorden» ligger innenfor området i nordøst, men størstedelen av verdien for dette området er knyttet til fjellandskapet i øst.	
Vegetasjonsdekke og vegetasjonsbruk	Delområdetypen har mindre spredte skogsområder, spesielt i de mer kuperte områdene i sør-sørøst. Det er løvskog som dominerer, men det er også flere områder med blandingsskog.	
Aktive naturprosesser	Det er få aktive naturprosesser i delområdetypen.	

Jord- og skogbruk, tamreindrift, fiske og annen utmarksbruk	Det er noen jordbruksarealer med tilhørende gårdsbygninger i sør-sørøst, med områder med fulldyrka jord, innmarksbeite og overflatedyrka jord.	
Arealbruk	Delområdetypen består av byen Sandnes, og domineres av bebygd areal og infrastruktur. E39 og jernbanen går gjennom området fra sør til nord. Det går en del kraftledninger (regionalnett og sentralnett) gjennom området og det ligger flere transformatorstasjoner her. Det er noen tette skogsområder i tilknytning til de kuperte områdene i sør og øst, og mindre skogsområder spredt i delområdet. Det er noen jordbruksarealer i sør-sørøst.	X
Bebyggelsespreg	Bebyggelsen består hovedsakelig av boligbebyggelse i form av eneboliger, rekkehus og leilighetsbygg, og sentrumsstruktur. I jordbrukslandskapene er det spredte gårdsbruk.	X
Historie og stedsidentitet	Det er registrert flere funn av kulturminner, fredete bygninger og SEFRAK-bygninger i delområdet. Flere av de registrerte kulturminnene i sterkt utbyggede områder er fjernet, men det er likevel veldig mange synlige kulturminner i resten av området. Et av disse er registrert gårdsanlegg på sørøstsiden av Stokkalandsvatnet, som er synlig i landskapet. Langgata og Norestraen er registrert som Kulturmiljø og landskap av nasjonal interesse (tidligere NB!-registeret).	
Landskapskarakter for delområdetypen	Delområdet består av et slakt og noe bølgende til småkupert terreng som domineres av bebygd areal og infrastruktur. Det består hovedsakelig av boligbebyggelse i form av eneboliger, rekkehus og leilighetsbygg, med sentrumsstruktur. Deler av delområdet vender mot- og er tilknyttet til Gandsfjorden i nordøst. Flere synlige registrerte kulturminner og kulturmiljøer viser til historisk utvikling i området.	

Tabell 5-12. Verdivurdering av delområdetype SISK – Skjermet indre kystslette.

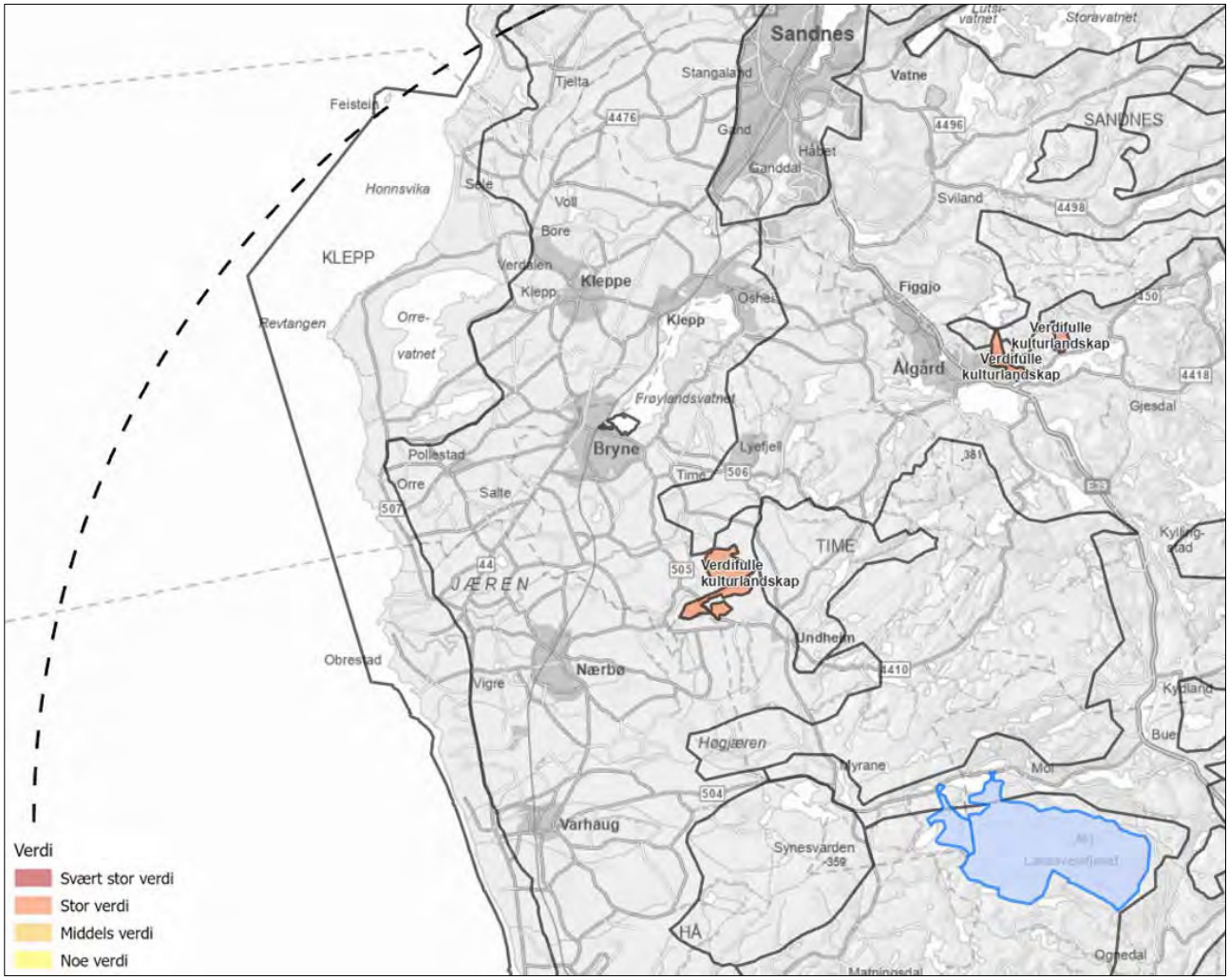
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi
		▲		

Inngrepsgrad: Noe verdi
Naturvariasjon: Noe verdi
Distinkthet: Noe verdi
Mangfold: Middels verdi
Særpreg: Middels verdi
Sammenhenger: Middels verdi
Tilhørighet/identitet: Middels verdi
Visuell karakter: Noe verdi

Verdien av delområdet vurderes til å være **middels verdi.**

Begrunnelse: Delområdetypen består hovedsakelig av tettbebyggelse og sentrumsstruktur, hvor det er innslag av gode visuelle kvaliteter i form av tilknytning til fjord og vann, samt historiske sammenhenger i form av eldre bebyggelse.

5.2.10 Delområdetype VF- Verdifulle kulturlandskap



Figur 5-24: Kart over delområdetype VF – Verdifulle kulturlandskap, som får stor verdi. Blått markert areal er tiltaksområdet.

Områdene med verdifulle kulturlandskap tas ut som egne delområder da disse automatisk får stor verdi. Der områdene overlapper med KULA-områder, slås disse sammen. For beskrivelse av de verdifulle kulturlandskapene, se kapittel 4.6. Det blir bare to egne verdifulle kulturlandskap delområder:

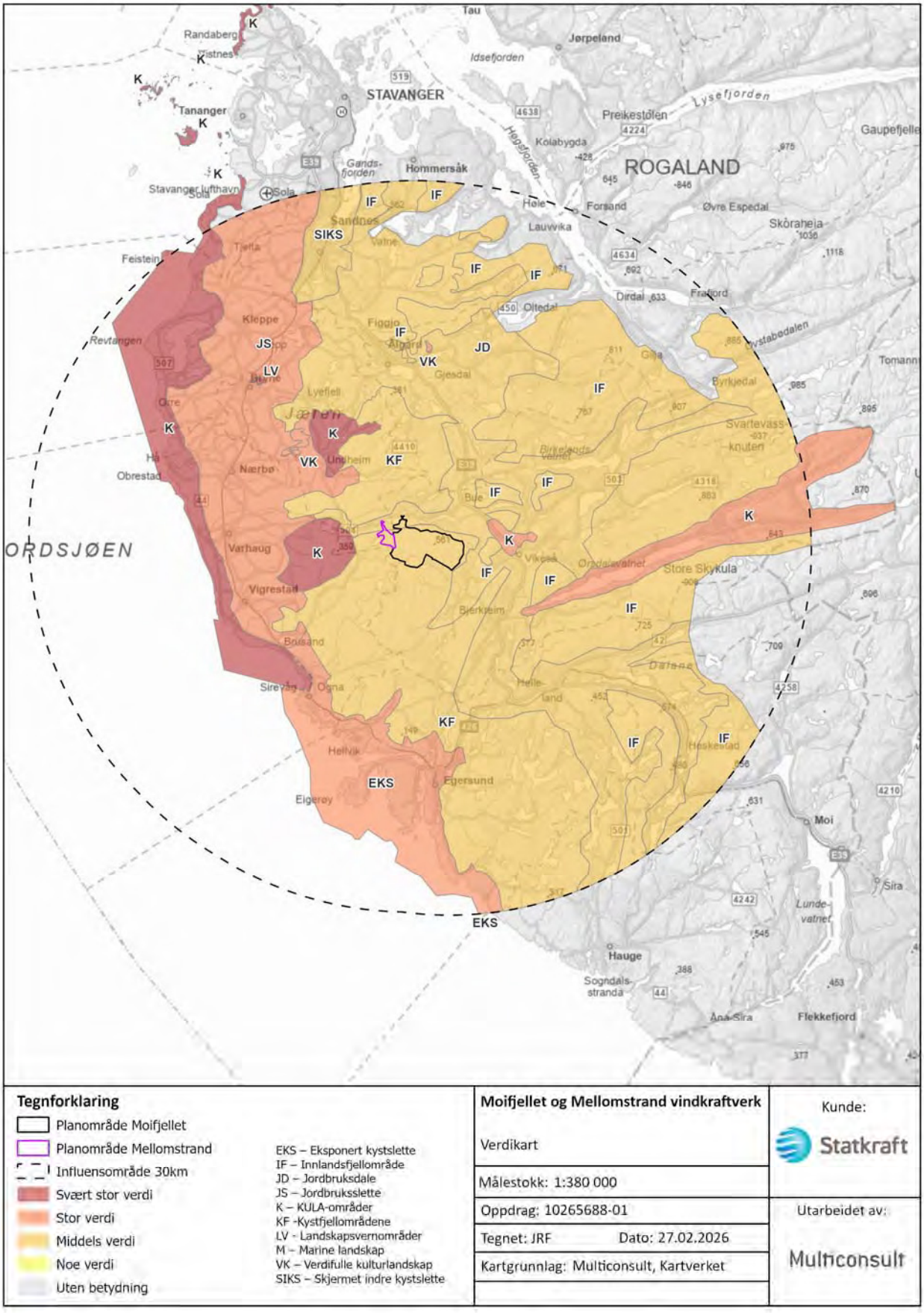
Tjensvoll/Mossige:

Området får automatisk **stor verdi**.

Lima:

Området får automatisk **stor verdi**.

5.2.11 Verdikart



Tegnforklaring

- Planområde Moifjellet
- Planområde Mellomstrand
- Influensområde 30km
- Svært stor verdi
- Stor verdi
- Middels verdi
- Noe verdi
- Uten betydning

EKS – Eksponert kystslette
IF – Innlandsfjellområde
JD – Jordbruksdale
JS – Jordbruksslette
K – KULA-områder
KF -Kystfjellområdene
LV - Landskapsvernområder
M – Marine landskap
VK – Verdifulle kulturlandskap
SIKS – Skjermet indre kystslette

Moifjellet og Mellomstrand vindkraftverk	Kunde: Statkraft
Verdikart	
Målestokk: 1:380 000	
Oppdrag: 10265688-01	Utarbeidet av: Multiconsult
Tegnet: JRF Dato: 27.02.2026	
Kartgrunnlag: Multiconsult, Kartverket	

Figur 5-25 Verdikart for delområdetypene i influensområdet.

5.3 Generell vurdering av påvirkning

Det er lettere å forstå virkningen av et tiltak når du vurderer det mot noe lett gjenkjennelig. I dette tilfellet ligger flere vindkraftverk tett opp til planområdet, som gjør at det er enklere å få en riktig forståelse for hvordan det planlagte tiltaket vil se ut i dette landskapet.

Hvordan det skilles mellom påvirkning i en dagslyssituasjon kontra en mørkesituasjon, med lysmerking for luftfart, inngår som ledd i den samlede vurderingen av teoretisk påvirkning, se kapittel 5.3.3.

5.3.1 Visuell påvirkning av turbiner i dagslys

Nye turbiner i forbindelse med Moifjellet og Mellomstrand vindkraftverk vil fra flere områder være synlige nært eksisterende turbiner og vil ha formlikhet med disse. Turbinene vil ligge noe høyere i terrenget enn vindkraftverkene rundt og vil i tillegg være 10-20 meter høyere enn disse. Men forskjell i turbinstørrelse kan være vanskeligere å oppfatte, fordi turbinene står med ulik høyde i terrenget og med ulik avstand til betrakteren. Rotasjonshastigheten vil fremstå som roligere jo større vingespenn turbinene har.

Når det kommer til hinderlysmerking vil teoretisk differanse i synlighet mellom HI og øvrige lystyper øke mest i dagslys og avta med senket lysintensitet og bakgrunnsluminans. Den opplevde synligheten vurderes likevel å være motsatt. Lysstyrken på hinderlys for turbinene på dagen vil være tilsvarende som hinderlys på eksisterende turbiner i området rundt, med den forskjellen at hinderlys på nye turbiner også vil ha LI-lys type B (fast rødt lys) på mellomliggende nivå, i tillegg til HI-lys type B på nacellen (hvitt blinkende lys). Kravet til LI-lys type B vil som nevnt tidligere også gjelde for eksisterende vindkraftverk, og disse må være på plass innen 31.12.2027.

En etablering av Moifjellet og Mellomstrand vindkraftverk vil medføre at påvirkningen på landskapet vil oppleves sterkere jo nærmere man er vindkraftverket. Noen områder hvor man ser eksisterende turbiner i dag, vil bli ytterligere påvirket av eksponering for nye turbiner, også i nye synsretninger. Det er også områder som i dag ikke er direkte påvirket av- eller eksponert for eksisterende turbiner som vil bli fysisk og/eller visuelt påvirket av eventuelt nye turbiner i forbindelse med Moifjellet og Mellomstrand vindkraftverk.

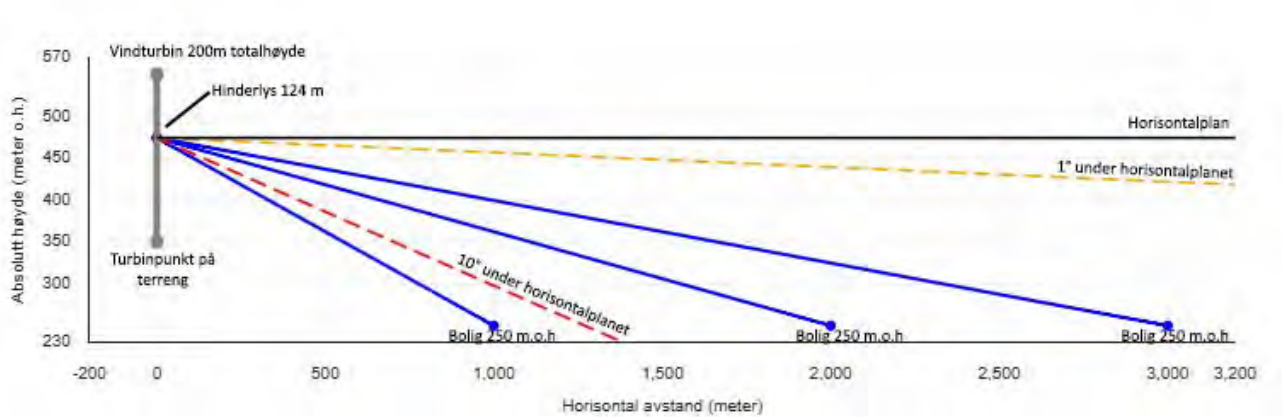
5.3.2 Visuell påvirkning av turbiner i mørket

Opplevelsen av turbiner på natten vil i hovedsak knyttes til hinderlys og evt. støy. Når det kommer til opplevelsen av hinderlys vil den avhenge av avstand og høydeforskjeller. Lysstyrken på hinderlys for de nye turbinene vil om natten være tilsvarende som hinderlys på eksisterende turbiner i området rundt, med den forskjellen at hinderlys på nye turbiner også vil ha LI-lys type B (fast rødt lys) på mellomliggende nivå, i tillegg til HI-lys type B på nacellen (hvitt blinkende lys). Men kravet til LI-lys type B vil som nevnt tidligere også gjelde for eksisterende vindkraftverk, og disse må være på plass innen 31.12.2027. Påvirkning av lys vil i tillegg til ytre siktforhold variere med avstand og siktvinkel i forhold til selve lyskilden.

For Moifjellet og Mellomstrand vindkraftverk ligger bebyggelsen tettest på vindkraftverket hovedsakelig i daldragene rundt, altså lavere i terrenget enn vindkraftverket. Bebyggelsen lenger unna vindkraftverket ligger også hovedsakelig lavere i terrenget, i daldrag i øst og sør, og på jordbruksslетten i vest. Flere steder vil hinderlys fra allerede eksisterende vindkraftverk påvirke disse områdene i dag, og Moifjellet og Mellomstrand vil forsterke dette inntrykket.

Ut ifra tabell 3-2 i kapittel 4.9 under kunnskapsgrunnlaget, vil bebyggelsen tett på og lenger unna, som i hovedsak ligger lavere i terrenget enn turbinpunktene og lysene på nacellen, i hovedsak være

eksponert for lys med en intensitet under 1000cd. Hvor stor påvirkningen vil være vil i tillegg til høydeforskjell mot tiltaket, som kan sees i tabell 3-2, avhenge av avstand til tiltaket. Tabell 4-6 i kapittel 4.9 viser en faglig basert vurdering av hvordan lysintensiteten oppleves innenfor de ulike synlighetssonene som er beskrevet i kapittel 2.1.4. (34).



Figur 5-26: Figuren viser eksempelturbin for Moifjellet og Mellomstrand vindkraftverk på 200 m totalhøyde og med nacellelys på 124 m, samt turbinpunkt på kote 350. Denne er sett opp mot boliger på 1, 2 og 3 km unna, beliggende på kote 250, noe som er realistisk plassering i terreng i området rundt Moifjellet og Mellomstrand vindkraftverk. Figuren tar ikke hensyn til variasjoner i terreng samt vegetasjon og annen bebyggelse i området mellom turbin og boliger, som vil kunne skjerme for synlighet mot turbiner på dagtid og nattestid. Figuren er laget ved hjelp av AI.

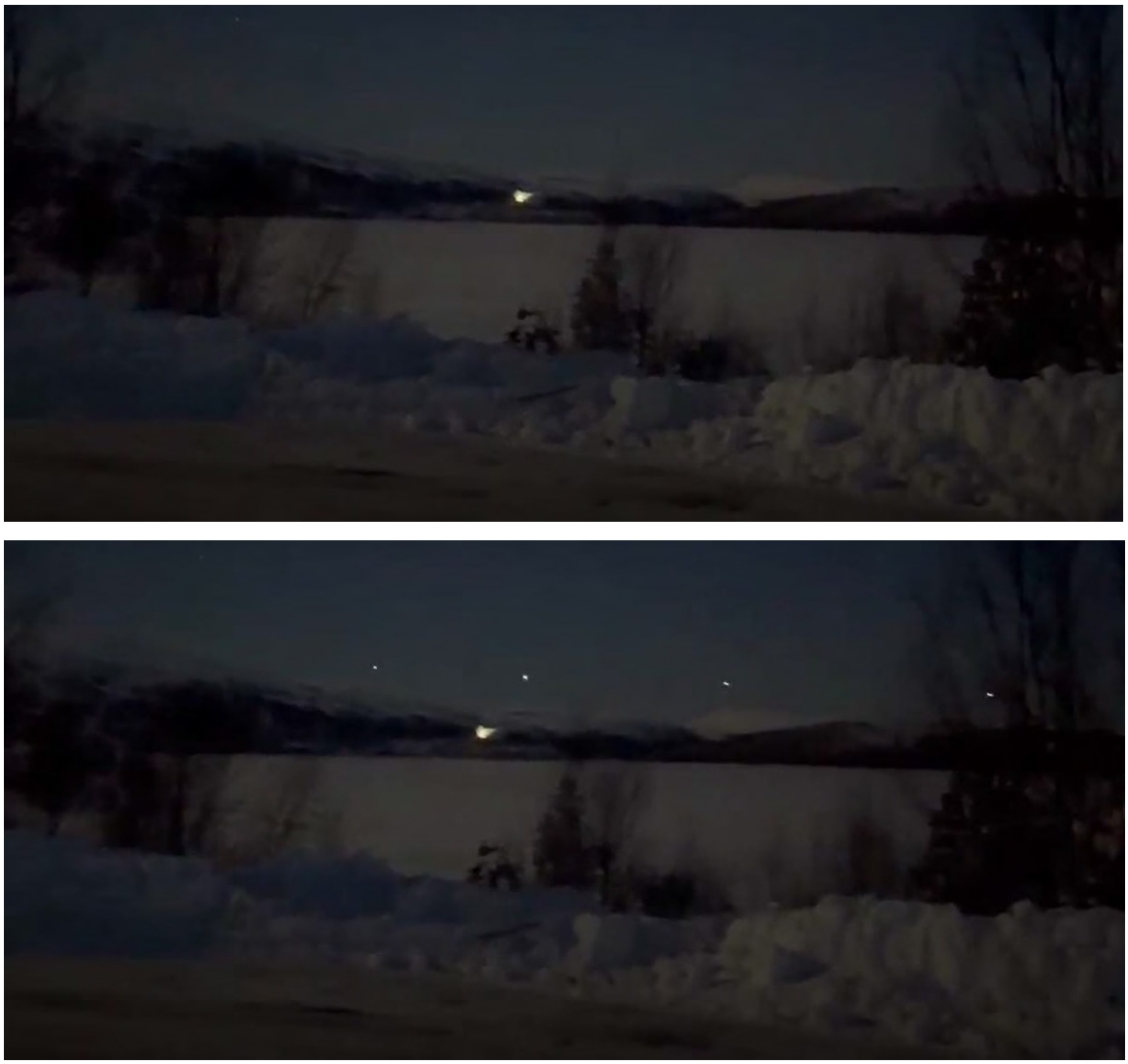
Ut ifra figur 5-26 ser vi at boligene som ligger 100 meter lavere i terrenget enn turbinpunktet og med avstand til turbinen på 1, 2 og 3 km, ligger under 1° av horisontalplanet, noe som tilsier at de vil være eksponert for lys på under 1000cd. Boligen på 1 km avstand ligger ca. 12-13° under horisontalplanet, den på 2 km avstand på ca. 7° under og den på 3 km avstand ca. 4-5° under. Under følger også en tabell som viser eksempler med boliger med forskjellig plassering i terreng og forskjellig avstand til tiltaket, for å illustrere hvordan de påvirkes av lyset basert på plassering i terreng og avstand til tiltaket:

Tabell 5-13: Tabell som viser eksempler med boliger med forskjellig plassering i terreng og forskjellig avstand til tiltaket, og hvordan disse påvirkes av hinderlys både med tanke på eksponering av lys og hvordan avstand også virker inn på opplevelsen. Tabellen tar ikke hensyn til variasjoner i terreng samt vegetasjon og annen bebyggelse i området mellom turbin og boliger, som vil kunne skjerme for synlighet mot turbiner på dagtid og nattestid. Tabellen er laget ved hjelp av AI.

Avstand (km)	Bolighøyde (m.o.h.)	Høydeforskjell (m) fra nacellelys	Vinkel under horisontalplanet (°)	Typisk lysnivå (andel av maks)	Forklaring
1	250	224	12,63°	≈ 3% eller lavere	Dypt under horisontalplanet – svært kraftig nedtoning av lys
5	250	224	2,57°	≈ 10-20 %	Klart under horisontalplanet – betydelig redusert lys
10	150	324	1,85°	≈ 25-35 %	Moderat under horisontalplanet – tydelig nedtoning, og avstand til tiltaket reduserer opplevelsen av lyset noe
20	60	414	1,19°	≈ 40-60 %	Rundt 1° – begynnende reduksjon, men avstand til tiltaket reduserer opplevelsen av lyset
30	10	464	0,89°	≈ 60-100 %	Mellom 0° og 1° – nær maks, men redusert. Avstand til tiltaket reduserer opplevelsen av lyset

Ut ifra tabell 3-2 i kapittel 3.3.5 og tabell 4-6 fra kapittel 4.9.1 under kunnskapsgrunnlaget, samt de mer prosjektspesifikke figur 5-26 og tabell 5-13, og i tillegg egenskaper ved blinkende lys, vil den teoretiske påvirkningen av turbinene om natten for Moifjellet og Mellomstrand vindkraftverk, med de blinkende høyintensitetslysene, bli:

- Sterkt forringet (sone 1 (opp til 600 m) og sone 2 (600 meter til 2 km): Både tiltakets nær- og fjernvirkning er negativ, og skjemmer landskapet visuelt i stor grad.
    - I planområdet vil synlige lys være svært sterke, men store areal vil ha få synlige lys grunnet perimetermerking.
    - På nær avstand vil lysene være sterke, og sektoren blir relativt stor.
    - Tiltaket vil stedvis kunne sees i sammenheng med andre eksisterende turbiner med lys HI type B som også blinker.
- Forringet (og sone 3 (2 km til 5km)): Tiltaket medfører vesentlig økt synlighet i landskapet i nære omgivelser.
    - På midlere avstand vil lysene være markante, samtidig som sektoren har en viss utbredelse.
    - Tiltaket vil stedvis kunne sees i sammenheng med andre eksisterende turbiner med lys HI type B som også blinker.
- Noe forringet (og sone 4 (5-14 km) og sone 5 (14-20 km)): Tiltaket medfører noe økt synlighet i brudd med tiltakets nære omgivelser. Tiltakets fjernvirkning er negativ i noen grad.
    - På midlere avstand nivå 2 vil lysene være markante, spesielt tettest på vindkraftverket, samtidig som sektoren har en viss utbredelse.
    - På lang avstand er lysintensiteten svak og sektoren begrenset, men blinkene vil gjøre lysene synlige.
    - Tiltaket vil fra flere steder kunne sees i sammenheng med andre eksisterende turbiner med lys HI type B som også blinker.
- Ubetydelig (sone 6 (20-30 km)): Tiltakets fjernvirkning er lite påvirket.
    - På fjern avstand er lysene ikke lengre markante og sektorene som dekkes av blinkende lys vil være relativt små.
    - Blinkene vil være svært svake og dekke en svært liten sektor.
    - Tiltaket vil i hovedsak kunne sees i sammenheng med andre eksisterende turbiner med lys HI type B som også blinker.



Figur 5-27: Bildene er fra Våvatnet rasteplass mot vindturbinene ved Geitfjellet Vindkraftverk, tatt på natta i fullmånelys. I den gitte situasjonen er ikke intensiteten på lysene dempet, slik at den lyser med 100 000 candela i stedet for 2000cd. De viser med andre ord et verste-fall senario, ved uregelmessighet, i en relativt nær situasjon. Bildene er hentet ut fra følgende film: Hinderlys på Geitfjellet fra Våvatnet - Natt.



Figur 5-28: Bilder tatt fra fv.714 i dagslys. Lysene er lite synlige, men kan ses som lyse prikker på utsnittet under til høyre. Under til venstre tilsvarende bilde uten blink. Hinderlys på Geitfjellet fra fv. 714 - Dag.

5.3.3 Samlet vurdering av teoretisk påvirkning

I tabell 5-14 vises en samlet vurdering for teoretisk påvirkning av Moifjellet og Mellomstrand vindkraftverk, der grad av synlighet og hvordan landskapets sammensetning vil influere på den visuelle virkningen innenfor ulike delområder ikke er hensyntatt. Dette omtales samlet for lys- og mørke-situasjon under påvirkningen for hvert delområde i kapittel 5.4.

Tabell 5-14: Teoretisk påvirkning vurdert opp mot 0-alternativet.

	Sone 1	**Sone 2**	**Sone 3**	**Sone 4**	**Sone 5**	**Sone 6**
Dagslys	Sterkt forringet	Sterkt forringet	Forringet	Noe forringet	Noe forringet	Ubetydelig
Mørke	Sterkt forringet	Sterkt forringet	Forringet	Noe forringet	Noe forringet	Ubetydelig
Samlet vurdering	Sterkt forringet	Sterkt forringet	Forringet	Noe forringet	Noe forringet	Ubetydelig

For sone 1 (opp til 600 m – planområdet) og sone 2 (600 m-2 km) vil påvirkningen være sterkt forringet, da dette området går fra få inngrep til å domineres av vindturbiner med tilhørende veier, og dalområdene rundt vil få turbiner i flere synsretninger. For sone 3 (2-5 km) blir påvirkningen i hovedsak forringet, siden flere av daldragene rundt Moifjellet får turbiner i flere synsretninger. For sone 4 (5-14 km) og sone 5 (14-20 km) blir påvirkningen hovedsakelig noe forringet, da man her begynner å komme noe lenger unna turbinene, og kan se de mer i sammenheng med andre turbiner i området. For sone 6 (20-30 km) blir påvirkningen hovedsakelig ubetydelig grunnet avstand til tiltaket.

5.4 Vurdering av påvirkning og konsekvens for delområdene

5.4.1 Inndeling i delområder innenfor de ulike synlighetssonene

Som nevnt i kapittel 2.1.4 deles de ulike delområdetypene inn i mindre områder (delområder) innenfor de beskrevne synlighetssonene (se kart i figur 5-29 for de synlighetssonene og de ulike delområdetypene). Inndelingen gir 30 ulike delområder innenfor de 6 ulike synlighetssonene. Navnene delområdene får gis etter delområdetype-synlighetssone-nummer av landskapstypen, for eksempel JS-1-1 betyr landskapstype jordbruksslette, synlighetssone 1 og delområde nr. 1 av denne delområdetypen innenfor synlighetssonen. Der delområdetypen deles opp slik at kun en liten del av delområdetypen inngår i en annen sone, vurderes påvirkning og konsekvens av hele delområdetypen innenfor den sonen der størstedelen av delområdetypen (som da blir delområdet i denne sonen) ligger innenfor. For KULA Jærkysten og Jærstrendene landskapsvernområde deles dette opp i to delområder innfor to ulike soner grunnet utstrekningen av delområdet. For KULA Ørsdalen/Kvitlen og Dyrskog verdifullt kulturlandskap tas hele vurderingen i sonen nærest tiltaket, da påvirkningen for dette delområdet er veldig lav totalt sett. Delområdene innenfor de ulike synlighetssonene er:

Synlighetssone 1 (inntil 600 meter):

- Delområde KF-1-1

Synlighetssone 2 (600 meter – 2 km):

- Delområde JD-2-1
- Delområde KF-2-1

Synlighetssone 3 (2-5 km):

- Delområde IF-3-1
- Delområde JD-3-1
- Delområde K-3-1 – KULA Storrsheia
- Delområde K-3-2 – KULA Høg-Jæren og Synesvarden landskapsvernområde og Synesvarden landskapsvernområde med plantelivsfredning
- Delområde KF-3-1

Synlighetssone 4 (5-14 km):

- Delområde IF-4-1
- Delområde JD-4-1
- Delområde JS-4-1
- Delområde K-4-1 – KULA Hadlands-Sæland-Undheim og Lyngaland landskapsvernområde og Urådalen landskapsvernområde
- Delområde K-4-2 – KULA Ørsdalen-Kvitlen og Dyrskog verdifult kulturlandskap
- Delområde KF-4-1
- Delområde VK-4-1 – Tjensvoll/Mossige

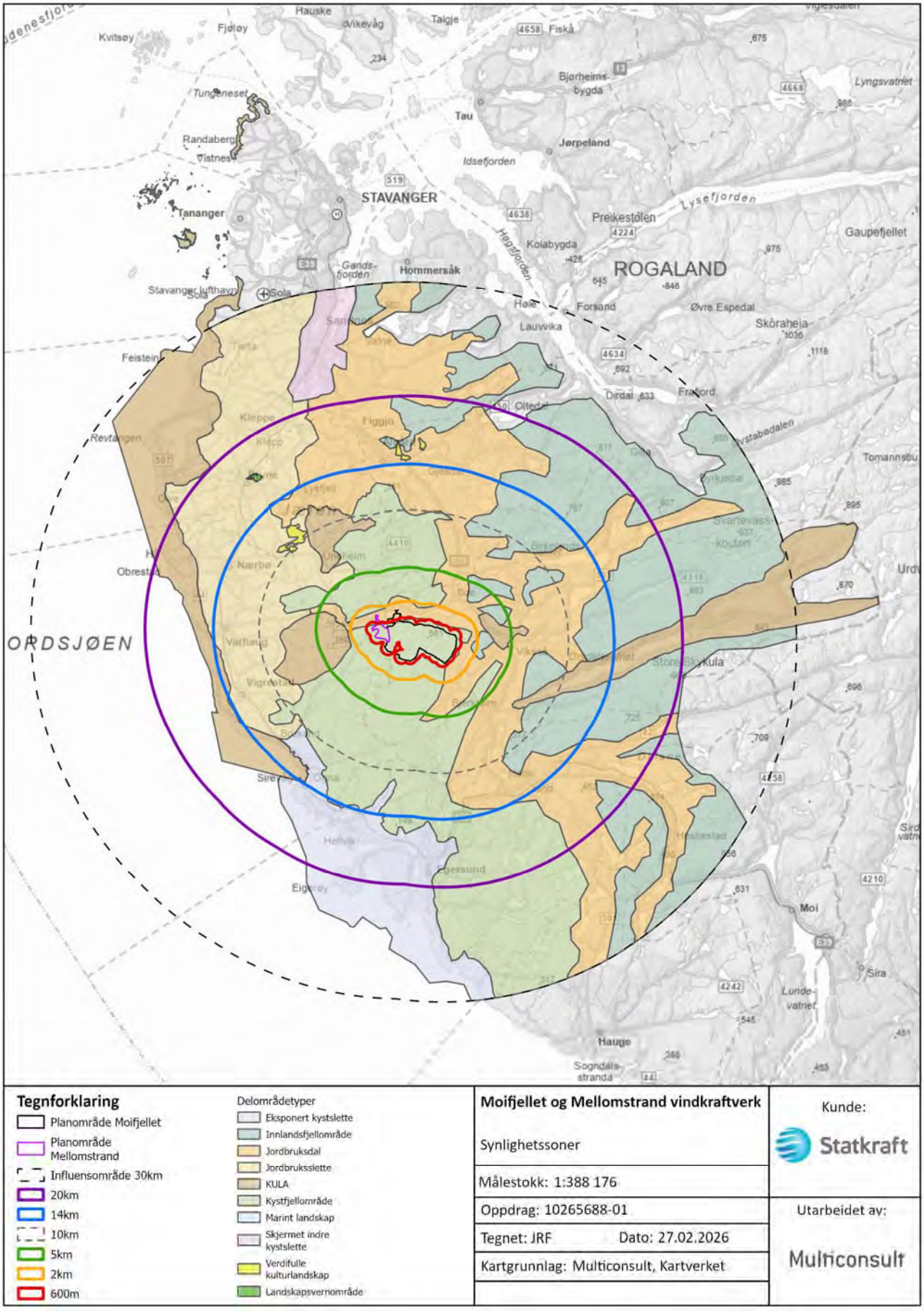
Synlighetssone 5 (14-20 km):

- Delområde EKS-5-1

- Delområde IF-5-1
- Delområde JS-5-1
- Delområde JD-5-1
- Delområde K-5-1 – KULA Jærkysten og Jærstrendene landskapsvernområde del 1
- Delområde KF-5-1
- Delområde LV-5-1 Søndre Frøyland landskapsvernområde med fuglefredning
- Delområde VK-5-1 – Lima verdifullt kulturlandskap

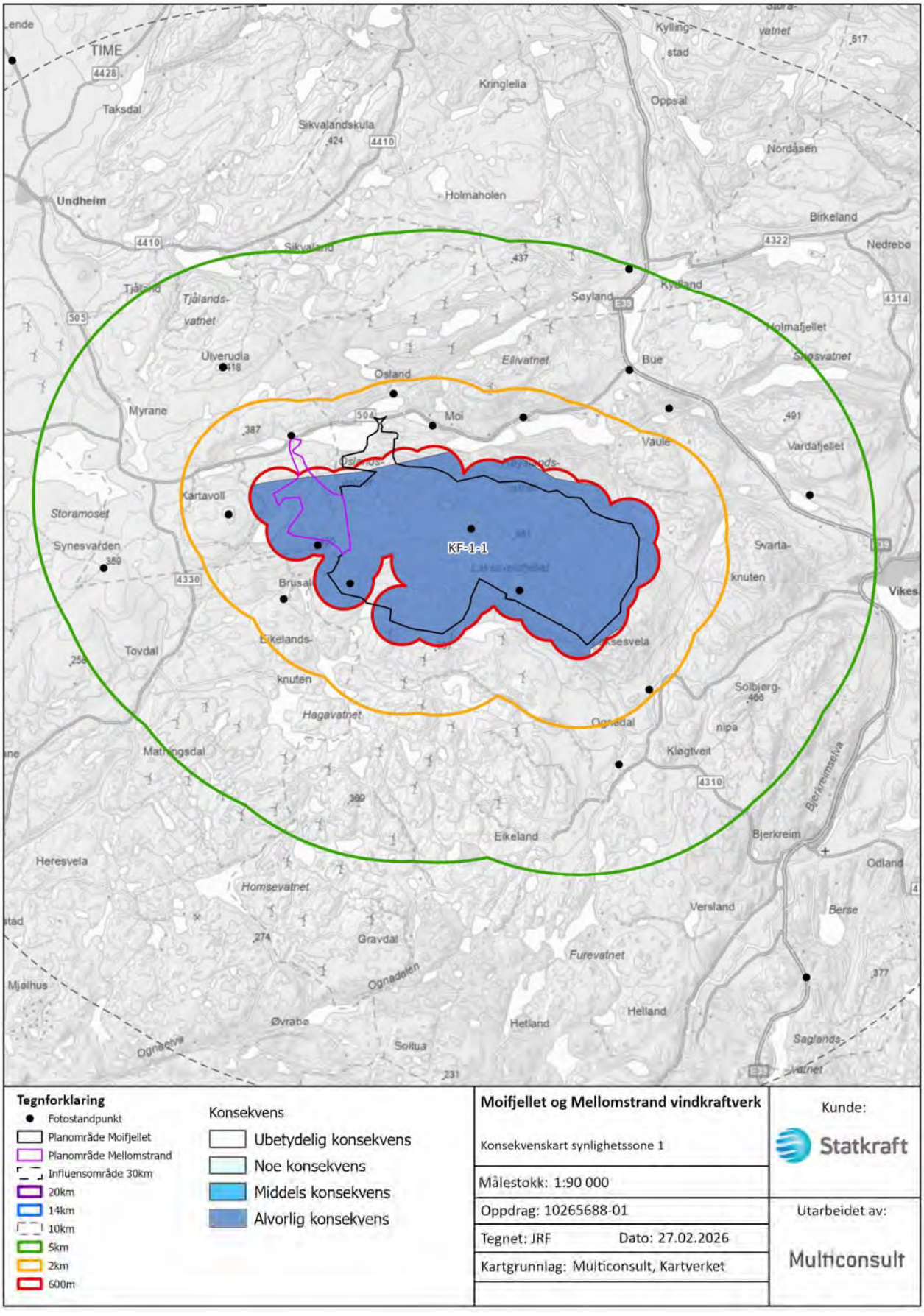
Synlighetssone 6 (20-30 km):

- Delområde IF-6-1
- Delområde JS-6-1
- Delområde JD-6-1
- Delområde K-6-1 – KULA Jærkysten og Jærstrendene landskapsvernområde del 2
- Delområde KF-6-1
- Delområde KS-6-1
- Delområde SIKS-6-1



Figur 5-29: Synlighetssonene og de ulike delområdetypene.

5.4.2 Delområder innenfor synlighetssone 1 (inntil 600 meter)



Figur 5-30: Kart over delområder med konsekvens i synlighetssone 1.

Delområde KF-1-1

Tabell 5-15: Vurdering av verdi, påvirkning og konsekvens for delområde KF1-1-1.

Verdivurdering: Delområde KF-1-1 **Delområdetype: Kystfjellområde**				
Uten betydning	Noe verdi	Middels verdi	Stor verdi ▲	Svært stor verdi
Delområdet er under delområdetypen kystfjellområde som har middels verdi. Lokalt for dette delområdet økes verdien til **stor verdi** grunnet deler av områdets kategorisering som inngrepsfri natur sone 2 (1-3 km fra inngrep).				

Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 ▲					

Synlighet: Sterkt forringet
Fragmentering: Sterkt forringet
Skala: Sterkt forringet
Formgiving: Sterkt forringet
Tilhørighet/identitet: Sterkt forringet

Påvirkningen av tiltaket vurderes som **sterkt forringet**.

Begrunnelse: Delområdet består av tiltaksområdet for turbinene og en sone på 600 meter fra disse (kalt visuell totaldominans – nær avstand nivå 1 – synlighetssone 1). Store deler av området er visuelt påvirket av eksisterende vindkraftverk, og fysisk påvirket av at en turbin fra Bjerkreim vindkraftverk er innenfor sonegrensen. I tillegg ligger Bjerkreimsenderen/Laksesvelafjellet TV tårn med tilhørende vei i delområdet, og det går en kraftledning inn i delområdet langs denne veien. Ellers er det lite inngrep i området i dag, og en mindre del av området er kategorisert som inngrepsfri natur sone 2 (1-2 km fra inngrep). Denne sonen vil forsvinne ved utbygging av Moifjellet og Mellomstrand vindkraftverk. Utbygging av vindkraftverket med tilhørende veier, kraftledningstrase og massetak vil ha stor påvirkning på området og landskapskarakteren her. Området vil gå fra å være et kupert kystlyngheiområde med noen inngrep til å domineres av vindturbiner på 200 meter totalhøyde. Moifjellet og Mellomstrand vindkraftverk vil stedvis sett fra delområdet oppleves som en forlenget del av Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk, noe som vil kunne forsterke tiltaket visuelt i negativ retning fra dette delområdet (se visualisering i figur 5-32). Tilhørende veier er planlagt landskapstilpasset i det kuperte terrenget (for eksempel, se visualisering med veier inne i figur 5-34).

Mellomstrands turbin MS 4 vil bli spesielt negativ visuelt og fysisk, da den ligger et stykke unna de andre turbinene i vindkraftverket, i tillegg til at denne ligger ned mot Kartavatnet og påvirker et landskap som ligger noe lavere i terrenget og går noe over mot jordbrukslandskap.

Veiadkomsten til alternativ 1 er kortere og ligger bedre i terrenget med mindre inngrep enn veiadkomsten i alternativ 2.

	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 2 ▲					

Synlighet: Sterkt forringet
Fragmentering: Sterkt forringet
Skala: Sterkt forringet
Formgiving: Sterkt forringet
Tilhørighet/identitet: Sterkt forringet

Påvirkningen av tiltaket vurderes som **sterkt forringet**.

	Begrunnelse: Se begrunnelse for Moifjellet og Mellomstrand vindkraftverk i alternativ 1. Alternativ 2 – Moifjellet vindkraftverk ekskluderer utbygging av Mellomstrands 4 turbiner nordvest i vindkraftverket, med tilhørende veiareal, og har adkomstvei lenger nordøst. Den visuelle og fysiske påvirkningen av vindturbinene på området blir noe mindre ved en utbygging av alternativ 2 i stedet for alternativ 1, men veiadkomsten er lengre, og ligger dårligere i terrenget, med større inngrep.

Tiltakets konsekvens							
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 Moifjellet og Mellomstrand vindkraftverk	**Alvorlig konsekvens** for delområdet (---). ▲						
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 2 Moifjellet vindkraftverk	**Alvorlig konsekvens** for delområdet (---). ▲						



Figur 5-31: Foto fra sør i tiltaksområdet (T01 i kart over fotostandpunkt) sett mot Bjerkreim vindkraftverk.



Figur 5-32: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra sør i tiltaksområdet (T01 i kart over fotostandpunkt) mot Bjerkreim vindkraftverk.



Figur 5-33: Foto fra nord i tiltaksområdet (T02 på kartet over fotostandpunkt), sett mot Bjerkreim vindkraftverk. Vannet Ulvatjørn i forgrunnen.



Figur 5-34: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1) etter revegetering av veiene, sett fra nord i tiltaksområdet mot Bjerkreim vindkraftverk.

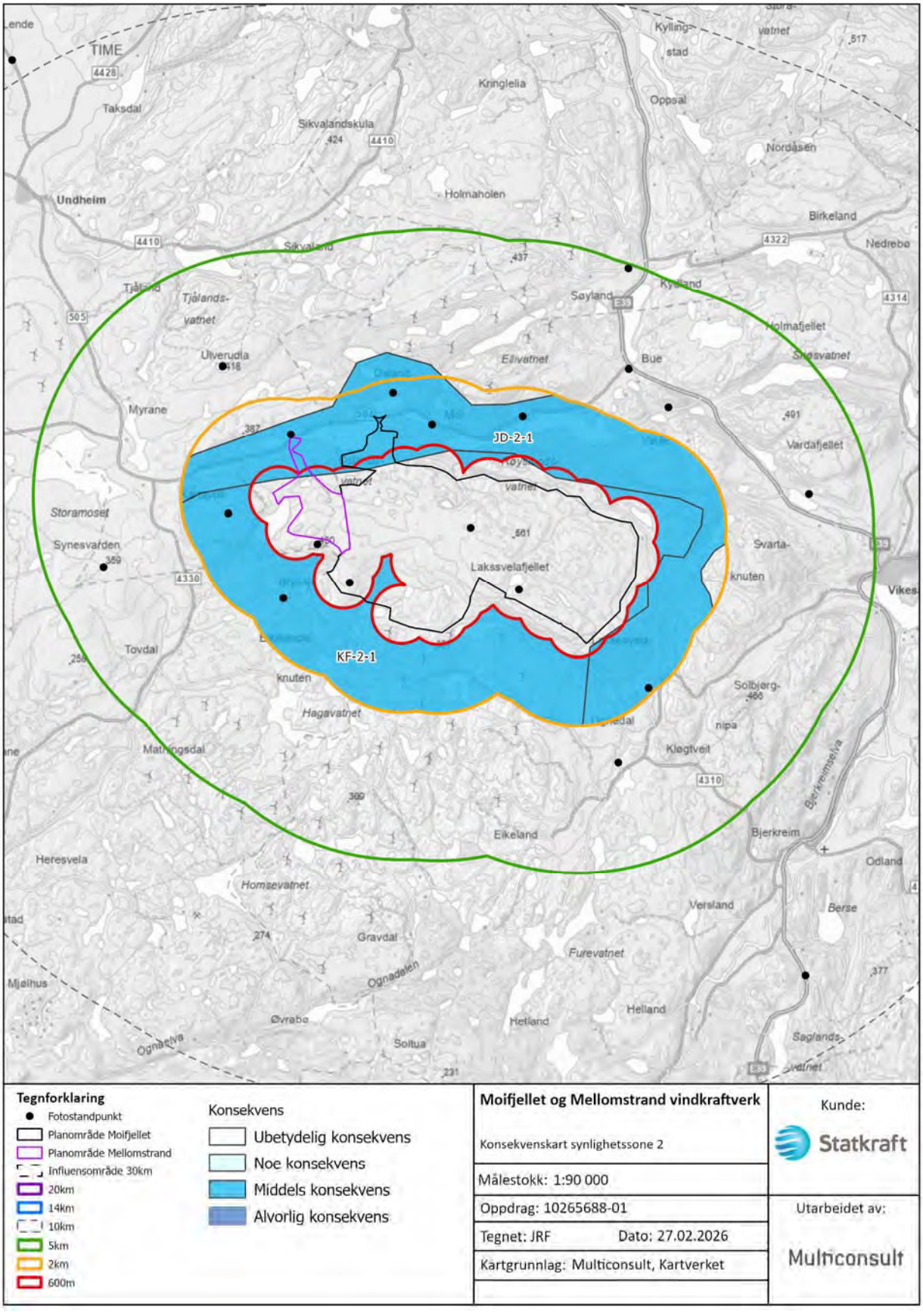


Figur 5-35: Visualisering av Moifjellet vindkraftverk (alternativ 2) etter revegetering av veiene, sett fra nord i tiltaksområdet mot Bjerkreim vindkraftverk. Fra dette fotostandpunktet er det i venstre bildekant to færre turbiner enn for Moifjellet og Mellomstrand vindkraftverk (alternativ 1).



Figur 5-36: Visualisering av Moifjellet vindkraftverk (alternativ 2) under anlegging av veiene, sett fra nord i tiltaksområdet (T02 på kartet over fotostandpunkt) mot Bjerkreim vindkraftverk.

5.4.3 Delområder innenfor synlighetssone 2 (600 meter-2 km)



Figur 5-37: Kart over delområder med konsekvens i synlighetssone 2.

Delområde JD-2-1

Tabell 5-16. Vurdering av verdi, påvirkning og konsekvens for delområde JD-2-1.

Verdivurdering: Delområde JD-2-1 **Delområdetype: Jordbruksdal**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
		▲			
Delområdet er under delområdetypen jordbruksdal som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1					▲
Synlighet: Sterkt forringet Fragmentering: Sterkt forringet Skala: Sterkt forringet Formgiving: Forringet Tilhørighet/identitet: Forringet Påvirkningen av tiltaket vurderes som **sterkt forringet**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil gi sterk visuell påvirkning på daldraget ved Mellomstrand, Osland, Moi og Røysland (se visualiseringer, Figur 5-39, figur 5-42, figur 5-47, figur 5-49 og figur 5-51). Flere steder fra disse områdene kan man se turbiner fra før i noen synsretninger, men med turbinene i Moifjellet og Mellomstrand vindkraftverk i tillegg til eksisterende vil dalområdet få turbiner i enda flere synsretninger. Dette vil påvirke dette dallandskapet svært negativt visuelt. Fra Osland vil Mellomstrands turbin MS 04 utpeke seg som spesielt negativ visuelt, da den oppleves lavere i terrenget og et stykke unna de andre turbinene. Området fra Ognavatnet til Vadet/Litlehei ser ikke turbiner i dag, men blir nå visuelt påvirket av Moifjellet og Mellomstrand vindkraftverk. Tiltaket vil bli mindre synlig fra Laksesvela-Slettabø-Holen-området (se visualisering, figur 5-53). Veiadkomsten for alternativ 1 påvirker delområdet fysisk og visuelt. Den er kortere og ligger bedre i terrenget med mindre inngrep enn veiadkomsten i alternativ 2.					
	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 2					▲
Synlighet: Sterkt forringet Fragmentering: Sterkt forringet Skala: Sterkt forringet Formgiving: Forringet Tilhørighet/identitet: Forringet Påvirkningen av tiltaket vurderes som **sterkt forringet**. *Begrunnelse:* Se begrunnelse for Moifjellet og Mellomstrand i alternativ 1. Alternativ 2 – Moifjellet vindkraftverk ekskluderer utbygging av Mellomstrands 4 turbiner med tilhørende veiareal, og har adkomstvei lenger nordøst. Som kan sees av visualiseringen sett fra Osland i figur 5-43, blir dette området noe mindre påvirket av utbyggingen ved alternativ 2, da Mellomstrands 4 turbiner kan sees herfra. Utstrekningen av vindkraftverket mot vest blir derfor noe mindre ved alternativ 2.					

	Den visuelle påvirkningen av vindturbinene på området blir noe mindre totalt sett ved en utbygging av alternativ 2 i stedet for alternativ 1, men veiadkomsten er lengre, og ligger dårligere i terrenget med større inngrep.						
Tiltakets konsekvens							
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1	**Middels konsekvens** for delområdet (--). ▲						
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 2	**Middels konsekvens** for delområdet (--). ▲						



Figur 5-38: Foto fra Mellomstrand mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk.



Figur 5-39: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1) sett fra Mellomstrand. Mellomstrands turbin MS 04 kan sees helt mot høyre i bildet.



Figur 5-40: Visualisering av Moifjellet vindkraftverk (alternativ 2) sett fra Mellomstrand.



Figur 5-41: Foto fra Osland mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk.



Figur 5-42: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1) sett fra Osland. Mellomstrands turbin MS 04 kan sees helt mot høyre i bildet. Som kan sees ligger den lavere i terrenget og over mot jordbrukslandskapet sett herfra.



Figur 5-43: Visualisering av Moifjellet vindkraftverk (alternativ 2) sett fra Osland. Som kan sees blir utstrekningen av Moifjellet vindkraftverk noe kortere enn Moifjellet og Mellomstrand sett fra denne synsvinkelen.



Figur 5-44: Foto fra Osland (fra samme fotostandpunkt som i figur 5-41, men i en annen vinkel) mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk.



Figur 5-45: Visualisering av Moifjellet vindkraftverk (alternativ 2) sett fra Osland.



Figur 5-46: Foto fra Moi mot lokalisering av Moifjellet og Mellomstrand vindkraftverk.



Figur 5-47: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1) sett fra Moi.



Figur 5-48: Foto fra Moi (fra samme fotostandpunkt som foto i figur 5-46, men i en annen synsvinkel) mot lokaliseringen av Moifjellet vindkraftverk.



Figur 5-49: Visualisering av Moifjellet vindkraftverk (alternativ 2) sett fra Moi (fra samme fotostandpunkt som foto i figur 5-46, men i en annen synsvinkel).



Figur 5-50: Foto fra Røysland mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk.



Figur 5-51: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Røysland. Sett herfra er ikke Mellomstrands 4 turbiner synlige.



Figur 5-52: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Laksesvela.



Figur 5-53: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Laksesvela. Deler av turbinbladene vil stikke opp over horisonten sett fra dette fotostandpunktet. Sett herfra er ikke Mellomstrands 4 turbiner synlige.

Delområde KF-2-1

Tabell 5-17. Vurdering av verdi, påvirkning og konsekvens for delområde KF-2-1.

Verdivurdering: Delområde KF-2-1 **Delområdetype: Kystfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
		▲			
Delområdet er under delområdetypen kystfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1					▲
Synlighet: Sterkt forringet Fragmentering: Sterkt forringet Skala: Forringet Formgiving: Forringet Tilhørighet/identitet: Forringet Påvirkningen av tiltaket vurderes som **sterkt forringet**. *Begrunnelse:* Delområdet er visuelt og fysisk påvirket av eksisterende vindkraftverk. Turbiner med tilhørende veier fra Bjerkreim vindkraftverk ligger i delområdet. Moifjellet og Mellomstrand vindkraftverk vil påvirke inntrykket ytterligere, spesielt fra nærliggende høydedrag i vest og sør, som fra områdene rundt Brusaknuden (se visualisering i figur 5-55, figur 5-56 og figur 5-58), Brusali (se visualisering i figur 5-60) og Karten (se visualisering i figur 5-63), hvor de nye turbinene kommer tettere på enn eksisterende turbiner. Her vil Moifjellet og Mellomstrand vindkraftverk tette igjen store deler av det som i dag er et åpent område mellom de to vindkraftområdene i sør og nord, og bidra til at det vil kunne oppleves som et sammenhengende og stort vindkraftverk, spesielt mot sør. Dette vil påvirke landskapet i disse områdene svært negativt visuelt.					

	Mellomstrands turbin MS 04 vil bli spesielt negativ visuelt (se visualisering i figur 5-63), da den ligger et stykke unna de andre turbinene i vindkraftverket, i tillegg til at denne ligger ned mot Kartavatnet og påvirker et landskap som ligger noe lavere i terrenget og går noe over mot jordbrukslandskap. Tilhørende veier i vindkraftverket er planlagt landskapstilpasset og vil trolig bli lite synlig på grunn av det kuperte terrenget (se visualisering med veier inne i).

	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 2					▲

Synlighet: Sterkt forringet
Fragmentering: Sterkt forringet
Skala: Forringet
Formgiving: Forringet
Tilhørighet/identitet: Forringet

Påvirkningen av tiltaket vurderes som **sterkt forringet**.

Begrunnelse: Se begrunnelse for Moifjellet og Mellomstrand i alternativ 1. Alternativ 2 – Moifjellet vindkraftverk ekskluderer utbygging av Mellomstrands 4 turbiner med tilhørende veier. Dette gjør at delområdet blir noe mindre visuelt påvirket, spesielt sett fra Karten, som nå får turbinene noe mer på avstand. Sett fra Brusali får alternativ 2 en mindre utstrekning mot vest enn alternativ 1. Se visualisering sett fra Karten i figur 5-64, Brusaknuden i figur 5-55 og figur 5-56 og Brusali i figur 5-61.

Tiltakets konsekvens							
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1					▲		

Middels konsekvens for delområdet (--).

Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 2					▲		

Middels konsekvens for delområdet (--).



Figur 5-54: Foto fra Brusaknuden sett mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk. Bjerkreim vindkraftverk i høyre bildekant og Måkaknuten vindkraftverk i venstre bildekant.



Figur 5-55: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Brusaknuden, med etablerte veier. Bjerkreim vindkraftverk i høyre bildekant og Måkaknuten vindkraftverk i venstre bildekant. Mellomstrands 4 turbiner er ikke synlige sett fra denne synsvinkelen.



Figur 5-56: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Brusaknuden, med revegerte veier. Bjerkreim vindkraftverk i høyre bildekant og Måkaknuten vindkraftverk i venstre bildekant. Mellomstrands 4 turbiner er ikke synlige sett fra denne synsvinkelen.



Figur 5-57: Foto fra Brusaknuden, fra samme fotostandpunkt som i figur 5-54, sett mot lokaliseringen av Mellomstrands 4 turbiner. Måkaknuten vindkraftverk i høyre bildekant.



Figur 5-58: Visualisering fra Brusaknuden, fra samme fotostandpunkt som i figur 5-54, sett mot lokaliseringen av Mellomstrands 4 turnbiner. Måkaknuten vindkraftverk i høyre bildekant. Resten av Moifjellet vindkraftverk ligger utenfor høyre bildekant.



Figur 5-59: Foto fra Brusali, tatt mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk. Deler av Bjerkreim vindkraftverk kan sees i høyre bildekant.



Figur 5-60: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Brusali. Deler av Bjerkreim vindkraftverk kan sees i høyre bildekant. Som kan sees ved sammenligning med neste figur, figur 5-61, vil to av de fire vindturbinene fra Mellomstrand bli synlige herfra.



Figur 5-61: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Brusali. Deler av Bjerkreim vindkraftverk kan sees i høyre bildekant. Som kan sees ved sammenligning med figur 5-60 blir det to færre synlige turbiner fra dette standpunktet ved en utbygging av Moifjellet vindkraftverk.



Figur 5-62: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Karten.

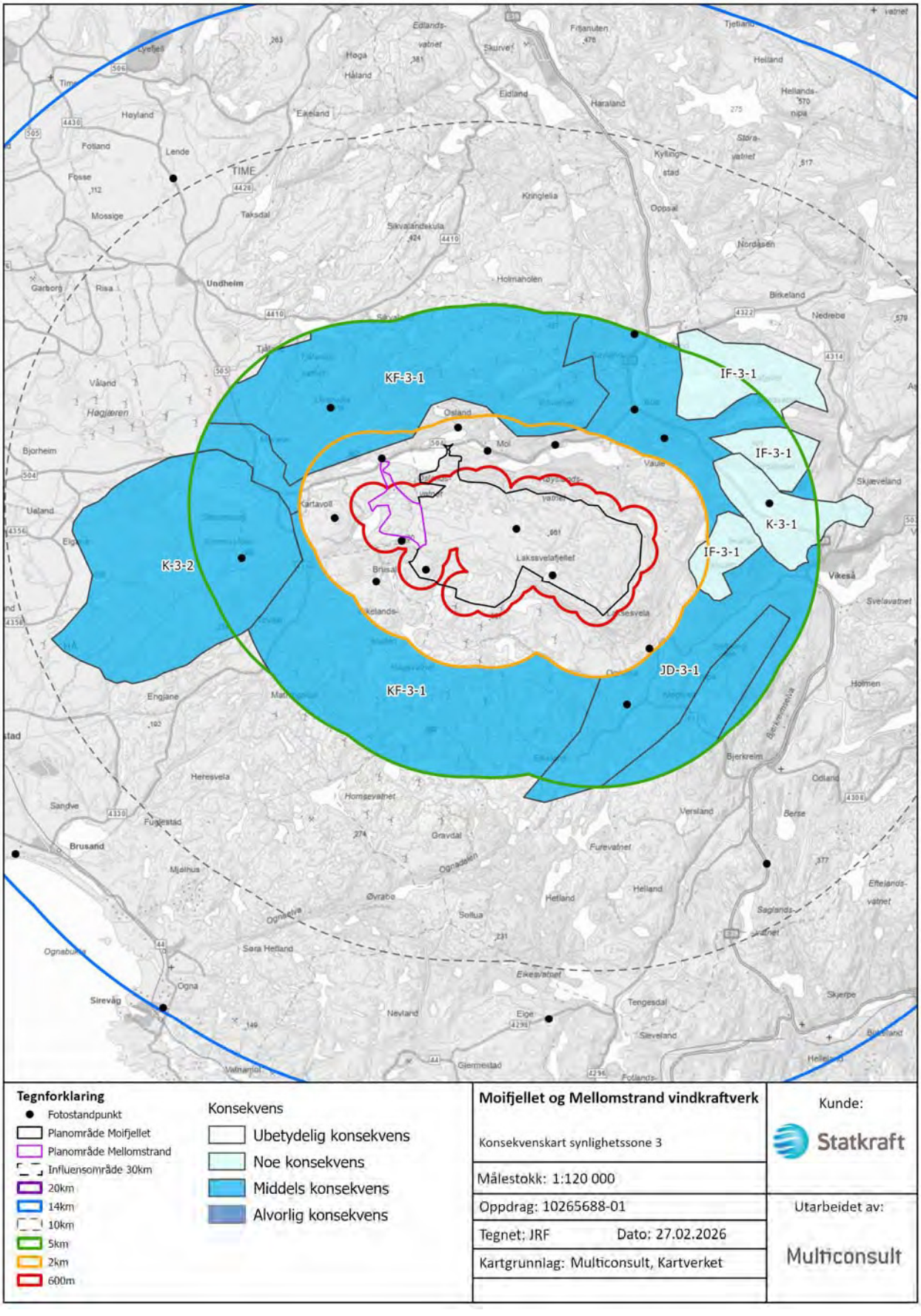


Figur 5-63: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Karten. Vindturbin MS04 (helt til venstre i venstre bildekant) kommer tettere på sett herfra, og ligger nært Kartavatnet ned mot jordbrukslandskapet.



Figur 5-64: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Karten. Vindkraftverket oppleves totalt sett noe mer på avstand sett herfra enn Moifjellet og Mellomstrand vindkraftverk.

5.4.4 Delområder innenfor synlighetssone 3 (2-5 km)



Figur 5-65: Kart over delområder med konsekvens i synlighetssone 3.

Delområde IF-3-1

Tabell 5-18. Vurdering av verdi, påvirkning og konsekvens for delområde IF-3-1.

Verdivurdering: Delområde IF-3-1 **Delområdetype: Innlandsfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen innlandsfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og Alternativ 2	▲ Synlighet: Forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil påvirke dette inntrykket ytterligere, spesielt fra de høyeste punktene. Vindkraftverket vil også påvirke visuelt områder som i dag ikke ser turbiner (se synlighetskart i figur 5-4).				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).				

Delområde JD-3-1

Tabell 5-19. Vurdering av verdi, påvirkning og konsekvens for delområde JD-3-1.

Verdivurdering: Delområde JD-3-1 **Delområdetype: Jordbruksdal**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
		▲			
Delområdet er under delområdetypen jordbruksdal som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2				▲	
Synlighet: Forringet Fragmentering: Forringet Skala: Forringet Formgiving: Noe forringet Tilhørighet/identitet: Forringet Påvirkningen av tiltaket vurderes som **forringet**. *Begrunnelse:* Store deler av delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil forsterke dette ytterligere. Tiltaket vil bli godt synlig i nordøst, i områdene Kydland/Søyland (se visualisering, figur 5-67), Bue (se visualisering i figur 5-69) og Vaule (se visualisering i figur 5-71), og i sørøst, fra Ognadalen (se visualisering, figur 5-73). Fra sør vil området kunne oppleves som sammenhengende med Bjerkreim vindkraftverk. Området fra Svelabakken til Litlesvela i øst er lite visuelt påvirket i dag, og vil kun bli ytterligere påvirket i de høyestliggende områdene i sør-sørøst.					
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2				▲			
Middels konsekvens for delområdet (--).							



Figur 5-66: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Kydland/Søyland. Måkaknuten vindkraftverk kan sees i høyre bildekant.



Figur 5-67: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Kydland/Søyland. Måkaknuten vindkraftverk kan sees i høyre bildekant. Mellomstrands 4 turbiner vil ikke bli synlige sett fra dette fotostandpunktet.



Figur 5-68: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Bue.



Figur 5-69: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Bue. Mellomstrands 4 turbiner vil ikke bli synlige sett fra dette fotostandpunktet.



Figur 5-70: Foto av lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Vaule.



Figur 5-71: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Vaule. Mellomstrands 4 turbiner vil ikke bli synlige sett fra dette fotostandpunktet.



Figur 5-72: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Ognadalen bedehus.



Figur 5-73: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Ognadalen bedehus. Mellomstrands 4 turbiner vil ikke bli synlige sett fra dette fotostandpunktet.

Delområde K-3-1

Tabell 5-20. Vurdering av verdi, påvirkning og konsekvens for delområde K-3-1.

Verdivurdering: Delområde K-3-1 KULA Storrsheia **Delområdetype: KULA**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen KULA Storrsheia som automatisk har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er noe visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil i hovedsak bli lite synlig fra de lavereliggende kulturlandskapsområdene, men vil bli noe synlig fra gårdsbrukene på vestsiden av Storrheisvatnet. Mest synlig blir det fra dalområdene på østsiden av Storrsheivatnet, se visualisering i figur 5-75.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).				



Figur 5-74: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra østsiden av Storrheisvatnet.



Figur 5-75: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra østsiden av Storrheisvatnet. Mellomstrands 4 turbiner vil ikke bli synlige sett fra dette fotostandpunktet.

Delområde K-3-2

Tabell 5-21. Vurdering av verdi, påvirkning og konsekvens for delområde K-3-2.

Verdivurdering: Delområde K-3-2 - KULA Høg-Jæren og Synesvarden landskapsvernområde og Synesvarden landskapsvernområde med plantelivsfredning **Delområdetype: KULA og landskapsvernområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
				▲	
Delområdet er under delområdetypen KULA og landskapsvernområde som automatisk har **svært stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1	▲ Synlighet: Forringet Fragmentering: Forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet vindkraftverk vil forsterke dette uttrykket, og tiltaket vil kunne oppleves som et sammenhengende og stort vindkraftverk sammen med Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk (se visualisering sett fra turmålet Synesvarden, figur 5-77). Mellomstrands turbin MS 04 gjør alternativ 1 noe mer negativt visuelt enn alternativ 2, da den ligger et stykke unna de andre turbinene i vindkraftverket, i tillegg til at den påvirker et landskap som ligger noe lavere i terrenget og går noe over mot jordbrukslandskap. Men på denne avstanden utgjør den ikke en like stor påvirkning som i mer nærliggende områder.				
	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 2	▲ Synlighet: Forringet Fragmentering: Forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Se begrunnelse for Moifjellet og Mellomstrand i alternativ 1. Alternativ 2 – Moifjellet vindkraftverk ekskluderer utbygging av Mellomstrands 4 turbiner med tilhørende veier. Dette gjør at delområdet blir noe mindre visuelt påvirket, spesielt sett fra Synesvarden, som får turbinene noe mer på avstand. Men på denne avstanden utgjør den ikke en like stor påvirkning som i mer nærliggende områder.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -

Moifjellet og Mellomstrand vindkraftverk	**Middels konsekvens** for delområdet (--). ▲						
	+++/++++	+/++	0	-	- -	- - -	- - - -
Moifjellet vindkraftverk	**Middels konsekvens** for delområdet (--). ▲						



Figur 5-76: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra turmålet Synesvarden. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Figur 5-77: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra turmålet Synesvarden. Også herfra oppleves Mellomstrands turbin MS 04 tettere på og ned mot et annet type landskap (jordbrukslandskapet). Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Figur 5-78: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra turmålet Synesvarden. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.

Delområde KF-3-1

Tabell 5-22. Vurdering av verdi, påvirkning og konsekvens for delområde KF-3-1.

Verdivurdering: Delområde KF-3-1 **Delområdetype: Kystfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
		▲			
Delområdet er under delområdetypen kystfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1				▲	
Synlighet: Forringet Fragmentering: Forringet Skala: Forringet Formgiving: Noe forringet Tilhørighet/identitet: Forringet Påvirkningen av tiltaket vurderes som **forringet**. *Begrunnelse:* Store deler av delområdet er visuelt påvirket av eksisterende vindkraftverk. I tillegg ligger blir delområdet fysisk påvirket av Måkaknuten vindkraftverk og Stigafjellet vindkraftverk i nord, og Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk i sør. Moifjellet vindkraftverk vil påvirke området ytterligere. Fra turmålet Ulvarudlå (se visualisering, figur 5-80) vil tiltaket kunne oppleves som et stort og sammenhengende vindkraftverk sammen med Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk. Mellomstrands turbin MS 04 vil bli spesielt negativ visuelt, da den ligger et stykke unna de andre turbinene i vindkraftverket, i tillegg til at denne påvirker et landskap som ligger noe lavere i terrenget og går noe over mot jordbrukslandskap.					

	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 2				▲	
	Synlighet: Forringet Fragmentering: Forringet Skala: Forringet Formgiving: Noe forringet Tilhørighet/identitet: Forringet Påvirkningen av tiltaket vurderes som **forringet**. *Begrunnelse:* Se begrunnelse for Moifjellet og Mellomstrand i alternativ 1. Alternativ 2 – Moifjellet vindkraftverk ekskluderer utbygging av Mellomstrands 4 turbiner med tilhørende veier. Dette gjør at delområdet blir noe mindre visuelt påvirket, spesielt sett fra Ulvarudlå, som nå får turbinene noe mer på avstand (se visualisering i figur 5-81).				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1				▲	
	Middels konsekvens for delområdet (--).				
	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 2				▲	
	Middels konsekvens for delområdet (--).				



Figur 5-79: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Ulvarudlå. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.

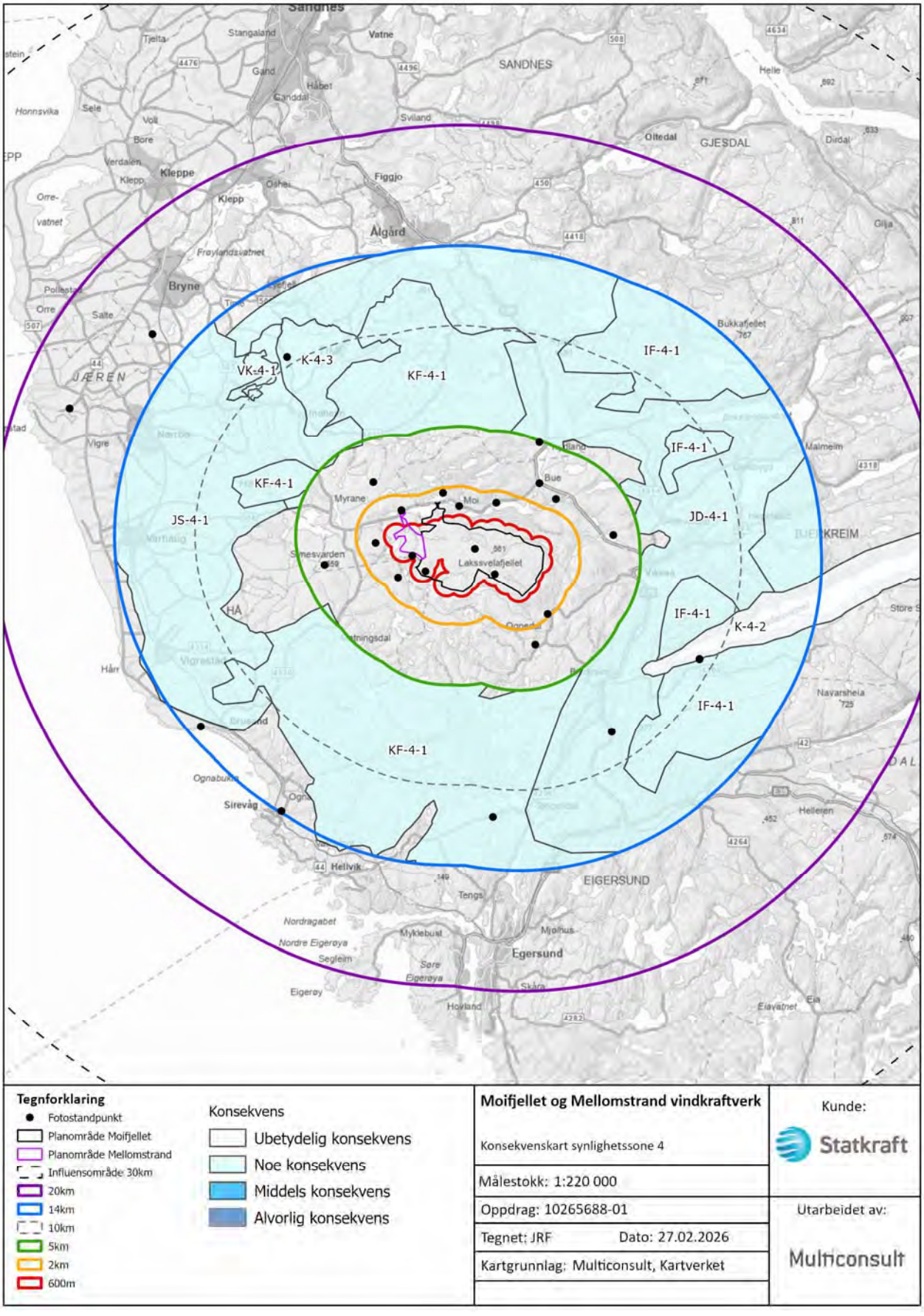


Figur 5-80: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Ulvarudlå. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Figur 5-81: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Ulvarudlå. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.

5.4.5 Delområder innenfor synlighetssone 4 (5-14 km)



Figur 5-82: Kart over delområder med konsekvens i synlighetssone 4.

Delområde K-4-1

Tabell 5-23. Vurdering av verdi, påvirkning og konsekvens for delområde K-4-1.

Verdivurdering: Delområde K-4-1 KULA Ørsdalen/Kvitlen og Dyrskog verdifult kulturlandskap **Delområdetype: KULA og verdifullt kulturlandskap**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen KULA og verdifullt kulturlandskap som automatisk har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er lite visuelt påvirket av eksisterende vindkraftverk, kun stedvis visuelt påvirket fra de høyestliggende områdene. Moifjellet og Mellomstrand vindkraftverk vil påvirke noe ytterligere de aller høyeste områdene, men tiltaket vil bli lite synlig fra daldraget, som i hovedsak er KULA-områdets formål. Tiltaket vil være synlig fra hyttefeltet i Hytland, som er i overgangen mot delområde IF-4-1. Disse hyttene tilhører landskapsmessig og tilkomstmessig delområdet IF-4-1, og tiltaket sett herfra vurderes og visualiseres i delområde IF-4-1. Se visualisering fra Hytland i figur 5-87 i delområde IF-4-1.					
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).					

Delområde K-4-2

Tabell 5-24. Vurdering av verdi, påvirkning og konsekvens for delområde K-4-2.

Verdivurdering: Delområde K-4-2 KULA Hadland-Sæland-Undheim og Lyngaland landskapsvernområde og Urådalen landskapsvernområde **Delområdetype: KULA og landskapsvernområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
				▲	
Delområdet er under delområdetypen KULA som automatisk har **svært stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2			▲ Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Store deler av delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil bidra til ytterligere påvirkning, og vil kunne oppleves som en forlengelse av Måkaknuten vindkraftverk og Stigafjellet vindkraftverk sett fra dette delområdet (se visualisering fra området mellom Hykken og Lende, figur 5-84 (Moifjellet og Mellomstrand vindkraftverk) og figur 5-85 (Moifjellet vindkraftverk)).		
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2			▲ **Noe konsekvens** for delområdet (-).				



Figur 5-83: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra området mellom Hykken og Lende. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim og Høg-Jæren vindkraftverk er synlig i høyre bildekant.



Figur 5-84: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra området mellom Hykken og Lende. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim og Høg-Jæren vindkraftverk er synlig i høyre bildekant. Moifjellet og Mellomstrand vindkraftverk vil sett herfra kunne oppleves som en forlenget del av Måkaknuten vindkraftverk.



Figur 5-85: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra området mellom Hykken og Lende. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim og Høg-Jæren vindkraftverk er synlig i høyre bildekant. Moifjellet vindkraftverk vil sett herfra kunne oppleves som en forlenget del av Måkaknuten vindkraftverk. Det er tre færre synlige turbinder for Moifjellet enn for Moifjellet og Mellomstrand, så utstrekningen blir noe mindre mot vest (høyre bildekant).

Delområde IF-4-1

Tabell 5-25. Vurdering av verdi, påvirkning og konsekvens for delområde IF-4-1.

Verdivurdering: Delområde IF-4-1 **Delområdetype: Innlandsfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen innlandsfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ <u>Synlighet:</u> Noe forringet <u>Fragmentering:</u> Noe forringet <u>Skala:</u> Noe forringet <u>Formgiving:</u> Forringet <u>Tilhørighet/identitet:</u> Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Store deler av delområdet er visuelt påvirket av eksisterende vindkraftverk. Områdene i sør har høyest grad av visuell påvirkning i dag, og er også de områdene som blir ytterligere høyest visuelt påvirket av Moifjellet og Mellomstrand vindkraftverk. I disse områdene vil Moifjellet vindkraftverk kunne bidra til et nytt område med vindturbiner i horisonten (se visualisering sett fra Hytland, figur 5-87).				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).						



Figur 5-86: Foto av lokaliseringen av Moifjellet og Mellomstrand vindkraftverk sett fra Hytland. Bjerkreim vindkraftverk er synlig i venstre bildekant.



Figur 5-87: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Hytland. Bjerkreim vindkraftverk er synlig i venstre bildekant. Mellomstrands 4 turbiner er ikke synlige sett herfra.

Delområde VK-4-1

Tabell 5-26. Vurdering av verdi, påvirkning og konsekvens for delområde VK-4-1.

Verdivurdering: Delområde VK-4-1 Tjensvoll/Mossige verdifullt kulturlandskap **Delområdetype: Verdifullt kulturlandskap**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen verdifullt kulturlandskap som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Store deler av området er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil bidra til ytterligere visuell påvirkning, og forsterke områdene som allerede er høyest visuelt påvirket i dag.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).				

Delområde KF-4-1

Tabell 5-27. Vurdering av verdi, påvirkning og konsekvens for delområde KF-4-1.

Verdivurdering: Delområde KF-4-1 **Delområdetype: Kystfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen kystfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er visuelt og fysisk påvirket av eksisterende vindkraftverk, med deler av Skinansfjellet og Gravdal vindkraftverk beliggende i delområdet. Moifjellet og Mellomstrand vindkraftverk vil forsterke dette uttrykket ytterligere, og tiltaket vil flere steder oppleves som en forlenget og forsterkende del av Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk (se visualisering sett fra Eige, figur 5-89).				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).				



Figur 5-88: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Eige, sør i delområdet. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant.



Figur 5-89: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Eige. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant, med Moifjellet vinkraftverk liggende bak og mot høyre bildekant, og høyere i terrenget. Moifjellet vindkraftverk vil kunne oppleves som en forlenget

del av Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk sett fra denne lokaliseringen. Mellomstrands 4 turbiner vil ikke bli synlige sett fra dette fotostandpunktet.



Figur 5-90: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Eige, sør i delområdet. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant.



Figur 5-91: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Eige. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant, med Moifjellet og

Mellomstrand vinkraftverk liggende bak og mot høyre bildekant, og høyere i terrenget. Moifjellet vindkraftverk vil kunne oppleves som en forlenget del av Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk sett fra denne lokaliseringen.



Figur 5-92: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Eige. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant, med Moifjellet vinkraftverk liggende bak og mot høyre bildekant, og høyere i terrenget. Moifjellet vindkraftverk vil kunne oppleves som en forlenget del av Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk sett fra denne lokaliseringen.

Delområde JD-4-1

Tabell 5-28. Vurdering av verdi, påvirkning og konsekvens for delområde JD-4-1.

Verdivurdering: Delområde JD-4-1 **Delområdetype: Jordbruksdal**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen jordbruksdal som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Noe forringet Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk, og Moifjellet og Mellomstrand vindkraftverk vil forsterke dette uttrykket ytterligere. Det er sterkest påvirkning nord og sør i delområdet (se visualisering sett fra Saglandsbakken i sør, figur 5-94), noe mindre i øst og mindre generelt i lavereliggende områder.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).				



Figur 5-93: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Saglandsbakken, sør i delområdet.



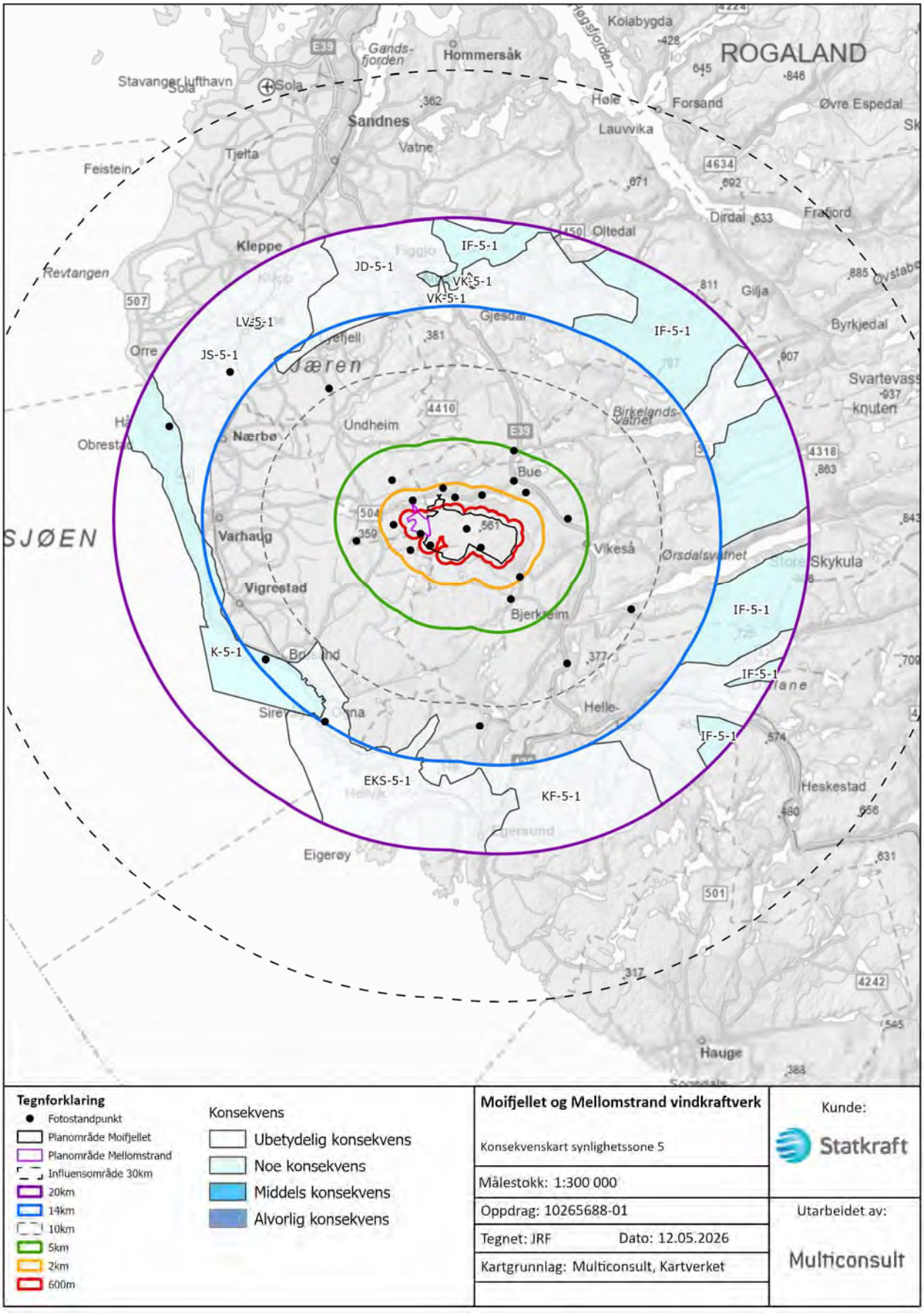
Figur 5-94: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Saglandsbakken. Tiltaket vil bli synlig mot horisonten i nordvest. Mellomstrands 4 turbiner vil ikke blir synlige fra dette fotostandpunktet.

Delområde JS-4-1

Tabell 5-29. Vurdering av verdi, påvirkning og konsekvens for delområde JS-4-1.

Verdivurdering: Delområde JS-4-1 **Delområdetype: Jordbruksslette**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen jordbruksslette som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2			▲		
	Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Noe forringet Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er sterkt visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil forsterke den visuelle påvirkningen i høydedragene i vest, men vil ikke bli synlig fra de store flatere partiene i øst.					
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2				▲			
	Noe konsekvens for delområdet (-).						

5.4.6 Delområder innenfor synlighetssone 5 (14-20 km)



Figur 5-95: Kart over delområder med konsekvens i synlighetssone 5.

Delområde EKS-5-1

Tabell 5-30. Vurdering av verdi, påvirkning og konsekvens for delområde EKS-5-1.

Verdivurdering: Delområde EKS-5-1 **Delområdetype: Kystslette**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen eksponert kystslette som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet vil forsterke dette noe ytterligere. Nordvest og tettest på tiltaksområdet vil Moifjellet vindkraftverk kunne oppleves som at det fortetter Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk, uten at det det samlet sett vil få en større utstrekning (se visualisering sett fra Sirevåg, figur 5-98). Sør- og lenger unna tiltaksområdet vil de visuelle virkningene av vindkraftverk totalt forsterkes noe på de høyereliggende områdene.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				



Figur 5-96: Foto mot tiltaksområdet for Moifjellet og Mellomstrand vindkraftverk, sett fra Sirevåg. Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk er synlig herfra.



Figur 5-97: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Sirevåg. Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk i forgrunnen, med Moifjellet og

Mellomstrand vindkraftverk som fortetter i bakkant. Som kan sees ved sammenligning med figur 5-98 er det to færre synlige turbiner fra dette standpunktet ved Moifjellet vindkraftverk (mot venstre bildekant).



Figur 5-98: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Sirevåg. Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk i forgrunnen, med Moifjellet vindkraftverk som fortetter i bakkant. Som kan sees ved sammenligning med figur 5-97 er det to færre synlige turbiner fra dette standpunktet ved Moifjellet vindkraftverk (mot venstre bildekant).

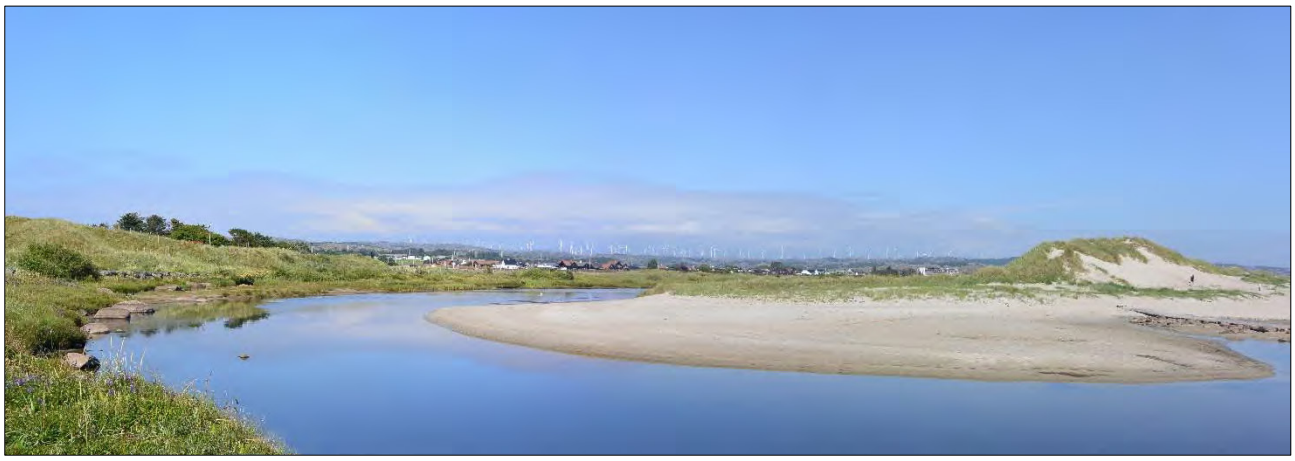
Delområde K-5-1

Tabell 5-31. Vurdering av verdi, påvirkning og konsekvens for delområde K-5-1.

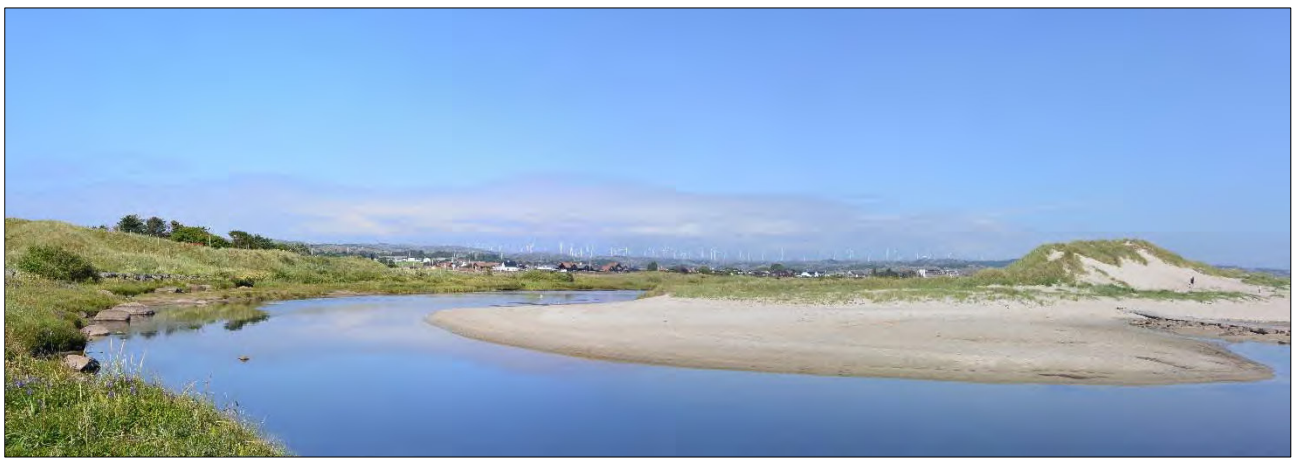
Verdivurdering: Delområde K-5-1 KULA Jærkysten og Jærstrendene landskapsvernområde (del 1) **Delområdetype: KULA og landskapsvernområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
				▲	
Delområdet er under delområdetypen KULA og landskapsvernområde som har **svært stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet vindkraftverk vil forsterke dette inntrykket, og utstrekningen av vindturbiner vil totalt bli noe større, og med flere lag med vindturbiner bak hverandre. Flere lag med turbiner vil kunne bidra til å gi et noe mer rotete uttrykk (se visualisering sett fra Brusand, figur 5-101 og fra Nærheim, figur 5-104), men vil totalt sett ikke påvirke landskapet like mye som områdene som bidrar til en videre utstrekning av eksisterende vindkraftverk. Stedvis i delområdet vil noen turbiner forsvinne bak terrengformer internt i delområdet.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).						



Figur 5-99: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk sett fra Brusand. Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk er synlig herfra.



Figur 5-100: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Brusand. Vindkraftverk bidrar til en større utstrekning av vindturbiner mot venstre bildekant, og et noe mer rotete uttrykk. Som kan sees ved sammenligning med figur 5-101 figur 5-100blir utstrekningen noe større mot venstre bildekant sett herfra enn for Moifjellet vindkraftverk.



Figur 5-101: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Brusand. Vindkraftverk bidrar til en større utstrekning av vindturbiner mot venstre bildekant, og et noe mer rotete uttrykk. Som kan sees ved sammenligning med figur 5-100 blir utstrekningen noe kortere mot venstre bildekant sett herfra enn for Moifjellet og Mellomstrand vindkraftverk.



Figur 5-102: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Nærheim. Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk er synlig herfra.



Figur 5-103: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Nærheim. Vindkraftverket bidrar til et noe mer rotete visuelt uttrykk. Som kan sees ved sammenligning med figur 5-104 er det ikke stor forskjell i den visuelle opplevelsen av de to ulike alternativene.



Figur 5-104: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Nærheim. Vindkraftverket bidrar til et noe mer rotete visuelt uttrykk. Som kan sees ved sammenligning med figur 5-103 er det ikke stor forskjell i den visuelle opplevelsen av de to ulike alternativene.

Delområde JD-5-1

Tabell 5-32. Vurdering av verdi, påvirkning og konsekvens for delområde JD-5-1.

Verdivurdering: Delområde JD-5-1 **Delområdetype: Jordbruksdal**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen jordbruksdal som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet vil forsterke dette noe ytterligere i høyereliggende områder.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde IF-5-1

Tabell 5-33. Vurdering av verdi, påvirkning og konsekvens for delområde IF-5-1.

Verdivurdering: Delområde IF-5-1 **Delområdetype: Innlandsfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen innlandsfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Noe forringet Skala: Noe forringet Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **noe forringet**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet vindkraftverk vil forsterke dette inntrykket i høyereliggende områder, og stedvis fortette mellom eksisterende vindkraftverk.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Noe konsekvens** for delområdet (-).				

Delområde KF-5-1

Tabell 5-34. Vurdering av verdi, påvirkning og konsekvens for delområde KF-5-1.

Verdivurdering: Delområde KF-5-1 **Delområdetype: Kystfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen kystfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er fysisk og visuelt påvirket av vindkraftverk i dag, med deler av Egersund vindkraftverk i delområdet. Moifjellet vil forsterke det visuelle inntrykket noe stedvis i høydedrag og i åpnere områder.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde JS-5-1

Tabell 5-35. Vurdering av verdi, påvirkning og konsekvens for delområde JS-5-1.

Verdivurdering: Delområde JS-5-1 **Delområdetype: Jordbruksslette**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen jordbruksslette som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er sterkt visuelt påvirket av eksisterende vindkraftverk. Moifjellet vindkraftverk vil forsterke dette inntrykket noe ved at det fortettes noe innimellom eksisterende vindkraftverk og det kan oppleves flere lag av turbiner oppå hverandre.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				



Figur 5-105: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Steinsland. Høg-Jæren vindkraftverk er synlig i høyre bildekant og Måkaknuten vindkraftverk er synlig i venstre bildekant.



Figur 5-106: Visualisering av Moifjellet og Mellomstrand vindkraftverk (alternativ 1), sett fra Steinsland. Vindkraftverket vil kunne oppleves som en forlenget del av Høg-Jæren vindkraftverk sett herfra. Ved sammenligning med figur 5-107 kan man se at uttrykket blir noe mer rotete midt i bildet ved Moifjellet og Mellomstrand vindkraftverk enn ved kun Moifjellet vindkraftverk, men på denne avstanden utgjør ikke dette en betydelig forskjell.



Figur 5-107: Visualisering av Moifjellet vindkraftverk (alternativ 2), sett fra Steinsland. Vindkraftverket vil kunne oppleves som en forlenget del av Høg-Jæren vindkraftverk sett herfra. Ved sammenligning med figur 5-106 kan man se at uttrykket blir noe mindre rotete midt i bildet ved Moifjellet vindkraftverk enn ved Moifjellet og Mellomstrand vindkraftverk, men på denne avstanden utgjør ikke dette en betydelig forskjell.

Delområde VK-5-1

Tabell 5-36. Vurdering av verdi, påvirkning og konsekvens for delområde VK-5-1.

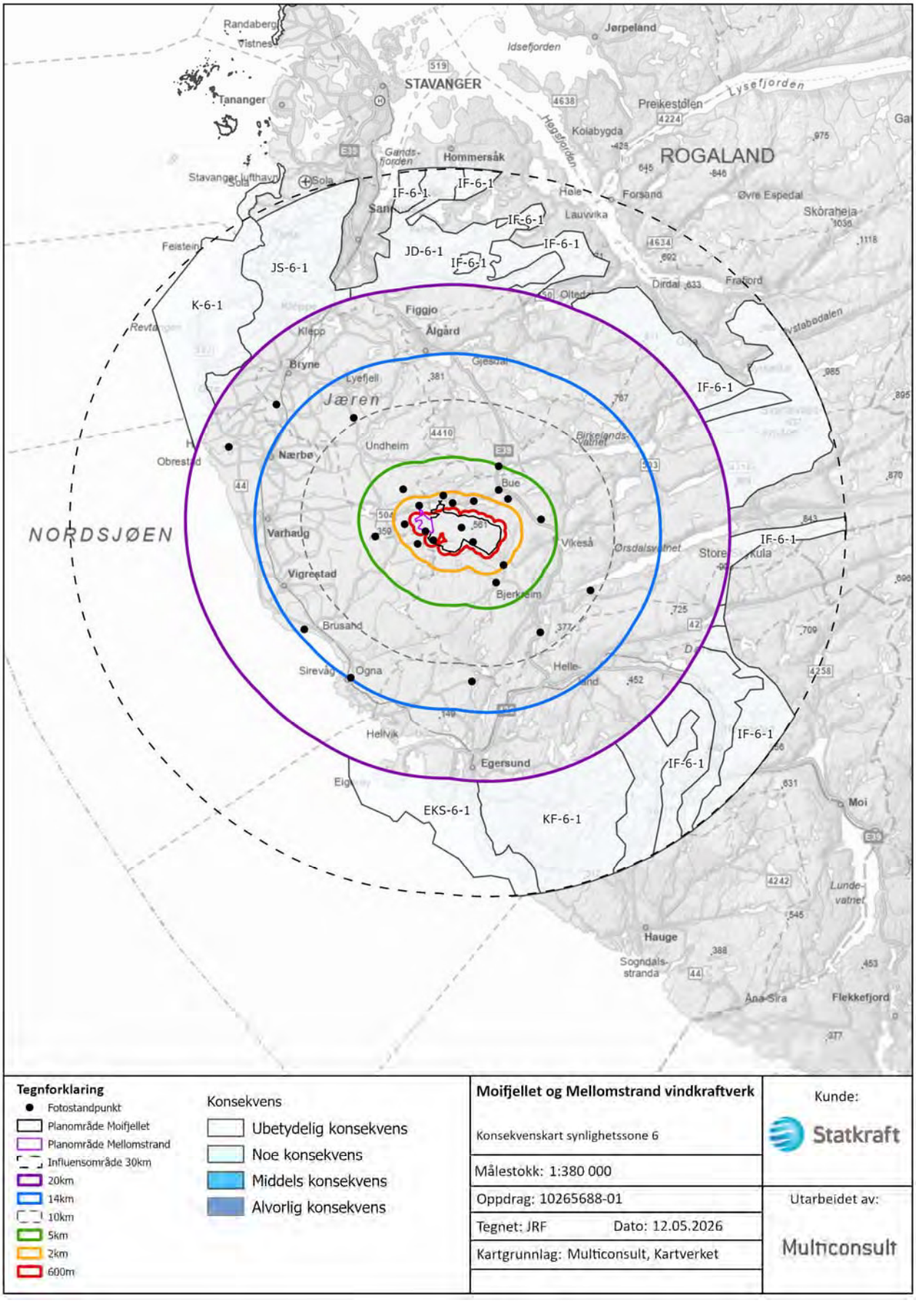
Verdivurdering: Delområde VK-5-1 Lima verdifullt kulturlandskap **Delområdetype: Verdifullt kulturlandskap**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen verdifullt kulturlandskap som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk, hvor flere er tett på og vil ta fokus. Moifjellet og Mellomstrand vindkraftverk vil ligge i bakkant og stedvis kunne forsterke dette inntrykket.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde LV-5-1

Tabell 5-37. Vurdering av verdi, påvirkning og konsekvens for delområde LV-5-1.

Verdivurdering: Delområde LV-5-1 Søndre Frøyland landskapsvernområde med fuglefredning **Delområdetype: Landskapsvernområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
				▲	
Delområdet er under delområdetypen verdifullt kulturlandskap som har **svært stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk, hvor noen er tett på og vil ta fokus. Moifjellet og Mellomstrand vindkraftverk vil ligge i bakkant og stedvis kunne forsterke dette inntrykket.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

5.4.7 Delområder innenfor synlighetssone 6 (20-30 km)



Figur 5-108: Kart over delområder med konsekvens i synlighetssone 6.

Delområde EKS-6-1

Tabell 5-38. Vurdering av verdi, påvirkning og konsekvens for delområde EKS-6-1.

Verdivurdering: Delområde EKS-6-1 **Delområdetype: Eksponert kystlsette**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen eksponert kystslette som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt og fysisk påvirket av eksisterende vindkraftverk, da Svåheia vindkraftverk ligger i delområdet. Moifjellet og Mellomstrand vindkraftverk vil forsterke det visuelle inntrykket noe ytterligere i høyereliggende områder, men det ligger mellom 20-30 km unna tiltaket, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde IF-6-1

Tabell 5-39. Vurdering av verdi, påvirkning og konsekvens for delområde IF-6-1.

Verdivurdering: Delområde IF-6-1 **Delområdetype: Innlandsfjell**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen innlandsfjell som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ <u>Synlighet:</u> Noe forringet <u>Fragmentering:</u> Ubetydelig <u>Skala:</u> Ubetydelig <u>Formgiving:</u> Ubetydelig <u>Tilhørighet/identitet:</u> Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er noe visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil forsterke dette noe stedvis i høyereliggende områder, men delområdet ligger mellom 20-30 km unna tiltaket, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde K-6-1

Tabell 5-40. Vurdering av verdi, påvirkning og konsekvens for delområde K-6-1.

Verdivurdering: Delområde K-6-1 KULA Jærkysten og Jærstrendene landskapsvernområde (del 2) **Delområdetype: KULA og landskapsvern**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
				▲	
Delområdet er under delområdetypen KULA og landskapsvern som har **svært stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2		▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Området er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil kunne forsterke dette inntrykket, men delområdet ligger mellom 20-30 km unna tiltak, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.			
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2			▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde JD-6-1

Tabell 5-41. Vurdering av verdi, påvirkning og konsekvens for delområde JD-6-1.

Verdivurdering: Delområde JD-6-1 **Delområdetype: Jordbruksdal**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen jordbruksdal som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er noe visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil kunne forsterke dette noe stedvis i høyereliggende områder, men delområdet ligger mellom 20-30 km unna tiltaket, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde JS-6-1

Tabell 5-42. Vurdering av verdi, påvirkning og konsekvens for delområde JS-6-1.

Verdivurdering: Delområde JS-6-1 **Delområdetype: Jordbruksslette**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
			▲		
Delområdet er under delområdetypen jordbruksslette som har **stor verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Store deler av delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil kunne forsterke dette inntrykket, men delområdet ligger mellom 20-30 km unna tiltaket, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde KF-6-1

Tabell 5-43. Vurdering av verdi, påvirkning og konsekvens for delområde KF-6-1.

Verdivurdering: Delområde KF-6-1 **Delområdetype: Kystfjellområde**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
▲ Delområdet er under delområdetypen kystfjellområde som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2	▲ Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt og fysisk påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil forsterke dette noe stedvis i høyereliggende områder, men delområdet ligger mellom 20-30 km unna tiltaket, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2	▲ **Ubetydelig konsekvens** for delområdet (0).				

Delområde SIKS-6-1

Tabell 5-44. Vurdering av verdi, påvirkning og konsekvens for delområde SIKS-6-1.

Verdivurdering: Delområde SIKS-6-1 **Delområdetype: Skjermet indre kystslette**					
Uten betydning	Noe verdi	Middels verdi	Stor verdi	Svært stor verdi	
		▲			
Delområdet er under delområdetypen skjermet indre kystslette som har **middels verdi**.					
Tiltakets påvirkning					
Utbyggings-alternativ	Forbedret	Ubetydelig endring	Noe forringet	Forringet	Sterkt forringet
Alternativ 1 og alternativ 2		▲			
	Synlighet: Noe forringet Fragmentering: Ubetydelig Skala: Ubetydelig Formgiving: Ubetydelig Tilhørighet/identitet: Ubetydelig Påvirkningen av tiltaket vurderes som **ubetydelig**. *Begrunnelse:* Delområdet er visuelt påvirket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil forsterke dette noe stedvis i høyereliggende områder, men delområdet ligger mellom 20-30 km unna tiltaket, med mye annet i forgrunnen som sannsynligvis vil ta store deler av oppmerksomheten.				
Tiltakets konsekvens					
Utbyggings-alternativ	+++/++++	+/++	0	-	- -	- - -	- - - -
Alternativ 1 og alternativ 2			▲				
			Ubetydelig konsekvens for delområdet (0).				

5.5 Nettilknytning

Det er små forskjeller mellom alternativene for nettilknytning. Den østligste kraftledningstraseen (alt.B) kommer best ut da denne går tettere på eksisterende vindkraftverk og Moifjellet og Mellomstrand vindkraftverk, samt at den har noen færre mastepunkt enn det vestligste alternativet (alt.A).

5.6 Midlertidige virkninger

Tema landskap omhandler de permanente virkningene for landskapet i driftsfasen for tiltaket. De midlertidige inngrepene i anleggsperioden vektlegges derfor ikke i denne utredningen.

I perioder vil utbyggingen gi inngrep som vil framstå som sår i landskapet og som vil ha betydelig nærvirkning for berørte områder. Omfanget av virkninger vil imidlertid variere gjennom byggeperioden.

5.7 Lys- og solblink

Beskrivelse og vurdering av hvordan eventuelle lys- og solblink kan påvirke tredjepart er gjort under konsekvensutredning folkehelse/helsekonsekvens, rapport 10265688-01-TVF-RAP-002 Moifjellet og Mellomstrand vindkraftverk - Helsekonsekvensutredning.

6 Trinn 2: Konsekvens

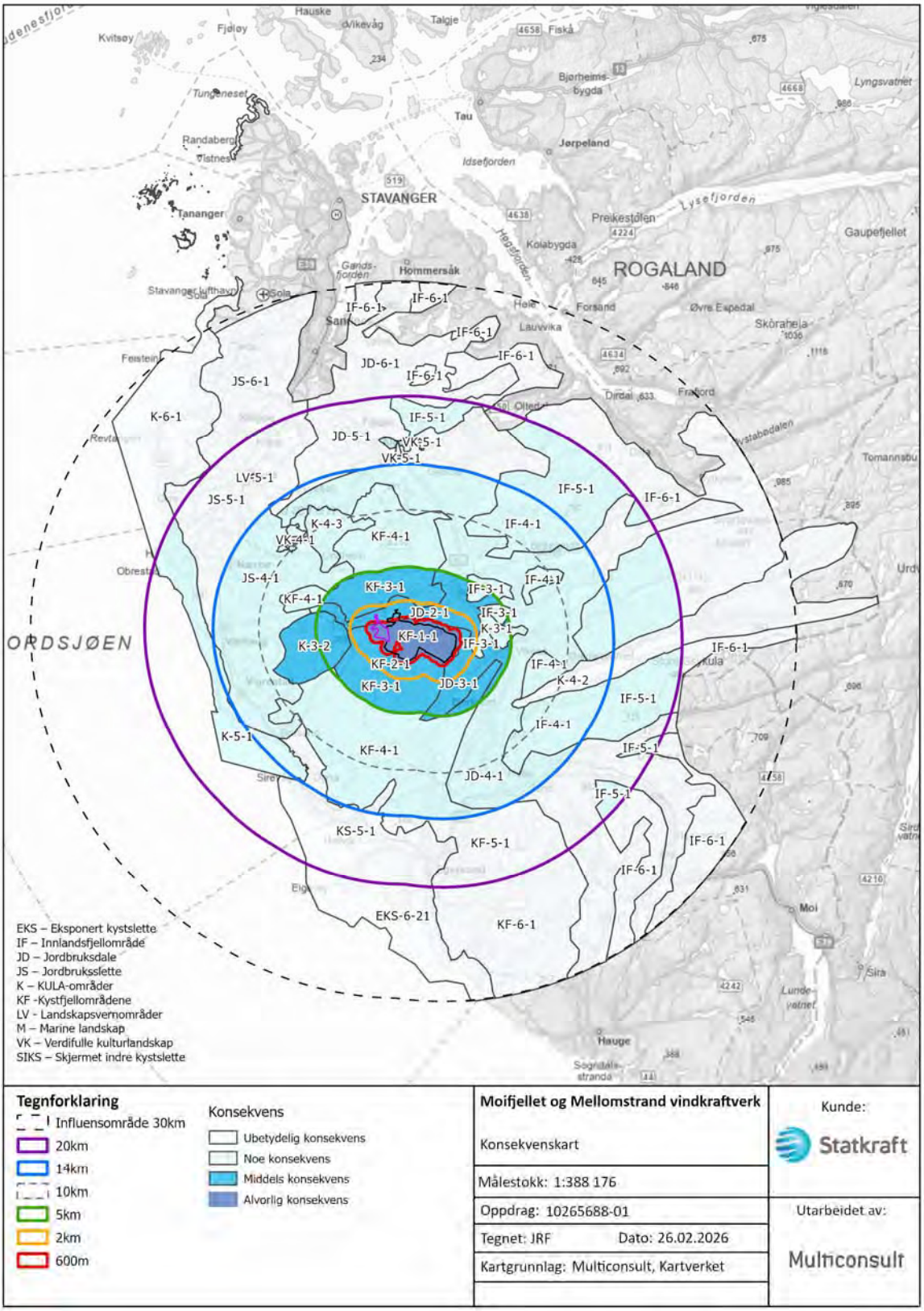
6.1 Sammenstilling av konsekvenser

Når det kommer til det fysiske inngrepet og de visuelle virkningene med tanke på turbinene kommer alternativ 1 – Moifjellet og Mellomstrand vindkraftverk noe dårligere ut, da alternativet består av fire ekstra turbiner mot vest. Det er turbin MS 04 som kommer spesielt dårlig ut av disse fire ekstra turbinene da denne ligger lavere i terrenget og ned mot en annen type landskap (jordbrukslandskap) enn resten av turbinene. Det er spesielt delområdene tettest på vindkraftverket som får de største visuelle virkningene av de fire ekstra turbinene. Når man kommer noe mer på avstand og ser flere av turbinene samlet, oppleves de to alternativene mer like.

Når det gjelder de fysiske og visuelle virkningene for adkomstvei er det alternativ 2 - Moifjellet (med adkomstvei fra Bjerkreim) som kommer dårligst ut, da denne er lenger og ligger dårligere i terrenget enn veiadkomsten til alternativ 1 (fra Time).

Konsekvensgraden for de to ulike alternativene er lik både på delområdenivå og samlet konsekvensgrad. Totalt sett er det altså små forskjeller, men alternativ 1 – Moifjellet og Mellomstrand vindkraftverk er rangert noe over alternativ 2 – Moifjellet vindkraftverk grunnet at adkomstveien er kortere og ligger bedre i terrenget.

Sammenstilling av konsekvenser for ulike alternativer er vist i tabell 6-1. Se også konsekvenskart for de ulike delområdene i figur 6-1.



Figur 6-1: Konsekvenskart for alle delområder innenfor influensområdet.

Tabell 6-1: Oppsummering av konsekvenser per delområde og samlet konsekvensgrad.

Synlighetssone	Delområder	Alt. 0	Alternativ 1 – Moifjellet og Mellomstrand vindkraftverk	Alternativ 2 - Moifjellet vindkraftverk
Sone 1	Delområde KF-1-1	0	Alvorlig konsekvens (---)	Alvorlig konsekvens (---)
Sone 2	Delområde JD-2-1	0	Middels konsekvens (--)	Middels konsekvens (--)
	Delområde KF-2-1	0	Middels konsekvens (--)	Middels konsekvens (--)
Sone 3	Delområde IF-3-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JD-3-1	0	Middels konsekvens (--)	Middels konsekvens (--)
	Delområde K-3-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde KF-3-1	0	Middels konsekvens (--)	Middels konsekvens (--)
Sone 4	Delområde IF-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JD-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JS-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde K-4-1	0	Middels konsekvens (--)	Middels konsekvens (--)
	Delområde K-4-2	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde K-4-3	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde KF-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde VK-4-1	0	Noe konsekvens (-)	Noe konsekvens (-)
Sone 5	Delområde EKS-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde IF-5-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde JD-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde JS-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde K-5-1	0	Noe konsekvens (-)	Noe konsekvens (-)
	Delområde KF-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde LV-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde VK-5-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
Sone 6	Delområde IF-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde JD-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde JS-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde K-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde KF-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde KS-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Delområde SIKS-6-1	0	Ubetydelig konsekvens (0)	Ubetydelig konsekvens (0)
	Samlet vurdering	Ubetydelig konsekvens	Middels negativ konsekvens	Middels negativ konsekvens

Synlighetssone	Delområder	Alt. 0	Alternativ 1 – Moifjellet og Mellomstrand vindkraftverk	Alternativ 2 - Moifjellet vindkraftverk
	Begrunnelse for samlet konsekvensgrad	Nullalternativet har per definisjon ingen konsekvens.	Innenfor influensområdet på 30 km har 6 delområder fått middels konsekvens, 10 har fått noe konsekvens og de resterende 14 har fått ubetydelig konsekvens. Det er delområdene tettes på tiltaket som har fått høyest konsekvensgrad, og det er også disse som vektlegges høyest i vurderingen av samlet konsekvensgrad. Samlet konsekvensgrad blir middels negativ konsekvens.	Innenfor influensområdet på 30 km har 6 delområder fått middels konsekvens, 10 har fått noe konsekvens og de resterende 14 har fått ubetydelig konsekvens. Det er delområdene tettes på tiltaket som har fått høyest konsekvensgrad, og det er også disse som vektlegges høyest i vurderingen av samlet konsekvensgrad. Samlet konsekvensgrad blir middels negativ konsekvens.
	Rangering	1	2	3
	Begrunnelse for rangering	Nullalternativet har per definisjon ingen konsekvens.	De største konsekvensene er knyttet til de fysiske påvirkningene av vindturbinene med tilhørende veier, samt de visuelle virkningene av vindturbinene, spesielt i delområdene tettest på- og i tiltaksområdet. Vindturbinene i dette alternativet påvirker området noe mer i negativ retning visuelt og fysisk enn alternativ 2, da det er 4 ekstra turbiner i vest. Disse kommer tett på høydedrag og turmål i nærområdet. Veiadkomsten til alternativ 1 fra Time er bedre enn veiadkomsten til alternativ 2 fra Bjerkreim, da denne er kortere, bedre tilpasset terrenget og med mindre inngrep.	De største konsekvensene er knyttet til de fysiske påvirkningene av vindturbinene med tilhørende veier, samt de visuelle virkningene av vindturbinene, spesielt i delområdene tettest på- og i tiltaksområdet. Veiadkomsten til alternativ 2 fra Bjerkreim er verre enn veiadkomsten til alternativ 1 fra Time, da denne er lengre, dårligere tilpasset terrenget og med større inngrep.

Nasjonale miljømål

Det er jf. Miljøstatus.no fastsatt 24 mål for miljøet av Klima- og miljødepartementet, fordelt på 6 ulike områder. Disse 6 områdene er:

1. Naturmangfold
2. Kulturminner og kulturmiljø
3. Friluftsliv
4. Forurensning
5. Klima
6. Polarområdene

Det er ikke utnevnt noen egne miljømål for landskap, men landskap inngår likevel som del av flere av miljømålene. Følgende er vurdert å være de viktigste miljømålene tilknyttet tema landskap:

- Miljømål 1.3 (Naturmangfold) Et representativt utvalg av norsk natur skal tas vare på for kommende generasjoner
- Miljømål 2.2 (Kulturminner og kulturmiljø) Kulturmiljø skal bidra til bærekraftig utvikling gjennom helhetlig samfunnsplanlegging
- Miljømål 2.3 (Kulturminner og kulturmiljø) Et mangfold av kulturmiljø skal tas vare på som grunnlag for kunnskap, opplevelse og bruk.
- Miljømål 3.1 (Friluftsliv) Friluftslivets posisjon skal tas vare på og utvikles videre gjennom ivaretakelse av allemannsretten, bevaring og tilrettelegging av viktige friluftslivsområder, og stimulering til økt friluftslivsaktivitet for alle.

For mer info om miljømålene tilknyttet naturmangfold, kulturminner og kulturmiljø og friluftsliv, se fagrapportene for disse temaene.

Miljøverdier av nasjonal eller vesentlig regional verdi

Rundskrivet Nasjonale og vesentlige regionale interesser på miljøområdet – klargjøring av miljøforvaltningens innsigelsespraksis, T-2/16, gir en tematisk gjennomgang av de særlig viktige nasjonale og vesentlige regionale interesser på miljøområdet som skal legges til grunn ved vurdering av planforslag og tiltak og innsigelser mot disse. Rundskrivet er ikke en uttømmende gjennomgang av alle forhold som kan gi grunnlag for innsigelse på miljøområdet.

Jf. rundskrivets kapittel 3.9 skal innsigelse vurderes når planforslaget er i konflikt med punktene i tabellen under:

Interesse	**Konflikt med planforslaget, mulig grunnlag for innsigelse**
Kulturhistoriske verdier og naturmangfoldverdier knyttet til landskap ***- Innsigelse skal vurderes når planforslaget vil komme i konflikt med:***	
Verdensarvområder (Bergstaden Røros, Vegaøyan, Vestnorsk fjordlandskap – Geirangerfjorden, Nærøyfjorden og Industriarven Rjukan-Notodden).	Nei
Kulturhistoriske landskap av nasjonal interesse (KULA), jf. kartlag i Askeladden. Nasjonale kulturhistoriske bymiljøer, jf. NB!-registeret.	Usikkert. Tiltaket vil ikke komme i direkte konflikt med omkringliggende KULA-områder, men det vil forekomme visuelle virkninger fra tiltaket på KULA-områder i influensområdet.
Helhetlige kulturlandskap av nasjonal eller vesentlig regional interesse, herunder utvalgte kulturlandskap i jordbruket, jf. Naturbase.	Nei
Landskap kartlagt etter NiN av nasjonal eller vesentlig regional verdi, der slik verdsetting foreligger.	Det foreligger ikke verdisetting etter NiN landskap, kun fastsetting av landskapstype.
Landskap der de samlede kulturhistoriske verdiene og naturmangfoldverdiene vurderes å utgjøre en miljøverdi av nasjonal eller vesentlig regional interesse.	Ja. Tiltaket vil komme i direkte konflikt med et delområde som har fått stor verdi grunnet blant annet inngrepsfri natur. Det vil også forekomme visuelle virkninger fra tiltaket på delområder i influensområdet som har stor eller svært stor verdi, men dette er usikkert om kan føre til innsigelse.

6.2 Ytterligere avbøtende tiltak

Det viktigste avbøtende tiltaket for tema landskap er å ikke ha større behov for avbøtende tiltak; altså å følge tiltakshierarkiets høyeste prioriteter «unngå skadevirkninger» og «begrense skadevirkninger». Det vil for tema landskap si at landskapsarkitekt må være med i hele prosessen ved planleggingen av vindkraftverket, fra plassering av turbiner, kraftledningsmaster og massetak til

prosjektering av internveier, turbinoppstillingsplasser og adkomstveier. Som nevnt i kapittel 3.3.3 har det for Moifjellet vindkraftverk har det vært fokus på dette i planleggingen, eksempelvis er veiene som hovedregel lagt utenfor myr, vannforekomster og overgangssoner i høydelag (unngå skadevirkning).

Selv om det er stort fokus på tiltakshierarkiet i planleggingen av vindkraftverk vil det likevel som oftest være behov for noen generelle avbøtende tiltak for utbygging av vindkraftverk:

- Plassering av turbiner, massetak, turbinoppstillingsplasser og veier i landskapet må hele tiden vurderes videre i prosessen for å få til et best mulig resultat med minst mulig påvirkning på landskap og miljø, også på stedet under bygging.
- I anleggsfasen er det avgjørende å unngå terrengskade ved kjøring og transport. En detaljplan vil sikre at nødvendige miljø- og landskapshensyn i arbeidet blir ivaretatt, herunder blant annet sikring av vegetasjon i utbyggingsperioden og revegetering og istandsetting av berørte arealer i etterkant av utbyggingen.
- Eventuelle andre anlegg i tilknytning til vindkraftverket bør gjøres ut fra en vurdering av topografi, landskapskarakter og byggeskikk i området. Det bør etterstrebes lokal forankring i materialbruk og utforming av tilhørende anlegg.

Et spesifikt landskapsmessig avbøtende tiltak som kan foreslås for alternativ 1- Moifjellet og Mellomstrand vindkraftverk er å ta bort turbin MS 04 inkl. tilkomstvei i sin helhet. Denne oppleves spesielt negativ visuelt og fysisk da den ligger et stykke unna de andre turbinene i vindkraftverket, i tillegg til at denne ligger ned mot Kartavatnet og påvirker et landskap som ligger noe lavere i terrenget og går noe over mot jordbrukslandskap.

Et annet viktig avbøtende tiltaket vil være behovsstyring av hinderlys, noe som vil kunne medføre en endring av betydning for tiltakets påvirkning og konsekvens i mørket. Se mer info om behovsstyrte hinderlys i kapittelet under.

En gjennomføring av de foreslåtte avbøtende tiltakene vil redusere den negative påvirkningen av tiltaket på landskapet, spesielt for de mest nærliggende delområdene (deler av JD-2-1, KF-2-1 og K-3-2), men dette vil ikke bli utslagsgivende for den totale konsekvensgraden for tema landskap (som er satt til middels negativ konsekvens).

Behovsstyrte hinderlys

Et mulig avbøtende tiltak mot den visuelle forstyrrelsen hinderlys gir, er behovsstyrte hinderlys. Det vil si at lyset normalt er avskrudd, men skrur seg på når fly eller annet luftfartøy detekteres i nærheten av vindkraftverket. I sitt forslag om *'Endringer i forskrift om rapportering, registrering og merking av luftfartshinder'* har Luftfartstilsynet i 2025 foreslått noen justeringer i kravene til behovsstyrte lys. Slik kravene foreligger i dag (desember 2025) er det en høy risiko for at det ikke vil være teknisk-økonomisk gjennomførbart å installere en løsning for behovsstyrt hinderlys. Det er utbyggers forståelse at de forslåtte justeringene neppe er tilstrekkelige til å endre denne situasjonen.

Usikkerhet: Statkraft har i sin høringsuttalelse til Luftfartstilsynet skrevet at kravene til behovsstyrte lys som foreslås er for omfattende, rigide og kostbare, og må modifiseres. Kostnaden må forventes å bli så høy at det er betydelig risiko for at et ellers lønnsomt vindkraftprosjekt ikke kan gjennomføres eller får vesentlig forringet lønnsomhet om de skal installere behovsstyrte hinderlys basert på Luftfartstilsynets utkast til reviderte krav.

6.3 Vurdering av samlet belastning

For synlighet av anlegget fra ulike avstander, vil samlet belastning først og fremst være knyttet til steder der en kan se flere vindkraftanlegg samtidig, og især fra de stedene der vindkraftanlegg kan sees i flere utsynsretninger. Noen steder vil det være synlige vindturbiner i tre himmelretninger innenfor en radius på 10–15 kilometer.

Moifjellet ligger i dag omgitt av eksisterende nærliggende vindkraftverk. Det er noen inngrep i tiltaksområdet i dag, som vei og radiomast med tilhørende bygninger, men store deler av området ellers består av middels kupert fjellandskap med en veksling mellom åpne heiområder og synlig fjell i dagen, og innehar et område som inngår i INON sone 2 (1-3 km fra større tekniske inngrep). Med utbygging av andre større vindkraftanlegg i nær avstand, som Høg-Jæren, Stigafjellet, Måkaknuten, Tindafjellet, Skurvenuten, Røyrmyra, Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er det jærske og høg-jærske landskapet med tiden i stor grad blitt endret, og de høyreiste turbinene står i sterk kontrast til kulturlandskapets småskala fremtoning. Moifjellet er i dag, sammen med Synesvarden landskapsvernområde, siste rest av sammenhengende inngrepsfri natur i denne delen av Rogaland. Bjerkreim kommune er en av Norges største vindkraftkommuner, og med en realisering av Moifjellet vindkraftverk vil 7 % av kommunens areal være avsatt til vindkraftproduksjon.

Høg-Jæren/Synesvarden og Oslandsvatnet er registrert og anerkjent som del av Vakre landskap i Rogaland. Førstnevnte ligger også i KULA-registeret. Vindkraftverkenes negative påvirkning på landskapsbildet er tydelig beskrevet i KULA-rapporten for Rogaland fra 2021, og det understrekes at flere nye vindkraftanlegg vil være destruktivt for landskapets karakter. Spesielt vil elementer som bryter eller dominerer utsikten og sammenhengen med kysten og Låg-Jærens strandflate virke ytterligere negativt på området og bør unngås. Landskapet er beskrevet som sårbart for arealendringer og gjengroing (35).

For utbyggingen av Moifjellet og Mellomstrand vindkraftverk er det delområdene tettest på tiltaket som får de antatt største negative konsekvensene av utbyggingen, og da spesielt fra tiltaksområdet, dalområdet nord for tiltaksområdet og i høyereliggende områder. Flere av disse områdene har allerede en høy visuell belastning som følge av eksisterende vindkraftverk, og den samlede belastningen ved utbygging av Moifjellet og Mellomstrand vindkraftverk vil tillegge enda flere synlige vindturbiner, for noen av områdene i flere synsretninger, enn i dag. Fra tiltaksområdet og høyereliggende områder tett på kan også Moifjellet og Mellomstrand vindkraftverk oppleves som en forlenget del av Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk. Denne samlokaliseringen antas å forsterke tiltakets visuelle virkning i negativ retning, sett fra disse områdene.

For områder noe lenger unna tiltaksområdet begrenses de negative virkningene noe grunnet avstand til tiltaket. Men tiltaket vil også fra disse områdene kunne forsterke inntrykket av eksisterende vindkraftverk. Moifjellet og Mellomstrand vindkraftverk vil fra noen ståsted kunne oppleves som en forlengelse av eksisterende anlegg, noe som videre kan føre til at det sammen med de eksisterende vindkraftverkene kan oppleves som et sammenhengende og stort anlegg. Dette bidrar til at den samlede belastningen også vil kunne bli noe større fra noen områder lenger unna tiltaket. Fra andre ståsteder på avstand vil det kunne oppleves som at Moifjellet og Mellomstrand vindkraftverk fortetter eksisterende vindkraftverk, fordi det blir liggende bak disse. Dette kan bidra til et noe mer rotete uttrykk enn i dag.

Selv om samlokalisering av inngrep ofte kan være positivt er det også en grense for hva en landskapstype og et område tåler. Å vurdere om den samlede belastningen av en utbygging til i dette området er så stor at det overskrider grensen for hva området tåler, samt for hva man kan anta som akseptabelt, er vanskelig. Dette vil blant annet avhenge av den individuelle betrakterens

preferanser. Eksisterende turbiner i området kan bidra til å dempe den faktiske visuelle virkningen av en ny utbygging, fordi turbiner ikke er fremmed i området. Virkningene kan være større ved etablering av et nytt vindkraftverk i et område som i dag er helt fri for turbiner.

Totalt sett vil tiltaket forsterke inntrykket av teknisk dominans i området, spesielt lokalt, hvor det vil stå i stor kontrast til det opprinnelige kulturlandskapet. For eventuelle nye framtidige utbygginger i området vil det være særdeles viktig at belastningen på landskapet sees i sammenheng med allerede utbygde anlegg for å unngå overbelastning på landskapstypen lokalt og på tilgrensende landskapstyper som påvirkes visuelt.

6.4 Usikkerhet

6.4.1 Usikkerhet ved konsekvensutredningen

Ved vurdering av konsekvenser for landskap knytter det seg alltid en viss usikkerhet til hvor vidt landskapsverdiene i området er godt nok fanget opp og vurdert korrekt. Verdiene er fastsatt på bakgrunn av innhentet data, 3D-modell, flyfoto, befaring i deler av influensområdet og bilder av området.

Påvirkningen er i hovedsak vurdert basert på teoretiske synlighetsanalyser, 3D-modell samt bilder over området og topografisk kart, og vurderes som relativt sikre. Se kapittel 2.1.4 angående usikkerhet for synlighetsanalyser.

I denne vurderingen vurderes kunnskapsgrunnlaget for landskap som godt (klasse 2) med tanke på å kunne vurdere verdi, påvirkning og konsekvens av tiltaket (ref. til tabell i kapittel 4.1).

6.4.2 Usikkerhet ved avbøtende tiltak

Ingen vesentlige usikkerheter er identifisert.

6.5 Andre forhold som beslutningstaker bør kjenne til

Ingen slike forhold er identifisert.

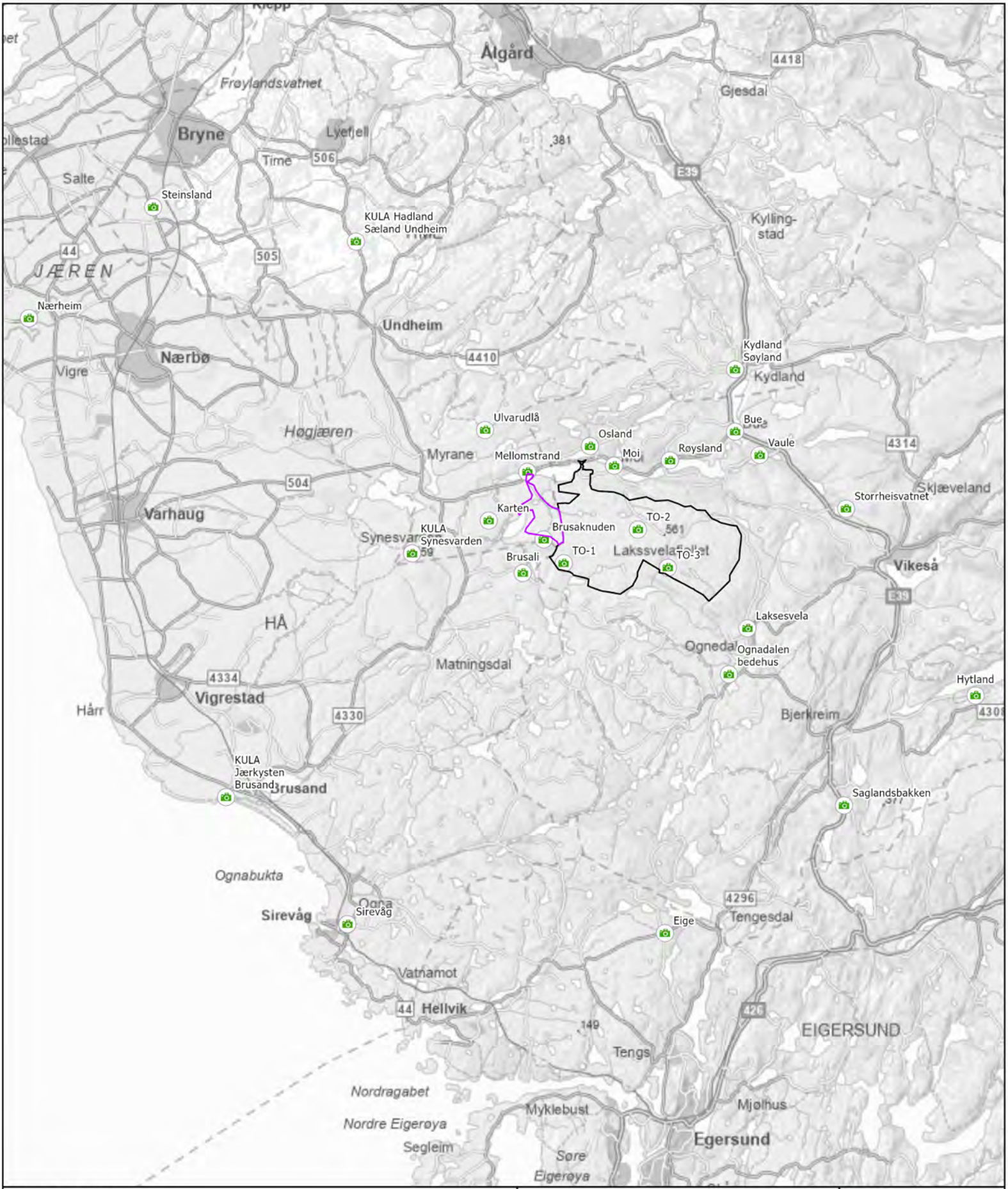
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Fagrapport landskap - Vedlegg 1

Visualiseringer



Tegnforklaring

- Fotostandpunkt
- Planområde Moifjellet
- Planområde Mellomstrand

TO = Tiltaksområde

Moifjellet og Mellomstrand vindkraftverk	Kunde: Statkraft
Fotostandpunkt	
Målestokk: 1:160 000	
Oppdrag: 10265688-01	Utarbeidet av:
Tegnet: JRF Dato: 26.02.2026	Multiconsult
Kartgrunnlag: Multiconsult, Kartverket	

Fotostandpunkt fra synlighetssone 1 (inntil 600 meter):

Dagens situasjon: TO1 mot Bjerkreim vindkraftverk.



Visualisering: TO1 mot Bjerkreim vindkraftverk.



Dagens situasjon: TO2 mot Bjerkreim vindkraftverk. Vannet Ulvatjørn i forgrunnen.



Visualisering Moifjellet vindkraftverk: TO2 mot Bjerkreim vindkraftverk med etablerte veier i anleggsfasen.



Visualisering: Moifjellet vindkraftverk (TO2) mot Bjerkreim vindkraftverk etter revegetering av veier.



Visualisering Moifjellet og Mellomstrand vindkraftverk: TO2 mot Bjerkreim vindkraftverk etter revegetering av veier.



Fotostandpunkt fra synlighetssone 2 (600 meter-2 km):

Dagens situasjon: Foto fra Mellomstrand mot Moifjellet og Mellomstrand vindkraftverk.



Visualisering: Moifjellet vindkraftverk sett fra Mellomstrand.



Visualisering: Moifjellet og Mellomstrand vindkraftverk sett fra Mellomstrand.



Dagens situasjon: Foto fra Osland mot lokalisering av Moifjellet vindkraftverk.



Visualisering: Moifjellet vindkraftverk sett fra Osland.



Dagens situasjon: Foto fra Osland mot lokalisering av Moifjellet og Mellomstrand vindkraftverk.

Visualisering: Moifjellet vindkraftverk sett fra Osland.

Visualisering: Moifjellet og Mellomstrand vindkraftverk sett fra Osland.

Dagens situasjon: Foto fra Moi mot lokaliseringen av Moifjellet vindkraftverk.

Visualisering: Visualisering av Moifjellet sett fra Moi.

Dagens situasjon: Foto fra Moi mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk.

Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Moi.

Dagens situasjon: Foto fra Laksesvela mot lokaliseringen av Moifjellet vindkraftverk.



Visualisering: Visualisering av Moifjellet vindkraftverk sett fra Laksesvela.



Dagens situasjon: Foto fra Brusaknuden sett mot lokaliseringen av Moifjellet vindkraftverk. Bjerkreim vindkraftverk i høyre bildekant og Måkaknuten vindkraftverk i venstre bildekant.



Visualisering: Visualisering av Moifjellet vindkraftverk sett fra Brusaknuden, med etablerte veier. Bjerkreim vindkraftverk i høyre bildekant og Måkaknuten vindkraftverk i venstre bildekant.



Visualisering: Visualisering av Moifjellet vindkraftverk sett fra Brusaknuden, med revegeterte veier. Bjerkreim vindkraftverk i høyre bildekant og Måkaknuten vindkraftverk i venstre bildekant.



Dagens situasjon: Foto fra Brusaknuden sett mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk.



Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Brusaknuden



Dagens situasjon: Foto fra Brusali, tatt mot lokaliseringen av Moifjellet. Deler av Bjerkreim vindkraftverk kan sees i høyre bildekant.



Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Brusali. Deler av Bjerkreim vindkraftverk kan sees i høyre bildekant.



Visualisering: Visualisering av Moifjellet vog Mellomstrand vindkraftverk, sett fra Brusali. Deler av Bjerkreim vindkraftverk kan sees i høyre bildekant.



Fotostandpunkt fra synlighetssone 3 (2-5 km):

Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Kydland/Søyland. Måkaknuten vindkraftverk kan sees i høyre bildekant.



Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Kydland/Søyland. Måkaknuten vindkraftverk kan sees i høyre bildekant.



Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Bue.



Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Bue.



Dagens situasjon: Foto av lokaliseringen av Moifjellet vindkraftverk, sett fra Vaule.

Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Vaule.



Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Ognadalen bedehus.



Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Ognadalen bedehus.



Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra østsiden av Storrheisvatnet.

Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra østsiden av Storrheisvatnet.

Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Karten.



Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Karten.



Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Karten.



Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Ulvarudlå. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Ulvarudlå. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Ulvarudlå. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Fotostandpunkt fra synlighetssone 4 (5-14 km):

Dagens situasjon (KULA Høg-Jæren): Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra turmålet Synesvarden. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Visualisering (KULA Høg-Jæren): Visualisering av Moifjellet vindkraftverk, sett fra turmålet Synesvarden. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Visualisering (KULA Høg-Jæren): Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra turmålet Synesvarden. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim vindkraftverk i høyre bildekant.



Dagens situasjon (KULA Hadland-Sæland-Undheim): Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra området mellom Hykken og Lende. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim og Høg-Jæren vindkraftverk er synlig i høyre bildekant.

Visualisering (KULA Hadland-Sæland-Undheim): Visualisering av Moifjellet vindkraftverk, sett fra området mellom Hykken og Lende. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim og Høg-Jæren vindkraftverk er synlig i høyre bildekant.

Visualisering (KULA Hadland-Sæland-Undheim): Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra området mellom Hykken og Lende. Måkaknuten vindkraftverk er synlig i venstre bildekant og Bjerkreim og Høg-Jæren vindkraftverk er synlig i høyre bildekant.

Dagens situasjon: Foto av lokaliseringen av Moifjellet vindkraftverk sett fra Hytland. Bjerkreim vindkraftverk er synlig i venstre bildekant.

Visualisering: Visualisering av Moifjellet vindkraftverk sett fra Hytland. Bjerkreim vindkraftverk er synlig i venstre bildekant.

Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Eige, sør i delområdet.
Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant.

Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Eige. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant, med Moifjellet vinkraftverk liggende bak og mot høyre bildekant, og høyere i terrenget. Moifjellet vindkraftverk vil kunne oppleves som en forlenget del av Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk sett fra denne lokaliseringen.

Dagens situasjon: Foto mot lokaliseringen av Moifjellet og Mellomstrand vindkraftverk, sett fra Eige, sør i delområdet. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig midt i bildet og mot venstre bildekant.

Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Eige. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig mot høyre bildekant, med Moifjellet vinkraftverk liggende bak og mot høyre bildekant, og høyere i terrenget. Moifjellet vindkraftverk vil kunne oppleves som en forlenget del av Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk sett fra denne lokaliseringen.



Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Eige. Bjerkreim og Skinansfjellet og Gravdal vindkraftverk er synlig mot høyre bildekant, med Moifjellet og Mellomstrand vinkraftverk liggende bak og mot høyre bildekant, og høyere i terrenget. Moifjellet vindkraftverk vil kunne oppleves som en forlenget del av Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk sett fra denne lokaliseringen.

Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Saglandsbakken.



Visualisering: Visualisering av Moifjellet vindkraftverk sett fra Saglandsbakken. Tiltaket vil bli synlig mot horisonten i nordvest.

Fotostandpunkt fra synlighetssone 5 (14-20 km):

Dagens situasjon: Foto mot tiltaksområdet for Moifjellet vindkraftverk, sett fra Sirevåg. Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk er synlig herfra.

Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk, sett fra Sirevåg. Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk i forgrunnen, med Moifjellet og Mellomstrand vindkraftverk som fortetter i bakkant.

Visualisering: Visualisering av Moifjellet vindkraftverk, sett fra Sirevåg. Skinansfjellet og Gravdal vindkraftverk og Bjerkreim vindkraftverk i forgrunnen, med Moifjellet vindkraftverk som fortetter i bakkant.

Dagens situasjon (KULA Jærkysten): Foto mot lokaliseringen av Moifjellet vindkraftverk sett fra Brusand. Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk er synlig herfra.



Visualisering (KULA Jærkysten): Visualisering av Moifjellet vindkraftverk sett fra Brusand. Moifjellet vindkraftverk bidrar til en større utstrekning av vindturbiner mot venstre bildekant, og et noe mer rotete uttrykk.



Visualisering (KULA Jærkysten): Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Brusand. Moifjellet og Mellomstrand vindkraftverk bidrar til en større utstrekning av vindturbiner mot venstre bildekant, og et noe mer rotete uttrykk.



Dagens situasjon (KULA Jærkysten): Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Nærheim. Bjerkreim vindkraftverk og Skinansfjellet og Gravdal vindkraftverk er synlig herfra.

Visualisering (KULA Jærkysten): Visualisering av Moifjellet vindkraftverk sett fra Nærheim. Moifjellet vindkraftverk bidrar til et noe mer rotete visuelt uttrykk.

Visualisering (KULA Jærkysten): Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Nærheim. Moifjellet og Mellomstrand vindkraftverk bidrar til et noe mer rotete visuelt uttrykk.

Dagens situasjon: Foto mot lokaliseringen av Moifjellet vindkraftverk, sett fra Steinsland. Høg-Jæren vindkraftverk er synlig i høyre bildekant og Måkaknuten vindkraftverk er synlig i venstre bildekant.



Visualisering: Visualisering av Moifjellet vindkraftverk sett fra Steinsland. Moifjellet vindkraftverk vil kunne oppleves som en forlenget del av Høg-Jæren vindkraftverk sett herfra.



Visualisering: Visualisering av Moifjellet og Mellomstrand vindkraftverk sett fra Steinsland. Moifjellet og Mellomstrand vindkraftverk vil kunne oppleves som en forlenget del av Høg-Jæren vindkraftverk sett herfra.



Fagrapport:

Eiendomsverdi



Utarbeidet på oppdrag fra Statkraft

Effekt på boligverdier ved etablering av Moifjellet vindkraftverk

oslo**economics**

Tittel: Effekt på boligverdier ved etablering av Moifjellet vindkraftverk
Utarbeidet av: Oslo Economics og Anders Dugstad
Oppdragsgiver: Statkraft

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Sammendrag

Vi har ved hjelp av en Delphi-undersøkelse analysert forventet effekt på boligverdier for primær- og fritidsboliger som berøres av etablering av vindkraftverk på Moifjellet. Estimatene viser forventede fall i boligverdi på mellom 3 og 26 prosent, og er avhengig av type bolig, hvordan boligene påvirkes av vindkraftverkene, og i hvilken grad de allerede er påvirket av eksisterende vindkraftverk i området. For boliger som både får økt støy, skyggekast og utsyn til turbinene på Moifjellet, er det estimerte verditapet på mellom 20 og 26 prosent. For boliger som kun får utsyn til vindturbinene er det estimerte verditapet mellom 3 og 15 prosent. Verditapet reduseres ettersom avstanden til vindkraftverket øker og påvirkningen avtar, og for primærboliger som ligger 6 til 10 kilometer fra vindkraftverket er det ikke statistisk grunnlag for å påvise et verditap.

Delphi-studien analyserer kun effekter på boligverdi for boliger som faktisk påvirkes av vindkraftverket gjennom skyggekast, støy og/eller synlighet. Ser vi på alle boliger innenfor en avstand på 3 kilometer fra vindkraftverket (uavhengig av hvordan de blir påvirket), finner vi et gjennomsnittlig estimert boligprisfall på mellom 16 og 22 prosent. For boliger som ligger lenger unna, mellom 3 og 6 kilometer, er det estimerte gjennomsnittlige boligprisfallet på 3-5 prosent. For primærboliger lenger enn 6 kilometer unna vindkraftverket er det ikke statistisk grunnlag for å påvise et verditap.

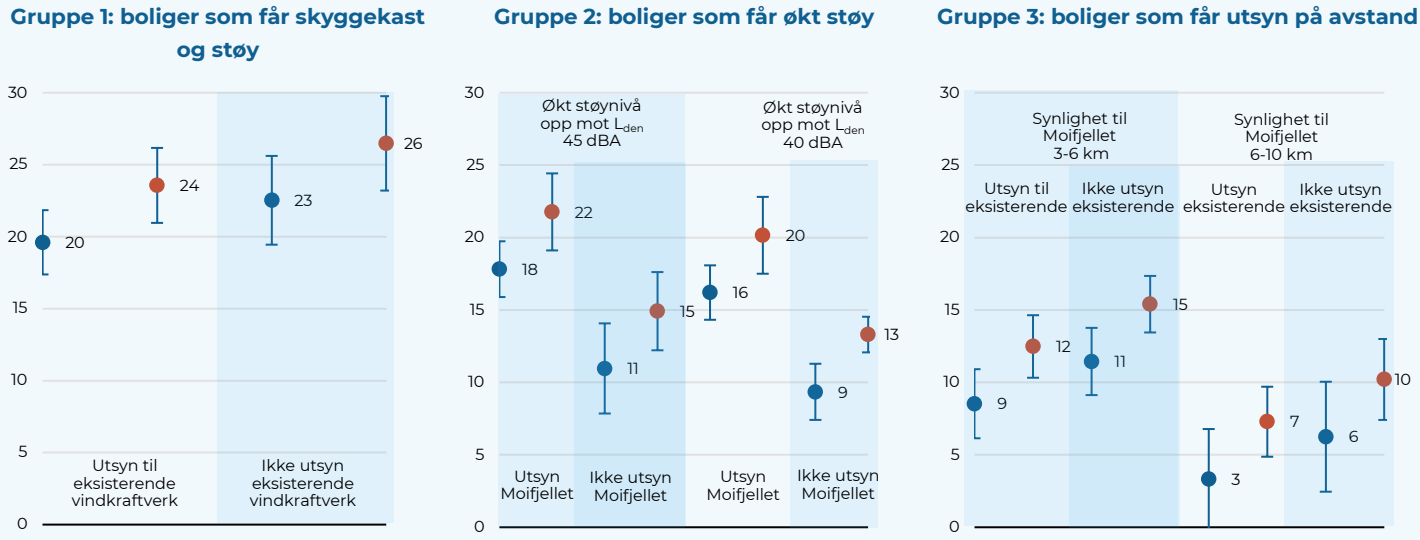
Statkraft ønsker å bygge vindkraft på Moifjellet i Bjerkreim kommune, i Rogaland. Vindkraftverkets planområde ligger i et område hvor det allerede er etablert flere vindkraftverk. Oslo Economics og Anders Dugstad ved NMBU har på oppdrag for Statkraft gjennomført en utredning som belyser effekten Moifjellet vindkraftverk forventes å ha på boligverdier på primær- og fritidsboliger i området.

Analysen er gjennomført som en Delphi-studie der vi estimerer forventede effekter på boligverdi basert på spørreundersøkelsesdata fra lokale eiendomsmeglere og andre eksperter. Metoden gjør det mulig å estimere en boligpriseffekt før tiltaket har funnet sted, i motsetning til blant annet studier basert på hedonisk prising som tar utgangspunkt i faktiske boligtransaksjoner. Undersøkelsen kan også designes slik at den tar hensyn til lokale forhold ved Moifjellet – både hvilken påvirkning ulike boliger i området vil få fra det planlagte vindkraftverket, og hvilken påvirkning de allerede har fra eksisterende vindkraftverk. Dette er vanskelig ved verdioverføring fra andre studier.

Forskningslitteraturen peker på støy, skyggekast og synlighet som de virkningene som har størst betydning for boligverdier i områder rundt vindkraftverk. Vi bruker disse virkningene og kombinasjonen av dem til å definere grupper av influerte boliger rundt Moifjellet. Gruppe 1 er boliger som får skyggekast og økt støy fra det planlagte vindkraftverket, gruppe 2 er boliger som får økt støy fra vindkraftverket og gruppe 3 er boliger som vil få utsyn til vindkraftverket på avstand. Innenfor gruppene er det variasjon i type bolig (fritidsbolig eller primærbolig) og hvordan boligene allerede er påvirket av de eksisterende vindkraftverkene i området.

For de ulike gruppene av influerte boliger innhenter vi vurderinger av forventede priseffekter fra en ekspertgruppe bestående av lokale og regionale eiendomsmeglere og andre fageksperter slik som tomteutviklere, takstmenn og andre med erfaring fra salg av bolig. I tråd med metode for Delphi-studier ble dette gjort gjennom en spørreundersøkelse som ble sendt ut i to omganger. I første omgang ba vi respondentene vurdere hvordan utbygging av Moifjellet vindkraftverk vil påvirke verdien til primær- og fritidsboliger i nærheten, avhengig av hvilke kombinasjoner av virkninger de får, og i hvilken grad boligene allerede er påvirket av eksisterende vindkraftverk. I andre runde fikk respondentene presentert de gjennomsnittlige svarene fra første runde og fikk mulighet til å korrigere svarene de ga i første runde. Svarene fra spørreundersøkelsen danner grunnlag for vår analyse av forventet effekt på boligverdi.

Figur 1-1: Estimerte prosentvise verdifall for boliger i de ulike gruppene



Merknad: Blå punkter er estimerte verdier for primærbolig og røde punkter er estimerte verdier for fritidsbolig. Blå søyler er 95 prosent konfidensintervall.

Estimerte priseffekter for boliger som får støy, skyggekast og utsyn til vindkraftverk

Hvordan ulike virkninger (støy, skyggekast og synlighet) slår inn på boligprisene i området er analysert ved å estimere en panelmodell med faste effekter. Basert på panelmodellen har vi estimert den samlede effekten på boligpriser i de ulike gruppene av influerte boliger.

Resultatene fra analysen er oppsummert i Figur 1-1. For primær- og fritidsboliger som får både skyggekast og støy, har vi beregnet et estimert verdifall på mellom 20 og 26 prosent, avhengig av boligtype og virkninger i dag. Det estimerte verdifallet er størst for fritidsboliger og for boliger som ikke har utsyn til vindkraftverkene som allerede finnes i området rundt Moifjellet. For boliger som får økt støynivå, men i liten grad skyggekast fra Moifjellet, ligger det estimerte verdifallet mellom 9 og 22 prosent.

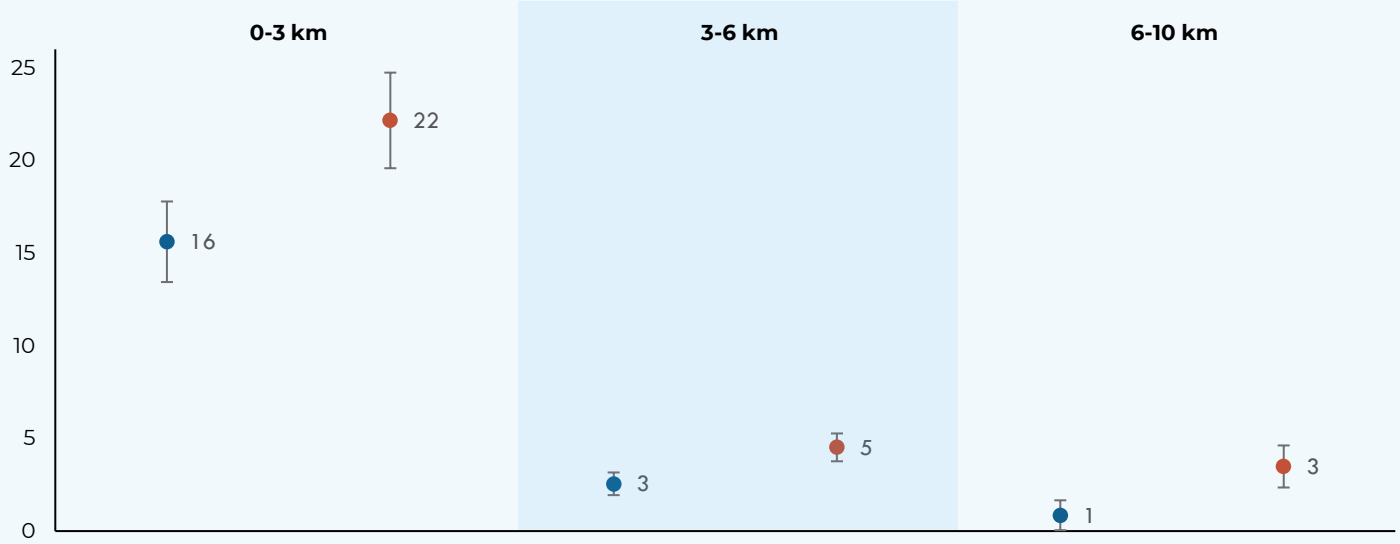
Boliger lenger unna vindkraftverket kan få utsyn til vindkraftverket, men vil ikke få støy eller skyggekast. Estimert verdifall for boliger som får utsyn til vindturbinene på Moifjellet er mellom 3 og 15 prosent. Verdifallet avhenger både av avstand til planområdet på Moifjellet, om boligene allerede har utsyn til eksisterende vindkraftverk og hvorvidt det er fritidsboliger eller primærboliger. For primærboliger mellom 6 og 10 kilometer fra Moifjellet som allerede har utsyn til eksisterende vindkraftverk, er det estimerte verditapet ikke signifikant ulikt null. Vi kan derfor ikke fastslå at det vil oppstå et fall i boligverdier for primærboliger som ligger mer enn 6 kilometer fra det planlagte vindkraftverket og som allerede har utsyn til eksisterende vindkraftverk.

Gjennomsnittlig priseffekt for boliger innenfor ulike avstander til vindkraftverket

Som del av utredningen har vi gjennomgått eksisterende forskning og litteratur der sammenhengen mellom utbygging av vindkraftverk og boligpriser er studert. En etablert metode for å studere dette forholdet er hedonisk prising, som studerer observerbare endringer i boligpriser eller observerbare forskjeller mellom pris for boliger som er berørt av et tiltak og ikke (for eksempel vindkraftutbygging). I en nasjonal kontekst er den mest relevante studien Andersen m.fl. (2024) som analyserer boligtransaksjoner for perioden 2010 til 2022 for alle boliger i nærheten av vindkraftverk som er bygget ut i Norge. Andersen m.fl. (2024) finner en negativ betalingsvillighet på mellom 12 og 17 prosent for boliger under 3 kilometer fra et vindkraftverk.

I Andersen m.fl. (2024) defineres influensområdet basert på avstand fra vindkraftverket, mens vår Delphi-analyse definerer influerte boliger basert på hvilke virkninger de får fra vindkraftverket (endring i skyggekast, støy og/eller synlighet). Avstand vil i mange tilfeller reflektere hvilke virkninger boligene får fra vindkraftverket, men dette vil også variere med blant annet topografi, terreng og annen bebyggelse. For å kunne sammenligne våre resultater med den tidligere studien, har vi med utgangspunkt i estimatene fra Delphi-studien, beregnet den samlede priseffekten for boliger innenfor gitte avstander fra vindkraftverket. Resultatene fra analysen er oppsummert i Figur 1-2. For boliger mellom 0 og 3 kilometer fra vindkraftverket finner vi et gjennomsnittlig verditap for primær- og fritidsboliger på henholdsvis 16 og 22 prosent, mens dette faller til henholdsvis 1 og 3 prosent når avstanden øker til mellom 6 og 10 kilometer.

Figur 1-2: Beregnet gjennomsnittlig verdifall for boliger innenfor intervaller av avstand



Merknad: Blå punkter er estimerte verdier for primærbolig og røde punkter er estimerte verdier for fritidsbolig. Blå søyler er 95 prosent konfidensintervall.

For primærboliger som ligger mindre enn 3 kilometer unna vindkraftverket er det gjennomsnittlige verdifallet på 16 prosent i vår studie, i samme størrelsesorden som funnene i den nasjonale studien av Andersen m.fl. som fant en negativ betalingsvillighet mellom 12 og 17 prosent for boliger under 3 kilometer fra et vindkraftverk (2024). Ettersom området rundt Moifjellet allerede er påvirket av flere vindkraftverk, kunne man i utgangspunktet forvente at effekten av vindkraftverket på boligpriser ville vært lavere i dette området enn for landsgjennomsnittet. På den annen side vil Delphi-studien i større grad enn studier basert på hedonisk prising ta hensyn til forventede verdifall som ikke realiseres i markedet. Dersom boligene som påvirkes mest av vindkraftverket får større problemer med salg og i mindre grad omsettes i markedet enn boliger som er upåvirket eller påvirkes i mindre grad, vil hedonisk prising underestimere effekten på boligverdier. Denne effekten kan spesielt forventes å være til stede for boliger nærmest vindkraftverket, i gruppen under 3 kilometer fra vindkraftverket.

For boliger som ligger mellom 6 og 10 kilometer fra vindkraftverket, er det estimerte gjennomsnittlige verdifallet 1 prosent for primærboliger. Verdien nærmer seg null og er ikke signifikant ulik null, noe som også samsvarer med studien av Andersen m.fl. (2024) som finner at effekten konvergerer mot null i en avstand på 5 til 7 kilometer fra vindkraftverket.

1. Bakgrunn og mandat

Statkraft ønsker å bygge vindkraft på Moifjellet i Bjerkreim kommune, i Rogaland. Området er preget av at det allerede er etablert flere vindkraftverk i området. Statkraft jobber nå med å utrede konsekvensene ved etablering av Moifjellet vindkraftverk. I den forbindelse har Oslo Economics og Anders Dugstad ved Norges miljø- og biovitenskapelige universitet (NMBU), gjennomført en utredning for Statkraft om forventet effekt på boligverdier i området ved bygging av vindkraftverket.

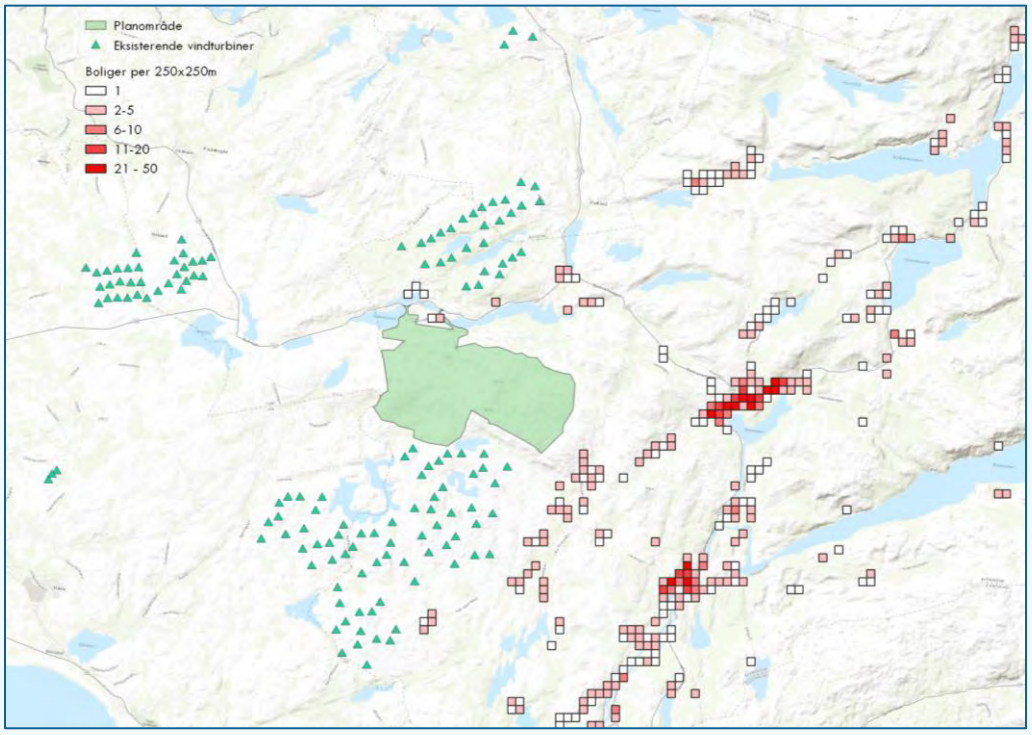
1.1 Bakgrunn for oppdraget

Statkraft utreder muligheten for å bygge vindkraft på Moifjellet i Bjerkreim kommune i Rogaland. Vindkraftverket som planlegges består av 30 til 40 vindturbiner med en turbinhøyde på 180 til 200 meter. Vindkraftverket dekker et planområde på 17 km^2 og er forventet å produsere ca. 850 GWh. Det tilsvarer årlig strømforbruk til over 53 000 husstander.

Moifjellet har flere allerede etablerte vindparker i nærheten. Søndre Bjerkreim vindkraftverk ligger rett sør for Moifjellet og har 70 turbiner. Nord for Moifjellet ligger Måkaknuten og Stigafjellet med til sammen 29 turbiner. Alle de tre vindkraftverkene ligger innenfor fem kilometer fra planområdet til Moifjellet vindkraftverk. I tillegg ligger Høg-Jæren vindkraftverk med 32 turbiner ca. 10 kilometer nordvest for Moifjellet. Figur 1-1 illustrerer planområdet for Moifjellet vindkraftverk (grønt område), eksisterende vindturbiner i omkringliggende vindkraftverk (grønne trekanter), og bebyggelse i området rundt (røde firkanter illustrer tetthet).

Bjerkreim kommune vedtok i mai 2024 planprogrammet for Moifjellet vindkraftverk. I planprogrammet er det fastsatt at effekter på boligverdi for både boliger og fritidsboliger skal utredes. Utredningen inngår som en del av konsekvensutredningen og Statkrafts konsesjonssøknad for Moifjellet vindkraftverk.

Figur 1-1: Området rundt Moifjellet vindkraftverk



Kilde: SSB, Befolkning på rutenett; NVE, vindturbiner; OpenStreetMap, bakgrunnskart. Illustrasjon Oslo Economics

1.2 Mandat, metode og informasjon

1.2.1 Vårt mandat

Oslo Economics og Anders Dugstad ved NMBU har på oppdrag for Statkraft gjennomført en utredning som belyser hvordan Moifjellet vindkraftverk forventes å påvirke boligverdier i området. Analysen inkluderer en vurdering av priseffekten på både primærboliger og fritidsboliger.

Mandatet for oppdraget har vært å analysere vindkraftverkets forventede effekt på boligverdier i området rundt vindkraftverket. En del av dette arbeidet har også vært å definere hvilke boliger rundt vindkraftverket som vil få effekt på boligverdien som følge av etablering av Moifjellet (influerte boliger). I vurderingen av antall berørte boliger bruker vi detaljerte analyser av støy, skyggekast og synlighet som Statkraft har fått utarbeidet som del av konsekvensutredningen.

1.2.2 Informasjonsinnhenting og metode

Den viktigste informasjonskilden for denne analysen er en spørreundersøkelse basert på Delphi-metoden (beskrevet i kapittel 2.3). Spørreundersøkelsen er gjennomført blant eiendomsmeglere og andre fageksperter som bedriver eiendomsrelatert virksomhet i områdene rundt det planlagte vindkraftverket eller i områder andre steder i landet hvor det er etablert vindkraft. Spørreundersøkelsen er blitt gjennomført i to runder, i tråd med forskningslitteraturen om Delphi-metoden (Navrud & Strand, 2018).

Som del av utredningen har vi gjennomgått eksisterende forskning og litteratur hvor sammenhengen mellom utbygging av vindkraftverk og boligpriser er studert. Vi har også gjennomført fire innledende intervjuer med eiendomsmeglere og fageksperter i Rogaland for å kartlegge hvordan de forventer at vindkraft-utbyggingen på Moifjellet vil kunne påvirke boligpriser i området rundt. Innsikten fra litteraturgjennomgangen og intervjuene har blitt benyttet i utformingen av spørreundersøkelsen.

I gjennomføring av prosjektet har vi hatt dialog med Statkraft og deres ekspertressurser for å sikre at informasjonen som presenteres i spørre-undersøkelsen er korrekt. Vi understreker samtidig at utforming av spørreundersøkelsen er det Oslo Economics og Anders Dugstad som har stått for, uten føringer fra Statkraft.

1.2.3 Rapportstruktur

I rapportens kapittel 2 presenterer vi ulike metoder for å vurdere hvordan etablering av vindkraft påvirker boligverdier og gir en oversikt over funn fra eksisterende forskning og litteratur. I kapittelet redegjør vi også for vårt valg av metode i denne studien.

I kapittel 3 presenterer vi hva som er de mest sentrale virkningene ved etablering av vindkraftverk, som forventes å kunne ha betydning for boligverdier. I kapittel 3 definerer vi influerte boliger rundt vindkraftverket og gir en oversikt over antall primær- og fritidsboliger som vi forventer vil bli berørt ved utbygging av Moifjellet vindkraftverk.

I kapittel 4 beskriver vi hvordan vi har utformet spørreundersøkelsen, utvalget av respondenter og hvordan resultatene fra spørreundersøkelsen er analysert.

Kapittel 5 presenterer resultatene fra analysene som er gjennomført, basert på svarene som er gitt i spørreundersøkelsen.

2. Metoder for å vurdere effekt på boligverdi

Det finnes få analyser av vindkraftverks effekt på boligpriser i Norge, og ingen etablerte metoder for å vurdere dette i planleggingsfasen av prosjekter. I samfunnsøkonomiske analyser brukes endringer i faktiske boligpriser som en måte å avsløre befolkningens betalingsvillighet for å unngå negative effekter på natur og miljø, for eksempel som følge av vindkraftutbygging. For å kunne ta hensyn til lokale forhold rundt det planlagte vindkraftverket på Moifjellet, vurderer vi en Delphi-studie som et godt supplement til en allerede gjennomført nasjonal studie av observert effekt av vindkraft på boligverdi.

2.1 Metoder for å vurdere påvirkning fra vindkraftverk

Vindkraftverk påvirker de som bor eller ferdes i nærheten, blant annet gjennom visuelle virkninger, støy og skyggekast. Hvor stor påvirkningen er avhenger av en rekke faktorer, som nærhet til vindkraftverket, topografi, synlighet og opplevd støy, men også folks preferanser og holdninger. Påvirkningen kan også avhenge av om det allerede er etablert vindkraft eller annen infrastruktur i samme område eller om vindkraftverket er planlagt etablert i et uberørt naturområde.

Etablering av vindkraft kan også påvirke verdier som ikke er direkte knyttet til bruk av området, ved at det forringer natur, artsmangfold og miljøgoder. Natur- og miljøgoder kan ha betydning for flere enn de som bruker området, gjennom at det er en verdi i seg selv at de eksisterer, både for dagens befolkning og/eller fremtidige generasjoner (Dugstad, et al., 2024).

For de som bor i nærheten av et vindkraftverk vil vindkraftverkets påvirkning på viktige natur- og miljøgoder i området kunne materialisere seg i en endring i boligverdi. I plan-/ utredningsprogrammet for Moifjellet vindkraftverk er det fastsatt at påvirkning på eiendomsverdi for bolig og fritid innenfor influensområdet skal utredes.

Det finnes i dag få analyser som estimerer forventet effekt på boligpriser av vindkraftverk i forkant av bygging, og det finnes ingen etablerte metoder for å estimere denne effekten direkte. I etterkant av utbygginger blir det imidlertid gjort studier av observerbare endringer i boligpriser eller observerbare forskjeller mellom pris for boliger som er berørt av et tiltak og ikke. Dette kan for eksempel være studier som sammenligner forskjeller i boligpriser mellom boliger som er påvirket av vindkraftverk og boliger som ikke er det, eller studier som sammenligner boligpris i bestemte områder før og etter at vindkraftverk er etablert.

I dette kapittelet presenterer vi ulike verdsettingsmetoder som kan være aktuelle for å vurdere hvilken effekt vindkraft på Moifjellet vil ha på boligverdier i området. Metodene som presenteres har ikke nødvendigvis som formål å studere et tiltaks effekt på boligverdier i seg selv, slik vi gjør i denne utredningen. Analyser av et tiltaks effekt på boligverdier kan imidlertid inngå i samfunnsøkonomiske analyser[1], som en metode for å avsløre befolkningens preferanser og deres verdsettelse av negative effekter på natur og miljø i deres nærområder. På den måten kan det være mulig å sette en kroneverdi på en del av tiltakets miljøvirkninger, som det normalt er vanskelig å prissette. Metoden som brukes for å avsløre preferanser gjennom å studere endringer i boligpriser, kalles *hedonisk prising*.

I kapittelet diskuterer vi også styrker og svakheter med de ulike metodene, og i hvilken grad de er egnet til å belyse effekten på eiendomsverdier av Moifjellet vindkraftverk. Med utgangspunkt i gjennomgangen velger vi en metode som vi går videre med i denne utredningen.

2.2 Hedonisk prising

Hedonisk prising tar utgangspunkt i observerte endringer i faktiske boligverdi. Denne metoden brukes i samfunnsøkonomiske analyser for å prissette en samling av ulike typer virkninger for de som bor i/nær de områdene som tiltaket påvirker. De som bor i nærheten av et vindkraftverk kan for eksempel få visuelle virkninger, støy, tap av rekreasjonsområder og eventuelle andre ulemper. Summen av disse ulempene antas å slå ut som redusert betalingsvilje for boligene nær

[1] Formålet med en samfunnsøkonomisk analyse er å vurdere alle virkninger av et tiltak og så langt som mulig verdsette virkningene. Verdsetting av virkninger gjøres etter betalingsvillighetsprinsippet, altså hvor mye befolkningen er villig til å betale for å unngå et tiltak eller en utbygging.

vindkraftverket og kan observeres gjennom forskjeller i boligverdier i nærheten av vindkraftverk.

Hedonisk prising brukes i verdsettingslitteraturen, som en metode for å avsløre folks preferanser. Utgangspunktet er en antakelse om at de ulempene som beboere opplever, kommer helt eller delvis til uttrykk gjennom endringer i boligprisene i etterkant av at det bygges et vindkraftverk i nærheten. Dette reflekterer den betalingsviljen boligkjøperne i området har for å unngå påvirkningen fra vindkraftverkene. Endringer i faktiske boligpriser reflekterer også det forventede privatøkonomiske tapet for personer som eier boliger i området (Bishop, et al., 2020).

Det er gjennomført flere internasjonale studier av sammenhengen mellom boligpriser og vindkraft-utbygging. Studiene benytter ulike variabler for sammenligning slik som tid, størrelse på vindkraftverk og geografi/topologi. Mange av studiene ser på effekten av ett vindkraftverk, mens andre tar for seg flere vindkraftverk i en region, et land eller flere land.

I 2023 ble det også publisert en norsk studie på dette temaet. Andersen et al. (2024) bruker en hedonisk prismodell for å estimere boligeieres betalingsvillighet for å unngå å bo nær et vindkraftverk i Norge, med data fra bolig-transaksjoner i nærheten av vindkraftverk i hele landet. Studien finner en negativ betalingsvillighet mellom 12 og 17 prosent for boliger under 3 kilometer fra et vindkraftverk. Den negative effekten går mot null når avstanden er opp mot 5 til 7 kilometer.

I tekstboksen på neste side oppsummeres funn fra den nylig gjennomført norske studien og internasjonale studier. Resultatene fra studiene er beskrevet ytterligere i Vedlegg A.

Svakheter med metoden

Ved hedonisk prising estimeres effekter av vindkraftverk på nominelle boligverdier. En utfordring er at det er mange forhold som påvirker boligpriser som det er vanskelig å kontrollere for i analysene. I Andersen et al. (2024) kontrolleres det for faktorer som er enkelt observerbare i data, som størrelse, etasje, antall soverom, veranda og lignende. I tillegg til disse faktorene er det mange andre faktorer som kan påvirke prisene, som utsikten fra boligen, vegetasjon i området, antall på visning og aktivitet i budrunden. Flere av disse faktorene kan kontrolleres for gjennom å bruke differanse-i-differanse-metoden som alternativ til hedonisk prising, noe Andersen et al. (2024) også gjør i sin analyse.[2]

Ved bruk av Hedonisk prising er datagrunnlaget de faktiske boligtransaksjonene i bestemte avstander til vindkraftverket, og dette brukes til å estimere en priseffekt også for usolgte boliger i samme avstand fra vindkraftverket. Det kan oppstå skjevheter i utvalget dersom det er systematiske forskjeller mellom de boligene som selges og de boligene som ikke selges i markedet. Et eksempel på dette er dersom boliger som får størst påvirkning av vindkraftverket, blir vanskelige å selge, og det skjer færre transaksjoner av disse enn de som får mindre påvirkning. Ved denne type *fortrengningseffekter* så vil estimater beregnet basert på faktiske transaksjoner kunne underestimere de faktiske effektene på boligpriser. Det kan være tilfelle dersom eierne av boligene som er betydelig påvirket av vindkraftverket får problemer med salg eller ikke er villige til å realisere de faktiske verdifallet i markedet, og velger å beholde boligen fremfor å selge.

Andersen, et al. (2024) viser til nettopp denne utfordringen med hedonisk prisingsmodeller i sin rapport og skriver: *«En annen utfordring er at man ikke nødvendigvis har data på alle salg, og at manglende observasjoner kan være korrelert med forklarende variabler. Ett eksempel kan være hvis boliger som ligger veldig nære vindkraftverk oftere enn andre ikke blir solgt på markedet, men blir revet på grunn av for mye støy til å kunne bo der eller forblir usolgt. Da vil vi en få en skjevhet i utvalget vårt og underestimere effekten av å bo nærme et vindkraftverk».*

2.3 Verdioverføring

Som alternativ til å anvende en hedonisk prismodell er det mulig å bruke verdioverføring fra tidligere studier. Verdioverføring innebærer å benytte resultater fra tidligere hedoniske prismodeller og anvende det på data for det gitte området.

Menon Economics (2024) beskriver fire former for verdioverføring:

- Enhetsverdioverføring
- Verdifunksjonsoverføring
- Meta-analyse
- Delphi-metoden

De ulike metodene for verdioverføring og hvordan de kan anvendes for boligverdi ved Moifjellet er beskrevet ytterligere i dette delkapittelet.

[2] Ved differanse-i-differanse-metoden sammenliknes prisveksten til boliger som blir påvirket av vindkraft mot upåvirkede boliger. Metoden gjør det mulig å kontrollere for ulike dimensjoner av faste effekter, noe Andersen et al. (2024) gjør.

Norsk studie av påvirkning på boligverdi av vindkraftverk

Andersen et al. (2024) har nylig publisert en studie der de bruker en hedonisk prismodell for å estimere boligeieres betalingsvillighet for å unngå å bo nær et vindkraftverk i Norge. Analysen er basert på data fra over 230 000 boligtransaksjoner, for boliger som ligger under 30 kilometer fra et landbasert vindkraftverk.[1] Datagrunnlaget som studien bygger på er hentet fra Finn.no i perioden mellom 2010 og 2022. Eiendomsdataene er kombinert med informasjon om vindkraftverkene fra NVEs vindkraftdatabase bestående av over 61 vindkraftverk i Norge.

Studien finner en negativ betalingsvillighet mellom 12 og 17 prosent for boliger under 3 kilometer fra et vindkraftverk. Den negative effekten er statistisk signifikant inntil en avstand på 4 til 6 kilometer fra vindkraftverket og går mot null når avstanden er 5 til 7 kilometer.

Studien finner at effektene på boligpriser er negativ og statistisk signifikant for alle vindkraftverk, men større for boliger som ligger nær vindkraftverk med mange turbiner (definert som mer enn 10 turbiner).

Det er nærliggende å forvente at ikke bare vindkraftverk som er bygget og i drift kan ha betyning for boligpriser, men at også planer om etablering av vindkraftverk kan ha betyning for boligverdier i et område. Andersen et al. (2024) har undersøket dette i sin studie og estimerer en modell for markedstilpasning over tid. I modellen antas byggestart å være to år før driftsstart og influensområdet er definert som inntil tre kilometer fra vindkraftverket. Studien finner at priseffekten som inntreffer under byggeprosessen er relativt liten og ikke signifikant (mellom 3,2 og 5,7 prosent negativ effekt avhengig av modell). Før byggestart er effekten tilnærmet lik null og ikke signifikant.

Oppsummering av funn fra internasjonale hedonisk prisingsstudier

Internasjonalt er det gjort en rekke analyser av vindkraftverks påvirkning på boligpriser ved bruk av hedoniske prismodeller. Studiene benytter ulike variabler for sammenligning slik som tid, størrelse på vindkraftverk og geografi/topologi. Mange av studiene ser på effekten av ett vindkraftverk, mens andre tar for seg flere vindkraftverk i en region, et land eller flere land.

Influensområde og priseffekt i ulike områder

Schutt (2023) viser også at det relevante influensområdet der boligpriser blir påvirket av vindkraftverk varierer mellom studiene som er gjennomført. Enkelte studier tar utgangspunkt i et forhåndsdefinert område, for eksempel 2 kilometer fra vindkraftverket, mens andre studier ser på effekten ved ulik avstand og bruker dette som grunnlag for å vurdere når priseffekten avtar eller ikke kan tilskrives vindkraftverket. Flere studier finner en ikke-signifikat priseffekt fra og med 3 til 4 kilometer fra vindkraftanlegget[1], mens enkelte studier finner en statistisk signifikant effekt helt ut til 6 til 8 kilometer fra anlegget (Westlund & Wilhelmsson, 2021).

Flere studier forsøker også å skille mellom priseffekten i urbane og rurale strøk, men resultatene er varierende. I en tysk studie finner Frondel et al. (2019) at den negative effekten av vindturbiner er betydelig høyere i rurale områder. Resultatet står i kontrast til funnene i en nederlandsk studie hvor effekten er *større* i urbane områder (Dröes & Koster, 2016). Variasjonen i resultatene fra de ulike studiene kan også avhenge av andre forhold, som at boligens sentralitet ofte har betydning for boligpriser mens vindkraft ofte bygges i mindre sentrale områder.

Vindkraftverkets størrelse

Flere studier finner at størrelsen på vindkraftverket påvirker effekten på boligpriser. En dansk studie finner at den negative påvirkningen øker med antall vindturbiner (Jensen, et al., 2018). Den norske studien utført av Andersen et al. (2024) skiller mellom store og små vindkraftverk, der store vindkraftverk er definert som vindkraftverk med mer enn 10 turbiner. De finner en større negativ priseffekt på boliger som ligger i nærheten av vindkraftverk med mange turbiner (Andersen, et al., 2024).

Store vindkraftverk med flere turbiner virker å påvirke boligverdiene negativt, samtidig som flere studier peker på at effekten er størst ved å gå fra ingen til én turbin. Blant annet understreker forskerne i en nederlandsk studie at det primært er den første turbinen som reduserer boligprisene (Dröes & Koster, 2021).

Fritidsbolig

Få internasjonale studier ser på effekten vindkraft har på boligverdien til fritidsboliger, men en dansk studie skiller mellom ferieboliger og ordinære boliger (Jensen, et al., 2018). Studien finner at boligprisen for ordinære boliger reduseres med mellom 0,2 og 1,1 prosent dersom det kommer en ny vindturbin innenfor 3 kilometer. Resultatene er lignende for feriehus, men ikke like tydelige, der studien kun finner signifikante resultater i noen av områdene de vurderte (Jensen, et al., 2018). I andre studier vises det til generelle holdninger blant fritidsboligeiere, der det eksempelvis er vist høyere motstand til vindkraft blant eiere av fritidsboliger sammenlignet eiere av ordinære boliger (Westlund & Wilhelmsson, 2021).

Priseffekt av ulike eksternaliteter

Enkelte studier ser kun på hvordan spesifikke virkninger av vindkraftverket påvirker boligverdier og skiller ikke på avstanden til vindkraftverket. Disse studiene tar høyde for at terreng, topografi og bebyggelse også kan påvirke hvor mye boliger blir berørt av et vindkraftverk. En dansk studie skiller mellom priseffekt som skyldes støy og visuell påvirkning (Jensen, et al., 2013). De finner at effekten av støy fra turbinene er assosisert med en reduksjon i boligprisene på 6,7 prosent i de mest eksponerte områdene, mens visuell påvirkning står for 3,15 prosent av boligpris-reduksjonen assosiert med bygging av et vindkraftverk. I en tysk studie finner forskerne at boligtomter med «ekstrem» til «middels» sikt til vindkraftverk har en prisnedgang på mellom 9 og 14 prosent (Sunak & Madlener, 2016). De tyske forskerne finner videre at mindre forandringer i vindkraftverks synlighet ikke har noen statistisk betydelig for boligprisene.

2.3.1 Enhets- og verdifunksjonsoverføring

De vanligste metodene for verdioverføring er enhetsverdioverføring eller funksjons-verdioverføring.

Enhetsverdioverføring innebærer å direkte benytte den estimerte gjennomsnittlige effekten av vindkraft på boligpriser fra en tidligere studie, for eksempel den estimerte effekten Andersen et al. (2024) finner i Norge som helhet. Utfordringen med denne fremgangsmåten er at man ikke får kontrollert for forskjeller i karakteristikker mellom områdene som studien baserer seg på og områdene der man ønsker å estimere effekten.

Funksjonsverdioverføring innebærer å bruke en allerede estimert statistisk regresjon fra en tidligere studie, som tar hensyn til varierende egenskaper ved både vindkraftverkene og de omkringliggende områdene (boligtype, størrelse, om det allerede er bygget vindkraft i området osv.). Med denne metoden kan man kontrollere for ulike karakteristikker og få mer presise og tilpassede verdier. Metoden forutsetter at variablene og egenskapene er inkludert i den opprinnelige hedoniske prismodellen, og at det er tilstrekkelig data for disse egenskapene i området som vurderes.

Begge metodene for verdioverføring forutsetter at det finnes gode studier med høy overføringsverdi til området som vurderes. Studien av Andersen et al. (2024) er den vi vurderer som mest relevant i denne sammenheng ettersom studien tar for seg vindkraft i Norge. Det er likevel noen forhold som gjør at vi vurderer studien som mindre relevant for å reflektere de lokale forholdene rundt Moifjellet som vi er opptatt av å undersøke her. Andersen et al. (2024) skiller ikke på effekter mellom områder hvor det allerede er etablert og ikke etablert vindkraft. Studien skiller heller ikke mellom primær- og fritidsboliger. Videre legger Andersen et al. (2024) til grunn at alle boliger innenfor en viss avstand til vindkraftverkene får den samme effekten, uavhengig av topografiske forhold eller andre faktorer som kan gjøre at effekten varierer på tvers av boliger innenfor samme område. Studien skiller altså ikke på boliger som i ulik grad får virkninger fra vindkraftverket i form av støy, skyggekast og/eller synlighet innenfor samme område. Vi vurderer derfor at overføringsverdien av Andersen et al. (2024) sin studie er usikker gitt formålet med denne utredningen.

Overføringsverdien fra internasjonale studier som er gjennomført er videre svært usikker. Natur, landskapsbilde og topografi, bebyggelse, innbyggernes preferanser og holdninger til vindkraft, og deres inntektsnivå er eksempler på faktorer som varierer på tvers av land og kan ha stor betydning for hvilken effekt vindkraftverk kan ha for verdien av omkringliggende boliger. Dette illustrer også metaanalysen som Schütt (2023) har gjennomført. Studien finner stor variasjon i samlet priseffekt på boligverdier på tvers av studier, jf. kapittel 2.2. Det er også få internasjonale studier som ser på effekter vi særlig er interesserte i her, spesielt på eiendomsverdier som allerede er påvirket av eksisterende vindkraftverk og som nå utsettes for ytterligere utbygging, samt virkningen på fritidsboliger.

2.3.2 Meta-analyse

En meta-analyse er en form for verdioverføring der funn fra flere tidligere verdsettingsstudier sammenstilles. Estimater på betalingsvillighet fra ulike verdsettingsstudier utgjør observasjonene i en meta-analyse for å estimere en samlet betalingsvillighetsfunksjon.

En utfordring med meta-analyser er å samle inn nok studier som undersøker det samme. Ulike verdsettingsstudier ser ofte på en konkret utbyggingssak, som kan gjøre det vanskelig å sammenstille disse analysene.

I 2023 ble det gjennomført en meta-analyse som ser på virkninger av vindkraftverk og endringer i boligpriser. Meta-analysen tar for seg resultater fra 25 internasjonale studier som benytter hedonisk prising som verdsettingsmetode. Denne studien viser sprikende resultater i effekten på boligpriser (Schütt, 2023). Meta-analysen viser at vindkraft har fra opptil 50 prosent negativ effekt til 50 prosent positiv effekt på boligpriser. Samlet finner metastudien en gjennomsnittlig negativ priseffekt på 0,68 prosent for boliger i en avstand på rundt 3 kilometer fra et vindkraftverk. Effekten faller til null etter rundt 4,5 kilometer.

Siden det nylig er gjennomført en meta-analyse av studier som ser på vindkraftverk og boligpriser, og det er få nye studier nasjonalt som er publisert etter 2023, vurderer vi at en ny meta-analyse ikke vil tilføre betydelig ny informasjon. Vi vurderer imidlertid at funnene fra Schütt (2023) kan benyttes som grunnlag for sammenligning.

2.3.3 Delphi-metoden

Innen miljøverdsetting sees Delphi-metoden på som en kombinasjon av betinget verdsetting og verdioverføring. Metoden innebærer å samle informasjon og meninger om et gitt tema fra en gruppe respondenter innenfor deres ekspertområde. I stedet for å spørre folk direkte om deres preferanser for en miljøendring, som man gjør i betinget verdsetting, bruker Delphi-metoden

et utvalg eksperter sin vurdering til å forutsi folks preferanser.

Metoden ble først brukt til å predikere utvikling innen forskning og teknologi av Dalkey og Helmer (1963), og har siden blitt brukt innen en rekke ulike fagområder, inkludert verdsetting av eksternaliteter, miljøgoder og økosystemtjenester (Barzilay, et al., 2012; Strand, et al., 2017; Navrud & Strand, 2018; Dugstad & Navrud, 2023). I dag brukes metoden ofte når kvantitative data er vanskelige eller kostbare å samle inn, eller når prediksjon av fremtidige hendelser er formålet.

Som argumentert av Barzilay et al. (2012), kan Delphi-metoden være nyttig for å evaluere effekten av lokale eksternaliteter på boligpriser, spesielt i lokalsamfunn med få boliger og boligtransaksjoner, i likhet med studieområdet på Moifjellet. Dugstad og Navrud (2023) viser at Delphi-metoden gir mer pålitelige estimater av ikke-bruksverdier for globale miljøgoder, i form av folks betalingsvillighet, enn tradisjonelle verdi-overføringsmetoder.

Delphi-metoden er illustrert i Figur 2-1. Det første steget i metoden er å definere og velge ut en ekspertgruppe som deltar gjennom prosessen. Ekspertene jobber anonymt gjennom de ulike delene. Metoden tar deretter utgangspunkt i informasjonen som er samlet inn fra de utvalgte ekspertene, for eksempel gjennom spørre-undersøkelser. Informasjonsinnsamlingen gjennomføres blant de samme respondentene i flere runder, for at disse skal utvikle en enighet og konsensus rundt vurderingene av et spesifikt tema. Mellom rundene får respondentene presentert en oppsummering av ekspertgruppas samlede svar i anonymisert format. Ekspertene blir deretter bedt om å vurdere sine svar og får mulighet til å justere disse (Navrud & Strand, 2018).

Prosessen gjentas til en viss grad av konsensus eller stabilitet oppnås. Ofte stopper prosessen når svarene blir mer samstemte og variasjonen mellom ekspertenes vurderinger reduseres.

Svakheter med metoden

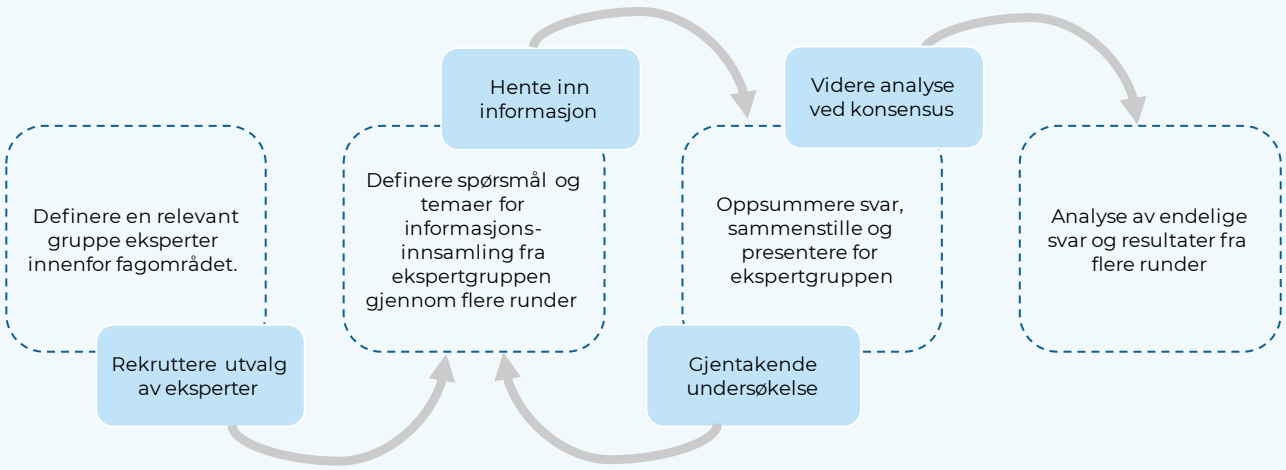
Delphi-metoden er i liten grad anvendt på miljøvirkninger og det finnes lite forskning på hvor godt egnet metoden er for denne type virkninger, med unntak av Dugstad & Navrud (2023) som finner at metoden gir prediksjon i tråd med tradisjonell verdioverføring. Dugstad & Navrud (2023) peker på behovet for å teste ut Delphi-metoden videre for å verdsette både lokale og globale fellesgoder.

Delphi-metoden er en form for betinget verdsetting som rettes mot eksperter. Metoden innebærer derfor noen av de samme svakhetene som tradisjonell betinget verdsetting, der estimatene bygger på personenes oppfatning og egen vurdering. En utfordring med denne type metode er at respondentene ikke nødvendigvis har et godt bilde av hva miljøgodet er verdt i penger, og at de kan ha insentiver til å uttrykke preferanser strategisk for å påvirke utfallet i en retning som de selv ønsker. Videre kan det være utfordringer knyttet til å rekruttere et tilstrekkelig antall eksperter, noe som kan begrense grunnlaget for statistiske analyser.

2.4 Valg av metode

Formålet med denne utredningen er å forstå hvordan etablering av vindkraft på Moifjellet vil påvirke boligverdier i områdene rundt

Figur 2-1: Oversikt over Delphi-metoden



Illustrasjon: Oslo Economics

vindkraftverket. Utredningen gjøres i forkant av utbyggingen, og faktiske effekter er dermed ikke observerbare i boligmarkedet.

Moifjellet vindkraftverk skiller seg fra andre vindkraftverk som er bygget i Norge ved at det allerede er etablert vindkraft i området rundt Moifjellet. Videre vil både primær- og fritidsboliger bli berørt av vindkraftutbyggingen. I analysen ønsker vi derfor å fange opp forventet priseffekt på både primær- og fritidsboliger ved etablering av Moifjellet vindkraftverk, hensyntatt at det allerede er bygget vindkraft i området. Vi ønsker også å undersøke om den forventede effekten er forskjellig for primær- og fritidsboliger.

2.4.1 Hedonisk prismodeller krever et stort datagrunnlag og gjennomføres i etterkant av utbyggingsprosjekter

Anvendelse av hedonisk prismodeller forutsetter tilgang på boligtransaksjonsdata hvor man kan sammenligne utvikling i boligpriser i områder med vindkraft mot sammenliknbare områder uten vindkraft. Ettersom vindkraftanlegget på Moifjellet ikke er utbygd, er det ikke mulig å analysere de faktiske effektene av vindkraftverket på boligverdien i dag.

En alternativ fremgangsmåte for å vurdere effekten på boligverdi av Moifjellet vindkraftverk er å bruke en hedonisk prismodell basert på andre områder med vindkraft som har liknende egenskaper. Metodens treffsikkerhet avhenger av et tilstrekkelig antall boligtransaksjoner. En utfordring for denne fremgangsmåten er at rundt eksisterende vindkraftverk i Norge er det ofte lite bebyggelse og svært begrenset med data på boligtransaksjoner.

Andersen et al. (2024) benytter et datasett med over 230 000 boligtransaksjoner i Norge. Dette er transaksjoner for alle boliger i områder inntil 30 kilometer fra de 61 konsesjonspliktige vindkraftverkene i hele landet over en 12 års periode. I Norge er det få boliger i nærheten av hvert vindkraftverk, og ved å anvende en hedonisk prismodell på kun et eller et lite utvalg av disse 61 vindkraftverkene, ville datagrunnlaget blitt betydelig redusert. Det er derfor usikkert hvor stor tilleggsverdi en slik lokal analyse vil gi og om man har nok data til å fange opp effektene.

For å analysere effekten på fritidsboliger kan en hedonisk prismodell for transaksjoner av fritidsboliger anvendes. Samtidig vil transaksjoner for fritidsboliger nær vindkraftverk i Norge som helhet være desto mer begrenset enn for primærboliger. I tillegg er det en rekke andre preferanser og forhold som påvirker prisene på fritidsboliger som kan være vanskelig å kontrollere for i en analyse. En nasjonal analyse av fritidsboliger vil derfor trolig være mindre relevant for dette spesifikke området.

For å gjøre en analyse tilpasset lokale forhold rundt Moifjellet har vi vurdert det som lite hensiktsmessig å gjennomføre en ny analyse ved bruk av hedonisk prising. Hovedgrunnen til denne vurderingen er begrensingen i datagrunnlaget som vil gi mindre robuste og trolig ikke-signifikante resultater. Studien av Andersen et al. (2024) er trolig det beste grunnlaget for å anvende en hedonisk prismodell i Norge som helhet, men der lokale tilpasninger er krevende.

Et alternativ til å anvende en hedonisk prismodell er å bruke verdioverføring fra tidligere studier som baserer seg på hedonisk prising. Verdioverføring innebærer å benytte resultater fra tidligere studier og anvende dataene for et gitt område.

Verdioverføring gjennom enhetsverdioverføring eller funksjonsverdioverføring forutsetter at det finnes gode studier med høy overføringsverdi til området som vurderes. Vi vurderer som beskrevet over at Andersen et al. (2024) sannsynligvis er det beste grunnlaget for å si noe om den gjennomsnittlige effekten vindkraft har på omkringliggende boliger i Norge, men at det er svært usikkert i hvilken grad estimatene kan reflektere den faktiske eller forventede boligpriseffekten av vindkraftutbygging på Moifjellet. Overføringsverdien fra de utenlandske studiene er enda mer usikker.

Vår vurdering er dermed at både studien som er gjennomført i Norge og andre internasjonale studier er lite egnet til å belyse de spesifikke lokale forholdene som er ønskelige å belyse i denne utredningen.

2.4.2 Delphi-metoden kan være et godt supplement for å fange opp de lokale forholdene

Delphi-metoden kan være egnet der kvantitative data er vanskelige å samle inn, jf. omtale i kapittel 2.2. Vi vurderer Delphi-metoden som et godt supplement til resultatene fra den nasjonale undersøkelsen av boligpriseffekten av vindkraftverk (Andersen, et al., 2024). Delphi-studien åpner for at de lokale forhold kan hensyntas i analysen. Dette muliggjør en lokal tilnærming i analysen, spesielt relatert til den marginale effekten gitt eksisterende vindkraftverk, og effekten på fritidsboliger.

Delphi-metoden kan fange opp noen flere virkninger der hedonisk prising potensielt kan underestimere priseffekten av at boligen er lokalisert nær et vindkraftverk. Boliger som ikke blir

lagt på markedet eller solgt i den aktuelle perioden vil ikke inngå i datasettet med faktiske boligtransaksjoner for hedonisk prising. Dersom det gjennomføres få eller ingen transaksjoner av de mest påvirkede boligene, kan det gi en skjevhet i utvalget og resultere i at priseffekten underestimeres, jf. 2.2 Gjennom informasjonsinnhenting i Delphi-studien blir ekspertgruppen bedt om å vurdere den samlede effekten. Vurdering av den samlede effeken vil også ta høyde for at noen eventuelt får problemer med salg, eller ikke vil selge til den prisen de tilbys dersom verdifallet er stort. Delphi-metoden vil i situasjoner der vindkraftverkets påvirkning gir utfordringer ved boligsalg potensielt gi en mer forventingsrett estimert priseffekt.

For å tilpasse til lokale forhold, innretter vi Delphi-undersøkelsen mot boliger som vil få spesifikke virkninger av vindkraftverket, i form av synlighet, støy, skyggekast, eller kombinasjoner av disse. Dette innebærer at vi kun estimerer priseffekten for eiendommer som faktisk påvirkes av vindkraftverket, og at boliger som er upåvirket ikke er inkludert i datagrunnlaget. Dette i motsetning til analyser med hedonisk prising, som estimerer gjennomsnittlige priseffekter for boliger i ulike avstander til vindkraftverket. Innenfor de ulike avstandskategoriene kan boligene, avhengig av sin lokalisering i forhold til vindkraftverket, i ulik grad være preget av virkninger som synlighet, støy og/eller skyggekast, og enkelte boliger kan også være helt upåvirket. Hvis mange boliger er upåvirket eller lite påvirket av vindkraftverket, vil dette isolert sett gi lavere estimerte effekter på boligprisene, enn estimater fra en Delphi-studie som kun estimerer forventede priseffekter på boliger som faktisk påvirkes.

3. Influerte boliger rundt Moifjellet vindkraftverk

Støy, skyggekast og synlighet er de virkningene av vindkraftutbygging som har størst betydning for boligverdier. Primær- og fritidsboliger i området rundt Moifjellet vil i ulik grad bli berørt av en vindkraftutbygging. Innenfor et område på 10 kilometer fra Moifjellet vindkraftverk ligger det omtrent 1 900 boliger. 83 prosent er primærboliger og 17 prosent er fritidsboliger. 28 boliger vil få skyggekast, økt støy og få utsyn til turbinene på Moifjellet. Ytterligere 83 boliger vil få økt støypåvirkning og 484 boliger vil få utsyn til vindkraftverket på Moifjellet.

Vurdering av ulike virkninger av vindkraft fra tidligere studier (litteraturgjennomgang)

Forskningen fra Heintzelman & Tutle (2012) og Jensen et al., (2013) viser at støy har en vesentlig innvirkning på boligpriser. Studiene fra Gibbons et al. (2015) og Sunak et al. (2016) trekker frem at skyggekast har stor betydning for boliger som ligger nær vindkraftverket. De to sistnevnte studiene fremhever også at synlighet til vindkraftverk er viktig, og ytterligere studier underbygger dette funnet som for eksempel av Hoen et al. (2011), Dong & Lang (2022) og Dröes & Koster (2016). Samtlige studier vi refererer til viser at støy, skyggekast og synlighet til vindkraftverket er viktige virkninger som er sentrale for virkningene etablering av vindkraftverk har på boligpriser.

3.1 Lokale virkninger

Vindkraftanlegg påvirker mennesker som bor eller ferdes i nærheten av anlegget på forskjellige måter. Virkninger av vindkraftverk inkluderer visuelle virkninger, opplevd støy og skyggekast fra turbinene (Zerrahn, 2017; Krekel & Zerrahn, 2017). Alle disse virkningene kan få utslag i boligverdier for boliger i området rundt et vindkraftverk.

Hvor stor effekten på boligverdier vil være avhenger av en rekke forhold. Påvirkningen og effekten på boligpriser vil ofte henge sammen med avstanden til vindkraftverket, jf. kapittel 2. Opplevd støy eller skyggekast vil bare gjelde for de boligene som ligger nærmest vindkraftverket, mens synlighet til vindkraftverket også kan ha betydning for boliger lengre unna. Andre forhold som personlige preferanser, generell oppfatning av vindkraft, bruk av friluftsområder i nærheten og nærhet til eksisterende vindkraftverk, kan også påvirke boligverdiene til boliger som blir berørt.

Gjennom bruk av Delphi-metoden ønsker vi å fange opp de lokale virkningene ved etablering av vindkraft på Moifjellet. Vi definerer influerte boliger[3] rundt Moifjellet basert på hvordan boliger påvirkes av henholdsvis støy, skyggekast og synlighet. Bakgrunnen for at disse faktorene er benyttet for å vurdere effekten på boligverdier, er funn fra litteraturgjennomgangen, NVEs vurderinger av arealbruk rundt vindkraftverk og innledende intervjuer med lokale eiendomsmeglere og tomteutviklere. Gjennomgående for alle kildene er at disse tre virkningene blir trukket frem som de viktige for boligpriser. Virkningene er nærmere omtalt i de påfølgende delkapitlene.

3.1.1 Skyggekast

Dersom vindturbiner står mellom solen og en bolig, kan turbinen kaste en bevegelig skygge over boligen. Dette vil oppleves som en sveipende skygge over en flate, eller som en hurtig veksling mellom sollys og skygge (NVE, 2014). Opplevelsen av skyggekast avhenger av en rekke forhold, blant annet vær, tid på året, avstand fra turbinen, driftsmønsteret til turbinen og størrelsen på turbinbladene.

De boligene som befinner seg nærmest vind-turbinene er de som er mest utsatte for skyggekast. Moderne turbiner kan kaste skygge opp til to kilometer fra turbinen (Norconsult AS, 2022). Intensiteten av skyggekast avtar med økende avstand fra turbinen. Når mindre enn 20 prosent av solen er dekket av vingebladet sett fra mottakeren, defineres det ikke lenger som skyggekast. Solens posisjon på himmelen og størrelsen på turbinen vil også være avgjørende for i hvilken retning og hvor langt skyggen fra turbinen når. Når solen står høyt på himmelen vil skyggen være kortere sammenlignet med når sola står lavt i horisonten på morgenen og kvelden.

Skyggekast inngår ofte i samlebetegnelsen *visuelle virkninger og* inkluderes i studier som omhandler plagereaksjoner av vindkraft. En studie fra Canada

[3] I konsekvensvurderinger og analyser av påvirkning er det vanlig å definere ett eller flere influensområder, for eksempel i ulike avstander til inngrepet. I denne analysen defineres influensområdet basert på omfanget av virkninger som boligene får fra vindkraftverket. Vi bruker derfor heller begrepet *influerte boliger*.

finner at det er en responssammenheng mellom graden av skyggekastplage og andre eksponeringsfaktorer og støysensitivitet hos mottakere (Michaud, et al., 2016). Disse funnene viser hvordan visuelle aspekter, som skyggekast, og andre virkninger som støy, kan betraktes som separate eksponeringer, men samtidig bidrar til å forsterke hverandre.

NVE stiller krav til at bygninger som utsettes for skyggekast ikke utsettes for faktisk skyggekast i mer enn 8 timer per år og for teoretisk skyggekast i mer enn 30 timer per år eller 30 minutter per dag[4] (NVE, 2014). Statkraft vil tilpasse driften av vindturbinene slik at grenseverdiene overholdes.

Grunnet solas plassering vil boliger som befinner seg nord og nordøst for Moifjellet kunne utsettes for skyggekast ved etableringen av vindkraftverket. En del av boligene som vil få skyggekast fra Moifjellet har allerede skyggekast fra eksisterende vindkraftverk i området (Stigafjellet og Måkaknuten). Ved etableringen av Moifjellet vil disse boligene få en økning i skyggekast.

3.1.2 Støy

Støy defineres som uønsket lyd som kan påvirke menneskets fysiske og psykiske velvære (Miljødirektoratet, 2000). Støy fra moderne vindmøller er bredspektret. Støyen skyldes aerodynamisk lyd fra vingene som avhenger av vingespissens hastighet, vingenes form og turbulensen i luften. Lyden fra turbinene vil oppfattes som en pulserende «svisjelyd», men ved flere turbiner vil den kunne oppfattes som en jevnere dur. Støyen inkluderer en lav motordur fra motoraggregatet inni vindmøllen (Miljødirektoratet, 2000).

På kort avstand fra turbinene vil støynivået være jevnt, mens det på lengre avstand vil avhenge av vindretning, vindhastighet, trykk- og temperatur-forhold og terreng (vegetasjonens evne til å absorbere støy) (NVE, 2024b). Støy er vanligvis merkbar innenfor en avstand på to til tre kilometer fra den nærmeste turbinen, men hvor langt støyen bærer avhenger av lokale forhold.

Støy fra vindturbiner oppgis i L_{den}, som inkluderer et påslag for lydnivåer på kvelden og på natten[5]. Støy opp til L_{den} 45 dBA anses som akseptabel støy hos en støyfølsom nabo (bolig, hytte, sykehjem, barnehage m.m.) til ett vindkraftverk og kategoriseres som «grønn sone».[6] Selv om støy i grønn sone er ansett som akseptabelt ved planlegging og utforming av vindkraftverk, er det anslått at opptil ti prosent av befolkningen (de mest støysensitive) vil kunne oppleve støyplage ved støy opptil L_{den} 45 dBA. Gul sone er en vurderingssone hvor bebyggelse med støyfølsomt bruksformål kan oppføres dersom avbøtende tiltak gir tilfreds-stillende støyforhold (Klima- og miljødepartementet, 2021). Dette er støy på mellom L_{den} 45 og 55 dBA. For disse støynivåene stilles det krav til utbygger om tiltak for å avbøte virkningene ved etablering av nye boliger, sykehus, fritids-boliger, skoler, barnehager og pleieinstitusjoner. Relevante tiltak kan for eksempel innebære at soverom og stue vender motsatt vei enn støykilden. Områder med støynivåer over L_{den} 55 dBA (rød sone) anses ikke egnet for bygninger med støyfølsomt bruksformål, og er definert som rød sone.

De fleste primær- og fritidsboligene som vil få støy fra Moifjellet vindkraftverk ligger i dag innenfor støysoner fra eksisterende vindkraftverk. Den samlede støybelastningen for disse boligene vil øke ved utbygging av Moifjellet vindkraftverk. For en del boliger vil samlet støybelastning innebære at støynivået går fra under grønn støysone til grønn støysone (lav plagegrad). Statkraft opplyser at det vil gjøres tilpasning i driften av vindturbiner slik at ingen boliger og øvrige bygg med støyfølsom bruk vil opplever støy over L_{den} 45 dBA.. Boliger som havner i rød støysone vil bli innløst dersom vindkraftverket bygges.

3.1.3 Synlighet

Vindkraftverk kan være synlig både på kort og lang avstand. Utenfor det som kan kategoriseres som nærområde for et vindkraftverk er det synlighet som er den dominerende virkningen. Det er flere faktorer som påvirker synligheten til turbinene, inkludert designet og høyden på turbinene, topografien i området og værforhold. Under norske forhold vil topografien og plasseringen av vindturbinene ha stor betydning for de visuelle virkningene (Norconsult, 2017). For eksempel vil de visuelle virkningene være betydelig større dersom vindkraftverket fyller synsfeltet eller utgjør et dominerende blikkfang i landskapet sammenlignet med de visuelle virkningene som oppstår dersom vindkraftverket drar nytte av den lokale topografien

[4] Teoretisk skyggekast er worst-case skyggekast og beregnes under følgende tre forutsetninger: i) Solen skinner konstant i alle timer med dagslys, ii) Turbinene er i konstant bevegelse og iii) Vindretningen er slik at turbinene alltid står vendt mot skyggekastmottaker.

[5] L_{den} er et støymål som sier noe om gjennomsnittlig lydtrykknivå gjennom hele døgnet (dag, kveld natt). Støy på kvelden og på natten tillegges hhv 5 og 10 dB ekstra støybelastning.

[6] Skalaen er logaritmisk som betyr at en økning på 3 dB innebærer en dobling av lydstyrken. I praksis oppleves en økning på 10 dB som en dobling av lydstyrken. (NVE, 2024b)

og etableres slik at det ikke synes fra lokal-befolkningens hovedsynsretning (Norconsult, 2017).

Norconsult (2017) viser at en avstand opptil 30 kilometer kan være relevant for visuell påvirkning. På så lang avstand vil turbinene kun være synlige i horisonten, og det er mange andre elementer som også vil påvirke det visuelle landskapsbildet. På nærmere hold vil vindturbinene være mer synlige, og et vindkraftverk kan dekke store deler av synsfeltet i en retning.

Mange av boligene som vil få utsyn til Moifjellet vindkraftverk har i dag utsyn til eksisterende vindkraftverk i området. Ved utbyggingen av Moifjellet vil disse boligene kunne se noen flere vindturbiner over et større område.

3.2 Influerte boliger

Både primær- og fritidsboliger i nærheten av Moifjellet vil i varierende grad påvirkes av vindkraftverket. Vi kategoriserer *influerte* boliger i grupper basert på de direkte virkningene de får av Moifjellet vindkraftverk (støy, synlighet, skyggekast), samt i hvilken grad de allerede berøres av eksisterende vindkraftverk (synlighet). Vi definerer altså ikke influensområdet som et fysisk avgrenset område rundt vindkraftverket, men kategoriserer heller boliger etter hva slags virkninger de vil få av vindkraftverket. Boliger som ikke vil få støy, skyggekast eller utsyn til Moifjellet vindkraftverk er ikke inkludert i gruppene av influerte boliger. I det videre bruker vi derfor begrepet *influerte boliger*, fremfor influensområde.

Ved å kun inkludere influerte boliger i utvalget, fremfor å se på effekter i ulike avstander til vindkraftverket, tar vi hensyn til lokale forhold som topografi, terreng og bebyggelse, som kan være avgjørende for hvilken påvirkning ulike boliger får. Samtidig vil kategoriene av influerte boliger også ta indirekte hensyn til avstand til vindkraftverket – der for eksempel boliger som får skyggekast og økt støy befinner seg i et begrenset område relativt nær vindkraftverket.

1: Boliger påvirket av skyggekast og støy
Den første gruppen omfatter primær- og fritidsboliger som vil få både skyggekast og støy fra vindkraftverket, i tillegg til utsyn til turbinene på Moifjellet. De fleste av disse boligene har allerede virkninger fra eksisterende vindkraftverk, både skyggekast og støy, men vil ved utbygging av Moifjellet vindkraftverk få en økt belastning.

Disse boligene vil få en økning i støynivå. Økningen vil være rundt L_{den} 5 dBA opp mot en total støybelastning på maks L_{den} 45 dBA. Dette støynivået tilsvarer NVEs definerte støygrense for hva som er en akseptabel støyplage. For de fleste vil dette støynivået oppleves som akseptabelt, men det kan oppleves som plagsomt for noen.

Boligene vil få skyggekast fra Moifjellet vindkraftverk, hvorav de fleste av disse allerede får skyggekast fra eksisterende vindkraftverk. I hvor stor grad boligene vil bli påvirket av skyggekast varierer og avhenger av blant annet vær og årstid. På en solfylt dag kan disse boligene få skyggekast i opptil 30 minutter.

Boligene vil også få utsyn til mange av turbinene på Moifjellet (> 10 turbiner). Enkelte av boligene har allerede utsyn til eksisterende vindkraftverk i området. I denne gruppen skiller vi derfor mellom boliger som har utsyn til turbiner ved eksisterende vindkraftverk og de som ikke har utsyn til noen turbiner i dag.

2: Boliger som får økt støy
Den andre gruppen omfatter boliger som vil bli påvirket av støy fra vindkraftverket. Dette er boliger som allerede kan ha støy og utsyn til eksisterende vindkraftverk i området. Økningen i støy vil for de fleste ligge opp mot L_{den} 5 dBA. Boligene vil i ingen eller liten grad bli påvirket av skyggekast fra Moifjellet.

Av boligene i denne gruppen skiller vi mellom boliger som vil få et samlet støynivå etter etablering av Moifjellet på mellom L_{den} 35-40 dBA og L_{den} 40-45

Arealbruk ved vindkraftverk

NVE opererer med fire kategorier av arealbruk knyttet til vindkraftverk:

1. Direkte fysiske inngrep
2. Direkte påvirket areal
3. Nærområdet
4. Visuelt influensområde

De to første kategoriene omfatter det avgrensede arealet som vindkraftverket og dens infrastruktur skal plasseres innenfor og de direkte fysiske inngrepene av arealbeslaget det medfører. Kategori tre inkluderer de som er bosatt i nærområdet rundt vindkraftanlegget, og som kan påvirkes av anlegget i form av visuelle virkinger, støy og/eller skyggekast. Den siste kategorien (4) favner et større område der de visuelle virkninger av vindturbinene er observerbare. NVE regner relevant avstand for det visuelle influensområdet som opp mot 30 kilometer fra anlegget. Påvirkning på boligverdi oppstår imidlertid i hovedsak innenfor nærområdet (kategori 3), og vi legger dette til grunn når vi definerer de influerte boligene i denne utredningen.

dBA.[7]. Boligene i denne gruppen har også utsyn til eksisterende vindkraftverk, men vi skiller mellom boliger som også vil ha utsyn til turbiner på Moifjellet og boliger som ikke vil ha utsyn til disse nye turbinene.

3: Boliger som har utsyn til Moifjellet på avstand
Den tredje gruppen omfatter boliger som vil ha utsyn til vindturbiner ved Moifjellet på avstand, men som ikke har andre virkninger fra vindkraftverket. Flere av disse boligene har i dag også utsyn til eksisterende vindkraftverk. Vi skiller derfor mellom boliger som har utsyn til eksisterende turbiner og boliger som ikke har det.

I denne gruppen er det stor variasjon i hvor synlige vindturbinene er, avhengig av hvor langt unna vindkraftverket boligene er lokalisert. I analysen deler vi dermed boligene i denne gruppen inn i to avstandsintervaller fra Moifjellet vindkraftverk. Disse intervallene er 3 til 6 km og 6 til 10 km.

Vi vurderer ikke området utenfor 10 kilometer som en del av de influerte boligene på bakgrunn av funn fra tidligere studier som ikke finner signifikant priseffekt utenfor dette området. For boliger med en avstand fra vindkraftverket på mellom 6 og 10 kilometer vil vi også vurdere om det er en reell effekt på boligpriser gjennom analysen.

3.3 Boliger rundt Moifjellet

Tidligere studier av hedonisk prising finner ingen priseffekter over 8 kilometer fra et vindkraftverk, og enkelte studier finner ingen effekter allerede etter 3 til 4 kilometer, jf. kapittel 2 (Westlund & Wilhelmsson, 2021). Som omtalt i kapittel 2 kan vårt valg av metode, der vi kun ser på berørte boliger, finne effekter i et større område enn hedonisk prisingsmodeller som regner ut et gjennomsnitt innenfor en avstand. Vi har derfor satt en grense for de influerte boligene på 10 kilometer, som er noe høyere en studiene av hedonisk prising. Gjennom analysen ønsker vi også å avdekke om priseffekten eventuelt avtar tidligere enn 10 kilometer fra vindkraftverket.

Antall primær- og fritidsboliger i området rundt Moifjellet som vil få ulike virkninger er basert på detaljerte analyser av støy, skyggekast og synlighet som Statkraft har fått gjennomført som del av konsekvensutredningen. Analysen av synlighet inkluderer alle boliger som vil ha noen grad av utsyn til vindturbinene på Moifjellet og skiller ikke mellom boliger som ser flere turbiner og boliger som kun ser deler av en turbin, eksempelvis en vingetupp. Vi forventer at effekten på boligverdier av vindkraftutbyggingen vil kunne variere innenfor samme område, avhengig av hvor godt utsyn boligene har til vindkraftverket.

Figur 3-1 illustrerer hvordan de influerte boligene kan fordele seg rundt vindkraftverket. I det følgende presenterer vi antall berørte boliger i de ulike gruppene av influerte boliger som definert i delkapittel 3.2.

1: Boliger påvirket av skyggekast og støy
Det er 28 boliger som vil få både skyggekast, økt støynivå og utsyn til Moifjellet vindkraftverk og faller inn under gruppe 1. Innenfor samme radius rundt vindkraftverket er det totalt 58 boliger. Av de berørte boligene har 25 boliger utsyn til eksisterende vindkraftverk i dag, hvorav 14 er fritidsboliger og 11 er primærboliger. Det er én fritidsbolig og to primærboliger som ikke har utsyn til eksisterende vindkraftverk og som vil få skyggekast og økt støy.

2: Boliger som påvirkes av økt støy
83 boliger rundt Moifjellet vil få økt støynivå over L_{den} 40 dBA, uten å bli påvirket av skyggekast og faller innenfor gruppe 2. Innenfor samme avstand rundt vindkraftverket er det i dag 111 boliger.

Boligene som påvirkes av støy fordeler seg som følger:

- 61 primærboliger vil få støynivå på L_{den} 40-45 dBA og få utsyn til turbiner ved Moifjellet
- 12 fritidsboliger vil få støynivå på L_{den} 40-45 dBA og få utsyn til turbiner ved Moifjellet
- 10 primærboliger vil få støynivå på L_{den} 40-45 dBA, men ikke få utsyn til turbiner ved Moifjellet

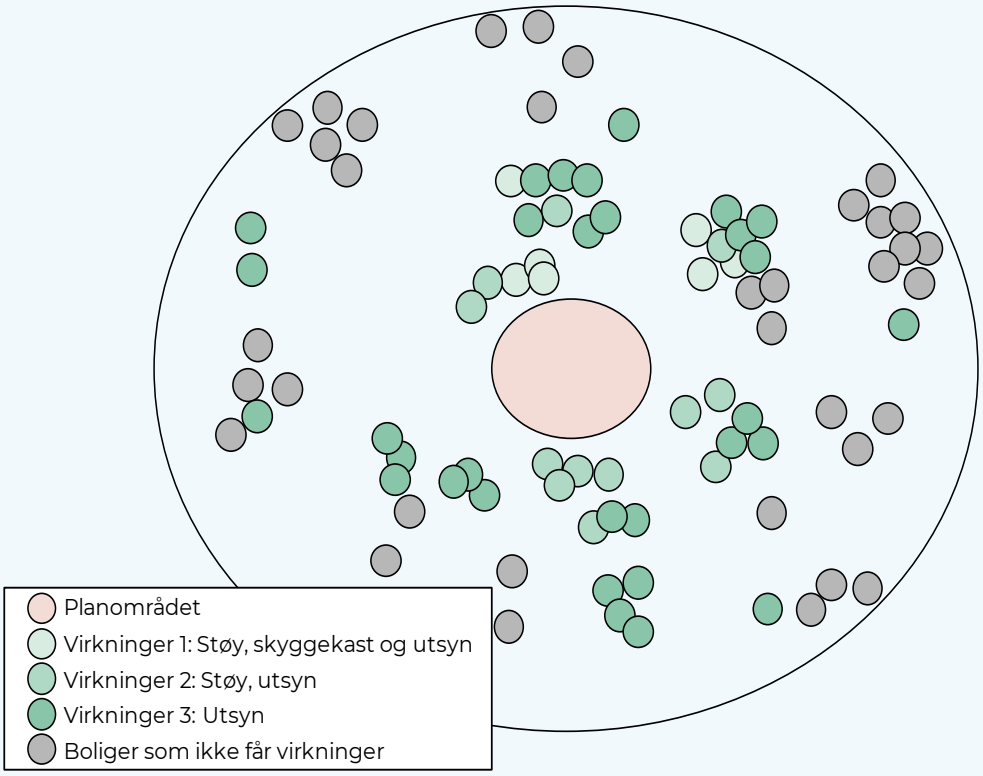
Det er ikke gjort detaljerte analyser av boliger som får støynivå lavere enn L_{den} 40 dBA, og vi har derfor ikke detaljerte tall for de berørte boligene som vil få støynivå mellom L_{den} 35 og 40 dBA.

3: Boliger som har utsyn til Moifjellet på avstand
Mellom 3 og 6 kilometer fra Moifjellet er det i dag 144 primærboliger og 25 fritidsboliger som vil få utsyn til Moifjellet, av totalt 628 boliger. Som beskrevet skilles det ikke mellom hvor synlig turbinene er fra boligen, og antallet inkluderer også eventuelle boliger som kun har begrenset utsyn til vindkraftverket ved at de for eksempel kun ser deler av en turbin eller tuppen av ett vingeblad. Av disse har 86 primærboliger og 22 fritidsboliger allerede utsyn til eksisterende vindkraftverk i området rundt. Samlet vil 14 prosent av boligene mellom 3 og 6

[7]Mennesker uten vesentlig hørselstap vil merke støy på L_{den} 40 dBA og 45 dBA. Kun de mest sensitiv hørsel vil kunne oppleve plage ved L_{den} 35 dBA. De færreste vil oppleve plage ved L_{den} 40 dBA og opptil 10 prosent ved L_{den} 45 dBA.

I området rundt Moifjellet vindkraftverk vil det være boliger som får flere virkninger (støy, skyggekast og synlighet), boliger som får enkelte virkninger og boliger som ikke får noen virkninger. Vi har definert influerte boliger basert på hva slags virkninger de får, gruppert i 3 grupper av virkninger. Figuren under illustrerer hvordan de influerte boligene kan fordeles rundt vindkraftverket, innenfor en avstand opp til 10 kilometer. Boliger i samme område kan få ulike grader av virkninger, for eksempel kan en nabo se vindkraftverket mens den andre naboen ikke gjør det. Merk at dette kun er en illustrasjon og den viser ikke hvor de influerte boligene rundt Moifjellet faktisk befinner seg.

Figur 3-1: Illustrasjon av ulike kategorier av influerte boliger rundt planområdet



Illustrasjon: Oslo Economics

kilometer fra Moifjellet som ikke ser noen vindturbiner i dag, få utsyn til Moifjellet.

Lenger ut, mellom 6 og 10 kilometer fra Moifjellet er det i dag 211 primærboliger og 104 fritidsboliger som vi få utsyn til Moifjellet, av totalt 1 136 boliger. De fleste – 185 av de berørte primærboligene og 96 av fritidsboligene, har i dag utsyn til eksisterende vindkraftverk i området rundt Moifjellet.

4. Utforming av spørreundersøkelsen

Delphi-metoden anvendes gjennom en spørreundersøkelse som sendes ut til lokale eiendomsmeglere og andre eksperter gjennom to runder. I undersøkelsen oppgir ekspertene forventet effekt på boligpriser gitt forskjellige situasjonsbeskrivelser som reflekterer lokale forhold rundt Moifjellet vindkraftverk og i hvilken grad primær- og fritidsboliger i nærområdet vil oppleve økt støy, skyggekast og/eller synlighet ved utbygging av vindkraftverket.

4.1 Utforming av spørreundersøkelse

4.1.1 Bakgrunnsinformasjon

I utforming av spørreundersøkelsen har vi tilstrebet at informasjonstekster og spørsmålene er så enkle og presise som mulig, for på den måten å legge til rette for at respondentene svarer mest mulig korrekt. Spørreundersøkelsen har blitt kvalitetssikret i flere omganger, og av flere personer, før utsendelse, for å sikre klarhet og unngå potensielle misoppfatninger i spørsmålsstillingen.

For å sikre at respondentene tar informerte beslutninger når de svarer ut undersøkelsen inkluderer undersøkelsen også viktig informasjon til respondenten om tema, herunder relevant informasjon om Statkrafts planer om etablering av vindkraft på Moifjellet, bebyggelse i området og andre lokale forhold som kan ha betydning for vurderingen. Undersøkelsen informerer også respondentene om estimater fra den nasjonale studien om effekt av landbasert vindkraftverk på boligpriser av Andersen, et al. (2024). Det gis også informasjon om hvordan Moifjellet vindkraftverk vil skille seg fra landsgjennomsnittet ved at det ligger i et område der det allerede er bygget ut flere vindkraftverk.

Spørreundersøkelsen inkluderer også enkelte bakgrunnsspørsmål om respondenten som er benyttet som kontrollvariabler ved analyse av resultatene. Bakgrunnsspørsmålene inkluderer blant annet informasjon om kjønn, alder, utdanning, yrke og arbeidserfaring.

4.1.2 Spørsmålssett

Vi har utformet spørreundersøkelsen med mål om å kunne vurdere de ulike virkingene av vindkraftverket på boligverdier (skyggekast, støy og synlighet). I tillegg har vi utformet undersøkelsen med mål om å kunne estimere den marginale effekten ved etablering av Moifjellet vindkraftverk, sammenlignet med dagens situasjon (hvor det allerede er eksisterende vindkraftverk i det aktuelle området).

For å estimere effekten av virkningene støy, skyggekast og synlighet til turbiner, skisserer vi tre spørsmålssett i spørreundersøkelsen som er direkte knyttet til grupperingen av virkninger som vi benytter til å definere de influerte boligene (se kapittel 3.2, og 0 for hele undersøkelsen). I hvert spørsmålssett presenterer vi en beskrivelse av påvirkningen for hver virkning (se Tabell 4-1). Dette inkluderer en beskrivelse av total støybelastning og endring i støy, skyggekast og synlighet til turbiner ved etablering av Moifjellet vindkraftverk. Vi beskriver også virkningene som de eksisterende vindkraftverkene har på primær- og fritidsboligene.

Hvert spørsmålssett knyttes også til en viss avstand fra vindkraftverket og et geografisk område på kartet. Dette er for å gi respondentene mer kontekst når de svarer på undersøkelsen, men betyr ikke at virkningene oppstår for alle boligene innenfor det geografiske området, eller at samme virkninger ikke kan oppstå andre steder. De geografiske områdene som er lagt ved spørre-undersøkelsen er eksempler på hvor de ulike kombinasjonene av virkninger kan oppstå.

Vi skiller mellom primær- og fritidsboliger. Etter at vi har presentert virkningene i hvert spørsmålssett, stiller vi spørsmål om forventet boligprisfall for hver av disse boligtypene.

Tidligere forskning og andre studier brukes til å sette noen ytre rammer for respondentene i undersøkelsen. I tråd med definisjon av de influerte boligene og funn fra tidligere studier setter vi en grense på maksimal avstand fra vindkraftverket på 10 kilometer. Vi setter også en øvre grense på hva respondentene kan oppgi av forventet negativ priseffekt på 50 prosent. Denne øvre grensen er også i tråd med forskningslitteraturen (Andersen, et al., 2024; Westlund & Wilhelmsson, 2021; Sunak & Madlener, 2016; Sunak & Madlener, 2013; Gibbons, 2015).

Spørsmålsett 1: Boliger som vil få økt støy, skyggekast og utsyn til mange turbiner
Det første spørsmålssettet tar for seg boliger med virkninger tilsvarende de beskrevet i den første gruppen av influerte boliger. Dette er boliger som vil få både økt støy, økt skyggekast og utsyn over mange turbiner. I spørreundersøkelsen er dette spørsmålssettet knyttet til området nord for Moifjellet.

I spørsmålssettet stiller vi spørsmål om forventet fall i boligverdi, både for boliger som har utsyn til eksisterende vindkraftverk og boliger som ikke har utsyn til turbiner i dag. For begge disse alternativene stiller vi spørsmål om forventet effekt på boligpriser ved etablering av Moifjellet vindkraftverk, og det skilles på primær- og fritidsbolig. Se Tabell 4-1 for inndelingen av spørsmålssett 1.

Spørsmålsett 2: Boliger som får økt støy og utsyn til mange av turbinene på Moifjellet
Spørsmålssett 2 tar for seg boliger som vil få både økt støy og synlighet til turbinene på Moifjellet, tilsvarende gruppe 2 av influerte boliger. I spørsmålssettet skiller vi mellom den totale støybelastningen for boliger på hhv. vest- og østsiden av vindkraftverket, der:

- Vestsiden får et støynivå opp mot L_{den} 45 dBA
- Østsiden får et støynivå opp mot L_{den} 40 dBA

Den marginale endringen ved etablering av Moifjellet er i begge tilfellene rundt L_{den} 5 dBA.

For boliger i disse områdene spør vi om forventet fall i boligverdi ved etablering av Moifjellet vindkraftverk, både for primær- og fritidsbolig.

For boliger på østsiden (med støynivå opp mot L_{den} 40 dBA) skiller vi mellom ulike grader av synlighet:

- Utsyn til mange turbiner i dag *og* vil få utsyn til mange turbiner ved Moifjellet (>10).
- Utsyn til mange turbiner i dag, men vil *ikke* ha utsyn til turbiner ved Moifjellet.

Se Tabell 4-1 for inndelingen av spørsmålssett 2.

Spørsmålsett 3: Boliger som vil få utsyn til vindturbiner på avstand
På en lengre avstand fra det planlagte vindkraft-verket på Moifjellet, vil boliger kunne få økt utsyn til turbiner, tilsvarende gruppe 3 influerte boliger. I spørreundersøkelsen skiller vi mellom boliger i to avstandsintervaller, 3-6 kilometer og 6-10 kilometer fra nærmeste turbin i Moifjellet vindkraftverk.

For boliger innenfor en radius på 3-6 km, stiller vi spørsmål om både primær- og fritidsbolig, for ulike grader av synlighet:

- Utsyn til flere turbiner ved Moifjellet og *ikke* utsyn til eksisterende vindkraftverk
- Utsyn til turbiner ved Moifjellet *og* turbiner fra eksisterende vindkraftverk
- Ikke utsyn til turbiner ved Moifjellet *eller* til eksisterende vindkraftverk

For boliger på lengre avstand, mellom 6 og 10 km, med utsyn til nye og eksisterende turbiner, stiller vi spørsmål om forventet fall i boligverdi for både

Tabell 4-1: Oversikt over virkninger fordelt på de tre spørsmålsettene vi skisserer i spørreundersøkelsen

Spørsmåls-sett	Avstand til nærmeste turbin på Moifjellet	Støybelastning	Opplevd skyggekast fra Moifjellet	Synlighet til turbiner fra Moifjellet	Synlighet til eksisterende anlegg
1	Inntil 3 km	Opptil L_{den} 45 dBA (økning ~ L_{den} 5 dBA)	Ja (også fra eksisterende)	Mange (>10 turbiner)	• Utsyn • Ingen utsyn
2	Inntil 3 km	Opptil L_{den} 45 dBA (økning ~ L_{den} 5 dBA) (vestsiden)	Nei	Mange (>10 turbiner)	Ja
	Inntil 3 km	Opptil L_{den} 40 dBA (økning ~ L_{den} 5 dBA) (østsiden)	Nei	• Ja, mange (>10 turbiner) • Ingen utsyn	Ja
3	3-6 km	Ingen	Nei	• Ja, flere (5-10 turbiner) • Ingen utsyn	• Utsyn • Ingen utsyn
	6-10 km	Ingen	Nei	Ja, i horisonten	Ja

primær- og fritidsbolig. Se Tabell 4-1 for inndelingen av spørsmålssett 3.

4.2 Utvalg av eksperter

Et viktig steg i Delphi-metoden er å definere og rekruttere et utvalg av eksperter som skal være kilden til informasjon. I vår analyse har vi valgt lokale eiendomsmeglere og andre eksperter med erfaring fra salg av boliger, som ekspertgruppe. For å utvide ekspertgruppen har vi inkludert eiendomsmeglere fra et utvalg andre kommuner hvor det har vært lignende vindkraftutbygging som rundt Moifjellet.

Spørreundersøkelsen ble sendt ut til en ekspertgruppe bestående av 75 respondenter, der to tredeler har lokal kunnskap fra Rogaland. Ekspertgruppen består primært av eiendoms-meglere som opererer i Bjerkreim og kommunene rundt, herunder kommuner i Jæren, Nord-Jæren og Dalane. I tillegg ble undersøkelsen sendt ut til eiendomsmeglere i Sirdal i Agder, Fosen og Åfjord i Trøndelag og Stord og Fitjar i Vestland.

4.2.1 Distribuering av spørreundersøkelsen

Ekspertene ble kontaktet på bakgrunn av et omfattende nettsøk. Spørreundersøkelsen ble sendt ut via Questback. Utsendingen av spørre-undersøkelsen har blitt supplert med en oppfølging på telefon og purring per e-post kort tid etter.

I tråd med Delphi-metoden blir spørre-undersøkelsen gjennomført i to runder. I den første runden av undersøkelsen blir respondentene, i henhold til forskningslitteraturen, bedt om å gjennomføre undersøkelsen uten dialog med andre eiendomsmeglere eller fageksperter. I den andre runden av spørreundersøkelsen får hver respondent informasjon om svarfordelingen til hele ekspertgruppen i anonymisert form, samt en påminnelse om hva de svarte i den første runden av spørreundersøkelsen. Respondentene får dermed mulighet til å justere svarene sine fra den første runden. Generelt anses svar i den andre runden som mer pålitelige, da svarene konvergerer nærmere den faktiske effekten ved at deltakerne har fått mulighet til å revidere sine svar basert på den samlede ekspertisen (Dugstad & Navrud, 2023).

For å forsikre oss om at rekkefølgen på spørsmålsettene respondentene får presentert ikke er ledende, deler vi respondentgruppen i to og distribuerer undersøkelsen med randomisert rekkefølge på spørsmålsettene.

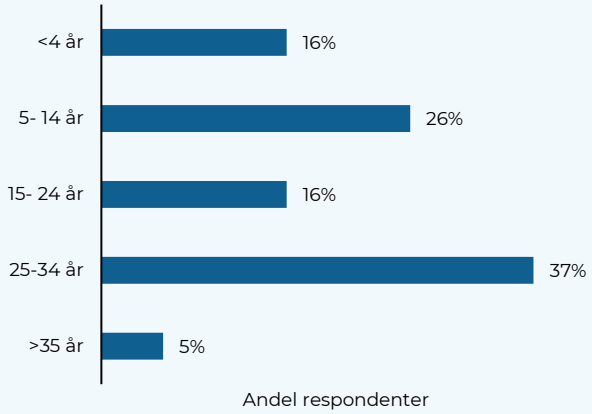
4.2.2 Respondenter

I den første runden av spørreundersøkelsen fikk vi 19 svar, som gir en svarprosent på litt over 25 prosent. I den andre runden fikk vi 17 svar.

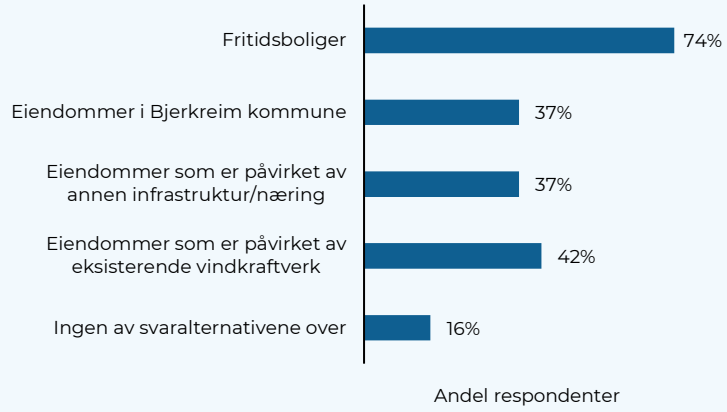
Av respondentene var det 47 prosent (10 av 19 respondenter) som hadde kjennskap til Statkrafts planer om utbygging av Moifjellet vindkraftverk, og kun 5 prosent (1 av 19 respondenter) som hadde kjennskap til den landsdekkende studien om effekt av landbasert vindkraftverk på boligpriser.

68 prosent av respondentene er eiendomsmeglere (13 av 19 respondenter), og resterende andel er tomteutviklere, takstmenn og annet. Som Figur 4-1 viser, har en andel på 58 prosent arbeidet i mer enn 15 år i bransjen (11 av 19 respondenter).

Figur 4-1: Antall år respondentene har arbeidet i bransjen



Figur 4-2: Respondentenes erfaring med salg av eiendommer



Merk: respondentene kan krysse av på flere kategorier

Merknad: Respondentene kan oppgi erfaring i flere kategorier. Kilde: Spørreundersøkelse gjennomført av Oslo Economics

Videre svarer 37 prosent av respondentene at de har erfaring med å selge eiendommer i Bjerkreim kommune (7 av 19 respondenter) (se Figur 4-2). Hhv. 37 og 42 prosent sier de har erfaring med salg av eiendommer som er påvirket av eksisterende vindkraftverk og eiendommer som er påvirket av annen infrastruktur/næring (7 og 8 respondenter). 74 prosent av respondentene har erfaring med salg av fritidsboliger (14 av 19 respondenter).

4.2.3 Tilstrekkelig stort utvalg

Det er viktig å ha et tilstrekkelig stort utvalg av eksperter for å muliggjøre videre analyser. I forkant av analysen anså vi et utvalg på omtrent 20 som tilstrekkelig i henhold til Navrud & Strand (2018). Vi endte like under dette nivået med hhv. 19 og 17 respondenter i de to rundene med spørreundersøkelsen.

Delphi-metoden forsøker gjennom å samle et bredt spekter av synspunkter fra ekspertressurser å oppnå konsensus om den *faktiske* effekten av det spørreundersøkelsen prøver å undersøke. Et lite utvalg begrenser variasjonen og representasjonen av relevant ekspertise og perspektiver, og kan redusere validiteten av resultatene. I et lite utvalg er det også en risiko knyttet til at enkeltpersoners meninger får uforholdsmessig stor innflytelse på resultatene. En svakhet med dette utvalget som består av få, stort sett lokale eiendomsmeglere, er at enkelte av respondentenes egne oppfatninger eller egeninteresser kan dominere resultatene mot en skjev fremstilling av den *faktiske* effekten. I vårt utvalg er det også en risiko for at kandidater som på forhånd har sterke oppfatninger og meninger er mer tilbøyelige til å delta i undersøkelsen, sammenlignet med eiendomsmeglere som fikk tilsendt spørreundersøkelsen, men valgte å ikke delta.

Formålet med vår analyse var å undersøke effektene ved Moifjellet spesielt, og som et supplement til nasjonale vurderinger. Det var derfor viktig for oss med lokal kunnskap i området/ lignende områder og kjennskap til effekt fra vindkraftverk for å sikre at analysen fanger opp de lokale forholdene. For et lite område som Moifjellet og Bjerkreim kommune reduserer dette den potensielle ekspertgruppen. Vi diskuterer utvalget av eksperter opp mot resultatene fra analysen ytterligere til slutt i rapporten.

4.3 Metode for å analysere svar fra spørreundersøkelsen

For analyse av svarene fra spørreundersøkelsen bruker vi en panelmodell. Data fra spørreundersøkelsen er transformert til paneldata, der svaret på hvert spørsmål om effekt på boligverdi utgjør en observasjon. Vi kategoriserer virkningene for hvert spørsmål basert på beskrivelsene av hhv. avstand, støy, skyggekast, synlighet, og opplevde virkninger til eksisterende vindturbiner i hver kategori.

Avstand fra vindturbinene er oppgitt i intervaller i kategoriene. I modellen er avstand kategorisert basert på den gjennomsnittlige avstanden i hvert intervall. For eksempel vil boliger som befinner seg 3-6 kilometer fra nærmeste vindturbin få verdien 4,5, som er gjennomsnittet av 3 og 6.

De øvrige virkningene er definert som binære variabler som tar verdien 1 dersom virkningen er til stede og 0 ellers. Eksempelvis får boliger som får skyggekast verdien 1 og boliger som ikke får skyggekast verdien 0 på denne variabelen. For å skille på støynivået etter etablering av Moifjellet vindkraftverk har vi laget to forskjellige variabler der «støy 1» svarer til økning i støy opp til L_{den} 40 og «støy 2» svarer til støy opp til L_{den} 45. Vi definerer også en binær variabel for om boligen er en primærbolig eller fritidsbolig.

Etter transformasjon til paneldata, ender vi opp med et paneldatasett med 648 observasjoner. Resultatene fra den første og den andre runden av undersøkelsen er inkludert i paneldatasettet, der den første runden av spørreundersøkelsen er inkludert som en kontrollvariabel.

For å analysere hvordan de ulike effektene påvirker verdireduksjon på boliger, estimerer vi en panelmodell med faste effekter, forklart som følgende:

$$y_{it} = \mathbf{x}_{it}\beta + v_i + \varepsilon_{it},$$

der y_{it} er reduksjon i boligverdi estimert av respondent i i spørsmål t, $\mathbf{x}$ er en vektor med forklaringsvariabler (inkludert eksternaliteter) og β er estimerbare koeffisienter som viser hvordan de ulike forklaringsvariablene påvirker verditap. Individfaste effekter er inkludert gjennom v_i, mens ε_{it} er støyleddet som fanger opp andre ting som påvirker estimert reduksjon i boligverdi for respondent i som respondenten vet, men ikke økonometrikeren. Ved bruk av faste effekter kontrollerer vi for egenskaper som ikke endres over tid for hver respondent (for eksempel kjønn, alder, utdanning og erfaring), men som likevel kan påvirke deres svar. Faste-effektmodeller er standard praksis for analysering av paneldata (Wooldridge, 2010).

I analysen bruker vi den estimerte modellen til å predikere verditap for ulike sett av virkninger. Resultatene oppgis som gjennomsnittlig verditap og 95 prosent konfidensintervall.

5. Effekt på boligverdi ved etablering av Moifjellet vindkraftverk

Analysen av spørreundersøkelsesdata viser et forventet fall i boligverdi for boliger som påvirkes av vindkraftutbyggingen på Moifjellet. Det estimerte verditapet er størst for boliger som ligger nært vindkraftverket og som vil få både økt støy, skyggekast og synlighet til turbinene. Verditapet reduseres ettersom avstanden til vindkraft-verket øker, og for primærboliger som ligger 6 til 10 kilometer fra vindkraftverket er det ikke statistisk grunnlag for å si at disse vil få et verditap. Verdifallet er mindre for primærboliger enn fritidsboliger.

5.1 Estimerte priseffekter av støy, skyggekast og utsyn til vindkraftverk

Basert på resultatene fra spørreundersøkelsen (oppsummert i Vedlegg D) har vi analysert hvordan de ulike virkningene (støy, skyggekast og synlighet) slår inn på boligprisene i området ved å estimere en panelmodell med faste effekter, som beskrevet i kapittel 4.3. I dette kapittelet beskrives først regresjonsresultatene fra panelmodellen som predikerer effekten av virkningene hver for seg. Deretter setter vi de ulike virkningene sammen og estimerer den samlede effekten på boligpriser i de ulike gruppene av influerte boliger. Til slutt i kapittelet sammenligner vi resultatene med studien av hedonisk prising.

Boligverdi

Rundt det planlagte vindkraftverket på Moifjellet er det omtrent 1 200 primærboliger og 140 fritidsboliger innenfor en avstand på 6 kilometer fra vindkraftverket. Det er få boligtransaksjoner i området nær det planlagte vindkraftverket, og det er dermed begrenset data på dagens boligverdier i området. Siden datagrunnlaget rundt Moifjellet er begrenset bruker vi data for et større område for å vurdere boligverdien på berørte boliger i dag. I området rundt 10 kilometer fra planområdet er det primært eneboliger, med en gjennomsnittlig boligpris på 3,3 millioner kroner (Ambita, 2024). Det er mindre omsetning av fritidsboliger i området nært Moifjellet, men i Bjerkreim kommune som helhet er den gjennomsnittlige verdien på fritidsboliger 1,9 millioner kroner (SSB, 2024).

Tabell 5-1: Panelregresjonsmodell av reduksjon i boligverdi

Variabel	Verdi
Konstant	11.82*** (1.77)
Avstand (km)	-1.49*** (0.43)
Støy1 (< L_{den} 40 dBA)	3.97*** (1.27)
Støy2 (<L_{den} 45 dBA)	5.58** (2.24)
Skyggekast	1.79 (1.20)
Synlighet	6.85*** (1.23)
Synlighet til eksisterende turbin	-2.92*** (0.75)
Fritidsbolig	3.95*** (1.02)
Runde 2	-0.546 0.062

Merk: *p<0.1, **p<0.05, ***p<0.01. Standardfeil oppgitt i parentes er gruppert på individnivå. R2 = 0.51. Antall observasjoner = 648

Modellen er basert på et sett av spørsmål om boliger som får ulike kombinasjoner av virkninger, og er egnet til å estimere priseffekten for boliger som får disse virkningene. Den er i mindre grad egnet til å beregne priseffekter for upåvirkede boliger (boliger som ikke får støy, skyggekast eller synlighet til Moifjellet).

5.1.1 Regresjonsresultater

Tabell 5-1 oppsummerer regresjonsresultatene fra panelmodellen. Resultatene kan forstås som hvordan tilstedeværelse av en enkelt virkning isolert sett og avstand (i kilometer) endrer den estimerte effekten for en enkelt bolig ut fra en konstant. Hver enkelt verdi kan forstås som endring i prosentpoeng. Med utgangspunkt i regresjons-

resultatene kan vi regne ut forventet prosentvis boligpriseffekt av en samling av virkninger[8].

Verdireduksjon på boliger som følge av vindkraftverket reduseres med økt avstand, noe som samsvarer med tidligere forskning (for eksempel Andersen et al (2024)). Når avstanden øker med 1 kilometer reduseres det estimerte boligverdifallet med 1,5 prosentpoeng. Resultatet er statistisk signifikant.

Videre øker verdireduksjonen når en av de negative virkningene skyggekast, støy og synlighet er til stede, der hver av disse virkningene isolert sett øker effekten på boligprisen med mellom 2 og 7 prosentpoeng. Denne er statistisk signifikant for støy og synlighet. Korrelasjon mellom støynivå og skyggekast relativt høy, som fører til at vi ikke finner statistisk signifikant effekt av skyggekast isolert sett i modellen. Effekten av skyggekast må derfor tolkes med forsiktighet og sees i sammenheng med støynivå.

Våre funn om en verdireduksjon som følge av støy på mellom 4 og 6 prosentpoeng er i tråd med en tidligere dansk studie som finner at effekten av støy fra turbinene er assosiert med en reduksjon i boligprisene på 6,7 prosent i de mest eksponerte områdene (Jensen, et al., 2013). Vi finner at utsyn til vindkraftverket alene øker den negative priseffekten med 6,85 prosentpoeng. Dersom boligen allerede har utsyn til eksisterende vindkraftverk i området rundt Moifjellet er verdireduksjonen mindre. For boliger som allerede har utsyn til eksisterende vindkraftverk faller den negative priseffekten med nær 3 prosentpoeng. Modellen viser at reduksjonen i boligverdi er statistisk signifikant og større for fritidsboliger enn primærboliger. For en fritidsbolig er verdi-reduksjonen om lag 4 prosentpoeng høyere enn for en tilsvarende primærbolig.

Det er verdt å merke at modellen er estimert på bakgrunn av 19 respondenter som svarte på en rekke scenarioer med presentasjon av ulikt omfang av negative effekter. Som et resultat får vi 648 observasjoner. Likevel vil resultatene være høyst avhengig av vurderingene til de 19 respondentene. Gitt det begrensede utvalget vil resultatene derfor være sensitive for potensielle skjevheter i respondentenes svar, spesielt knyttet til usikkerhet og eventuelle egeninteresser relatert til tematikken.

[8] Modellen er basert på et sett av spørsmål om boliger som får ulike kombinasjoner av virkninger, og er egnet til å estimere priseffekten for boliger som får disse virkningene.

5.1.2 Gjennomgang av priseffekt for de influerte boligene

I denne delen presenterer vi estimert effekt på boligverdi for primær- og fritidsboliger i de tre gruppene av influerte boliger. Estimert prosentvis fall i boligverdi med konfidensintervall i hvert område er vist i Figur 5-1 til Figur 5-3. Blå punkter er estimerte verdier for primærbolig og røde punkter er estimerte verdier for fritidsbolig. De blå søylene rundt punktene viser 95 prosent konfidensintervall for de estimerte verdiene.

1: Boliger som får skyggekast og støy

For primær- og fritidsboliger som får både skyggekast og støy, har vi beregnet et estimert verdifall på mellom 20 og 26 prosent, avhengig av boligtype og synlighet til eksisterende vindkraftverk (Figur 5-1). Verditapet er estimert for boliger som i gjennomsnitt ligger 2 kilometer[9] fra vindkraftverket og får skyggekast og økning i støy opp mot L_{den} 45 dBA. Disse boligene er påvirket av støy fra andre vindkraftverk i området i dag, men vil få en økning i støynivået. Verditapet vil reduseres dersom avstanden øker eller støynivået faller.

For primærboliger som får både økt støy, skyggekast og utsyn til turbiner, og som har disse virkningene fra eksisterende vindkraftverk, er det estimert en reduksjon i boligverdi på 20 prosent [17,4; 21,8]. For fritidsboliger med samme virkninger (skyggekast, støy og synlighet) er det estimerte verdifallet på 24 prosent [21,0; 26,2].

Boliger som ikke har utsyn til eksisterende vindkraftverk i området, får et høyere estimert verdifall ved etablering av Moifjellet vindkraftverk. For primærboliger som får skyggekast, støy opp mot L_{den} 45 dBA og utsyn til turbiner ved Moifjellet, men som ikke har utsyn til eksisterende vindkraftverk er det estimert et verditap på 23 prosent [19,4; 25,6]. For fritidsboliger som ikke har utsyn til eksisterende vindkraftverk, er det estimerte verditapet på 26 prosent [23,2; 29,8].

2: Boliger som får økt støy

For boliger som får økt støynivå (opp mot L_{den} 45 dBA), men i liten grad skyggekast fra Moifjellet, ligger det estimerte verdifallet for primær- og fritidsboliger mellom 9 og 22 prosent (Figur 5-2). Estimert verdifall er beregnet for boliger med en gjennomsnittlig avstand på 2 kilometer til vindkraftverket som får økt støy og som har utsyn til eksisterende vindkraftverk.[9]

For boliger som vil få en økning i støy på rundt L_{den} 5 dBA, opp mot samlet støy på L_{den} 45 dBA, og som får utsyn til Moifjellet, er verditapet estimert til hhv.

[9] Boliger i gruppe 1 ligger mellom 1 og 3 kilometer fra vindkraftverket. Verditapet er estimert for midtpunktet i intervallet av avstand.

18 [15,9; 19,7] og 22 [19,1; 24,4] prosent for primær- og fritidsboliger. For boliger med samme støypåvirkning, men som ikke får utsyn til Moifjellet, er verditapet estimert til hhv. 11 [7,9; 14,1] og 15 [12,2; 17,6] prosent for primær- og fritidsboliger.

For boliger med et lavere samlet støynivå, opp mot L_{den} 40 dBA etter etablering av Moifjellet, er det estimerte verditapet lavere. For boliger som vil få utsyn til turbiner på Moifjellet er verditapet estimert til hhv. 16 [14,3; 18,1] og 20 [17,5; 22,8] prosent for primær- og fritidsboliger. For boliger med samme støypåvirkning, men som ikke vil ha utsyn til Moifjellet er verditapet estimert til hhv. 9 [7,4; 11,3] og 13 [12,1; 14,5] prosent for primær- og fritidsboliger.

3: Boliger som får utsyn til Moifjellet på avstand
Estimert verdifall for boliger som får utsyn til vindturbinene på Moifjellet er mellom 3 og 15 prosent (Figur 5-3). Verdifallet avhenger både av avstand til planområdet på Moifjellet, om boligene allerede har utsyn til eksisterende vindkraftverk og hvorvidt det er fritidsboliger eller primærboliger. Verditapet er estimert innenfor to avstandsintervaller, der den estimerte verdien er basert på midtpunktet i intervallet på henholdsvis 4,5 og 8 kilometer.

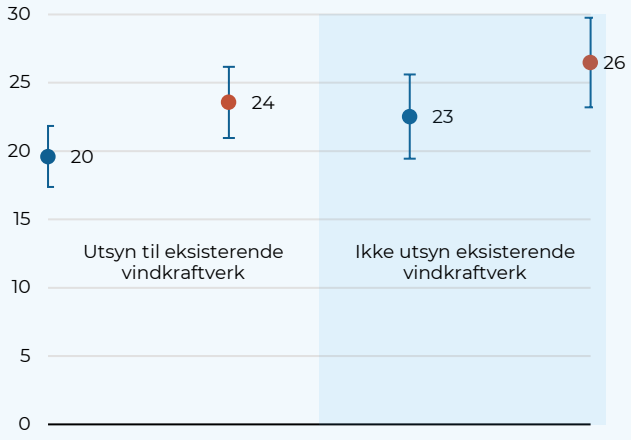
For boliger innenfor en avstand på 3 til 6 kilometer fra Moifjellet vindkraftverk, som både har utsyn til eksisterende vindkraftverk og vil ha utsyn til vindturbiner på Moifjellet, er estimert verdifall på 9 prosent [6,1; 10,9] for primærboliger og 12 prosent [10,3; 14,6] for fritidsboliger. For boliger som vil få samme virkninger, men som ligger 6 til 10 kilometer fra Moifjellet vindkraftverk er verditapet estimert til 3 prosent [-0,1; 6,8] for primærboliger og 7 prosent [4,9; 9,7] for fritidsboliger. Det estimerte verditapet for primærboliger i dette området er ikke signifikant ulik fra null. Vi kan derfor ikke fastslå at det vil oppstå et fall i boligverdier ved utbygging vindkraftverket for primærboliger mellom 6 og 10 kilometer fra Moifjellet, som vil få utsyn til både Moifjellet og eksisterende vindkraftverk.

For boliger 3 til 6 kilometer fra Moifjellet som i dag ikke har utsyn til eksisterende vindkraftverk, men som vil ha utsyn til Moifjellet vindkraftverk, er verditapet estimert til 11 [9,1; 13,8] prosent for primærboliger og 15 prosent [13,4; 17,4] for fritidsboliger. For boliger som vil få samme virkninger, men som ligger 6 til 10 kilometer fra Moifjellet, er verditapet estimert til 6 prosent [2,5; 10,0] for primærboliger og 10 prosent [7,4; 13;09] for fritidsboliger.

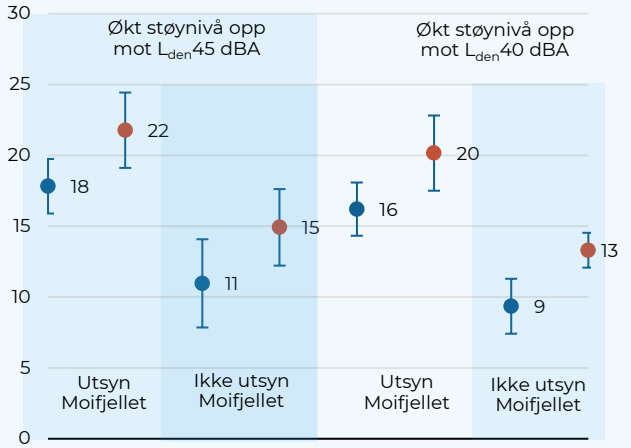
5.1.3 Usikkerhet i analysen

Resultatene er basert på en statistisk regresjonsmodell der den avhengige variabelen er

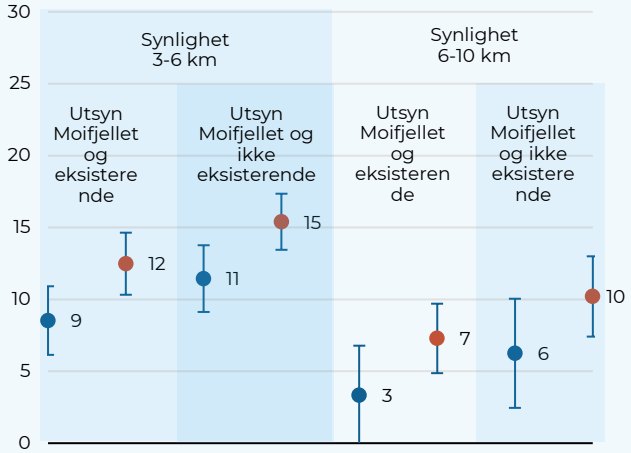
Figur 5-1: Estimerte prosentvise verdifall for gruppe 1: boliger som får skyggekast og støy



Figur 5-2: Estimerte prosentvise verdifall for gruppe 2: boliger som får støy



Figur 5-3: Estimerte prosentvise verdifall for gruppe 3: boliger som får utsyn på avstand



Merknad: Blå punkter er estimerte verdier for primærbolig og røde punkter er estimerte verdier for fritidsbolig. Blå søyler er 95 prosent konfidensintervall.

estimert boligverditap rapportert av eiendomsmeglere, og uavhengige variabler er ulike eksterne virkninger (støy, synlighet og skyggekast) og deres nivå. Analysen antar ingen avbøtende tiltak. Ved å redusere støy, synlighet og skyggekast gjennom avbøtende tiltak, kan verditapene reduseres.

Det er usikkert hvordan verditapet vil utvikle seg over tid. Så lenge de negative virkningene av støy, skyggekast eller synlighet ikke blir redusert, vil ikke priseffekten endres. Tilpasning av boliger for å skjerme virkningene kan endre verditapet over tid, men denne effekten er vanskelig å observere. Schütt (2023) kontrollerte for om verditapet endres over tid i sin meta-regresjon og fant ingen statistisk signifikant effekt. Dette tyder på begrenset tilpasning i markedet over tid.

Det er viktig å påpeke at våre estimater er basert på uttrykte forventinger av ekspertgruppen og ikke faktiske boligtransaksjoner. Dette gjør at estimatene i større grad kan være påvirket av ekspertenes egne interesser, for eksempel hvis enkelte eiendomsmeglere har økonomiske interesser knyttet til tematikken. Dette er en generell svakhet med uttrykte preferansemetoder (Johnston, et al., 2017). Ettersom vi har et relativt lite utvalg, kan dette forsterke sensitiviteten for slike egeninteresser. Samtidig samsvarer resultatene godt med tidligere forskning, noe som styrker validiteten. At ekspertene viser omfangssensitivitet, ved å verdsette mer omfattende negative eksternaliteter høyere, bidrar også til å styrke validiteten (Dugstad, et al., 2021). For å fastslå hvorvidt egeninteresser faktisk påvirker resultatene, kreves det mer forskning på Delphi-metoden innen miljøverdsetting.

5.2 Gjennomsnittlig verdifall basert på avstand

5.2.1 Forskjeller mellom Delphi-studien og hedonisk prising

Vår analyse basert på Delphi-metoden, skiller seg fra analyser basert på metode for hedonisk prising av faktiske boligtransaksjoner. Dette er blant annet metoden som er brukt av Andersen m.fl. (2024), som ser på effekten av landbasert vindkraft på boligpriser i Norge.

En viktig forskjell mellom disse analysene er hvordan influensområdene er definert. I den nasjonale hedonisk prisingsstudien defineres influensområdet utelukkende basert på avstand fra vindkraftverket, mens vår Delphi-analyse definerer influerte boliger basert på påvirkningen boligene vil få (endring i virkningene skyggekast, støy, synlighet eller kombinasjoner av disse). Avstand vil i mange tilfeller reflektere hvilke virkninger boligene får fra vindkraftverket, men dette vil også variere med blant annet topografi, terreng og annen bebyggelse.

Ved bruk av hedonisk prising beregnes altså en gjennomsnittlig effekt for *alle* boliger innenfor en gitt avstand fra vindkraftverket, der de ulike boligene kan være berørt i ulik grad av vindkraftverkene. For eksempel kan enkelte boliger være lokalisert slik at de både får utsyn, støy og skyggekast av vindkraftverket, mens andre boliger som følge av topografien i området, kan være nær upåvirket. For eiendommer som er særlig påvirket vil derfor hedonisk prising underestimere priseffekten, mens den kan overestimeres for upåvirkede eiendommer.

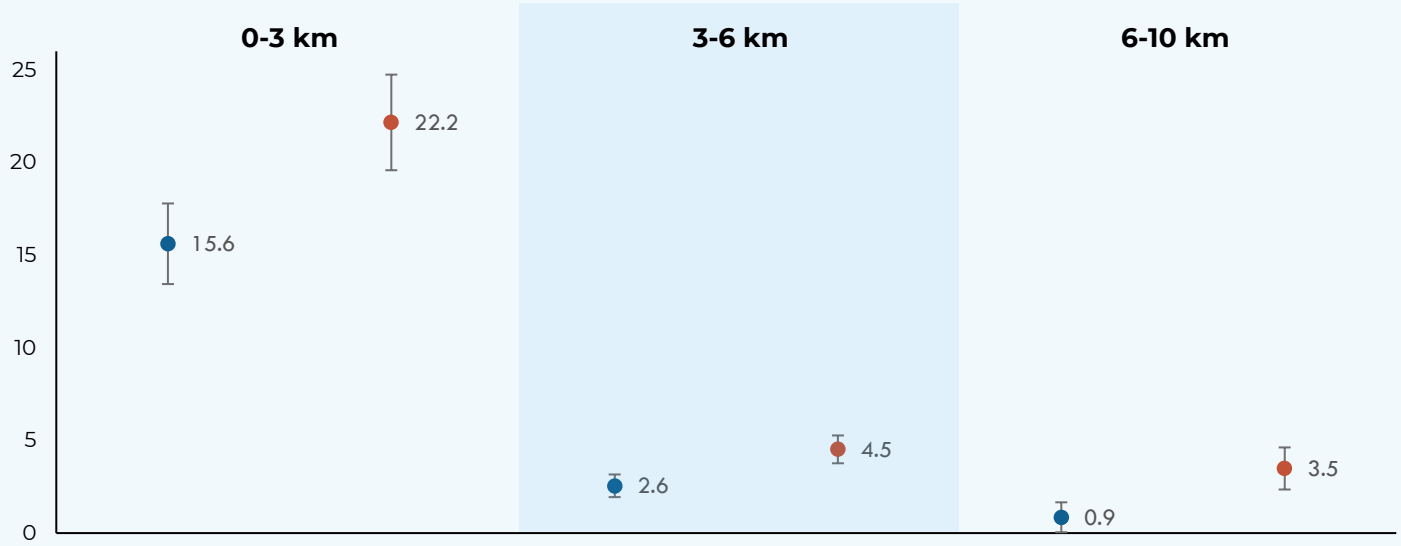
Hedonisk prising baseres også på faktiske boligtransaksjoner som kan observeres i boligmarkedet. Metoden tar ikke høyde for at det kan være enkelte eiendommer som ikke er blitt omsatt som følge av vindkraftutbyggingen. Utelatte omsetninger kan gi skjevheter i estimatene basert på hedonisk prising dersom boliger med særlig stort verdifall i mindre grad selges i markedet. Utfordringer med salg av boliger kan særlig være relevant for boligene som ligger nærmest vindkraftverket.

Ettersom det ikke er et en-til-en-forhold mellom boliger som er inkludert i de influerte boligene i Delphi-studien (de som får spesifikke virkninger) og boliger som er inkludert i influensområdet i studien basert på hedonisk prising (de i visse avstander til vindkraftverket), kan heller ikke resultatene sammenliknes direkte. For å i større grad kunne sammenligne resultatene, har vi derfor med utgangspunkt i estimatene fra Delphi-studien, beregnet den samlede priseffekten for boliger innenfor gitte avstander fra vindkraftverket og beregnet gjennomsnittet av disse.

Selv ved beregning av gjennomsnittlige verdier for boligprisfall innenfor avstandsintervaller, er det fortsatt forskjeller mellom metodene som kan påvirke resultatene. Det er blant annet grunn til å tro at Delphi-analysen (helt eller delvis) kan fange opp fortrengingseffekter[10], som tradisjonell hedonisk prisingsstudier ikke kan fange opp. Gjennom spørreundersøkelsen er eiendoms-meglere bedt om å vurdere den samlede effekten

[10] Fortrengningseffekter innebærer et verdifall for boliger som ikke blir solgt i markedet, enten fordi det oppstår problemer med salg av boligen etter at vindkraftverket etableres eller at eier ikke ønsker å selge til markedspris dersom verdifallet er stort, jf. også beskrivelse i 2.2

Figur 5-4: Beregnet gjennomsnittlig verdifall innenfor intervaller av avstand



Merknad: Blå punkter er estimerte verdier for primærbolig og røde punkter er estimerte verdier for fritidsbolig. Blå søyler er 95 prosent konfidensintervall.

for eiendommer som får ulike virkninger, og dette kan også ta høyde for at noen eventuelt får problemer med salg.

5.2.2 Gjennomsnittlig priseffekt

For å beregne gjennomsnittlig priseffekt har vi sett på alle primær- og fritidsboliger innenfor tre ulike intervaller av avstand til Moifjellet, herunder 0-3 kilometer, 3-6 kilometer og 6-10 kilometer. Hver bolig er beskrevet med virkningene som vil oppstå og et tilhørende estimert boligprisfall fra kapittel 5.1.2. Innenfor de ulike intervallene av avstand er det også boliger som ikke vil få noen av virkningene støy, skyggekast eller utsyn til vindkraftverket. Analysen vår forklarer boligprisfall som følge av ulike virkninger fra vindkraftverket, og det er derfor lagt til grunn at det ikke vil være et boligprisfall for boligene som ikke får virkingene støy, skyggekast eller synlighet. For alle boligene innenfor et avstandsintervall samlet, er det beregnet et gjennomsnittlig verdifall. Beregning av gjennomsnittlig verdifall er beskrevet ytterligere i Vedlegg B og oppsummert i Figur 5-4.

For primærboliger som ligger nærmest det planlagte vindkraftverket, mindre enn 3 kilometer unna, er det estimert et gjennomsnittlig verdifall på 15,6 prosent [13,4; 17,8]. Dette samsvarer med resultatene i studien av Andersen, et al. (2024) som fant en negativ betalingsvillighet mellom 12 og 17 prosent for boliger under 3 kilometer fra et vindkraftverk. Hedonisk prising kan underestimere effekten nære vindkraftverket, ved at fortrenings-effekter ikke hensyntas i analysen. For fritidsboliger innenfor 3 kilometer fra Moifjellet er det estimert et gjennomsnittlig verdifall på 22,2 prosent [19,6; 24,7].

Med økt avstand til vindkraftverket faller den gjennomsnittlige verdien, både som følge av at den estimerte verdien fra Delphi-studien faller og at andelen påvirkede boliger faller. For boliger som ligger mellom 3 og 6 kilometer unna vindkraftverket er det estimert et gjennomsnittlig verdifall på 2,6 prosent [1,9; 3,2] for primærboliger og 4,5 prosent [3,8; 5,3] for fritidsboliger. For boliger som ligger lenger unna, mellom 6 og 10 kilometer fra vindkraftverket, er det estimerte verdifallet for primærboliger 0,9 prosent [0,0; 1.7] og fritidsboliger 3,5 prosent [2,4; 4,6]. At verdien for primærbolig i dette området nærmer seg null, samsvarer også med studien av Andersen m.fl. (2024) som finner at effekten konvergerer mot null i en avstand på 5 til 7 kilometer fra vindkraftverket.

5.3 Avsluttende vurderinger

Vi har benyttet en Delphi-metodikk for å beregne forventet effekt på boligpriser for primærboliger og fritidsboliger rundt det planlagte Moifjellet vindkraftverk. Delphi-metoden innebærer her å spørre eiendomsmeglere og andre fageksperter om hvordan de forventer at boligpriser i det aktuelle området vil påvirkes for boliger som får ulike virkinger av vindkraftverket. Svarene fra spørreundersøkelsen danner grunnlag for vår analyse av forventet effekt på boligverdi for boliger som får ulike virkninger (støy, skyggekast og synlighet) av vindkraftverket. Hvordan de ulike virkningene slår inn på boligprisene i området er analysert ved å estimere en panelmodell med faste effekter.

Vi estimerer et forventet fall i boligverdier på mellom 3 og 26 prosent for primær- og fritidsboliger som berøres av støy, skyggekast eller utsyn til det planlagte Moifjellet vindkraftverk. Verdifallet er størst for boliger som ligger nær vindkraftverket og som får økt støy og skyggekast.

Verdifallet er lavere dersom boligene allerede har utsyn til eksisterende vindkraftverk og/eller befinner seg lengre unna planområdet for vindkraftutbyggingen. Verdifallet er større for fritidsboliger enn for primærboliger.

En nylig gjennomført nasjonal studie av Andersen m.fl. (2024) fant en negativ betalingsvillighet på mellom 12 og 17 prosent for boliger som ligger under 3 kilometer fra et vindkraftverk.[11] For å kunne sammenlikne resultatene fra vår Delphi-analyse med denne studien beregner vi gjennomsnittlige verditap innenfor ulike avstandsintervaller fra vindkraftverket. Vi estimerer et gjennomsnittlig verdifall på 15,6 prosent [13,4; 17,8] for primærboliger som ligger mindre enn 3 kilometer fra vindkraftverket, noe som er i samme størrelsesorden som funnene i den nasjonale studien.

Ettersom området rundt Moifjellet allerede er påvirket av flere vindkraftverk, kunne man i utgangspunktet forvente at effekten av vindkraftverket på boligpriser ville vært lavere enn for landsgjennomsnittet. På den annen side vil Delphi-studien i større grad enn studier basert på hedonisk prising ta hensyn til forventede verdifall som ikke realiseres i markedet. Dersom boligene som påvirkes mest av vindkraftverket får større problemer med salg og i mindre grad omsettes i markedet enn boliger som er upåvirket eller påvirkes i mindre grad, vil hedonisk prising underestimere effekten på boligverdier. Denne effekten kan spesielt forventes å være til stede for boliger nærmest vindkraftverket, med en avstand under 3 kilometer fra vindkraftverket.

Andre virkninger som kan påvirke boligverdier

I spørreskjemaene til ekspertgruppen har utgangspunktet for vurdering av boligprisfall vært i hvilken grad boligen påvirkes av økt støy, skyggekast og utsyn til vindkraftverk. Det kan også tenkes at andre eksterne virkninger av vindkraftverket kan påvirke boligverdi.

Eksempelvis kan tap av rekreasjonsområder også påvirke verdifall på primær- og fritidsboliger. Tap av rekreasjonsområder kan særlig påvirke boliger nær vindkraftverket, da bruken av naturområder typisk øker med nærhet til området, og det kan være vanskelig å isolere effektene av dette fra de som følger av støy, nærhet og synlighet (Iversen & Dugstad, 2024; Dugstad, et al., 2024). I vår analyse har vi ikke spurt spesifikt om hvordan tap av rekreasjonsområder påvirker boligpriser, nettopp fordi det er vanskeligere å isolere effekten. Vi forventer at effekten av dette i stor grad er internalisert i estimatene, særlig eventuell påvirkning på nærrekreasjonsområder rundt boligene.

Det kan også finnes positive eksterne virkninger av vindkraft, som potensielt billigere strøm, lokal verdiskaping og inntekt til kommunen gjennom produksjonsavgift og grunnrenteskatt. Hvorvidt disse effektene demper estimert verditap på berørte boliger, er høyst usikkert. Det er imidlertid mulig at slike spillover-effekter kan oppstå, der verdifall for boliger i nærheten av vindkraftverk delvis blir oppveid av økte boligpriser for boliger som ikke eksponeres direkte for de samme eksternalitetene. Dette kan ha fordelingsvirkninger, ettersom gevinster og tap ikke nødvendigvis fordeles likt mellom ulike grupper av boligeiere.

Virkningene kan reduseres ved avbøtende tiltak og erstatning

Vår analyse er basert på virkningene slik de er beskrevet i Statkrafts planer per i dag. Avbøtende tiltak eller andre tilpasninger som reduserer de negative virkningene fra vindkraftverket, vil også redusere det forventede verditapet på boligene i området rundt Moifjellet.

For den enkelte boligeier kan en negativ priseffekt også reduseres gjennom annen kompensasjon og erstatning. Grunneiere som får kompensasjon ved etablering av vindkraftverket på deres eiendommer, kan få en positiv samlet effekt på eiendomsverdien. Enkelte av boligene som vil få størst virkninger av vindkraftverket vil også kjøpes ut av Statkraft gjennom egne avtaler med boligeiere. Vi har ikke vurdert den samlede effekten for grunneiere eller andre som får annen kompensasjon, kun den direkte effekten på boligpriser som følge av støy, skyggekast og synlighet boligen vil få fra vindkraftverket.

Bruk av analysen inn i samfunnsøkonomiske vurderinger

Denne studien er gjennomført for å svare ut krav om å utrede hvilken effekt det planlagte vindkraftverket vil ha på boligverdier i området. Som beskrevet i kapittel 2 benyttes studier av boligpriseffekter gjerne som en metodikk inn i samfunnsøkonomiske analyser for å verdsette betydningen av miljø- og arealinngrep. Ved anvendelse av denne studien til et slikt formål, vil resultatene potensielt kunne reflektere de samlede «nærføringseffektene» av vindkraftverket. Dette inkluderer virkningene for de som bor i området,

[11] Studien bruker hedonisk prising basert på data fra alle eiendomstransaksjoner mellom 2010 og 2022 for boliger nær etablerte vindkraftverk i Norge.

både støy, skyggekast, synlighet og påvirkning på rekreasjonsområder i nærheten. Studien vil i mindre grad kunne brukes til å si noe om effekten på ikke-bruksverdier i området, eller negative miljøeffekter for de som er tilreisende eller bor lenger unna. Dersom resultatene benyttes inn i de samfunnsøkonomiske analysene er det viktig å vurdere i hvilken grad anslagene dekker virkninger som vanligvis vurderes som ikke-prissatte, for å unngå dobbelttelling av miljøvirkningene.

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Vedlegg A Litteraturgjennomgang

Dette vedlegget gir en oppsummering av de internasjonale studiene vi har gått gjennom og de viktigste funnene fra hver studie. Hovedfunnene fra studiene er også oppsummert i Tabell 6-1.

Meta-regresjonsanalysen til Schütt (2023) finner en gjennomsnittlig negativ priseffekt på 0,68 prosent for boliger i en avstand på rundt 3 kilometer fra et vindkraftverk. Effekten faller til null etter rundt rundt 4,5 kilometer. Resultatet er basert på 720 estimater fra 25 ulike studier med hedonisk prising. Dette estimatet forutsetter at modellene som brukes i de ulike studiene er satt opp riktig, og at det ikke er noe publiseringsbias. Dette er sterke, men nødvendige forutsetninger.

En dansk studie finner finner at landbasert vind har en negativ effekt på boligpriser innenfor 3 kilometer (Jensen, et al., 2018). Den negative effekten øker med antall vindturbiner, men med avtakende effekt. Jensen et al. (2018) ser også på effekt avhengig av om det gjelder ferie- eller ordinære boliger. For ordinære boliger finner de at boligprisene reduseres med mellom 0,2 og 1,1 prosent dersom det kommer en ny vindturbin innenfor 3 kilometer . Effekten avtar med antallet turbiner som allerede er innenfor 3 kilometer s radius. Resultatene er lignende for feriehus, men ikke like tydelige. Effkten er signifikant i tre av de fem områdene de ser på (i motsetning til fem av fem områder for ordinære boliger).

En tidligere dansk studie skiller mellom priseffekt som skyldes støy og visuell påvirkning (Jensen, et al., 2013). De finner at effekten av støy fra turbinene er assosisert med en reduksjon i boligprisene på 6,69 prosent i de mest eksponerte områdene. Visuell påvirkning står for 3,15 prosentpoeng av boligprisreduksjonen assosiert med bygging av et vindkraftverk. Denne negative priseffekten reduseres med 0,24 prosentpoeng per 100 meter fra vindturbinen for boliger med sikt til turbinen.

En svensk studie finner signifikante priseffekter i et større område rundt vindkraftverkene. Studien finner statistisk signifikant effekt helt ut til 6-8 kilometer (Westlund & Wilhelmsson, 2021). Effekt her ligger på 2-6 prosent. På distanser over 8 kilometer finner forskerne ingen statistisk signifikante estimater, og det er null effekt ved avstander større enn 14 kilometer.

I en tysk studie forsøker Frondel et al. (2019) å skille mellom urbane og rurale områder. De finner at den negative effekten av vindturbiner er betydelig høyere i rurale områder. Effekten på boligpriser nær urbane områder er betydelig svakere og statistisk insignfikant. Dette står i kontrast til funnene i Dröes & Koster (2016), hvor effekten er *større* i urbane områder. I forklaringen deres trekker Frondel et al. (2019) frem at urbane områder allerede er utviklet, så synet av en vindturbin endrer ikke nødvendvis det overordnede inntrykket av landskapet. De trekker også frem at urbane områder har høyere bygningstetthet, som kan dekke til synet av vinturbiner.

En nederlansk og en tysk studie forsøker å se på effekten i forkant av at vindturbinene bygges. Dröes & Koster (2016) viser at boligprisene er signifikant lavere allerede to år før konstruksjon av en ny turbin. Tidligere enn to år er det ikke noen statistisk signifikant effekt. Sunak & Madlener (2013) finner derimot ikke støtte for noen forventningseffekt. Effekten de finner er tydeligere for større turbiner og i urbane områder.

Ulik priseffekt avhengig av turbinstørrelse trekkes også frem i en annen nederlandsk studie (Dröes & Koster, 2021). De finner en boligpriseffekt på 1,8 prosent med et 2 kilometers influensområde. De påpeker også at turbiner har blitt høyere over tid, så den visuelle og støymessige effekten vil være større nå enn tidligere. De finner at større turbiner har en større effekt på boligpriser. Mens mindre turbiner, definert som mindre enn 50 meter, har en gjennomsnittlig effekt på mindre enn 1 prosent (ikke statistisk signifikant), har middels store turbiner (50-150 meter) en statistisk signifikant effekt på rundt 2 prosent. Store turbiner på over 150 meter, derimot, har en statistisk signifikant effekt på rundt 5 prosent, med et influensområde på rundt 2 kilometer. Effekten av mindre turbiner faller fort til null etter 1 kilometer – i tillegg til å ikke være statistisk signifikant innenfor dette influensområdet. De understreker, i likhet med andre artikler, at det er primært den første turbinen som reduserer boligprisene.

I en tysk studie bruker Sunak & Madlener (2016) en annen tilnærming ved å kategorisere ulike tomter (ikke boliger) etter hvor synlige nærmeste vindkraftverk er for dem. Det er derfor ikke noe relevant influensområde eller distanse for når effekten på boligtomter går til null. Det er kun synligheten som betyr noe. De finner at boligtomter med «ekstrem» til «middels» sikt til vindkraftverk ser

Tabell 6-1: Oversikt over eksisterende litteratur

Artikkel	Priseffekt	Influens-område	Null effekt	Land	Omfang	Periode
Andersen et al. (2024)	-15 % for <1 km	4 kilometer	5-7 km	Norge	Nasjonalt	
Westlund & Wilhelmsson (2021)	-14 %	2 km	6-8 km	Sverige	Nasjonalt	
Jensen et al. (2018)	Negativ	3 km	N/A	Danmark	Enkelte kommuner	
Jensen et al. (2013)	-3,15 % pga. visuell påvirkning og mellom -3 og -7 % pga. støy (avhengig av støynivå)	2,5 km	N/A	Danmark	Nasjonalt	2000-2011
Frondel et al. (2019)	-7,10 % for <1 km	N/A	8-9 km	Tyskland	Nasjonalt	2007-2015
Dröes & Koster (2021)	-1,8 %	2 km	2,25 km	Nederland	Nasjonalt	1985-2019
Dröes & Koster (2016)	-1,4 %	2 km		Nederland	Nasjonalt	1985-2011
Schütt (2023)	-0,68 %			N/A (metastudie)		
Gibbons (2015)	Mellom -5 og -6 %	2 km	8-14 km	England, Wales	Nasjonalt	2000-2012
Dong & Chang (2022)	Mellom -0,4 og -12,4 %			USA	Enkeltsak	2005-2020
Sunak & Madlener (2013)	Mellom -21,5 og -29,7 % for <1 kilometer (for tomt heller enn bolig)	N/A	1,5 km	Tyskland	To byer i vest-tysk stat	
Sunak & Madlener (2016)	Mellom -9 og -14 % for eiendommer med synlighet mellom «ekstremt» og «middels»	N/A	N/A	Tyskland	Tre byer i vest-tysk stat	1992-2010

en prisnedgang på mellom 9 og 14 prosent. Mindre forandringer i vindkraftverks synlighet har ingen statistisk betydelig effekt på boligpris.

Vedlegg B Beregnet gjennomsnittlig verdifall

I Tabell 6-2 til Tabell 6-4 summerer vi opp alle primær- og fritidsboliger innenfor hvert intervall av avstand fra vindkraftverket. Boligene er fordelt i ulike grupper, basert på hvilke virkninger som kan oppstå for den enkelte bolig (beskrevet under «Virkninger»). Virkningene har igjen betydning for estimert boligverdifall som utbyggingen på Moifjellet kan føre med seg, som beregnet i Delphi-analysen. Tabellen inkluderer også boliger innenfor avstandsintervallet som ikke vil få økt støy, skyggekast eller synlighet til vindkraftverket. Analysen vår forklarer boligprisfall som følge av ulike virkninger fra vindkraftverket, og det er derfor lagt til grunn at det ikke vil være et boligprisfall for boligene som ikke får virkingene støy, skyggekast eller synlighet.

For alle boligene, fordelt på primær- og fritidsboliger, er det beregnet et gjennomsnittlig verdifall innenfor hvert intervall av avstand.

Tabell 6-2: Estimert verdifall for ulike grupper av boliger 0-3 km fra Moifjellet

Virkninger	Antall primærboliger	Estimert prisfall (95 % KI)	Antall fritidsboliger	Estimert prisfall (95 % KI)
Skyggekast, støy, synlighet	2	22,5 (19,4; 25,6)	1	26,5 (23,2; 29,8)
Skyggekast, støy, synlighet, eksisterende synlighet	11	19,6 (17,4; 21,8)	14	23,6 (21,0; 26,2)
Støy, synlighet	4	20,7 (17,9; 23,5)	1	24,7 (21,4; 27,9)
Støy, synlighet, eksisterende synlighet	48	17,8 (15,9; 19,7)	11	21,8 (19,1; 24,4)
Støy, eksisterende synlighet	10	11,0 (7,9; 14,1)	0	
Synlighet	3	15,2 (12,1; 18,2)	0	
Synlighet og eksisterende synlighet	8	12,2 (8,8; 15,7)	0	
Upåvirket	7	0	1	0
Sum boliger og gjennomsnittlig verdifall	**93**	**15,6 (13,4; 17,8)**	**28**	**22,2 (19,6; 24,7)**

Tabell 6-3: Estimert verdifall for ulike grupper av boliger 3-6 km fra Moifjellet

Virkninger	Antall primærboliger	Estimert prisfall (95 % KI)	Antall fritidsboliger	Estimert prisfall (95 % KI)
Støy, synlighet	0		0	
Støy, synlighet, eksisterende synlighet	9	14,1 (11,1; 17,2)	0	
Synlighet	55	11,4 (9,1; 13,8)	3	15,4 (13,4; 17,4)
Synlighet og eksisterende synlighet	78	8,5 (6,1; 10,9)	22	12,5 (10,3; 14,6)
Upåvirket	415	0	46	0
Sum boliger og gjennomsnittlig verdifall	**557**	**2,6 (1,9; 3,2)**	**71**	**4,5 (3,8; 5,3)**

Tabell 6-4: Estimert verdifall for ulike grupper av boliger 6-10 km fra Moifjellet

Virkninger	Antall primærboliger	Estimert prisfall (95 % KI)	Antall fritidsboliger	Estimert prisfall (95 % KI)
Synlighet	26	6,3 (2,5; 10,0)	8	10,2 (7,4; 13,0)
Synlighet og eksisterende synlighet	185	3.3 (-0,1; 6,8)	96	7.3 (4,9; 9,7)
Upåvirket	701	0	120	0
Sum boliger og gjennomsnittlig verdifall	**912**	**0.9 (0,0; 1,7)**	**224**	**3,5 (2,4; 4,6)**

Vedlegg C Spørreundersøkelse design – Runde 1

Side 1

oslo**economics**

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

Takk for at du vil delta i spørreundersøkelsen!

Vi minner om at spørreundersøkelsen vil bestå av to runder, hvor dette er den første runden. Runde 2 vil sendes ut mot slutten av september. I Runde 2 vil du bli presentert resultatene fra denne undersøkelsen og ha mulighet til å justere svarene du har gitt.

Spørreundersøkelsene tar ca. 10 minutter å svare på per runde. Vi ber deg lese nøye gjennom informasjonen i denne undersøkelsen.

Neste

Side 2

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Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

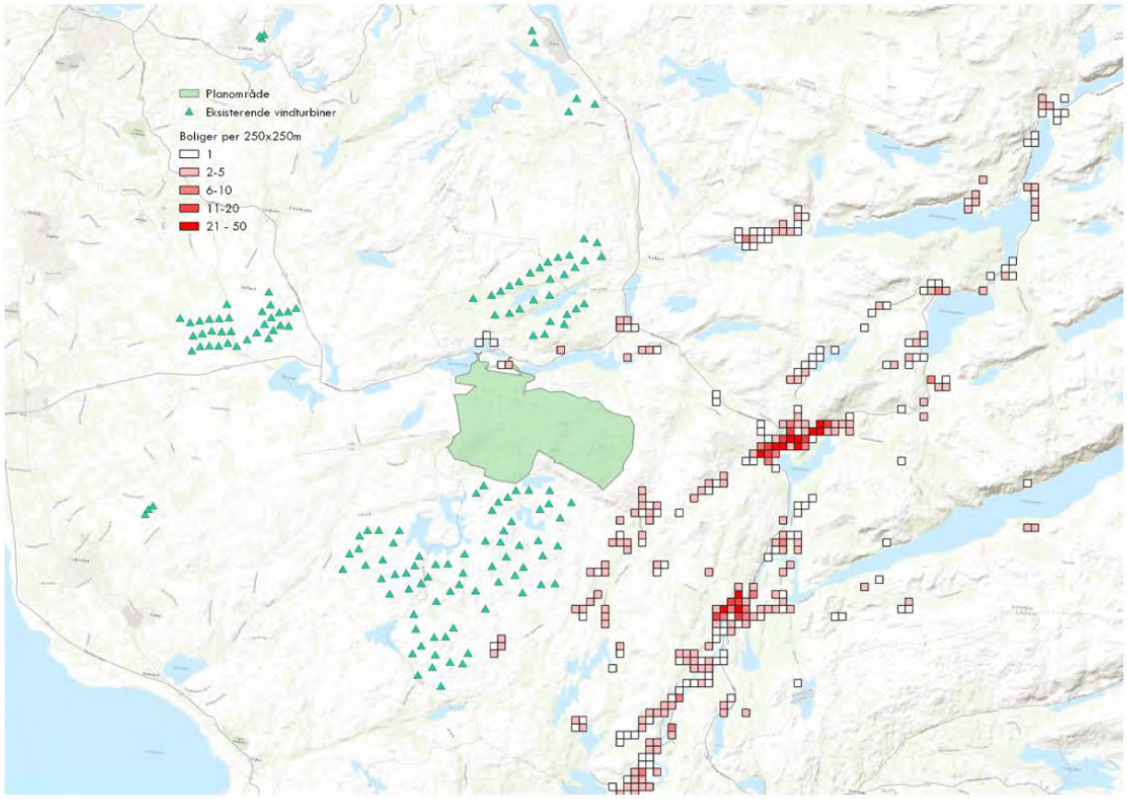
Om Moifjellet vindkraftverk og det berørte området

Moifjellet vindkraftverk vil bestå av:

- 30-40 turbiner
- Et planområde på ca. 17 km2
- Produksjon på ca. 850 GWh (tilsvarende årlig strømforbruk til 53 000 husstander)
- Turbinhøyde (vingetipp) på inntil 200 meter

I nærheten av det planlagte vindkraftverket er det allerede bygget flere vindkraftverk. Rett sør for Moifjellet ligger Bjerkreim vindkraftverk med 70 turbiner. Nord for Moifjellet ligger Måsakuten og Stigafjellet med totalt 29 turbiner. Disse ligger innenfor 5 km fra det planlagte vindkraftverket og har en høyde til vingetippen på omtrent 190 meter. Høg-Jæren vindkraftverk med 32 turbiner ligger ca. 10 km nordvest for Moifjellet og har turbiner med høyde på 125 meter (vingetipp). Rundt det planlagte vindkraftverket på Moifjellet er det omtrent 1200 boliger og 150 fritidsboliger innenfor en avstand på 6 km fra vindkraftverket.

- I området på omtrent 10 km rundt planområdet er det primært eneboliger, med en gjennomsnittlig eiendomspris på 3,3 millioner kroner.
- Det er mindre omsetning av fritidsboliger i området nært Moifjellet, men i Bjerkreim kommune som helhet er den gjennomsnittlige verdien på omtrent 1,9 millioner kroner.



Bildebeskrivelse: Grønt område er planområdet rundt Moifjellet. Vindturbiner fra eksisterende vindkraft er illustrert som grønne trekanter. De hvite og røde firkantene indikerer bebyggelse og tetthet (se gradering øverst til venstre).

Vi viser her noen eksempelbilder av hvordan området rundt Moifjellet ser ut i dag, uten Moifjellet vindkraftverk. Bildet til venstre viser Moifjellet sett fra bebyggelse. Bildet til høyre viser Bjerkreim vindkraftverk, som ligger rett sør for Moifjellet , sett fra bebyggelse.



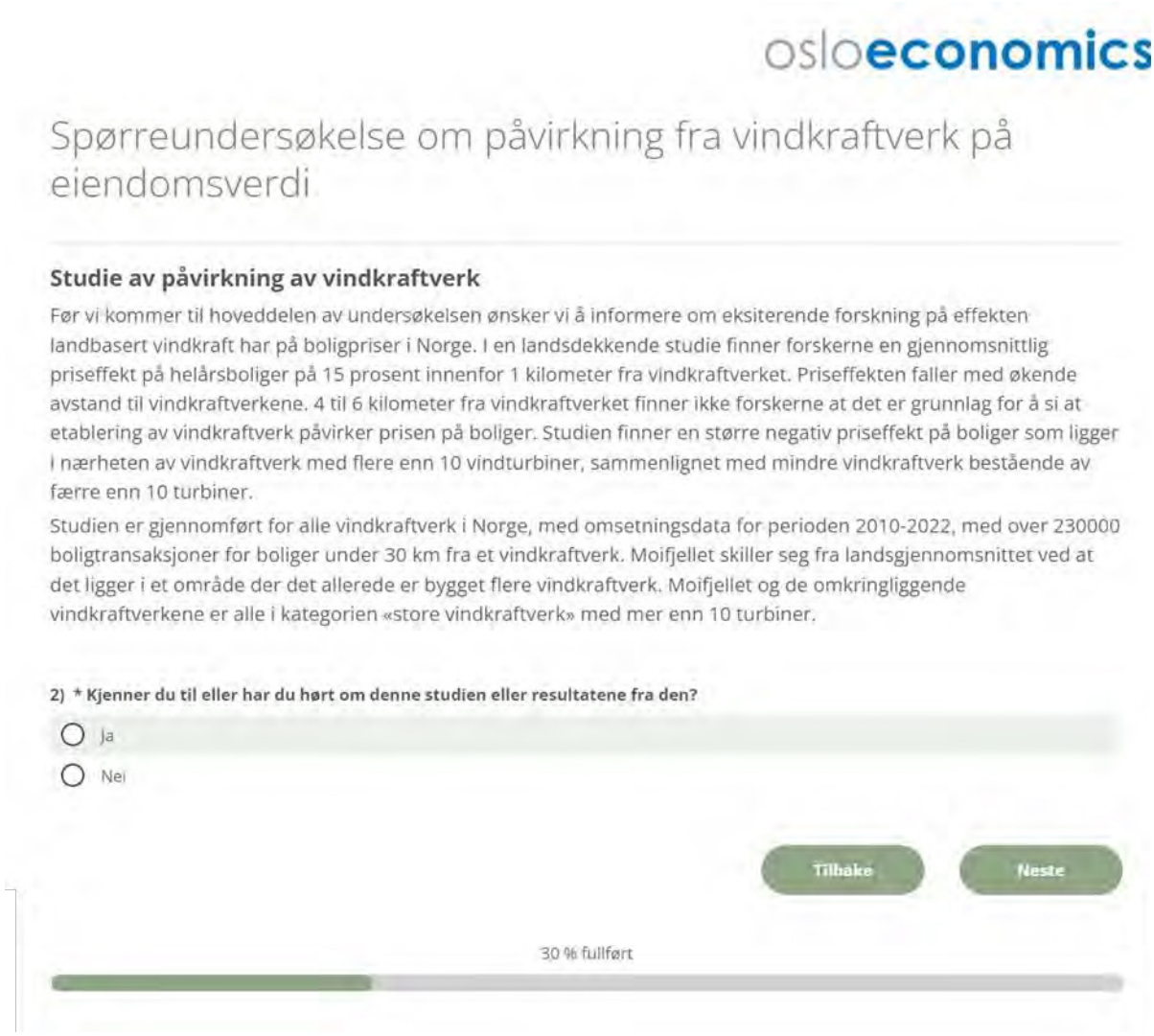
1) * Kjenner du til Statkrafts planer om utbygging av Moifjellet vindkraftverk?

- ◯ Ja
- ◯ Nei

Tilbake Neste

20 % fullført

Side 3


osloeconomics
Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi
Studie av påvirkning av vindkraftverk
Før vi kommer til hoveddelen av undersøkelsen ønsker vi å informere om eksiterende forskning på effekten landbasert vindkraft har på boligpriser i Norge. I en landsdekkende studie finner forskerne en gjennomsnittlig priseffekt på helårsboliger på 15 prosent innenfor 1 kilometer fra vindkraftverket. Priseffekten faller med økende avstand til vindkraftverkene. 4 til 6 kilometer fra vindkraftverket finner ikke forskerne at det er grunnlag for å si at etablering av vindkraftverk påvirker prisen på boliger. Studien finner en større negativ priseffekt på boliger som ligger i nærheten av vindkraftverk med flere enn 10 vindturbiner, sammenlignet med mindre vindkraftverk bestående av færre enn 10 turbiner.
Studien er gjennomført for alle vindkraftverk i Norge, med omsetningsdata for perioden 2010-2022, med over 230000 boligtransaksjoner for boliger under 30 km fra et vindkraftverk. Moifjellet skiller seg fra landsgjennomsnittet ved at det ligger i et område der det allerede er bygget flere vindkraftverk. Moifjellet og de omkringliggende vindkraftverkene er alle i kategorien «store vindkraftverk» med mer enn 10 turbiner.
2) * Kjenner du til eller har du hørt om denne studien eller resultatene fra den?
Ja
Nei
Tilbake
Neste
30 % fullført

Side 4

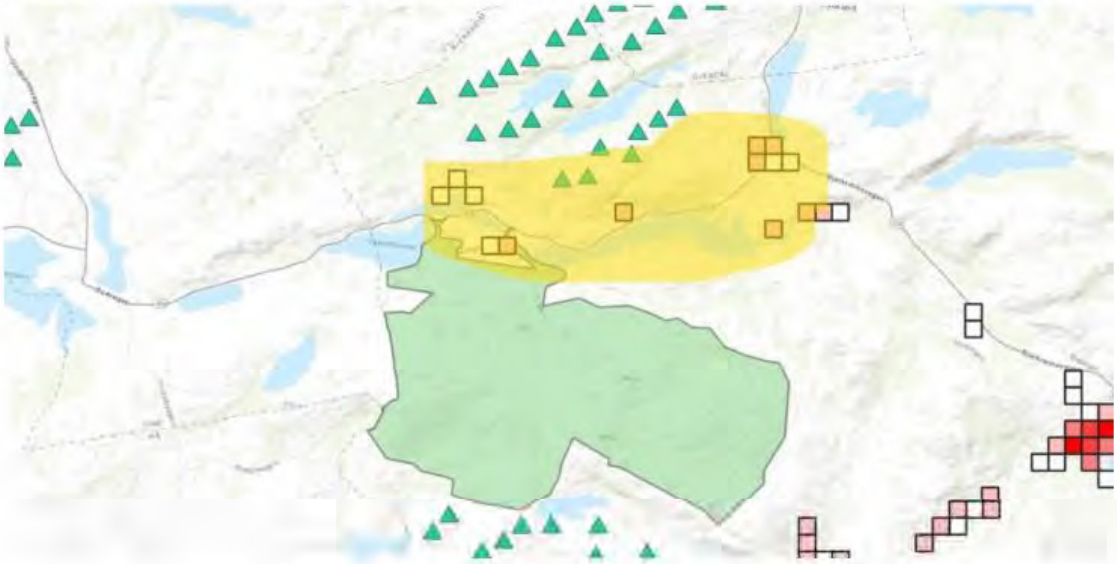

osloeconomics
Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi
Vi vil nå presentere 4 ulike områder med boliger og fritidsboliger som, på tvers av områdene, vil oppleve ulike negative effekter av vindkraftverket. Vi vil forklare de negative effektene for hvert område og det er viktig at du leser informasjonen nøye. Deretter vil vi for hvert område be deg om å oppgi hvor mye du forventer boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet. Vi ønsker at du oppgir forventet tap i verdi for henholdsvis helårsboliger og fritidsboliger.
Tilbake
Neste
40 % fullført

oslo**economics**

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

Boliger som vil oppleve skyggekast, økning i støy, og som vil se mange turbiner (området Bue, Vaule, Osland)

Boliger på nord- og nordøstsiden av Moifjellet, som ligger innenfor en radius på rundt 3 km fra nærmeste turbin i det planlagte vindkraftverket, vil kunne oppleve økt støy, skyggekast og vil få utsikt til mange av turbinene på Moifjellet.



Bildebeskrivelse: grønt område er planområdet rundt Moifjellet og grønne trekanter er eksisterende vindturbiner. Boligene du nå vurderer befinner seg i det gule området.

Støy: Boligene i dette området opplever allerede støy fra eksisterende vindkraftverk. Støyen fra eksisterende vindkraftverk tilsvarer støyen fra et moderne kjøleskap eller lett regn, og kan oppleves plagsomt for enkelte (rundt 40 dB). Utbygging av Moifjellet vindkraftverk kan føre til at støynivået øker merkbart (opptil 5 dB). Støyen etter utbygging kan sammenlignes med støyen fra et eldre kjøleskap eller summing i et bibliotek. Dette tilsvarer et støynivå rundt NVEs definerte støygrense på 45 dB, som for de fleste vil oppleves som akseptabelt, men som likevel kan oppleves forstyrrende og plagsomt for noen.

Skyggekast: En del boliger i dette området er allerede påvirket av skyggekast fra eksisterende vindkraftverk. Ved etablering av Moifjellet vil mange oppleve økt skyggekast, både for de som er påvirket i dag og noen som ikke er påvirket av skyggekast i dag. I hvilken grad boligene opplever skyggekast vil variere fra bolig til bolig og avhenge av værforhold og tid på året. På en solfylt dag kan enkelte boliger oppleve skyggekast i opp til 30 minutter. Samlet over et helt år vil ingen oppleve skyggekast på over 8 timer.

Utsyn til turbiner: Boligene i dette området har i dag utsyn til eksisterende vindkraftverk. Boligene vil kunne se mange av turbinene på Moifjellet (over 10 turbiner).

4) * For helårsboliger i dette området, hvor mye tror du boligene i gjennomsnitt vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

5) * For fritidsboliger i dette området, hvor mye tror du boligene i gjennomsnitt vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Enkelte av boligene i dette området ser ingen turbiner fra eksisterende vindkraftverk, men vil få utsyn til mange turbiner ved Moifjellet vindkraftverk. Beskrivelsen av støy og skyggekast over er fortsatt gjeldende.

6) * For helårsboliger i dette området, hvor mye tror du boligene i gjennomsnitt vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

7) * For fritidsboliger i dette området, hvor mye tror du boligene i gjennomsnitt vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Tilbake Neste

50 % fullført

Side 6

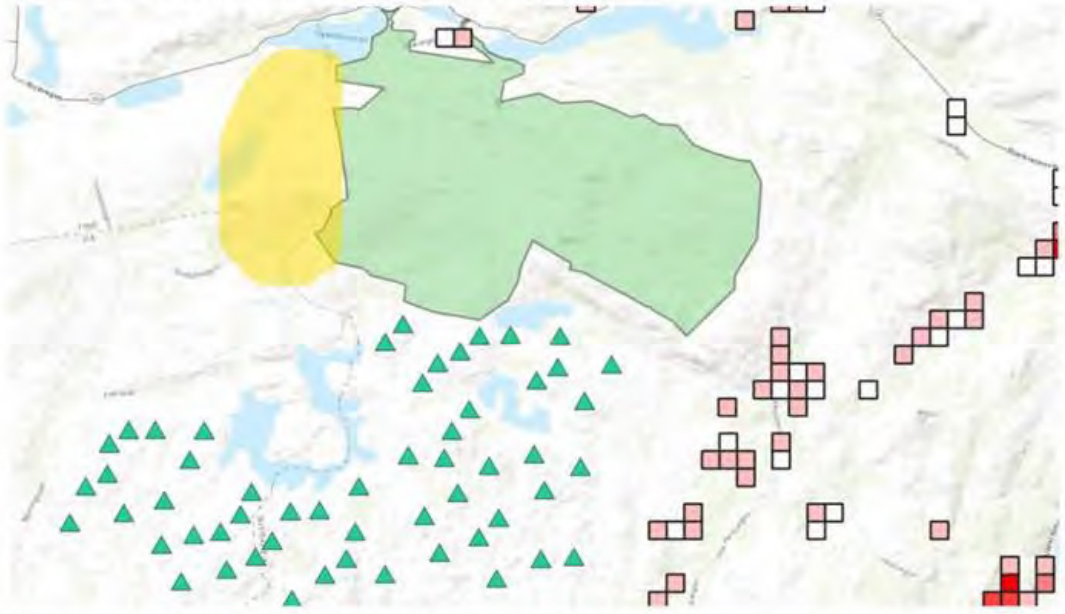
oslo**economics**

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

Boliger som opplever økt støy, og som ser mange turbinene på Moifjellet (området rundt Brusali)

I området vest- og sørøst for Moifjellet vil boliger som ligger innenfor en radius på 3 km fra nærmeste turbin kunne oppleve økt støynivå ved utbygging av vindkraft på Moifjellet. Turbinene på Moifjellet vil også være godt synlig fra boligene. Boligene vil i ingen eller liten grad bli påvirket av skyggekast fra Moifjellet.

Først ønsker vi at du vurderer området på vestsiden av Moifjellet – Brusali:



Bildebeskrivelse: grønt område er planområdet rundt Moifjellet og grønne trekanter er eksisterende vindturbiner. Boligene du nå vurderer befinner seg i det gule området.

Støy: Boligene i dette området opplever allerede støy fra eksisterende vindkraftverk. Støyen fra eksisterende vindkraftverk tilsvarer støyen fra et moderne kjøleskap eller lett regn, og kan oppleves plagsomt for enkelte (rundt 40 dB). Utbygging av Moifjellet vindkraftverk kan føre til at støynivået øker merkbart (opptil 5 dB). Støyen etter utbygging kan sammenlignes med støyen fra et eldre kjøleskap eller summing i et bibliotek. Dette tilsvarer et støynivå rundt NVEs definerte støygrense på 45 dB, som for de fleste vil oppleves som akseptabelt, men som likevel kan oppleves som plagsomt for noen.

Skyggekast: Boligene opplever i liten grad skyggekast fra eksisterende vindkraftverk og vil i ingen eller liten grad bli påvirket av skyggekast fra vindkraftverket på Moifjellet.

Utsyn til turbiner: Boligene har i dag utsyn til Bjerkreim vindkraftverk og ser svært mange turbiner fra boligene. De vil også få utsyn til mange av turbinene ved Moifjellet vindkraftverk (mer enn 10 turbiner).

8) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

9) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Tilbake Neste

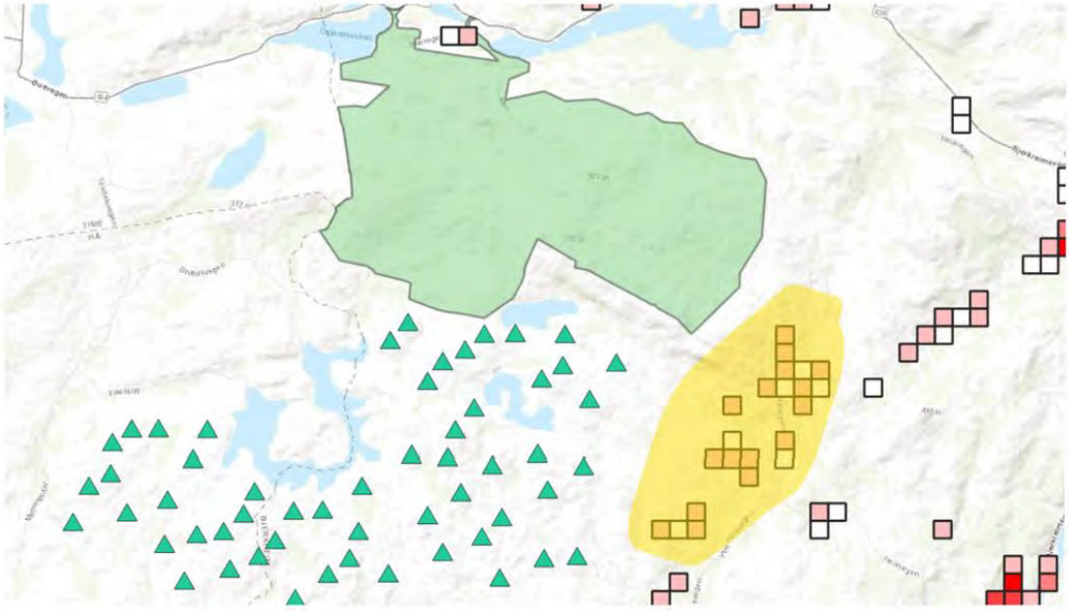
60 % fullført

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Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

Boliger som opplever økt støy og synlighet fra flere turbiner (området Laksesvela)

Nå ønsker vi at du vurderer området på sørøstsiden av Moifjellet – Laksesvela. Boligene i dette området har et lavere beregnet støynivå sammenlignet med Brusali som du nettopp vurderte, både i dag og ved etablering av Moifjellet.



Bildebeskrivelse: grønt område er planområdet rundt Moifjellet og grønne trekanter er eksisterende vindturbiner. Boligene du nå vurderer befinner seg i det gule området.

Støy: Boligene har i dag et støynivå som kan sammenlignes med lydnivået av hvisking (30-35 dB) og vil oppleve en økning opp mot lydnivået til et moderne kjøleskap eller lett regn (opp mot 40 dB). Økningen i støynivået er likt som for Brusali (opptil 5 dB), men fra et lavere beregnet støynivå i dag.

Skyggekast: Boligene opplever i liten grad skyggekast fra vindkraftverk i dag og vil i ingen eller liten grad oppleve skyggekast fra vindkraftverket på Moifjellet.

Utsyn til turbiner: Boliger i dette området har i dag utsyn til Bjerkreim vindkraftverk og ser svært mange turbiner fra boligene. De vil også få utsyn til mange turbiner på Moifjellet (mer enn 10).

10) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

11) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Enkelte av boligene i dette området vil oppleve økt støy, tilsvarende som beskrevet over, men vil ikke ha utsyn til turbinene i Moifjellet vindkraftverk. Disse har i dag utsyn til Bjerkreim vindkraftverk.

12) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

13) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Tilbake Neste

70 % fullført

Side 8

oslo**economics**

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

Boliger som ser vindturbiner fra sin bolig (blant annet området rundt Vikeså og Bjerkreim)

Innenfor en radius på 3-6 km fra det planlagte vindkraftverket på Moifjellet vil boliger ikke påvirkes av skyggekast eller støy fra vindkraftverket. Dette inkluderer områdene rundt de større tettstedene i kommunen, Vikeså og Bjerkreim. Synligheten til det planlagte vindkraftverket og eksisterende vindkraftverk varierer for boligene. Vi ønsker at du vurderer dette i tre forskjellige eksempler, der utsyn til turbiner er det som skiller boligene.

En del boliger vil få utsyn til turbiner ved Moifjellet, uten at boligene ser noen av de eksisterende vindkraftverkene.

14) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

15) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Mange boliger ser i dag allerede flere turbiner fra eksisterende vindkraftverk. Ved utbygging av Moifjellet vil de se flere vindturbiner i et større område.

16) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

17) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Flere boliger i dette området vil ikke se noen av turbinene ved Moifjellet vindkraftverk, og ser heller ikke turbiner fra andre vindkraftverk i området rundt. Dette inkluderer boliger i tettstedene Vikeså og Bjerkreim.

18) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

19) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Lengre fra vindkraftverket (6-10 km) vil turbinene fortsatt være synlig i horisonten. Flere av disse boligene har allerede i dag utsyn til turbiner fra vindkraftverkene som allerede er bygget i området.

20) * For helårsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

21) * For fritidsboliger i dette området, hvor mye tror du boligene vil tape seg i verdi etter utbyggingen av vindkraftverket på Moifjellet? (Svaret oppgis i prosentvis nedgang)

0 50

Tilbake Neste

80 % fullført

osloeconomics

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

22) * Hvilket kjønn er du?

- ○ Kvinne
- ○ Mann
- ○ Ønsker ikke å oppgi

23) * Hvilken alder er du?

- ○ under 30
- ○ 30 - 39
- ○ 40- 49
- ○ 50- 59
- ○ 60 +

24) * Hvilket utdanningsnivå har du?

- ○ Videregående skole
- ○ Fagbrev
- ○ Bachelor
- ○ Master/PhD
- ○ Annet

25) * Hvilken stilling har du?

- ○ Tomteutvikler
- ○ Eiendomsmegler
- ○ Eiendomsmeglerfullmektig
- ○ Takstmann
- ○ Annet

26) * Hvor lenge har du jobbet i denne bransjen?

0/255

27) * Hvilken kommune jobber du i?

- ☐ Bjerkreim
- ☐ Time
- ☐ Hå
- ☐ Klepp
- ☐ Gjesdal
- ☐ Egersund
- ☐ Annet

28) * Hva slags eiendommer jobber du primært med?

- [ ] Oppføring av nye boliger
- [ ] Salg av eksisterende boliger
- [ ] Oppføring av nye hytter
- [ ] Salg av eksisterende hytter
- [ ] Annet

29) * Har du erfaring med salg av eiendommer innenfor en eller flere av disse kategoriene?

- [ ] Eiendommer som er påvirket av eksisterende vindkraftverk
- [ ] Eiendommer som er påvirket av annen infrastruktur/næring
- [ ] Eiendommer i Bjerkreim kommune
- [ ] Fritidsboliger
- [ ] Ingen av svaralternativene ovenfor

Tilbake Neste

90 % fullført

Side 10

osloeconomics

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

30) Har du noen tilbakemeldinger på undersøkelsen?

0/4000

Tilbake Send

100 % fullført

Side 11

Spørreundersøkelse om påvirkning fra vindkraftverk på eiendomsverdi

Tusen takk for at du svarte på første runde av spørreundersøkelsen!

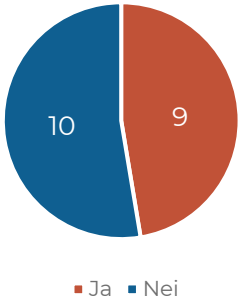
Du vil bli kontaktet igjen om et par uker for runde to av spørreundersøkelsen.

Vedlegg D Svar fra spørreundersøkelsene

D.1 Runde 1

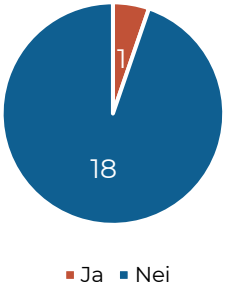
I denne runden var det 19 respondenter. Svarfordelingen for respondentene er gitt her.

Kjenner du til Statkrafts planer om utbygging av Moifjellet vindkraftverk?



Kjenner du til eller har du hørt om studien eller resultatene fra den?

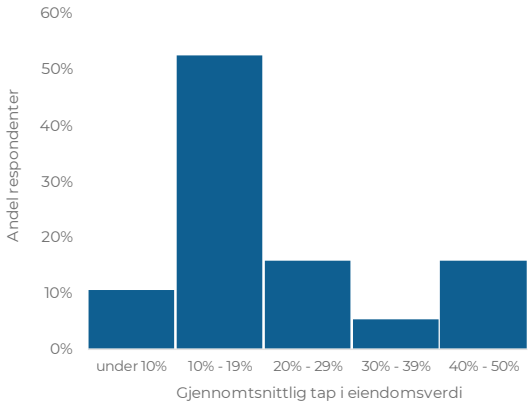
Merknad: «Studien» viser her til den landsdekkende studie som nylig er gjennomført og baserer seg på boligpriser

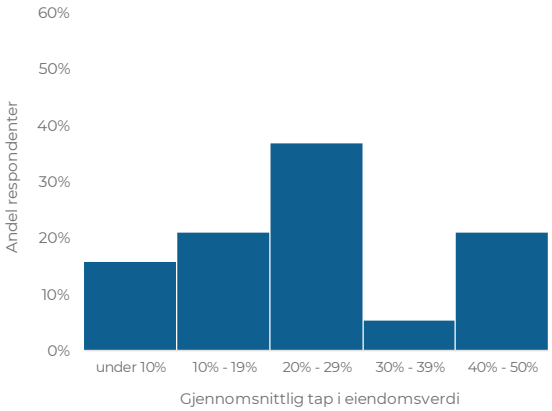


Boliger som vil oppleve skyggekast, økning i støy og som vi se mange turbiner (Området Bue, Vaule, Osland)

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
4	Verditap primærboliger	20%	15%	9%	40%
5	Verditap fritidsboliger	24%	20%	8%	50%

Figur 6-1: Svarfordeling spørsmål 4 (venstre) og spørsmål 5 (høyre) for alle respondenter

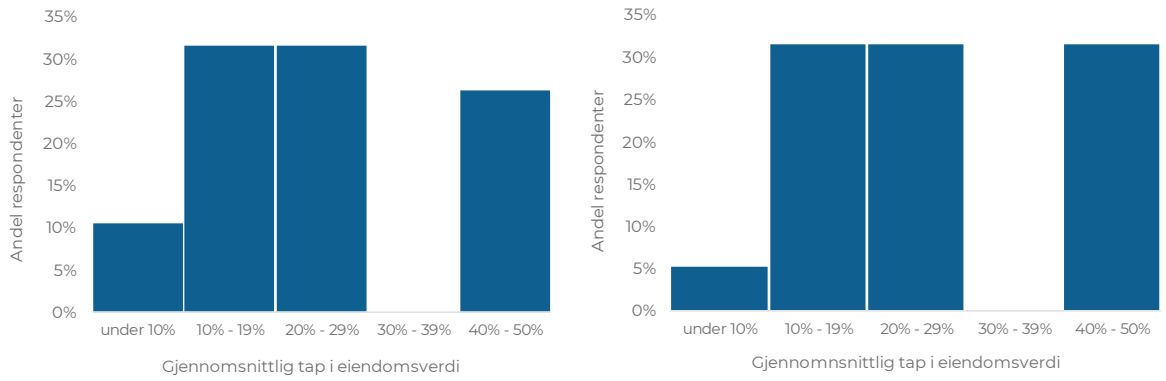




Enkelte av boligene i dette området ser ingen turbiner fra eksisterende vindkraftverk, men vil få utsyn til mange turbiner ved Moifjellet vindkraftverk. Beskrivelsen av støy og skyggekast over er fortsatt gjeldende.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
6	Verditap primærboliger	23%	20%	10%	43%
7	Verditap fritidsboliger	27%	20%	12%	50%

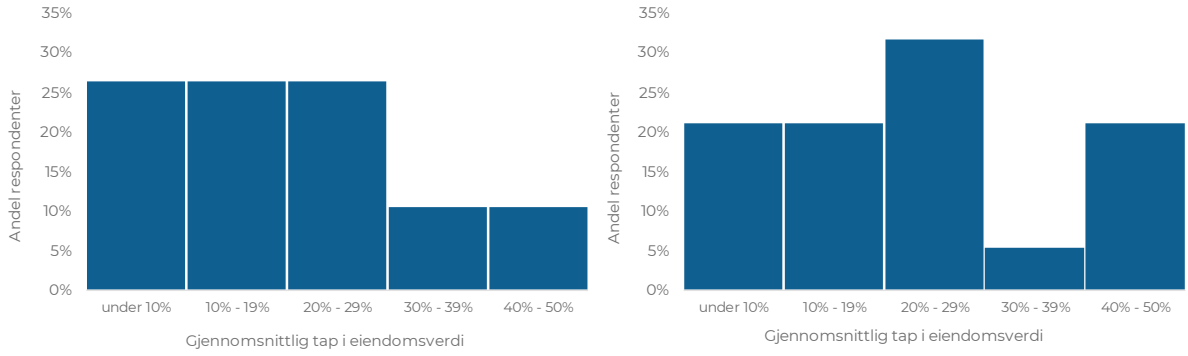
Figur 6-2: Svarfordeling spørsmål 6 (venstre) og spørsmål 7 (høyre) for alle respondenter



Boliger som opplever økt støy og ser mange av turbinene på Moifjellet (området rundt Brusali)

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
8	Verditap primærboliger	17%	15%	3%	33%
9	Verditap fritidsboliger	23%	20%	5%	50%

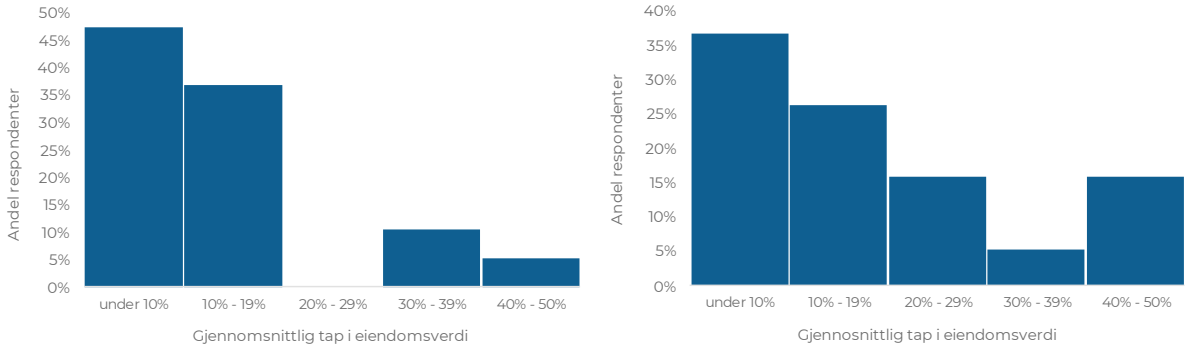
Figur 6-3: Svarfordeling spørsmål 8 (venstre) og 9 (høyre) for alle respondenter



Boliger som opplever økt støy og synlighet fra flere turbiner (området Laksesvela)

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
10	Verditap primærboliger	13%	10%	5%	32%
11	Verditap fritidsboliger	17%	10%	4%	43%

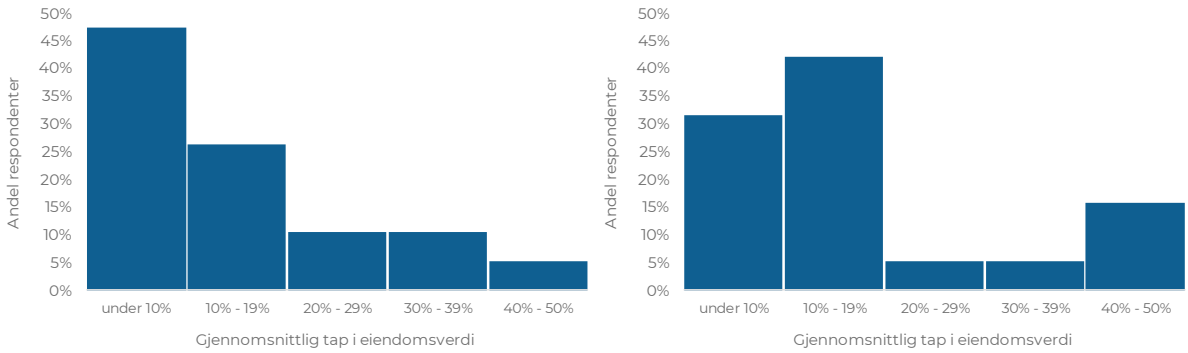
Figur 6-4: Svarfordeling spørsmål 10 (venstre) og 11 (høyre) for alle respondenter



Enkelte av boligene i dette området vil oppleve økt støy, som beskrevet over, men vil ikke ha utsyn til turbinene i Moifjellet vindkraftverk. Disse har i dag utsyn til Bjerkreim vindkraftverk.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
12	Verditap primærboliger	13%	10%	3%	32%
13	Verditap fritidsboliger	17%	10%	3%	45%

Figur 6-5: Svarfordeling spørsmål 12 (venstre) og 13 (høyre) for alle respondenter

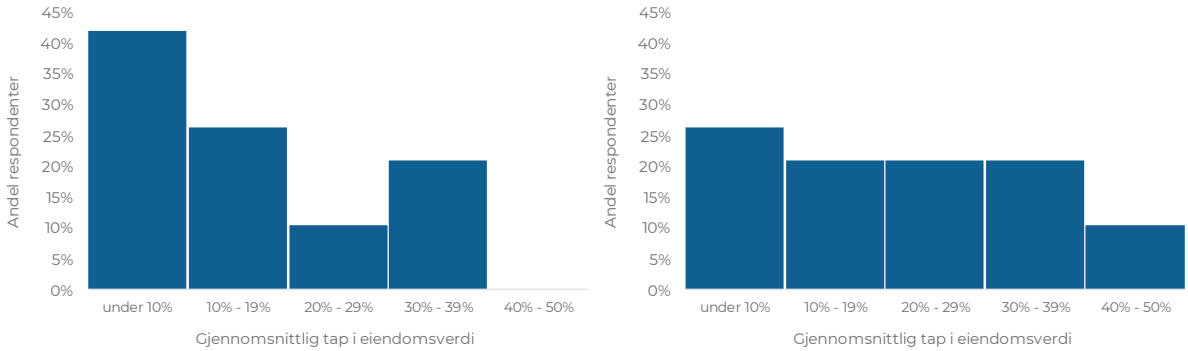


Boliger som ser vindturbiner fra sin bolig (blant annet området rundt Vikeså og langs Bjerkreimselva)

En del boliger vil få utsyn til turbiner ved Moifjellet, uten at boligene ser noen av de eksisterende vindkraftverkene.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
14	Verditap primærboliger	13%	10%	3%	32%
15	Verditap fritidsboliger	17%	10%	3%	45%

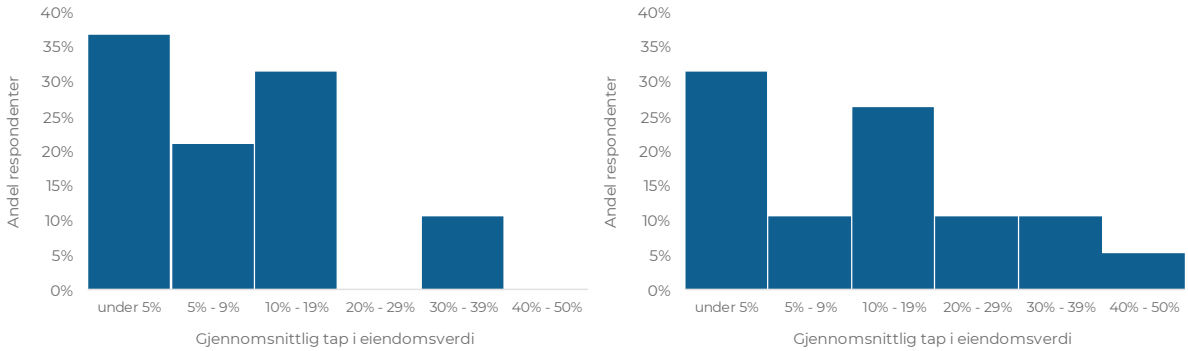
Figur 6-6: Svarfordeling spørsmål 14 (venstre) og 15 (høyre) for alle respondenter



Mange boliger ser i dag allerede flere turbiner fra eksisterende vindkraftverk. Ved utbygging av Moifjellet vil de se flere vindturbiner i et større område.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
16	Verditap primærboliger	9%	5%	0%	22%
17	Verditap fritidsboliger	13%	10%	1%	33%

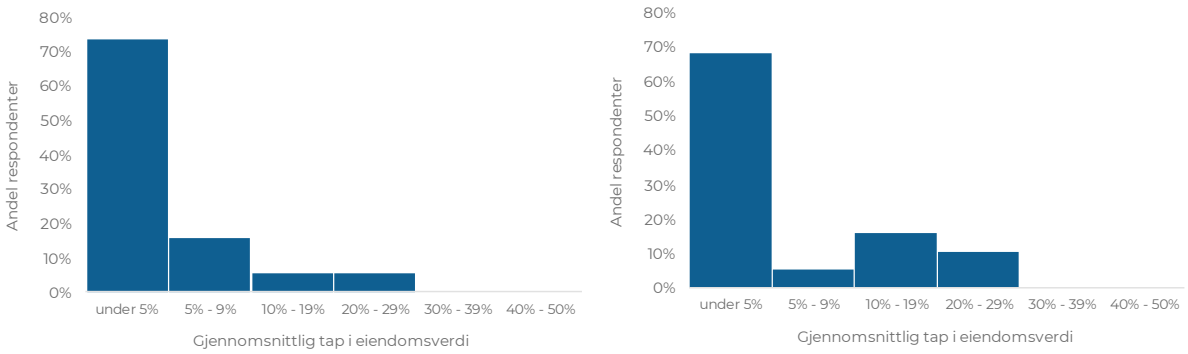
Figur 6-7: Svarfordeling spørsmål 16 (venstre) og 17 (høyre) for alle respondenter



Flere boliger i dette området vil ikke se noen av turbinene ved Moifjellet vindkraftverk, og ser heller ikke turbiner fra andre vindkraftverk i området rundt. Dette inkluderer boliger i tettstedene Vikeså og Bjerkreim

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
18	Verditap primærboliger	3%	0%	0%	7%
19	Verditap fritidsboliger	4%	0%	0%	17%

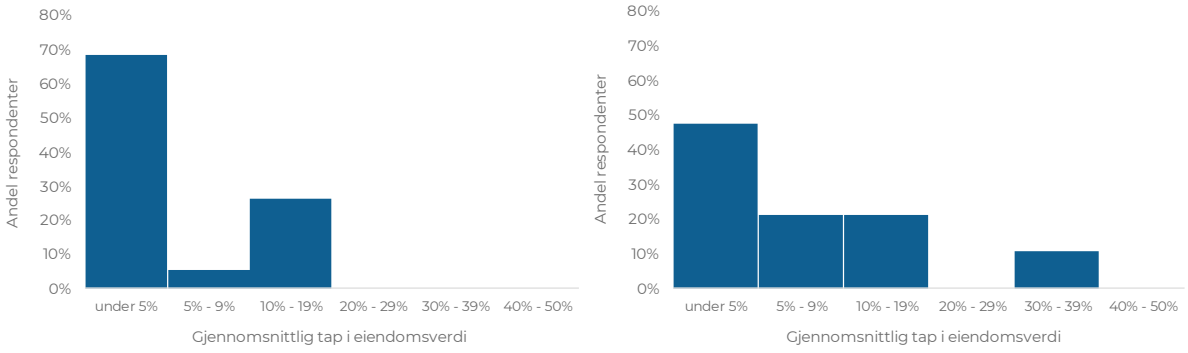
Figur 6-8: Svarfordeling spørsmål 18 (venstre) og 19 (høyre) for alle respondenter



Lengre fra vindkraftverket (6-10 km) vil turbinene fortsatt være synlig i horisonten. Flere av disse boligene har allerede i dag utsyn til turbiner fra vindkraftverkene som allerede er bygget i området.

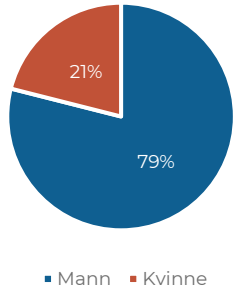
Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
20	Verditap primærboliger	3%	0%	0%	7%
21	Verditap fritidsboliger	4%	0%	0%	17%

Figur 6-9: Svarfordeling spørsmål 20 (venstre) og 21 (høyre) for alle respondenter

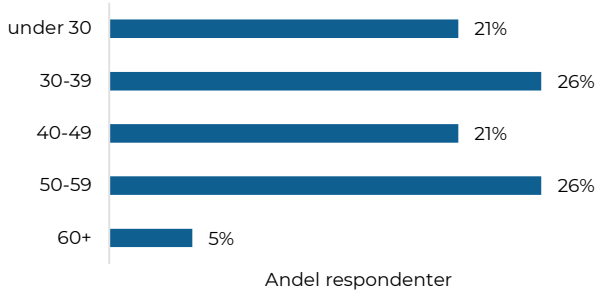


Overordnet om respondentene

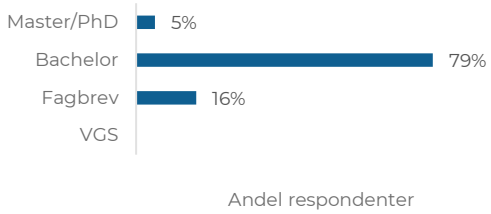
Kjønnsfordeling



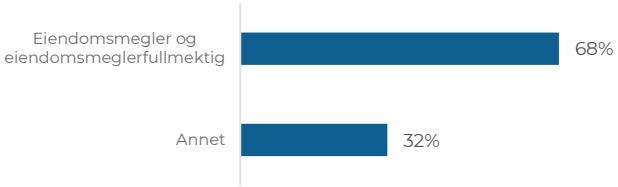
Aldersfordeling



Utdanningsnivå

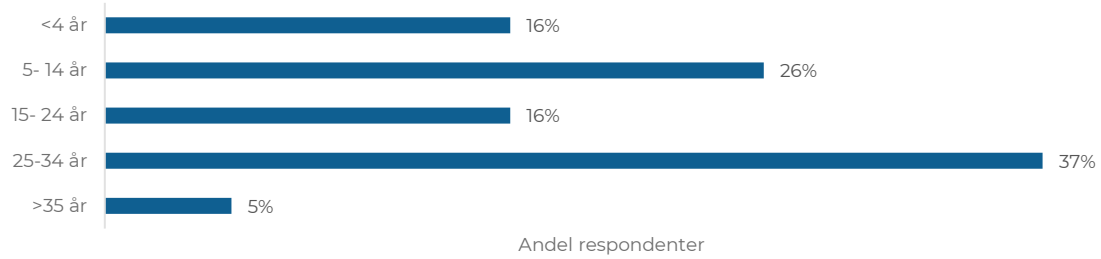


Stilling

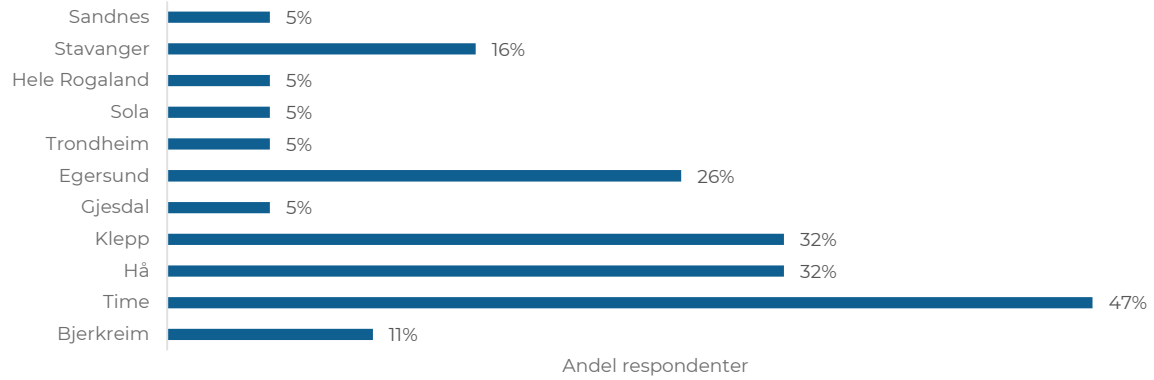


Merk: *Annet* inkluderer kategoriene tomteutvikler og takstmann

Antall år i bransjen

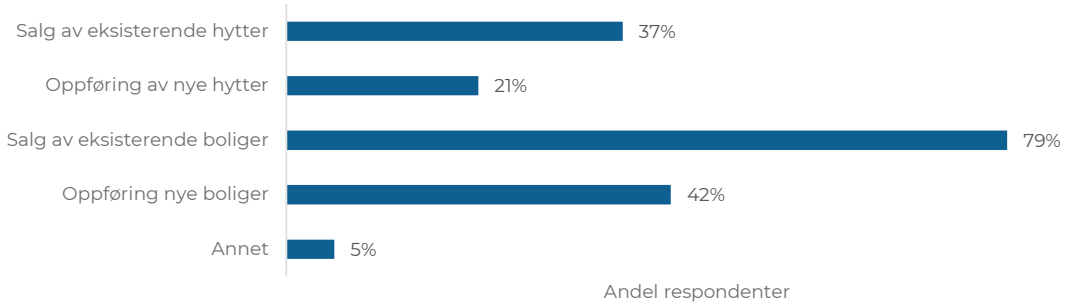


Hvilke kommuner jobber de i?



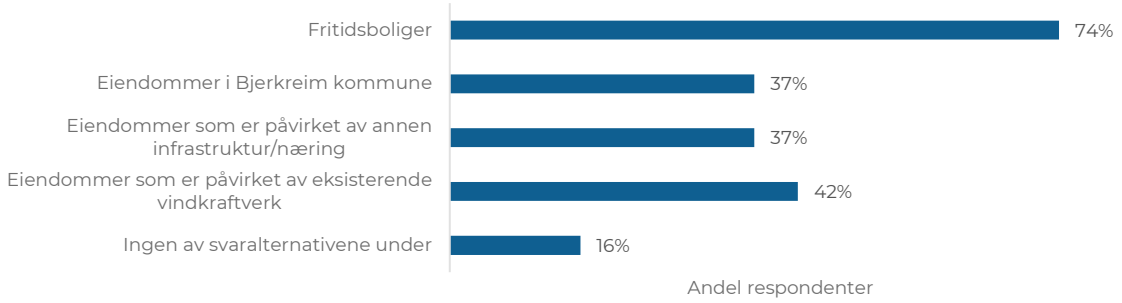
Merk: Noen respondenter arbeider i flere kommuner

Hvilke eiendommer jobber de primært med?



Merk: Enkelte respondenter jobber med eiendommer i flere kategorier. «Annet» inkluderer taksering av boliger, fritidsboliger og landbruk.

Erfaring med salg av eiendommer innenfor en eller flere av disse kategoriene?



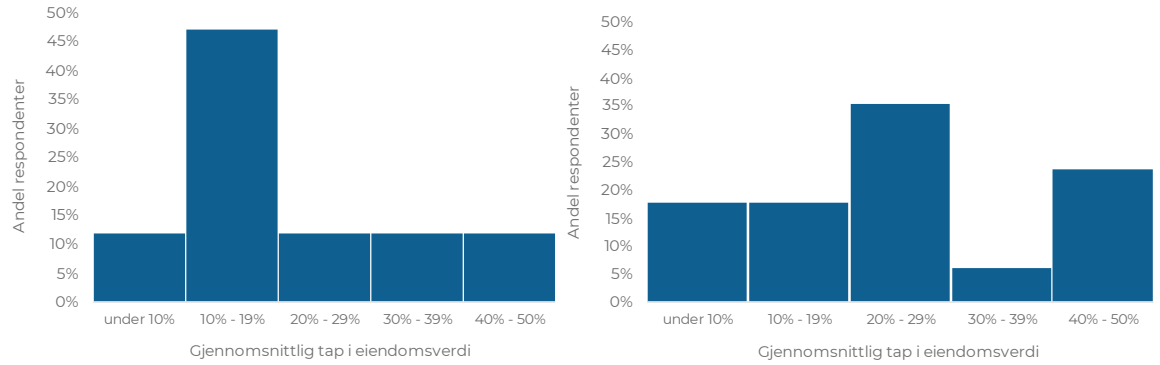
D.2 Runde 2

I denne runden var det 17 respondenter.

Boliger som vil oppleve skyggekast, økning i støy og som vi se mange turbiner (Området Bue, Vaule, Osland)

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
4	Verditap primærboliger	19%	15%	9%	37%
5	Verditap fritidsboliger	24%	20%	8%	47%

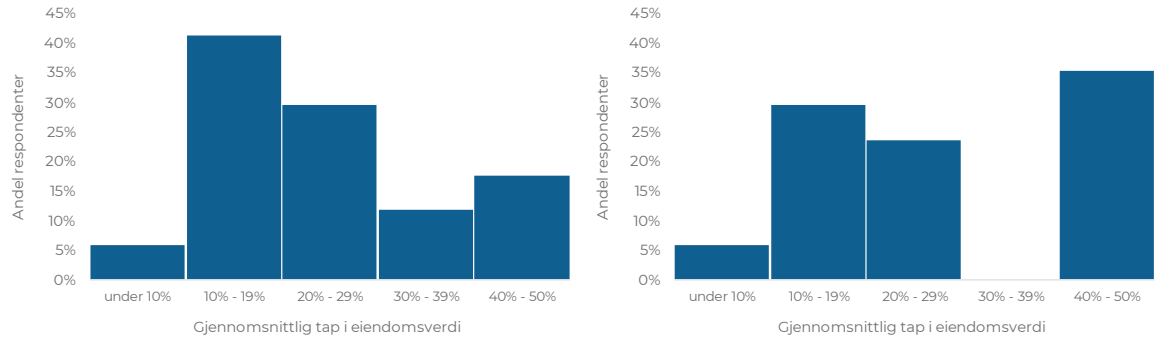
Figur 6-10 Svarfordeling spørsmål 4 (venstre) og spørsmål 5 (høyre) for alle respondenter



Enkelte av boligene i dette området ser ingen turbiner fra eksisterende vindkraftverk, men vil få utsyn til mange turbiner ved Moifjellet vindkraftverk. Beskrivelsen av støy og skyggekast over er fortsatt gjeldende.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
6	Verditap primærboliger	23%	20%	13%	41%
7	Verditap fritidsboliger	27%	20%	14%	47%

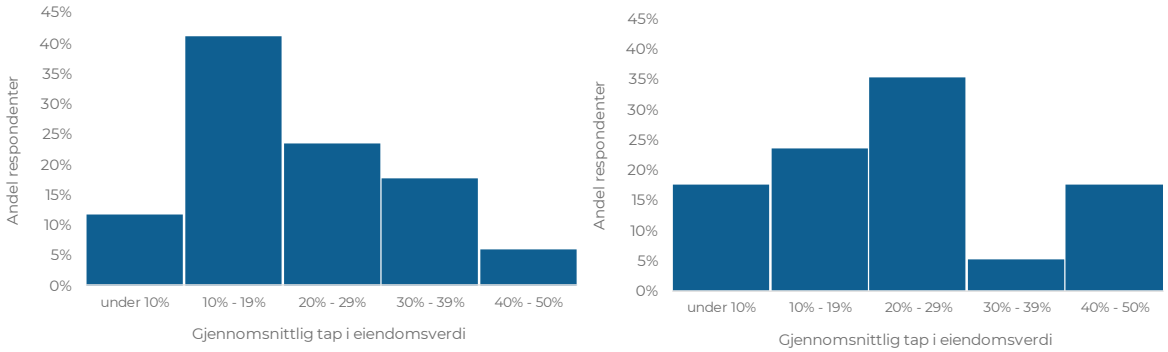
Figur 6-11: Svarfordeling spørsmål 6 (venstre) og spørsmål 7 (høyre) for alle respondenter



Boliger som opplever økt støy og ser mange av turbinene på Moifjellet (området rundt Brusali)

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
8	Verditap primærboliger	18%	16%	8%	30%
9	Verditap primærboliger	22%	20%	5%	44%

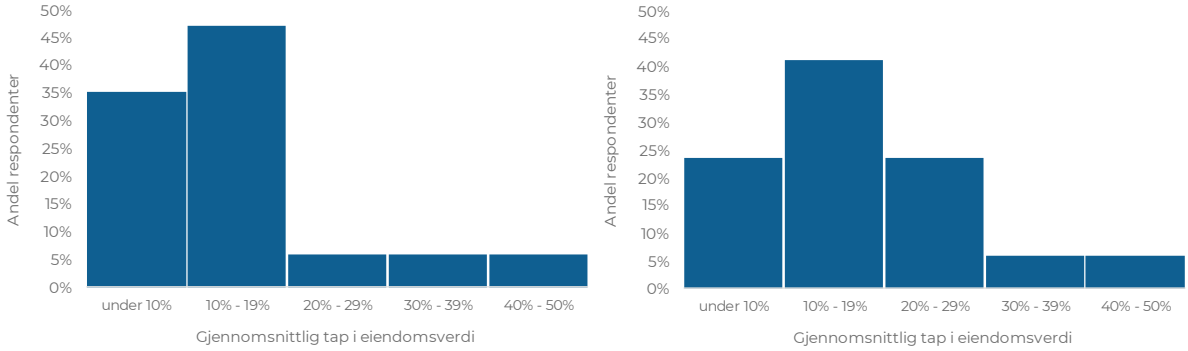
Figur 6-12: Svarfordeling spørsmål 8 (venstre) og 9 (høyre) for alle respondenter



Boliger som opplever økt støy og synlighet fra flere turbiner (området Laksesvela)

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
10	Verditap primærboliger	14%	10%	5%	29%
11	Verditap primærboliger	16%	12%	4%	31%

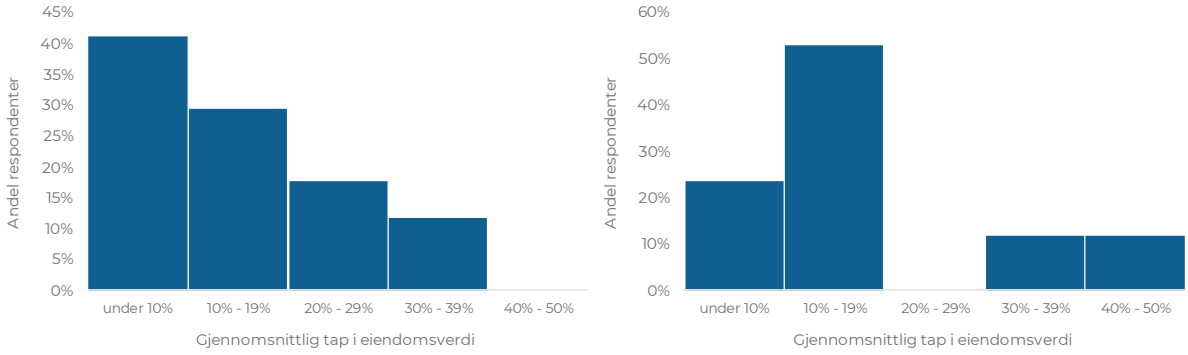
Figur 6-13: Svarfordeling spørsmål 10 (venstre) og 11 (høyre) for alle respondenter



Enkelte av boligene i dette området vil oppleve økt støy, som beskrevet over, men vil ikke ha utsyn til turbinene i Moifjellet vindkraftverk. Disse har i dag utsyn til Bjerkreim vindkraftverk.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
12	Verditap primærboliger	13%	10%	4%	29%
13	Verditap primærboliger	17%	10%	2%	38%

Figur 6-14: Svarfordeling spørsmål 12 (venstre) og 13 (høyre) for alle respondenter

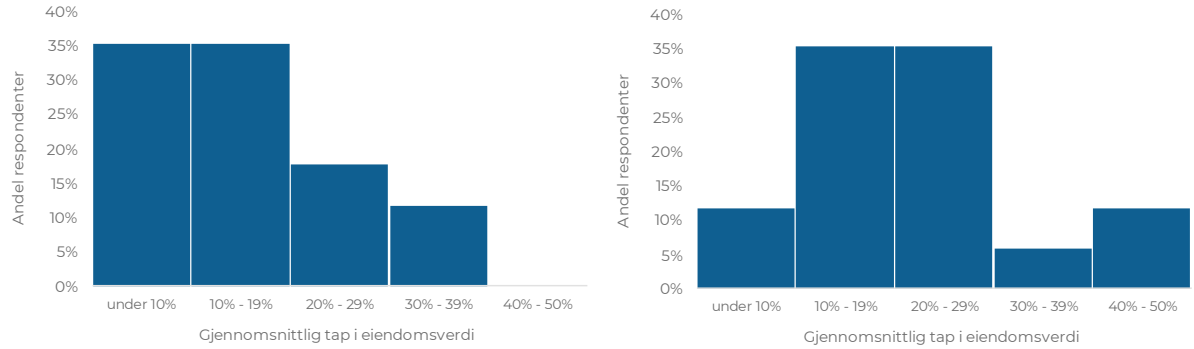


Boliger som ser vindturbiner fra sin bolig (blant annet området rundt Vikeså og langs Bjerkreimselva)

En del boliger vil få utsyn til turbiner ved Moifjellet, uten at boligene ser noen av de eksisterende vindkraftverkene.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
14	Verditap primærboliger	14%	10%	4%	29%
15	Verditap primærboliger	20%	20%	7%	38%

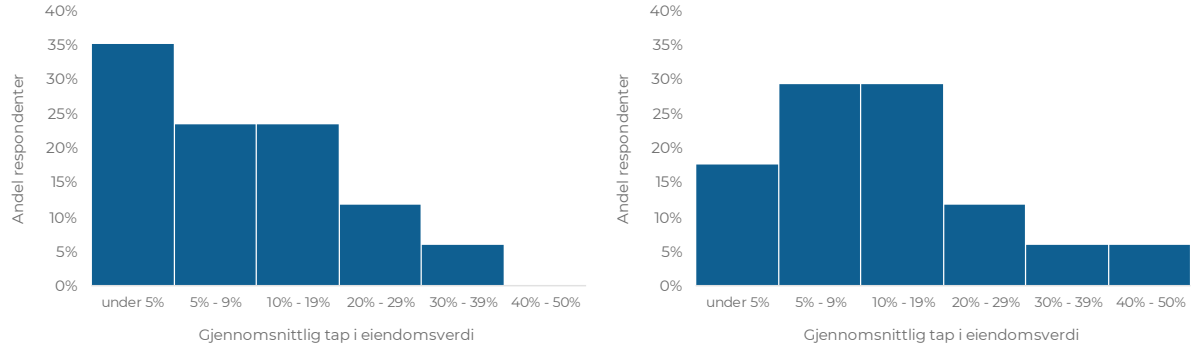
Figur 6-15: Svarfordeling spørsmål 14 (venstre) og 15 (høyre) for alle respondenter



Mange boliger ser i dag allerede flere turbiner fra eksisterende vindkraftverk. Ved utbygging av Moifjellet vil de se flere vindturbiner i et større område.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
16	Verditap primærboliger	9%	5%	0%	21%
17	Verditap fritidsboliger	13%	10%	3%	29%

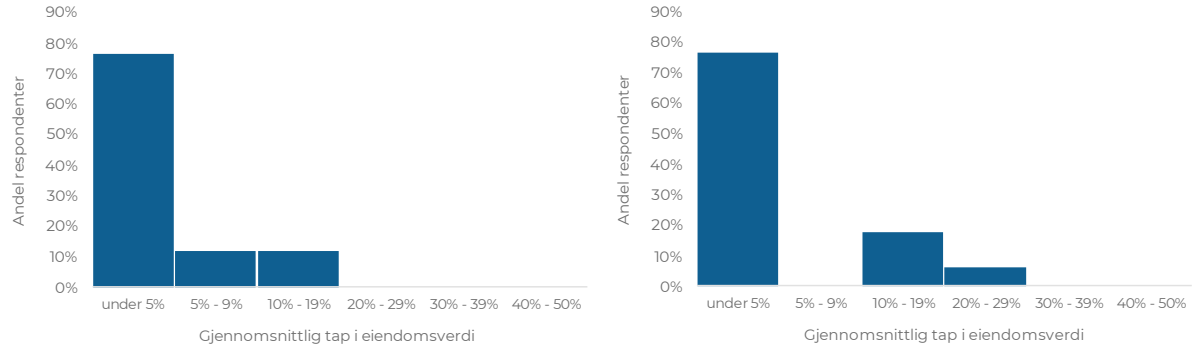
Figur 6-16: Svarfordeling spørsmål 16 (venstre) og 17 (høyre) for alle respondenter



Flere boliger i dette området vil ikke se noen av turbinene ved Moifjellet vindkraftverk, og ser heller ikke turbiner fra andre vindkraftverk i området rundt. Dette inkluderer boliger i tettstedene Vikeså og Bjerkreim

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
18	Verditap primærboliger	2%	0%	0%	7%
19	Verditap fritidsboliger	4%	0%	0%	15%

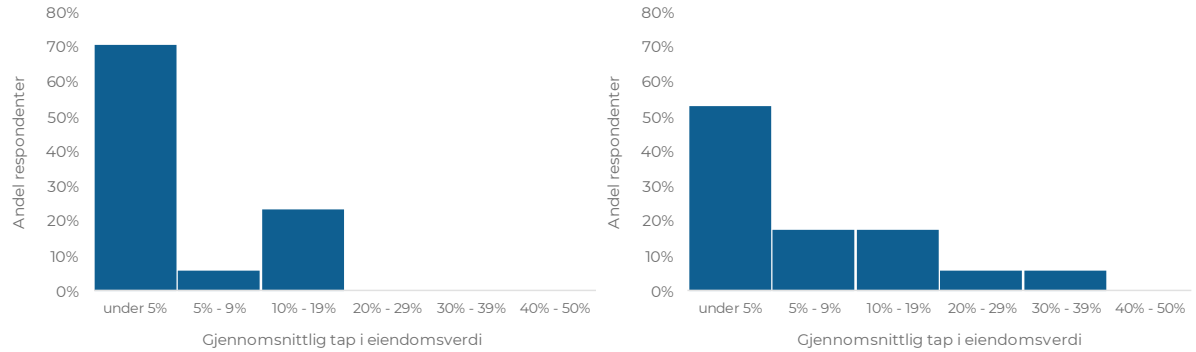
Figur 6-17: Svarfordeling spørsmål 18 (venstre) og 19 (høyre) for alle respondenter



Lengre fra vindkraftverket (6-10 km) vil turbinene fortsatt være synlig i horisonten. Flere av disse boligene har allerede i dag utsyn til turbiner fra vindkraftverkene som allerede er bygget i området.

Spørsmål		Gjennomsnitt	Median	10-persentil	90-persentil
20	Verditap primærboliger	4%	2%	0%	10%
21	Verditap fritidsboliger	7%	2%	0%	19%

Figur 6-18: Svarfordeling spørsmål 20 (venstre) og 21 (høyre) for alle respondenter



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Klimatilpasning

Notat Klimatilpasning

OPPDRAG	10265688-01 Mellomstrand Vindkraftverk	DOKUMENTKODE	10265688-01-RIM-NOT-001
EMNE	Notat for Mellomstrand Vindkraftverk - Klimatilpasning	TILGJENGELIGHET	Åpen
OPPDRAGSGIVER	Statkraft Vind DA	OPPDRAGSLEDER	Håvard Finanger
KONTAKTPERSON	Kristin Serck Hanssen	UTARBEIDET AV	Henrik Bjørgan
KOPI		ANSVARLIG ENHET	10103022 LARK Natur- og Klimadesign

SAMMENDRAG

Notatet omhandler klimatilpasning i Rogaland og tiltaksområde som vurderes for Mellomstand vindkraftverk, en mulig utvidelse av Moifjellet vindkraftverk. Utredningskrav for klimatilpasning blir vurdert og svart ut iht. det kombinerte plan-/utredningsprogrammet som er fastsatt av Time kommune og NVE. Fremstillinger av klimaendringer er gjort med utgangspunkt i høyt utslippsscenario, og data er hentet fra Norsk klimaservicesenter. Av endringer forventes det mer nedbør av både totalvolum og perioder med kraftig nedbør, samt økt middeltemperatur. Økning av mer lynnedslag kan også inntreffe. Konsekvenser av disse klimaendringene kan være mer overvann og risiko for flom, videre er det også mulig at færre villbranner vil oppstå grunnet mindre tørke. Kunnskap rundt prosjektering med hensyn til klimaendringer skal ivaretas, deriblant med beregninger og dimensjonering for håndtering av overvann med høye alternativer lagt til grunn. Naturbaserte løsninger skal ikke velges bort uten begrunnelse, og overvannet i forbindelse med økt nedbør kan ses på som en ressurs for både biologisk mangfold og gi flere rekreasjonsmuligheter. Konsekvenser for tredjepart er vurdert og løsninger med klimatilpasninger anses samlet sett som positive også for tredjepart.

01	27.02.2026	Endringer etter tilbakemelding fra Statkraft	Henrik Bjørgan	Sølvi Wehn	Håvard Finanger
00	16.01.2026	Notat klimatilpasning	Henrik Bjørgan	Sølvi Wehn	Håvard Finanger
REV.	DATO	BESKRIVELSE	UTARBEIDET AV	KONTROLLERT AV	GODKJENT AV

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1 Bakgrunn og utredningskrav

1.1 Bakgrunn for prosjektet

Dette notatet inngår i utredningen av planforslag for områderegulering og Statkrafts søknad om konsesjon (tillatelse til å bygge, eie og drive) Mellomstrand vindkraftverk i Time kommune.

Utredningen vil være en del av beslutningsgrunnlaget til Time kommune i prosessen om planen skal vedtas og når NVE skal vurdere om det kan gis konsesjon til tiltaket.

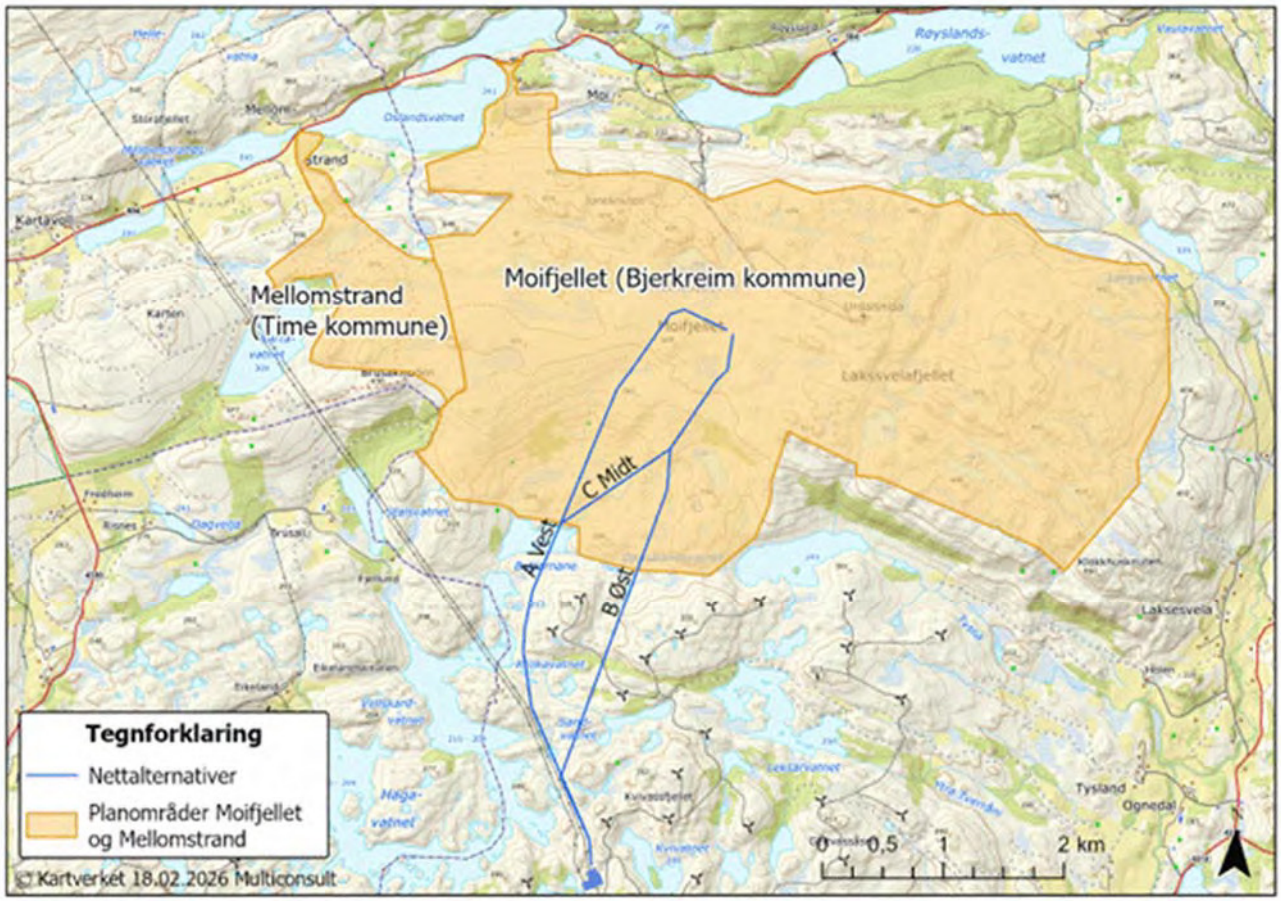
1.2 Prosjektmål

Statkraft har som mål å redusere miljø- og samfunnsmessige konsekvenser i størst mulig grad, samtidig som de ønsker å imøtekomme dagens og fremtidens energibehov. Utvidelsen av Moifjellet vindkraftverk med Mellomstrand vindkraftverk er i tråd med Statkraft sine mål, samtidig som det skal legge til rette for en god økonomisk og bærekraftig løsning for Time kommune (Statkraft, n.d.).

Statkraft sine mål sammenfaller med de statlige planretningslinjene for natur og klima, deriblant god forsyningssikkerhet for energi, og kostnadseffektivitet sammenlignet med andre tiltak (Kommunal- og distriktsdepartementet, 2025).

1.3 Planområde

Mellomstrand vindkraftverk er en utvidelse av Moifjellet vindkraftverk og ligger i sin helhet i Time kommune (figur 1-1 og figur 1-2). Utvidelsen med Mellomstrand vindkraftverk ligger vest for Moifjellet vindkraftverk.



Figur 1–1: Kart over planområder for Moifjellet og Mellomstrand vindkraftverk



Figur 1–2: Kart regional kontekst, med plassering av figur 1-1 «Kart over planområder (...)»

1.4 Utredningskrav

Konsekvenser utredes i henhold til det kombinerte plan-/utredningsprogrammet som er fastsatt av Time kommune og NVE. I planprogrammet er utredningskrav for ***5.2.6 Klimatilpasning*** omtalt slik:

Forslagsstiller skal beskrive hvordan tiltaket er utformet for å være tilpasset et framtidig endret klima. Aktuelle tiltak for klimatilpasning for de ulike delene av tiltaket skal vurderes og beskrives, herunder dimensjonering og plassering med tanke på framtidige ekstremværhendelser. I tillegg skal høye alternativer for nasjonale klimaframskrivninger skal legges til grunn. Dersom naturbaserte løsninger velges bort, f.eks. bevaring av våtmark og åpne vassdrag, skal dette begrunnes.

De statlige planretningslinjene for klima- og energiplanlegging og klimatilpasning (SPR) skal legges til grunn for beskrivelsene og vurderingene.

1.4.1 Statlige planretningslinjer for klima og energi

Kommunal- og distriktsdepartementet angir i retningslinjene for klimatilpasning at det skal arbeides for løsninger som gjør samfunnet bedre rustet til å møte klimaendringene. Det beskrives at konsekvenser av klimaendringene skal vurderes basert på nasjonale klimaframskrivninger. Det skal videre vurderes om klimaendringer gir et endret risiko- og sårbarhetsbilde. Ivaretakelse av økosystemer og arealbruk med betydning for klimatilpasning samt behovet for åpne vannveier, overordnede blågrønne strukturer, og forsvarlig overvannshåndtering er sentralt. Naturbasert løsninger bør vurderes (Kommunal- og distriktsdepartementet, 2025).

2 Metode - vurdering

Ifølge Miljødirektoratet handler klimatilpasning om å erkjenne at klimaer er i endring, samt forstå konsekvensene og iverksette tiltak for å hindre skader som følger av dette. Klimatilpasning innebærer også å se mulighetene som kan følge med klimaendringene (Miljødirektoratet, 2024). Miljødirektoratet angir at for å kunne planlegge klimatilpasset utbygging, må man basere dette på kunnskap om lokalklima, samt utforming og detaljering av planlagte bygg og infrastruktur (Miljødirektoratet, 2025).

For å innhente kunnskap om lokalklima er data fra klimastasjon i nærheten av planområde hentet fra Norsk klimaservicesenter sine nettsider (Norsk klimaservicesenter, 2026).

Multiconsult sitter på god kunnskap om utforming og detaljering av planlagte bygg og infrastruktur. Kunnskap beskrevet i dette notatet resulterer i anbefalinger om videre arbeid/utredninger som igjen vil bli brukt som grunnlag for endelig prosjektering.

Alternativene som vurderes påvirker ikke direkte innholdet i dette notatet. Dataen for klimaframskrivinger gjelder for et grovt geografisk område, og vil med det sammenfalle med område for Moifjellet vindkraftverk. Konsekvenser og tiltak er derfor aktuelle for begge vindkraftverkene, men analyser av naturfare er gjort med utgangspunkt i området for Mellomstrand vindkrafverk med tilgrensende områder.

2.1 Usikkerheter

Klimaet er i endring, og kunnskapsgrunnlaget for klimatilpasning er stadig i utvikling. De europeiske klimaframskrivinger har blitt nedskalert, det vitenskapelige kunnskapsgrunnlaget for klimatilpasning i Norge ble oppdatert som konsekvens av dette. Indeksen for klimaframskrivinger bygger på klimamodeller som igjen baserer seg på ufullstendig kunnskap om fysiske prosesser og formulering (Dyrrdal, 2025).

Kunnskap om kombinasjon av ulike værrelaterte hendelser er mangelfulle. De er ofte kalt «sammenfallende hendelser», og oppstår når ulike vær- og klimarelaterte prosesser, som i seg selv ikke trenger å være ekstreme, sammenfaller og fører til ekstreme tilfeller. Eksempel på dette er økte temperaturer gir tidligere snøsmelting, som kan føre til mer mettet jordsmonn som er uheldig om det inntreffer samtidig som kraftig regnvær. Data på klimaframskrivinger er ikke nøyaktig geografisk, og tydelige differanser fremkommer først i regional kontekst.

3 Klima

Rogaland fylke er en del av landsdelen Vestlandet, som preges av blant annet mye nedbør (se eksempel på forhold i vassdrag i figur 3-1). Temperaturen kan være nede på cirka -25 °C i indre strøk og i fjellet, hvor middeltemperatur er på -5 til -8 °C vinterstid. På sommeren er middeltemperaturen på 14-15 °C, hvor det på det varmeste er registrert 27-33 °C. Vindforholdene påvirkes av sesong og de store temperaturforskjellene. Langs kysten er årsmiddel av kuling på rundt 20 prosent av tiden, for liten storm eller mer er det cirka 1 prosent av tiden (Mamen, 2024).

Utredningsområde Mellomstrand ligger cirka 15 km fra kysten og inngår i den sterkt oseaniske seksjonen, som kjennetegnes av mye nedbør, liten temperaturvariasjon og milde vintre (Artsdatabanken, 2026).



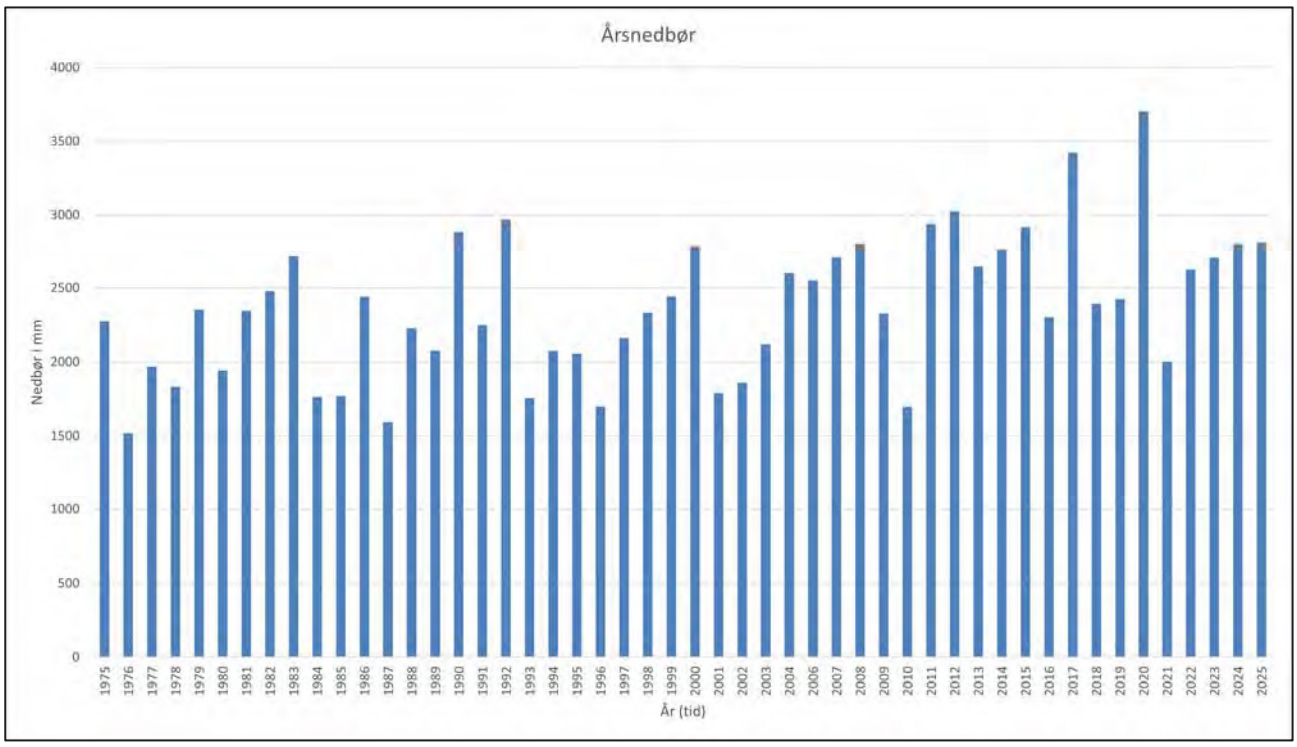
Figur 3–1: Bilde fra Kvednahola i Suldal en regnværsdag oktober 2019, hentet fra https://haugalandmuseet.no/arrangement/utstilling-klimaklokt/

3.1 Værdata

Værdataene på årsnedbør er hentet fra værstasjon Søyland I Gjesdal (SN44480) på 276 moh., som ligger omtrent seks kilometer i luftlinje øst for prosjektgrensen til utredningsområde, som igjen ligger på rundt 300-400 moh. Det er tatt utgangspunkt i de siste femti årene, med unntak av året 2005 hvor det ikke er tilgjengelig/registrert data (Norsk klimaservicesenter, 2026).

Året med mest nedbør registrert er 2020 med 3702 mm, året med minst registrert nedbør er 1976 med 1517 mm (se figur 3-2Figur 3–2). Om man ser på tiårsperioder, så er gjennomsnitt av årsnedbør for periodene som følger:

- 1975-1984: 2119 mm
- 1985-1994: 2204 mm
- 1995-2004: 2185 mm
- 2006-2015: 2639 mm
- 2016-2025: 2730 mm



Figur 3–2: Oversikt årsnedbør de siste femti årene, data hentet fra Norsk klimaservicesenter

Værstasjon Søyland I Gjesdal registrerer verken temperatur eller vind. Det er ingen andre værstasjoner tilknyttet Norsk klimaservicesenter i aktuell nærhet til utredningsområdet som registrerer temperatur eller vind.

3.2 Klima i endring

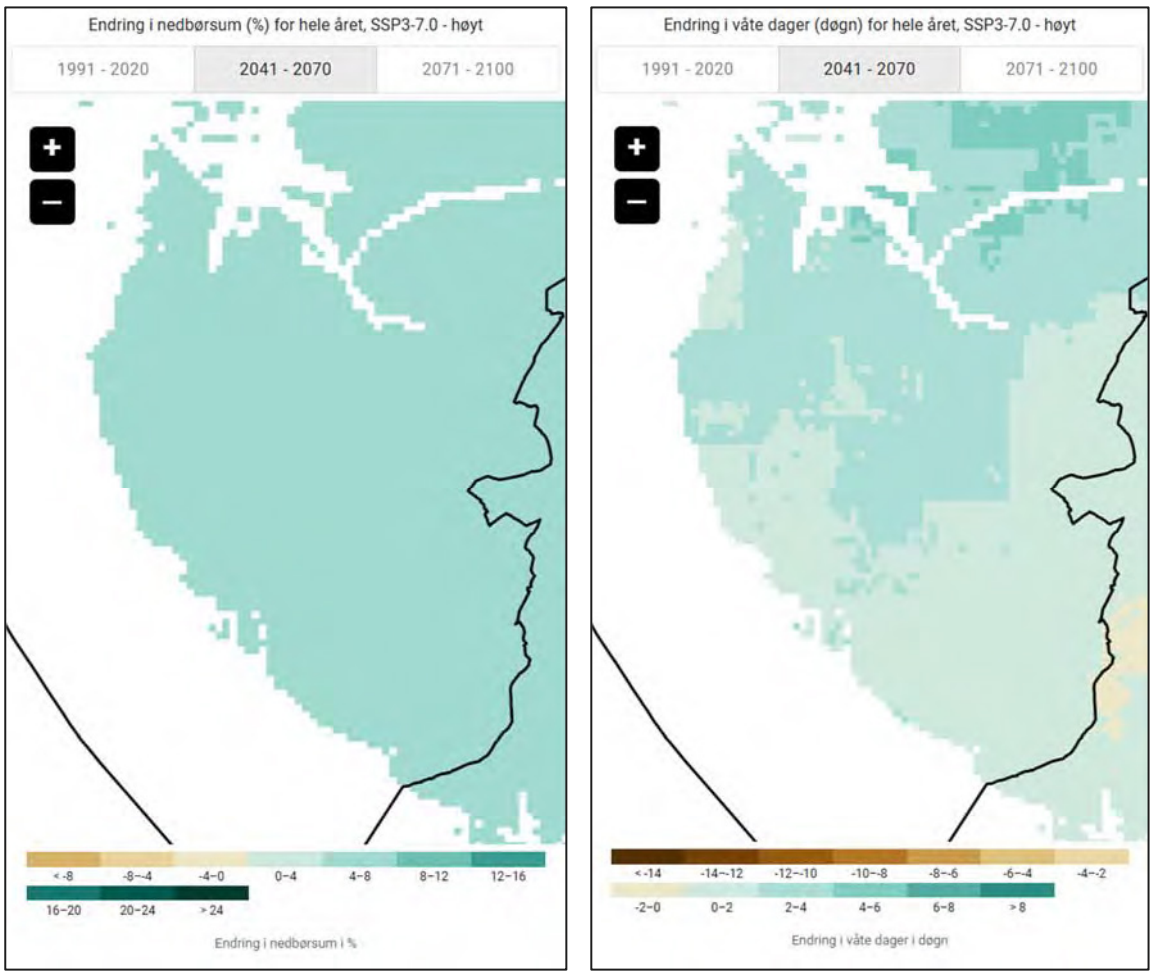
Mellomstrand inngår i klimaprofil Rogaland, hvor det forventes kraftig nedbør og økte problemer med overvann blant annet (Norsk klimaservicesenter, 2026). Følgende informasjon og figurer i dette notatet er sammenligninger mellom referanseperioden 1991–2020 og klimascenarier for perioden 2041–2070 under SSP3-7.0 - høyt utslippsscenario.

3.2.1 Nedbør

Det forventes for Mellomstrand en økning av både mengde nedbør i totalsum, mulig noe endring i antall dager med regn, og en økning i antall døgn og perioder med kraftig nedbør (figur 3-3 og 3-4). Det er ikke forventet noe større endring i fordampning (Norsk klimaservicesenter, 2026).

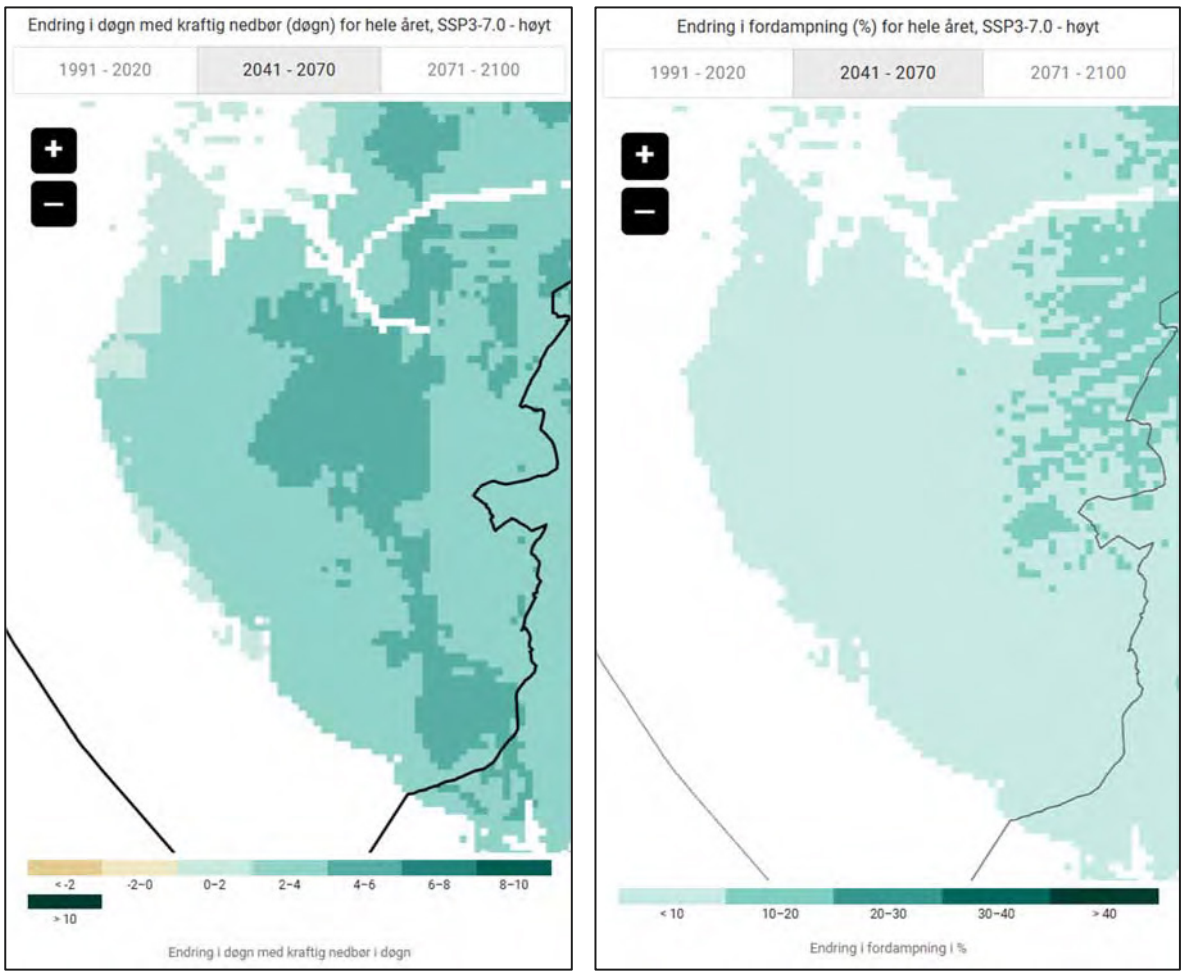
Dager med regn defineres som døgn per år med 1 mm nedbør eller mer. Kraftig nedbør defineres som døgn per år/sesong med 20 mm nedbør eller mer (Norsk klimaservicesenter, 2025).

- Det forventes en endring på 4-8 prosent mer i nedbørssum.
- For dager med regn vil endringen være 0-4 flere dager i året med nedbør, sammenlignet med referanseperioden på 165-205 dager.
- Det forventes en endring med 2-6 flere dager med kraftig nedbør, sammenlignet med referanseperioden på 30-50 dager.
- Det forventes en endring på under 10 prosent mm som fordampes, sammenlignet med referansen på 200-400 mm fordampning i året.



Figur 3–3: Skjermdump av kart som viser endring i nedbørsum (venstre) og endring i våte dager (høyre), hentet fra Norsk klimaservicesenter[1]

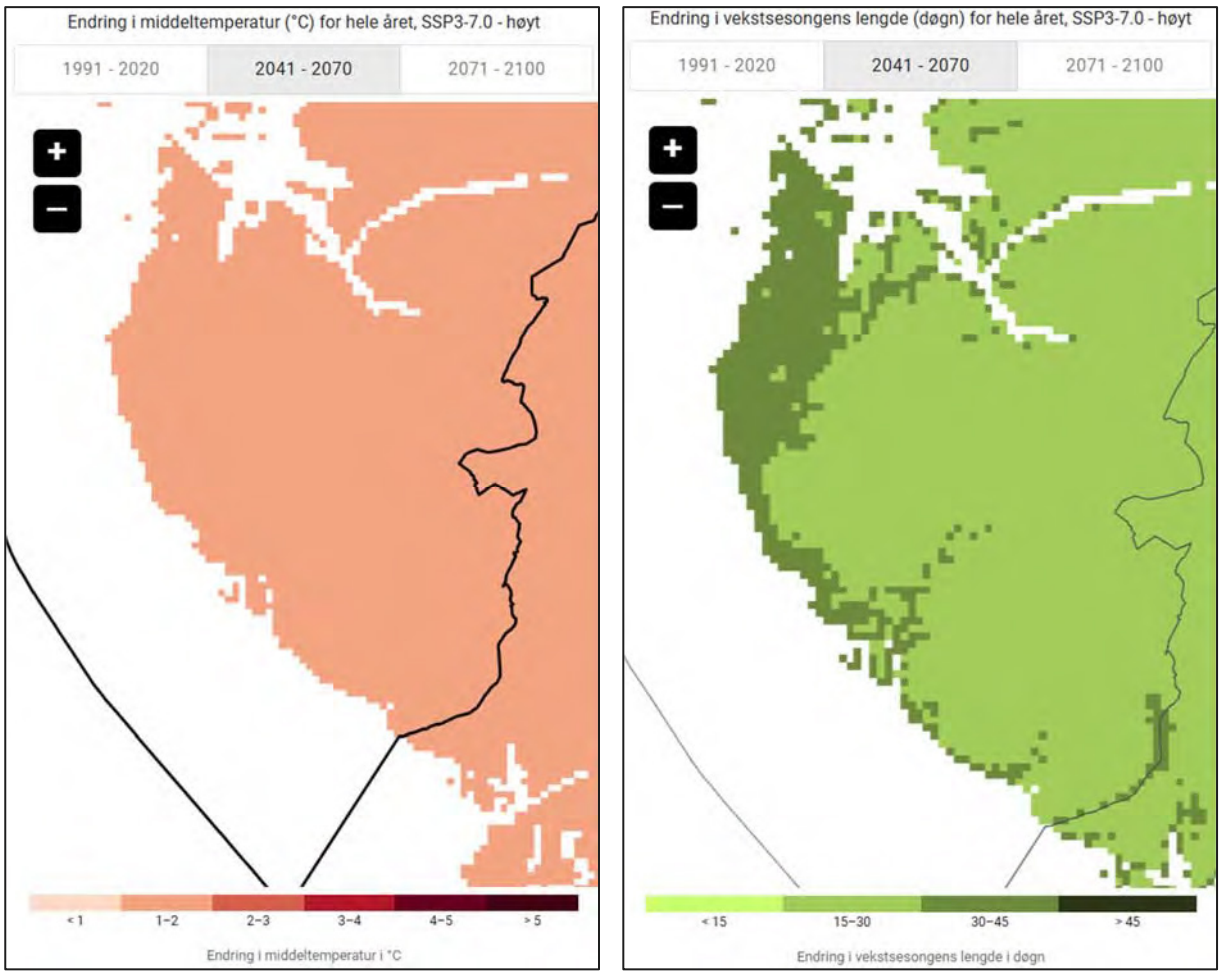
[1] https://klimaservicesenter.no/climateprojections



Figur 3–4: Skjermdump av kart som viser endring i døgn med kraftig nedbør (venstre) og endring i fordampning (høyre), hentet fra Norsk klimaservicesenter

3.2.2 Temperatur

For Rogaland og Mellomstrand forventes det en endring av middeltemperaturen med en økning på 1-2 °C sammenlignet med referansetemperaturen på 4-8 °C (se figur 3-5) (Norsk klimaservicesenter, 2026). Vekstsesongens lengde er forventet å øke med 15-30 døgn, sammenlignet med referanseperioden på rundt 180 døgn (se figur 3-6). Vekstsesongen betegnes som perioden i året med døgnmiddeltemperaturer over 5 °C (Norsk klimaservicesenter, 2025).



Figur 3–5 og 3-6: Skjermdump av kart som viser endring av middeltemperatur (venstre) og endring av vekstsesongens lengde (høyre), hentet fra Norsk klimaservicesenter

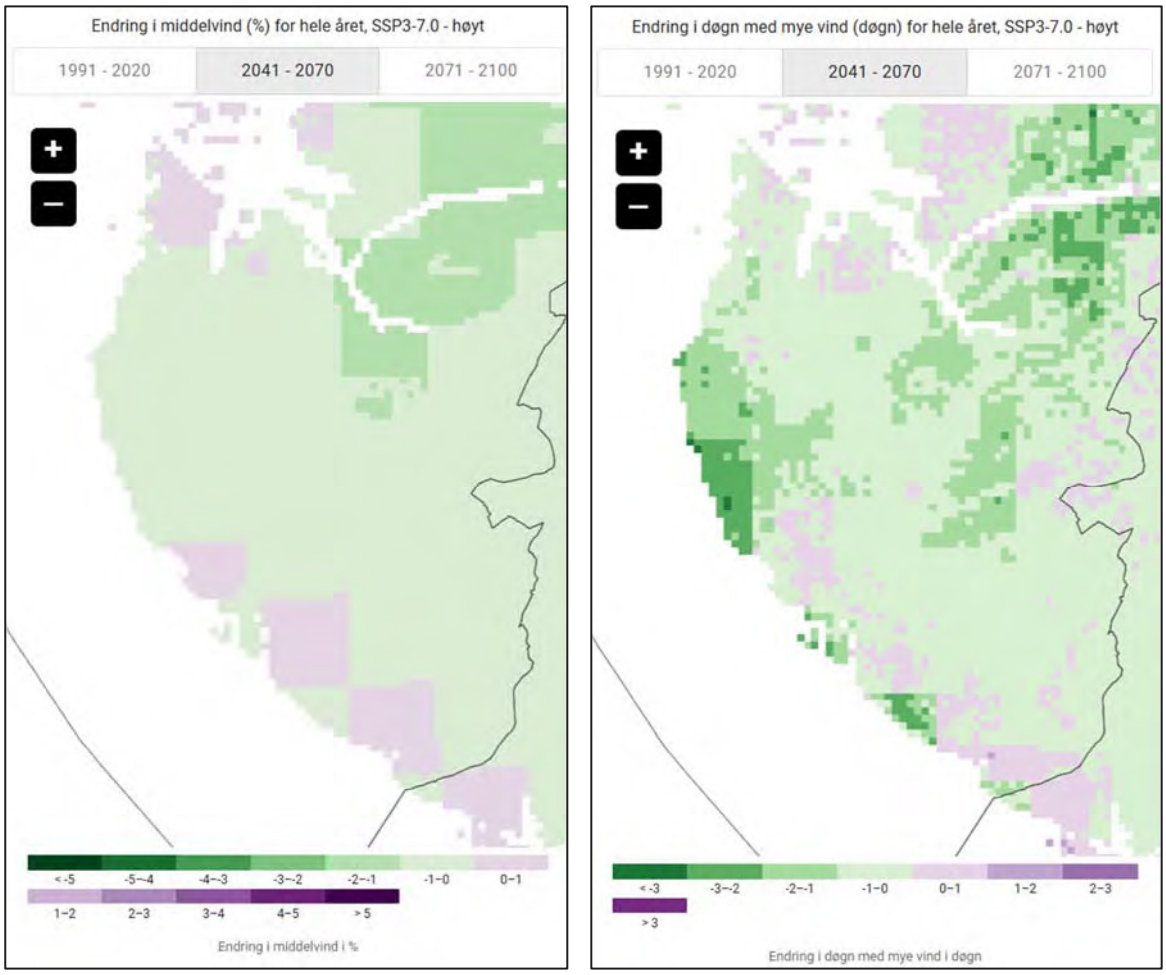
3.2.3 Lyn

Norsk klimaservicesenter har ikke indekser på framskrivninger av lynaktivitet. Det er ganske kompliserte prosesser som leder til lyn, Fuktighet i skyene samt vertikale temperaturforskjeller, kombinert med store spenningsforskjeller mellom sky og bakke er en begrenset forklaring på utløsende årsaker for lynaktivitet (Anita Verpe Dyrrdal, 2025).

Kombinasjonen av de øvrige klimaendringene fremstår som faktorer som kan føre til økt lynaktivitet i prosjektområdet. Et varmere klima og mer kraftige nedbør gir potensielt mer lyn, men den økte temperaturen vil også kunne føre til færre ispartikler i skyene som igjen kan gi mindre lyn (Sanna, 2025). Det er derfor vanskelig å si noe om hvordan klimaendringene vil påvirke lynaktiviteten.

3.2.4 Vind

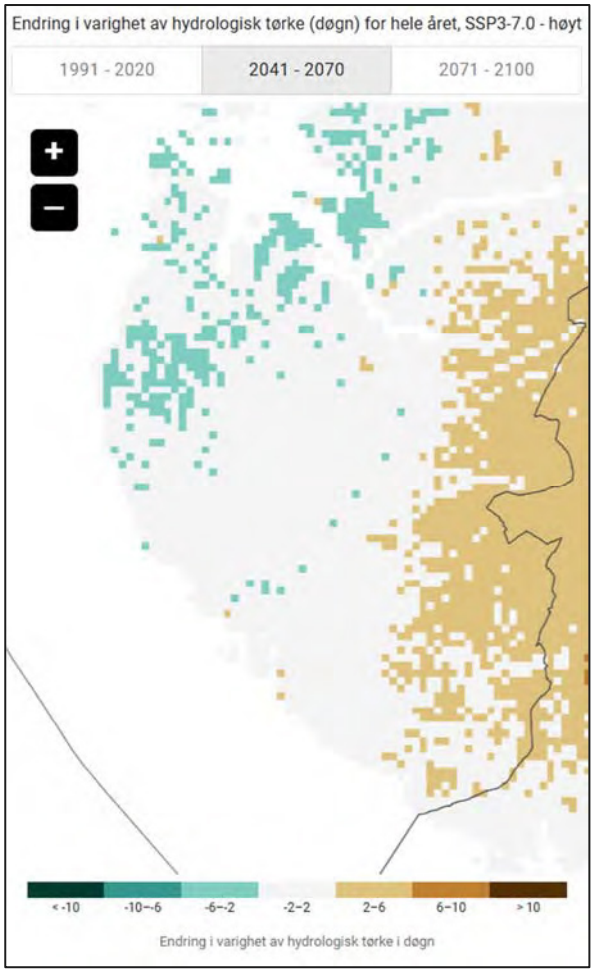
Det forventes en noe mindre mengde vind i tiden fremover (se figur 3-6). Både endring av styrken på middelvind og antall døgn med mye vind, altså døgn i året hvor døgnmiddelvinden er sterkere enn 10 m/s (Norsk klimaservicesenter, 2026) (Norsk klimaservicesenter, 2025).



Figur 3–6: Skjermdump av kart som viser endring i middelvind (venstre) og endring i døgn med vind (høyre), hentet fra Norsk klimaservicesenter

3.2.5 Tørke

Det forventes ingen endringer til litt flere dager med tørke, en naturlig sammenheng med påvirkningen fra de andre forventede klimaendringene (se figur 3-7) (Norsk klimaservicesenter, 2026).



Figur 3–7: Skjermdump av kart som viser endring i varighet av hydrologisk tørke, hentet fra Norsk klimaservicesenter

4 Naturfare

4.1 Fare for skred

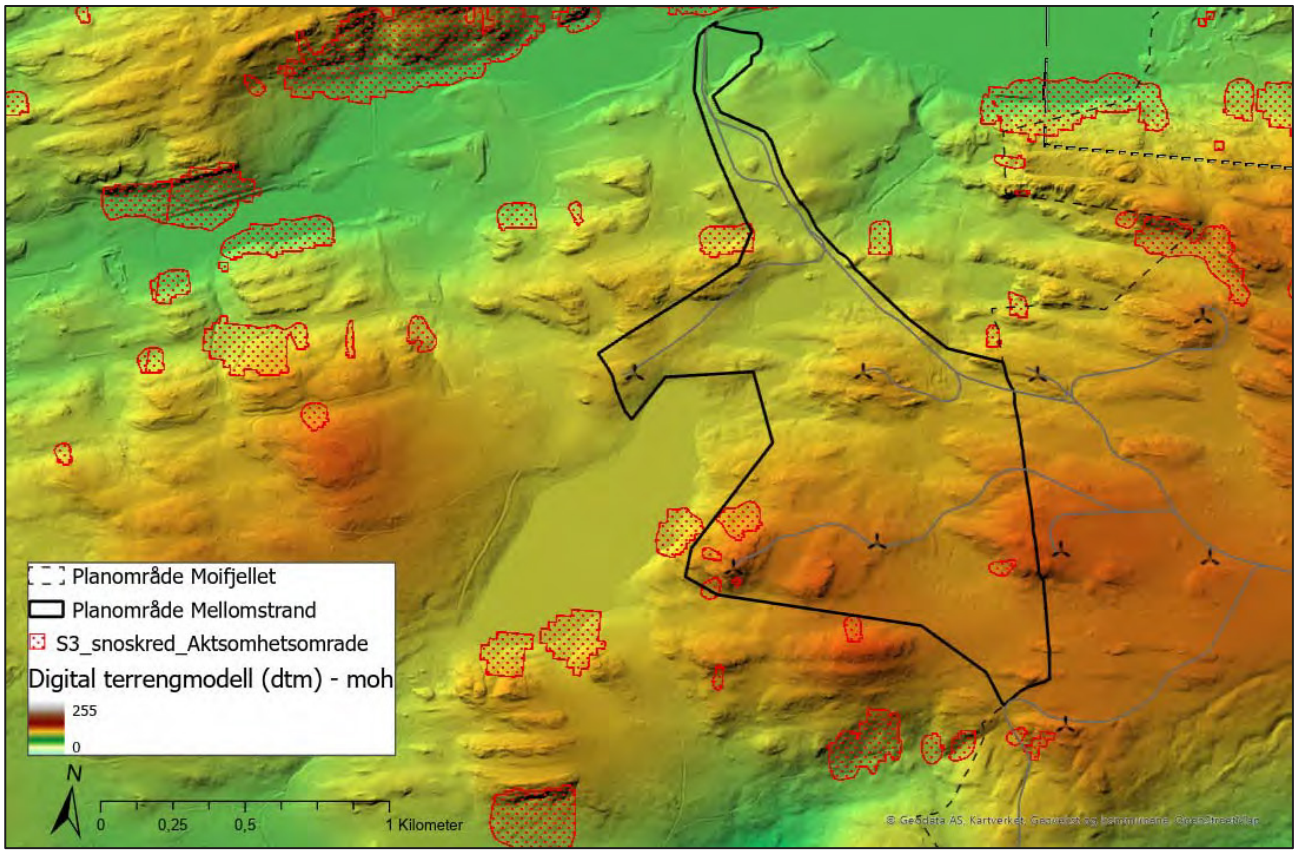
Topografien i planområdet inkluderer noen bratte parti, men planområdet inkluderer kun få areal som innehar risiko for snøskred. Det er ingen areal som i dag er antatt å inneha fare for jord og flomskred (se figur 4-1), selv om grunnforholdene tilsier potensiale for masseforflytning (se figur 4-3 og 4-4). Planområdet domineres av jorddekte flater, også der det er en viss grad av helling, med innslag av organiske jordlag (torv).

4.2 Fare for flom

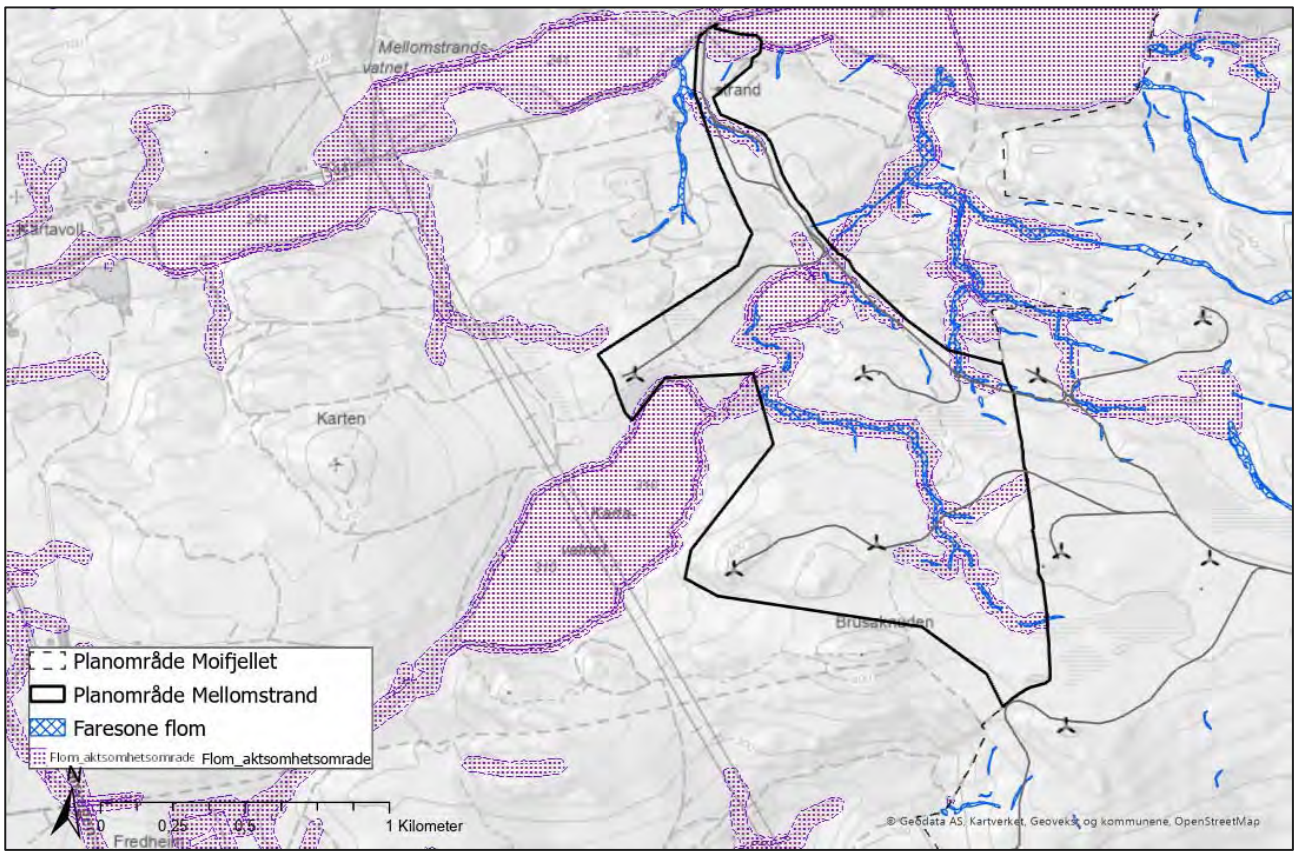
Innenfor planområdet er det arealer som kan være utsatt for flomfare (se figur 4-2). Se rapport 10265688-01-RIVass-RAP-001 for mer info.

Arealavgrensing av myr (se figur 4-3 og 4-4) og dybdemålinger ifm. KU klimagassutslipp viser flere myrer med dybder fra 38 cm til over 200 cm, med gjennomsnitt på 85 cm, se rapporten om klimagassutslipp (10252119-01-RIM-RAP-001) for mer info. Disse myrene er i dag med på å redusere risiko for avrenning og dermed også erosjon og flom.

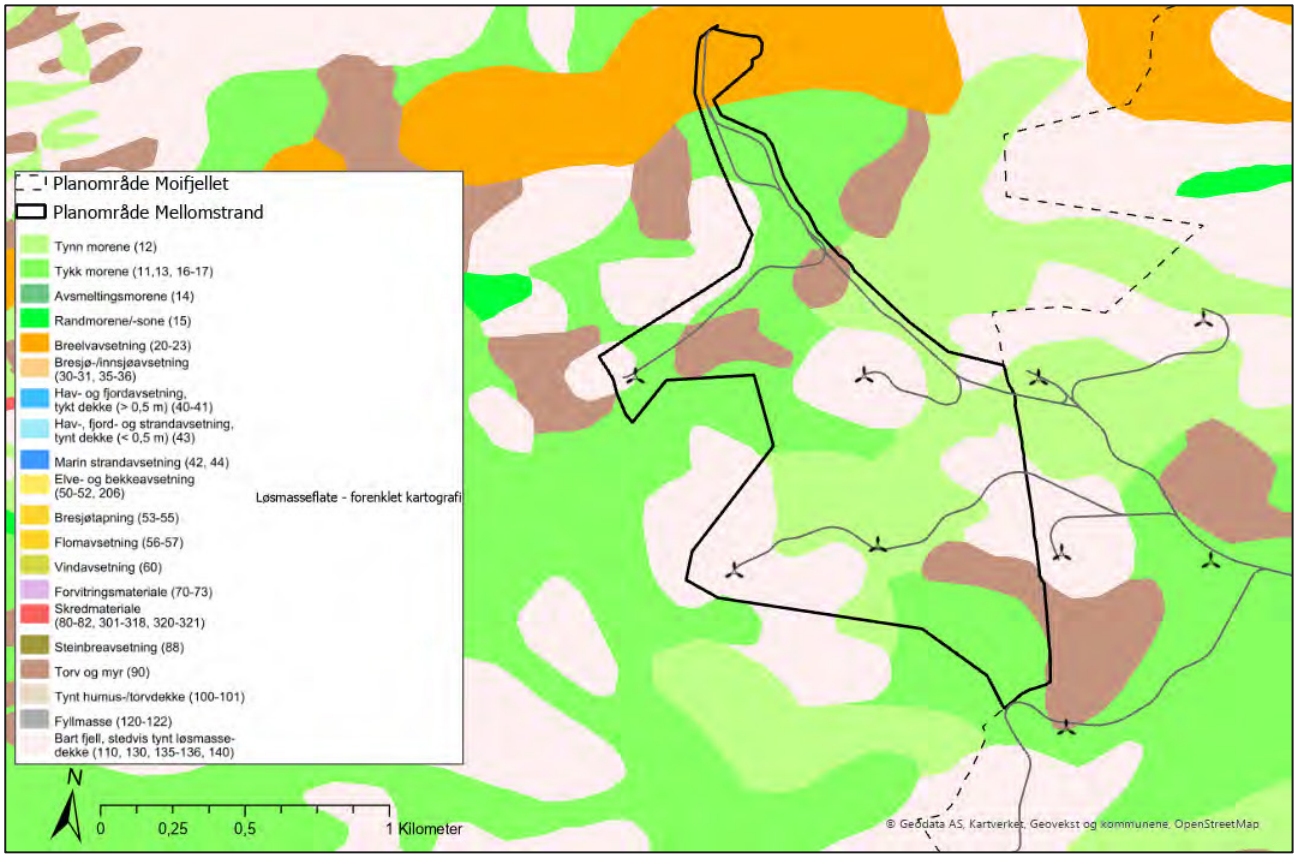
Resten av planområdet oppe på selve vindparken, som ikke er fjell i dagen, er dominert av kystlynghei med lavere mektighet enn 30 cm og landbruksareal som inkluderer naturbeitemark (se figur 4-3 og 4-4). Se rapport fagutredning naturmangfold (10265688-01-RIM-RAP-003) for mer info. Også kystlynghei og naturbeitemark er naturtyper som binder jordmasser og dermed hindrer erosjon. Jordbruksbetingede naturtyper som kystlynghei og naturbeite vil ved god hevd, redusere risiko for villbranner ved at dødt materiale (brensel) fjernes/beites.



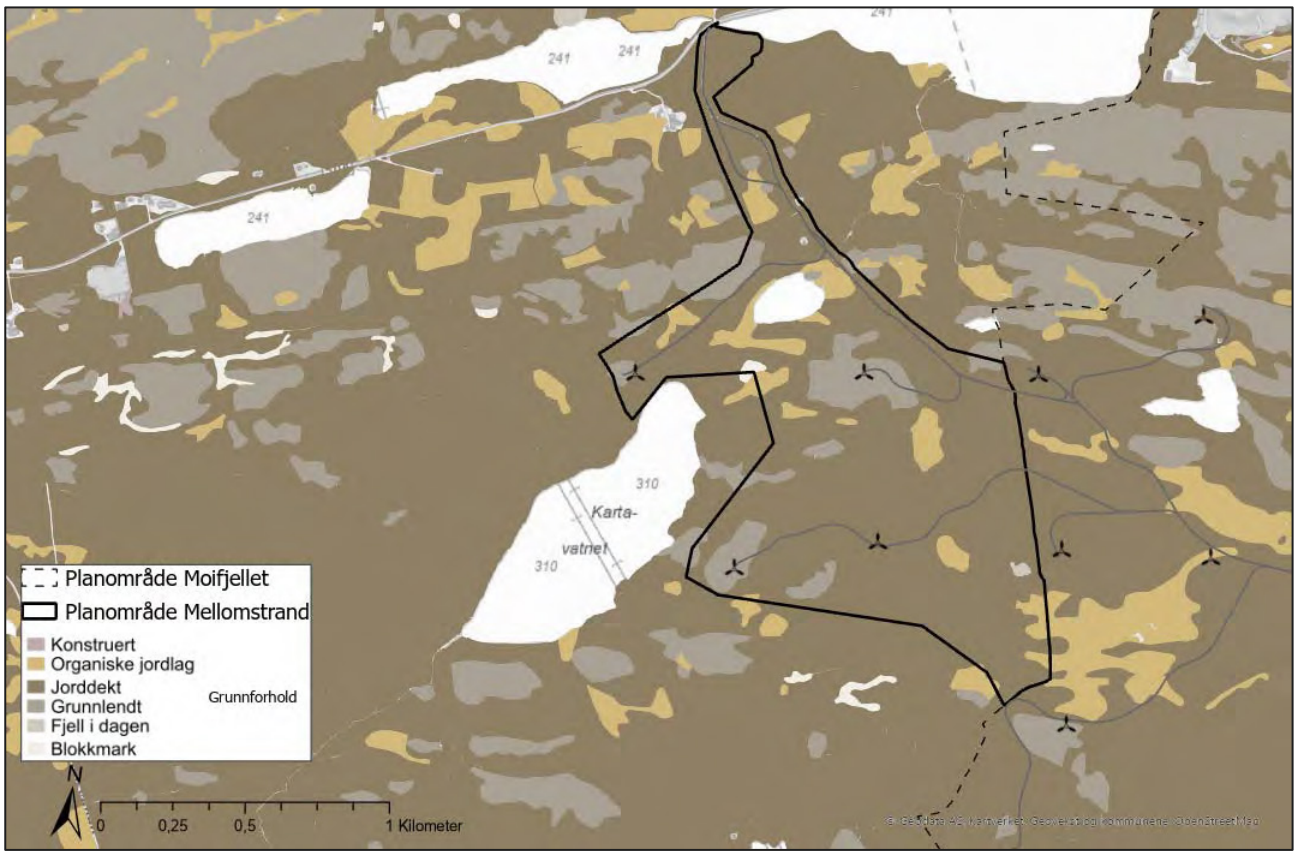
Figur 4–1: Topografi i planområdet og aktsomhetssoner for snøskred. Informasjon hentet fra https://hoydedata.no og https://kart.nve.no/



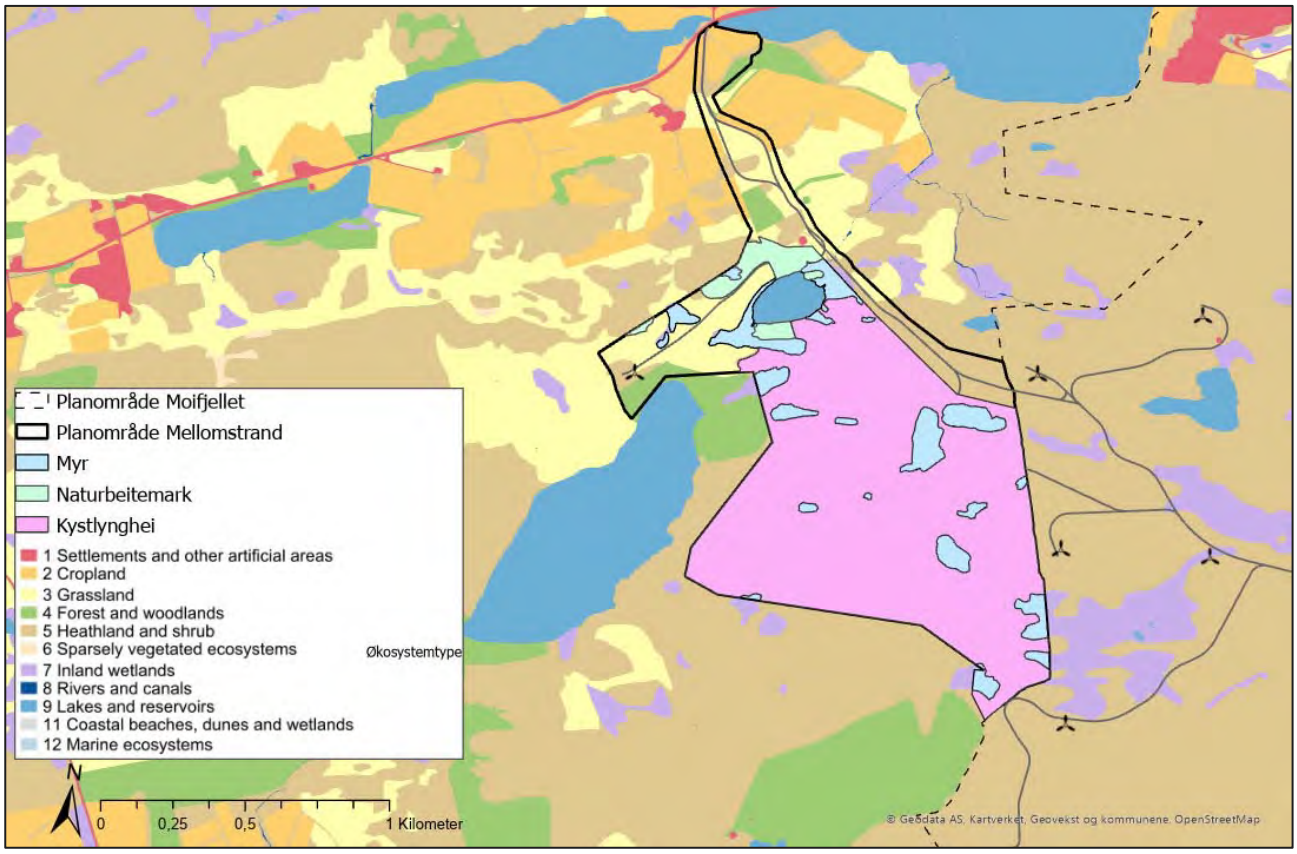
Figur 4–2: Modellert faresone for flom og aktsomhetssoner for flom. Informasjon hentet fra 10265688-01-RIVass-RAP-001 og https://kart.nve.no/



Figur 4–3: Grunnforhold i planområde - løsmassekart, informasjon hentet fra https://geo.ngu.no



Figur 4–4: Grunnforhold i planområdet, informasjon hentet fra Grunnkart for arealregnskap: https://wms.nibio.no/



Figur 4–5: Naturtyper og økosystem i planområdet. Naturtyper kartlagt av Multiconsult i 2025; økosystem: informasjon hentet fra Grunnkart for arealregnskap: https://wms.nibio.no/

5 Mulige konsekvenser av klimaendringer

5.1 Iskast

Klimaendringer kan ha påvirkning på mengden og hyppigheten av iskast fra turbiner, men her er det flere faktorer som spiller inn. Is dannes på konstruksjoner under bestemte kombinasjoner av temperatur, fuktighet og vind. Høyere middeltemperatur vil sannsynligvis gjøre sesongen for fare for ising kortere, men økt nedbør og fuktighet kan igjen føre til mer ising. Sesongen hvor faren for iskast er størst er hovedsakelig november til april (Noregs vassdrags- og energidirektorat, 2025).

5.2 Villbranner

Generelt vil økende temperatur, tidligere snøsmelting og tørkeperioder øke faren for vilbranner. De fleste naturbranner i Norge er relativt små, men de kan under spesielle forhold som ved langvarig tørke og kraftig vind, raskt utvikle seg til store og ukontrollerte branner (Storaunet, 2021).

Mellomstrand vil ut fra forventet klimaendringer oppleve en mindre fare for at villbrann kan oppstå og eventuelt spre seg. Både en endring til våtere klima med flere døgn med nedbør, samt en nedgang av vind vil kunne utgjøre en positiv endring i risikoen for villbranner. Det er heller ikke forventet noe stor endring av fordampning eller flere dager med tørke som konsekvens av klimaendringer (Norsk klimaservicesenter, 2026).

5.3 Lynnedslag

Økt lynaktivitet gir økt fare for lynnedslag, som kan både føre til utløsning av branner og skader på konstruksjoner. Rotorbladene skal ha lynavledere, men det har vært erfaringer med at disse ikke har fungert, som dermed har resultert lynnedslag og havari. Om lynavlederne funger slik de skal, vil ikke økt lynaktivitet direkte føre til konsekvenser for vindkraftverk.

Tilleggsinformasjon som er aktuelt for prosjektområde, er faktumet om kraftigere lynnedslag om vinteren. Lynnedslag på vinteren inntreffer mest langs kysten på Vestlandet og nordover, dette kan inntreffe når havet er varmere enn lufta og byggeskyer dannes. Byggeskyer driver inn mot kysten og kan danne lynaktivitet når de stiger over land. Lynnedslagene kan da komme fra en lavere del av skyen, noe som gjør at mer elektrisitet er igjen og effekten av lynnedslagene blir større sammenlignet med lynnedslag om sommeren (Thrane, 2023). Kraftigere lynnedslag kan gjøre større skader på vindkraftverket om lynavledere ikke fungerer.

6 Klimatilpasning

Utforming av tiltaket med nødvendige hensyn til blant annet klimaendringer og ekstremværhendelser blir ivaretatt i prosjektering - tverrfaglig og av landskapsarkitekt med nødvendig kompetanse.

6.1 Økt nedbør, flom- og skredfare

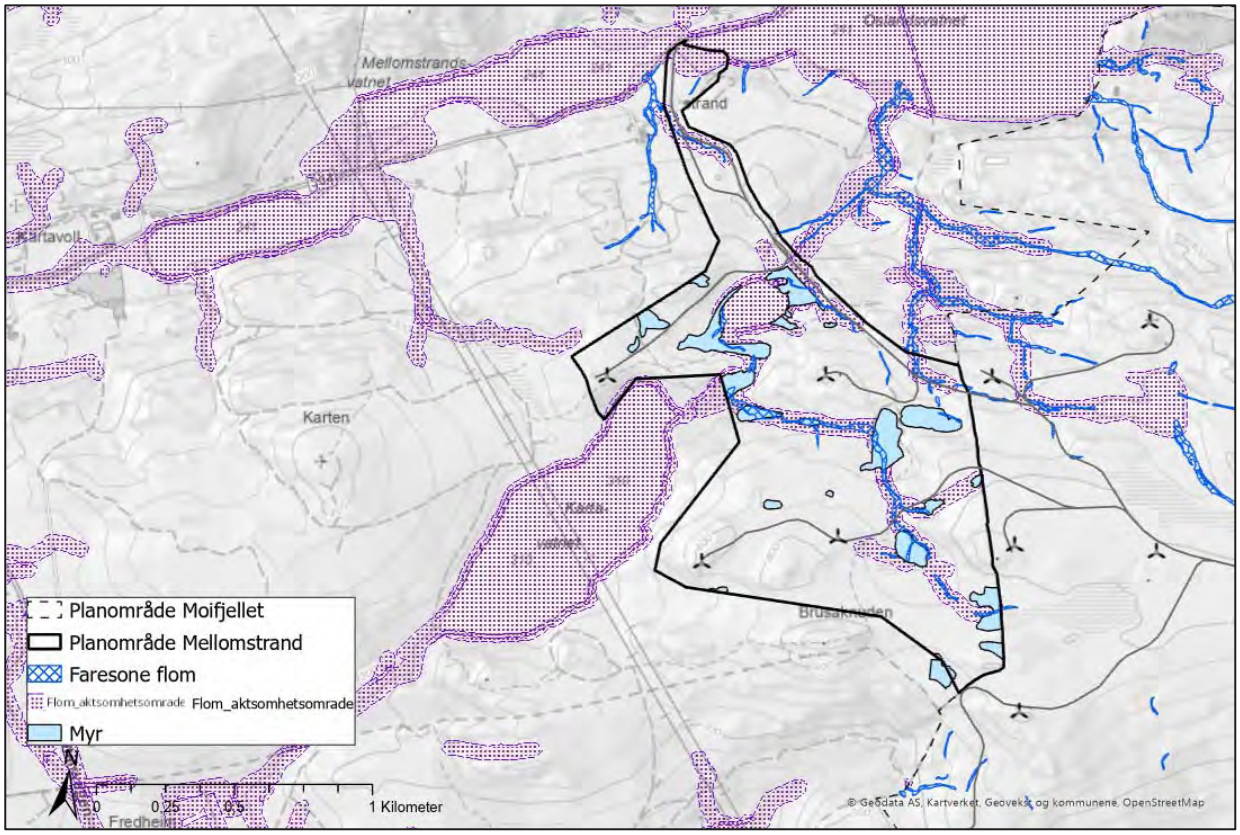
Beregninger og dimensjonering for håndtering av overvann med høye alternativer for nasjonale klimaframskrivninger skal legges til grunn i prosjektering og mulig byggingen av nytt vindkraftverk. Dette må ses i sammenheng med eksisterende våtmark, vassdrag og innsjøer. Åpne vannveier skal prioriteres der det er mulig, alternative vannveier og utvidelse av de eksisterende må hensyntas i utforming av området.

Helninger og muligheter for utsklidning av masser/skred må også vurderes i utformingen og valg av plassering på veg og andre konstruksjoner. Selv om mastene festes i fjell, må det hensyntas mulig skred som kan inntreffe og føre til ødeleggelser og kritiske skader med følge-effekter. Mer info og vurdering av dette i delrapport om flom og overvann (*10265688-01-RIVass-RAP-001)*.

6.2 Naturbaserte løsninger

Det skal ikke uten begrunnelse, velges bort naturbaserte løsninger som for eksempel bevaring av våtmark og åpne vassdrag i prosjektet. Relevante naturbaserte løsninger er ivaretagelse av myr og vassdrag, men også kystlynghei og naturbeitemark. Se figur 6-1 som viser kartlagt myr innenfor planområdet.

Ivaretagelse av myr i planområdet er viktig for å unngå økt risiko for skader i forbindelse med økt risiko for flom. Myr har stort vannlagringskapasitet og vil derfor være en viktig naturbasert løsning for håndtering og forebygging av utfordringer knyttet til overvann.



Figur 6–1: Kart over planområde med flom-aktsomhetssoner markert myrer

Midlertidige inngrep skal re-arronderes og tilrettelegges i så måte at naturlig revegetering framskyndes. Vegetasjon er med på å redusere fare for jord- og løsmasseskred, blant annet ved at røtter har en stabiliserende effekt på masser (Norges vassdrags- og energidirektorat, 2018).

6.3 Vedlikehold og skjøtsel

En viktig tilpasning er jevne kontroller og utskifting av deler som blir svekket av påkjenninger av et mer utfordrende klima (Hansen, 2025). Det vil også være nødvendig å følge opp at overvannshåndtering foregår på tiltenkt metode, med blant annet at vannveier holdes åpne og ikke endres utover det som er forventet over tid.

Det skal utarbeides en skjøtselsplan for kystlynghei, dette er viktig med tanke på fordelen med en velskjøttet kystlynghei vil redusere risiko for lyngbrann og bevaring av en trua naturtype. Skjøtselsplan må utarbeides i samarbeid med grunneiere / bønder som skjøtter lyngheia og med hjelp av økolog med kompetanse på kulturlandskapspleie. Ved utførelse av lyngbrenning må det avtales med grunneier, brannvesen og med nødvendig mannskap, slukkeutstyr, erfaring og kompetanse til rådighet (Miljødirektoratet, 2013).

7 Muligheter

Det er mulig å se på overvannet i forbindelse med økt nedbør som en ressurs. Gjennom helhetlig og gjennomtenkt planlegging og utforming kan vann bidra til bedre forhold for biologisk mangfold i og rundt akvatiske økosystemer, samt gi bedre og flere rekreasjonsmuligheter (se eksempel i figur 7-1).



Figur 7–1: Foto fra tilløpselv til Hagavatnet, tatt august 2024 av Multiconsult

8 Konsekvenser for tredjepart

Tredjepart er vurdert i dette notatet til å omfatte parter som blir berørt av tiltaket, men som ikke har noen mulighet for direkte å påvirke eller bestemme. Et klima i endring vil kunne påvirke alle, men tiltak som gjøres i forbindelse med klimatilpasning av mulig nye Mellomstrand vindkraftverk anses som samlet sett positive også for tredjepart. Klimapåslag i prosjektering av blant annet vannhåndtering kan utgjøre en noe større visuell virkning på blant annet turgåere i område, men konsekvenser av overvann som ikke lar seg håndtere vil ofte være enda mer dramatisk og gi både større konsekvenser og kunne påvirke flere tredjeparter. Stikkrenner osv. vil anlegges på sånn måte at den visuelle virkningen blir minst mulig. Iskast er en tydelig konsekvens for tredjepart som må hensyntas. Her er tiltak som bedre skilting og mulig overvåkning av fare for iskast med varsel etter sannsynligheten og farenivå aktuelle, for eksempel med dynamiske fareskilt.

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Fagrapport:

Transportanalyse

MOIFJELLET

TRANSPORT STUDY



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From
Mammoet Denmark
Sjællandsvej 5
7330 Brande
Denmark

Phone
045 9718 1346

To
Statkraft AS
Lilleaker
NO-2016 Oslo
Norway

Our reference 16000451
Your reference N/A

Date 29 August 2024
Subject Moifjellet Transport Study

Dear Recipient,

Please find our comments related to the forwarded route survey report for the Moifjellet project.

The comments focus on the reasons why the Port of Risavika have been considered as port of entry instead of Port of Sirevåg or Port of Egersund.

Sincerely yours,

Mammoet Denmark

Anders Bräuner
Senior Sales and Tendering Manager

Mammoet Denmark

Thomas Simonsen
Operations Manager

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1.2 Project proposed port / Risavika 6

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TASK SUMMARY

Route survey from nearest suitable port to Moifjellet project location.

Mammoet were handed the task of identifying the nearest suitable port for transporting wind turbine components to the Moifjellet project.

Furthermore, Mammoet were responsible for performing a route survey to determine the required road modifications for allowing a smooth and safe transport execution of the oversized components.

The Siemens Gamesa Renewable Energy 5X platform, with a 170-meter rotor, was used throughout the route survey, as this is the longest blade currently being transported in the Nordic countries. The difference in transport dimensions for the Vestas Wind System V162 or Nordex N163 blades are minimum, why no major changes to the route should be expected if considering these makes and models instead.

The following tower design was considered for the survey.

SECTION:	WEIGHT:	LENGTH:	LARGE Ø:	SMALL Ø:
Base section	84.958 kg	13.564 mm	4.700 mm	4.700 mm
Mid-1 section	84.328 kg	18.200 mm	4.700 mm	4.436 mm
Mid-2 section	84.548 kg	23.800 mm	4.436 mm	4.427 mm
Mid-3 section	71.771 kg	26.880 mm	4.427 mm	4.021 mm
Top section	63.863 kg	29.970 mm	4.021 mm	3.503 mm

The route survey was executed on the 31st of August and 1st of September, during when major road construction works were ongoing on the E39 south of Stavanger. As the purpose of the construction work is to upgrade the existing infrastructure no route restrictions are expected once the planned work is complete.

The considered route has been chosen based on what is most suitable and feasible considering the overall project execution but remains subject to possible restrictions set out by the Norwegian authorities.



1. PORT OF ENTRY

Ports considered for shipping in wind turbine generators for the Moifjellet project.

Mammoet have considered the following points when determining which port could be deemed most suitable as port of entry for the Moifjellet project:

- Infrastructure from the exit of the port area to the current considered access points for the site.
- Restrictions for vessels used for shipping the wind turbine generators to Norway.
- Storage capabilities for storing the wind turbine generators prior to transport.
- Handling capabilities for discharging vessel, shifting of components, and reloading prior to transport.

1.1 PORTS CONSIDERED AS UNSUITABLE

The following ports have not been considered as unsuitable due to reasons specified for each individual port.

1.1.1 Port of Sirevåg

Despite being the closest of the three considered ports, Mammoet have considered the Port of Sirevåg as unsuitable due to the following reasons.

- The oversized transports will have to travel close to Stavanger to cross the railroad tracks running between Stavanger and Egersund. This because the following crossing points cannot be considered:
  - Bridge at Brusand (https://maps.app.goo.gl/dp8NTjaSsq8HNCvt6) due to the convex radius and required width for passing.
  - Bridge near Vigrestad (https://maps.app.goo.gl/nV3Tin8pMQEo52aR8) due to height limitations.
  - Bridge in Varhaug (https://maps.app.goo.gl/6VMCvsy3rKu3Ugm89) due to the convex radius.
- The infrastructure for leaving the port of Sirevåg will require several road modifications to allow the transport to safely depart the port. This includes blasting away rock areas and widening of turns.
  - The guard fences at the bridge on Nordsjøvegen north of Sirevåg will have to be removed to allow for the oversail of the blades.
- Due to the location of the storage area, the quay, and the exit road, it will be challenging to handle the long blades in the port, while still allowing enough storage area for the tower sections and main components to be handled efficiently.
- Due to the small quay area, it will be challenging to discharge the incoming vessels carrying wind turbine components with land-based cranes, resulting in the need for geared vessels that cannot accommodate sufficient cargo.

1.1.2 Port of Egersund

The Port of Egersund is one of the ports in Norway that have handled most wind turbine components in recent time, Mammoet does however not find it suitable due to the following reasons:

- Restrictions for crossing the Eigerøy bridge.
  - Due to the development in blade lengths, a substantial amount of rocks will have to be blasted in order for the blade transport to be able to clear the right turn in the roundabout when entering the bridge.
    - Depending on how much clearance can be blasted, it may also be necessary to remove guardrails on the bridge to allow for the oversail.
  - Continuous transports exceeding 100 tons, the heaviest up to 160 tons, are not allowed to cross the bridge. This has resulted in components for the Bjerkreim project, Maakaknuten project and Stigafjellet project having to be barged pass the bridge to Langholmen.
    - Barging requirements and constraints:

        - If barging only units exceeding 100 tons, a total of 320 units will have to be barged, which could be as much as 250-300 trips to Langholmen from Port of Egersund.
        - If the longer blades must be barged across, that is an additional 120 units, which would also require a considerable long barge than the one used for the towers and main components.
        - Besides added time and costs for operating the barging setup, it also presents and increased HSE risk.
    - The area around Langholmen have been developed further since the above projects were carried out, making it more difficult to pass through. A fire station has been built at Langholmen. This could create a dangerous situation if fire trucks have to respond to an emergency at the same time as the oversized transports enter Eigerøyveien, leaving little or no space for them to pass.
    - The barging operation will have a significant operational and commercial impact on the overall project execution, due to reduced flexibility when planning transports, and the costs for setting up the needed barge setup.
- Due to the construction of new industrial facilities and roads inside the port area in Egersund, there is significant less storage area available compared to earlier, while the space required to maneuver the oversized transports during discharge has become much more restrictive.
- Besides the challenges already described for crossing the Eigerøy bridge, several locations have been identified as critical when transporting blades from Egersund:
    - Bridge at Krossmoveien (https://maps.app.goo.gl/8aeKMDAvB9ZxvTNA8), the oversail and overhang of the blade will be close to the powerlines on both side of the bridge. The guardrails will have to be removed in minimum one side to allow for the oversail of the blade.
    - House on Krossmoveien (https://maps.app.goo.gl/h5abJtJYYSHysQAKA), the blade will oversail the house, unless road can be widened, requiring blasting.
    - Left turn at E39 (https://maps.app.goo.gl/tLZH6fRWtSP9CMZb8) will have to be widened significantly, or the parking area will have to be used to drive on and a curfew arranged for the full project duration.
    - Curve in Vikeså (https://maps.app.goo.gl/P3UMPxryWt6t3G9X9), the blade will get in contact with the concrete embankment in the left side of the road.

1.2 PROJECT PROPOSED PORT / RISAVIKA

When assessing the overall possibilities and restrictions for the transport to the Moifjellet project, Mammoet would recommend shipping the components for the wind turbine to the Risavika Harbour in Stavanger.

1.2.1 Quayside and storage areas

The port in Risavika can accommodate the required vessel size for shipping in the wind turbine generators.

- Water depth, minimum 10 meters at the shallowest locations, but average is 14 meters.
- No navigational restrictions (E.g. ice, snow, height, tidal or priority).
- Quay length, up to 285 meters and with RO/RO capabilities.
- Heavy-lift quayside with up to 70 tons point loads, and remaining quay strength averaging 10 tons per square meter.
- Approximately 50.000 square meters of storage area, with a possible addition of 30.000 square meters.
    - Availability and required amount of storage area will be discussed in detail with the port when execution dates are firm.

1.2.2 Transport route to site from Risavika

Mammoet have performed a route survey from Risavika to the Moifjellet site which has been submitted to Statkraft.

Based on the route survey Mammoet finds the route from Risavika to site suitable for transporting the considered oversized components.

Mammoet also considers Risavika more suitable from a future service perspective, as sending spare parts like generators or similar loads to site via Risavika compared to Sirevåg or Egersund is a considerably more flexible solution. This because there are shore cranes available in Risavika for lifting these units on and off small coaster vessels, or they can be shipped to Risavika by use of existing RO/RO liner service vessels.

Mammoet have previously used and proven the proposed transport route from Risavika for the tower sections installed on the Skurvenuten project. This accounts for about 60% of the transport route.



2. CONCLUSION

Transport of wind turbine generators from Port of Risavika to the Moifjellet site

Based on the provided route survey report and the content of this report it can be concluded that wind turbine generators with similar dimensions and transport configurations as considered in the route survey can be safely transported to the Moifjellet wind farm from the Port of Risavika.

The above conclusion is based on obtaining permission for the proposed transport route from all relevant authorities and third-party landowners. Since blades transports with the blade-dolly system is new in Norway, this system must be approved by Statens Vegvesen.

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Route Survey

Moifjellet

SG170 - 6.0MW 115mhh

Statkraft

Rev.	Date	Change	Responsible	Checked
00	29-08-2024	First issue.	TBS-Mammoet	ABB-Mammoet

Public

MAMMOET

Introduction

The Road study was carried out to determine the extent of required road modifications for safe transportation of SG 170 6.0 MW 115MHH Wind Turbine components to Moifjellet wind park.

Project Data

Date of route survey:	Week 31 - 2024.
Responsible for route survey:	Thomas Simonsen, Mammoet.
Project name:	Moifjellet Wind Farm
Pick up point of components:	Port of Risavika
Site location:	Approx. 6 kilometres from the E39
Transport distance:	52,5 kilometres.
Turbine model:	SG 170 – 6.0 MW 115MHH
Participants in the route survey:	Thomas Simonsen, Mammoet. Anders Braüner, Mammoet
Route survey measurements is based on:	See configuration on page 4 - 5

Cargo information:

SECTION:	WEIGHT:	LENGTH:	WIDTH:	HEIGHT:
Base section	84.958 kg	13.564 mm	4.700 mm	4.700 mm
Mid-1 section	84.328 kg	18.200 mm	4.700 mm	4.436 mm
Mid-2 section	84.548 kg	23.800 mm	4.436 mm	4.427 mm
Mid-3 section	71.771 kg	26.880 mm	4.427 mm	4.021 mm
Top section	63.863 kg	29.970 mm	4.021 mm	3.503 mm
Blade	29.282 kg	83.362 mm	4.476 mm	4.000 mm

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Report layout

Google Maps links

All points in this route survey is marked with 
In order to find the specific point in this survey simply just press the icon.

Attached Files

Attached AutoCAD drawings (SPA / RM) is to illustrate the swept path and to give a detailed description of the extend of road modification on the specific point.

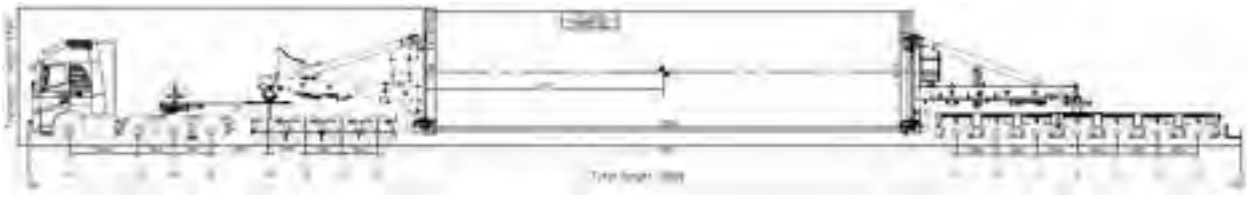
Shapes & Figures

Yellow arrow:	Indication of forward driving.
Red arrow:	Indication of reverse driving.
Red box:	Indication of street furniture, sign etc. that must be removed.
Dotted red box:	Removable signs or street furniture.
Blue area:	Indication of area that must be made suitable to drive on.
Dotted blue line:	Over sail line, removal of embankment, rocks, mountain wall etc.
Green box/line:	Indication of tree cutting/trimming.
Dotted black or red arrow:	Measurements, meters.
Dotted black line:	Measurements from/to.
Dotted red line:	Indication of over head utility/power line.
Dotted purple arrow:	Parking ban.
Dotted purple Box:	No parking

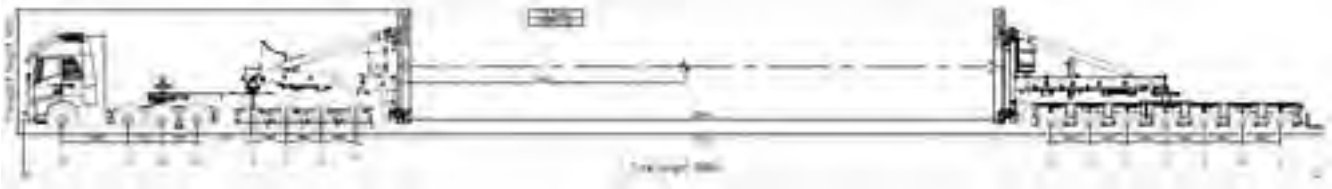
Public



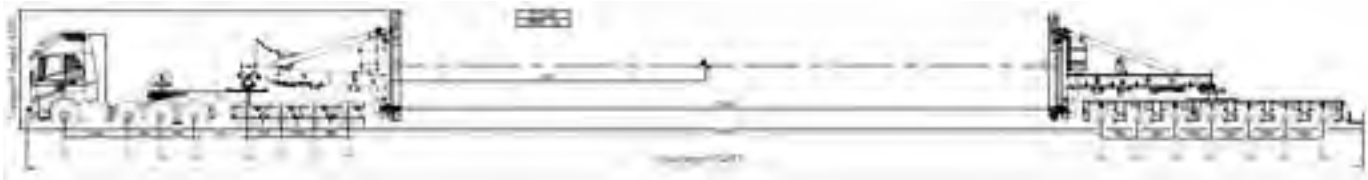
Total weight: 154.640 Kg



Total weight: 152.840 Kg



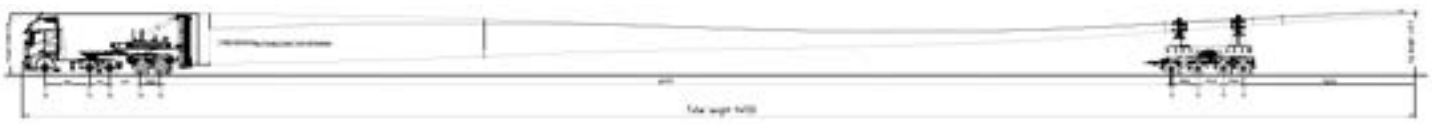
Total weight: 154.940 Kg



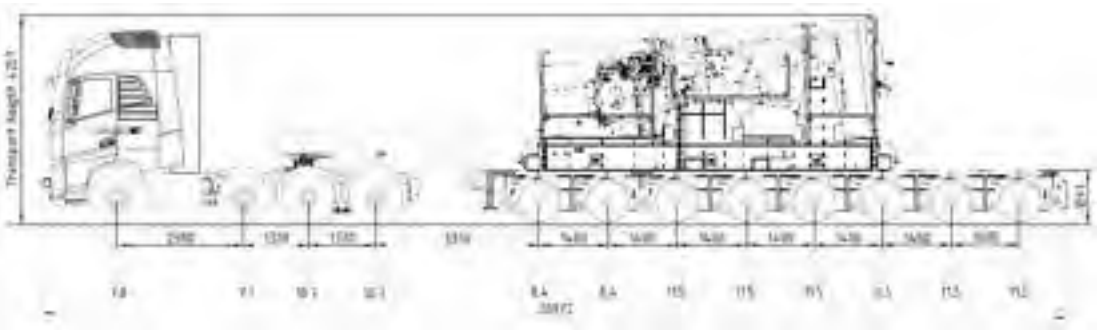
Total weight: 141.840 Kg



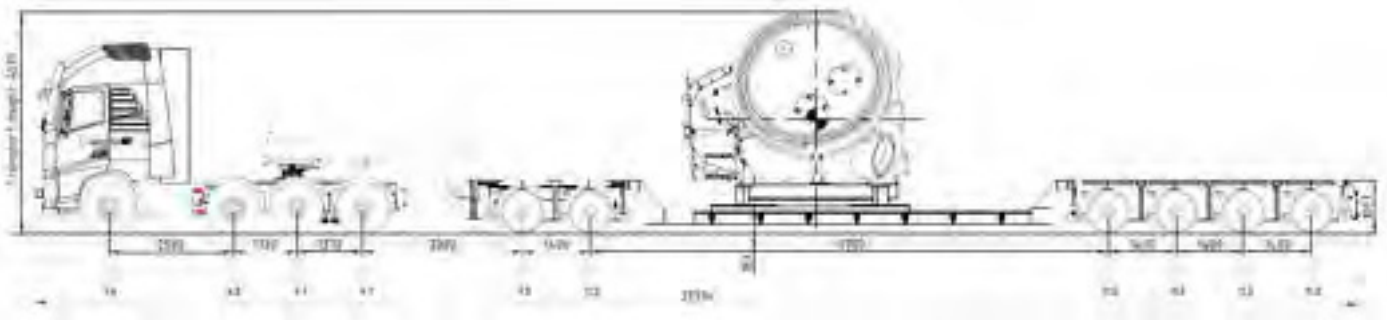
Total weight: 106.300 Kg



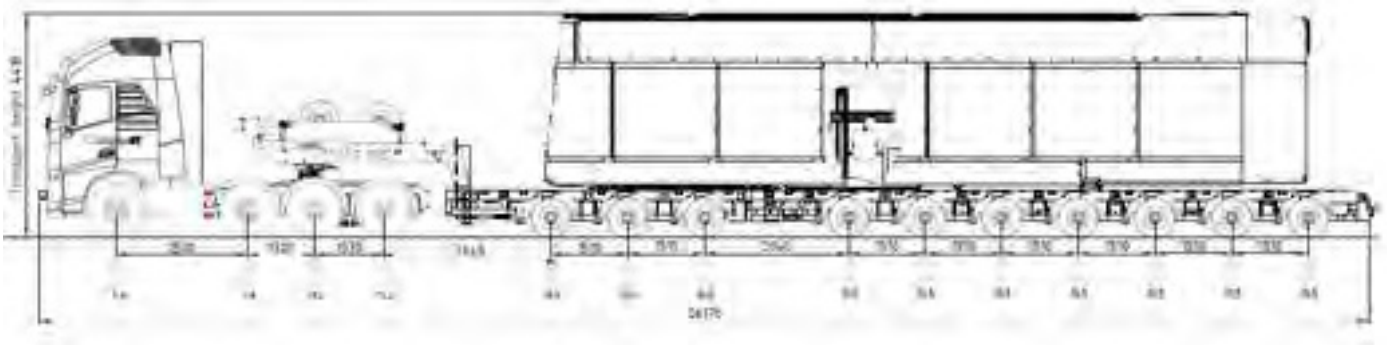
Total weight: 65.000 Kg



Total weight: 122.800 Kg



Total weight: 117.400 Kg

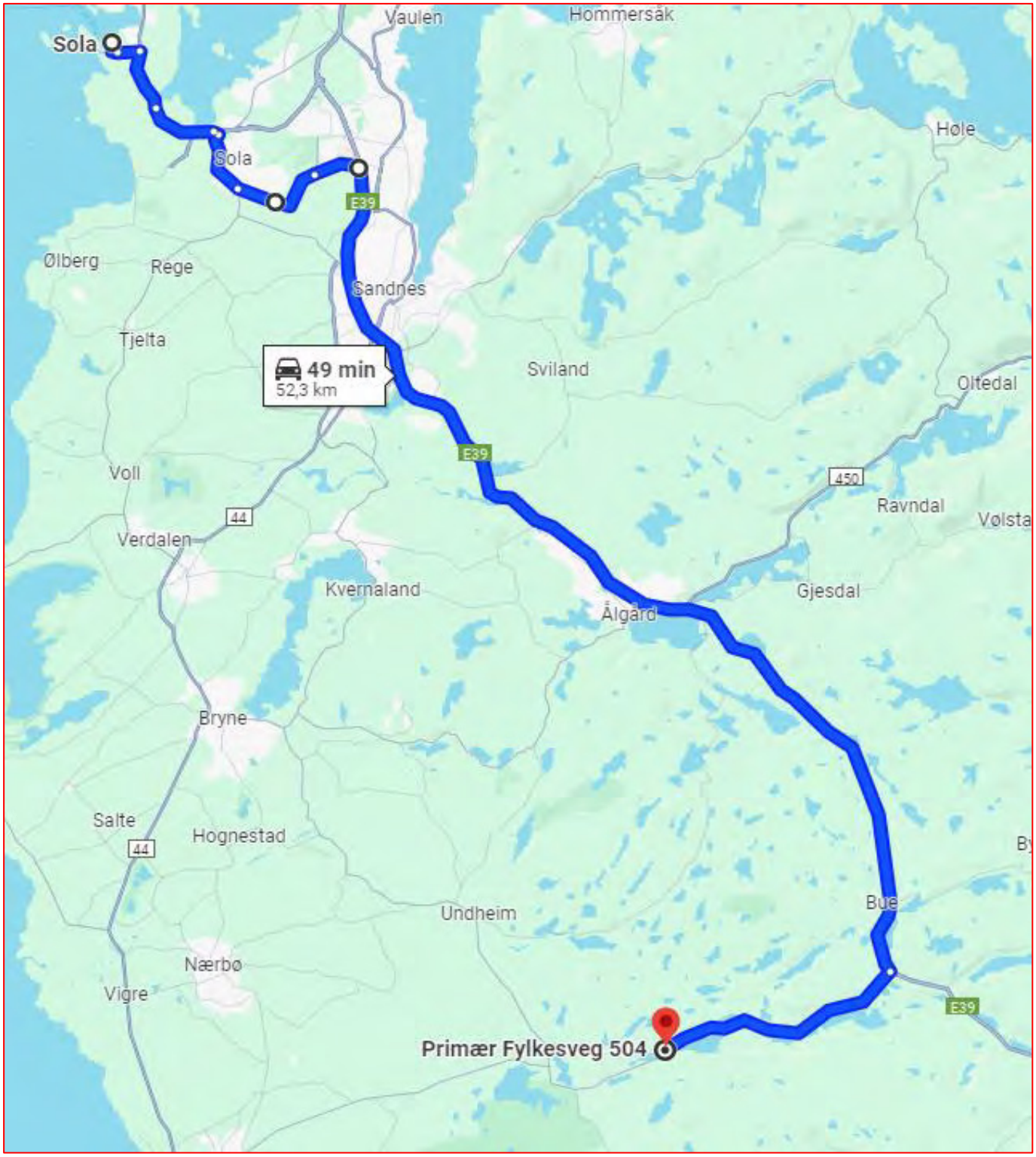


Total weight: 141.500 Kg

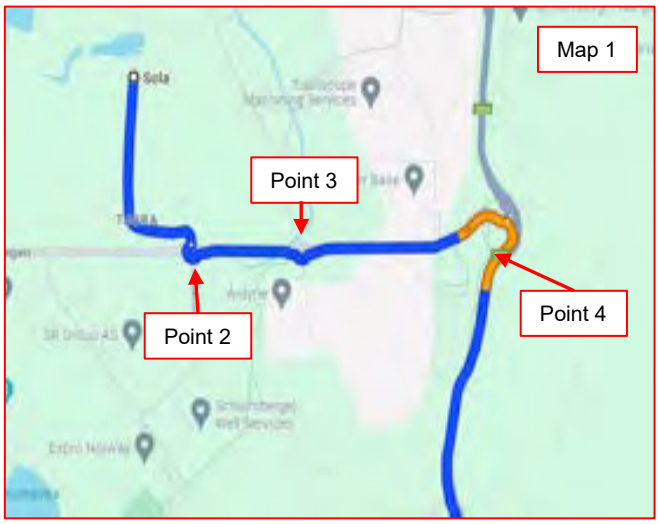
Public

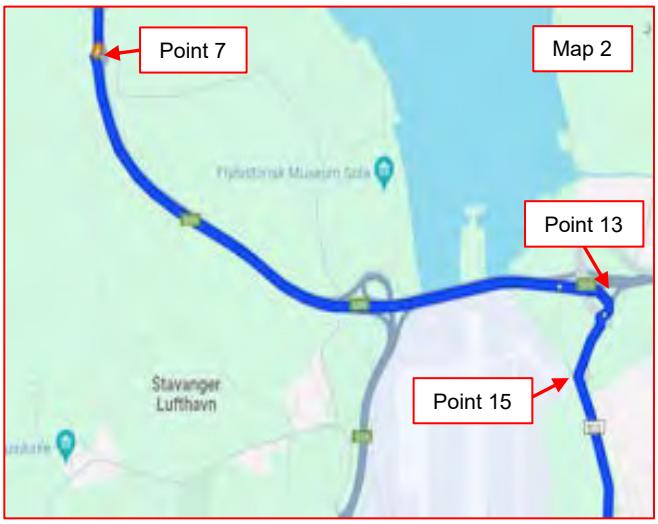
MAMMOET

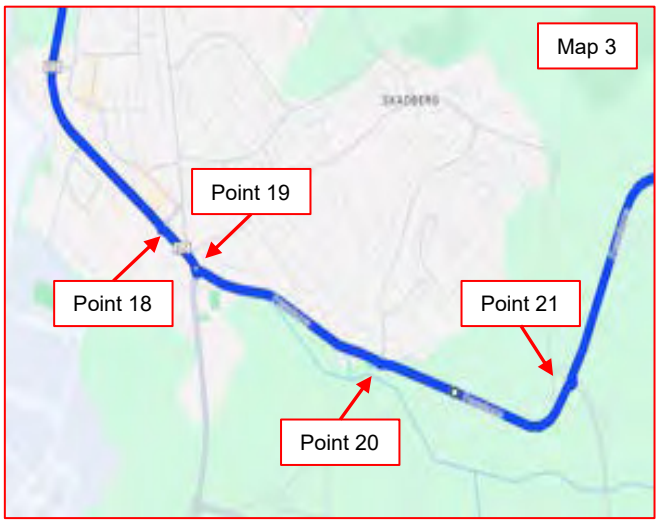
Route map from Port of Risavika to Moifjellet Wind Park.

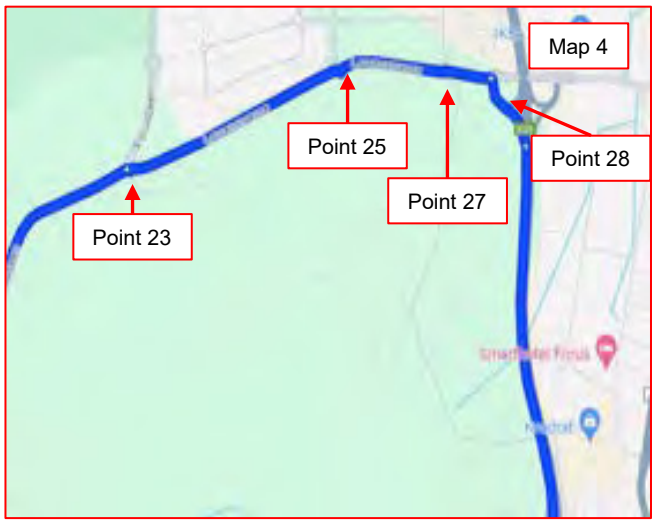


Public

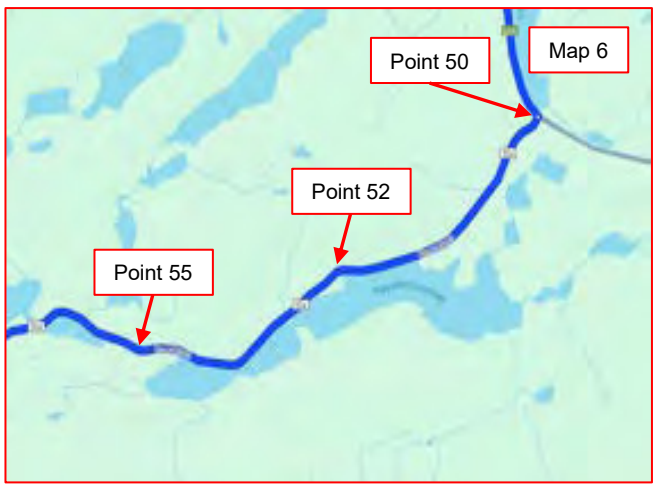

Map 1
Point 3
Point 2
Point 4


Point 7
Map 2
Point 13
Stavanger
Lufthavn
Point 15


Map 3
Point 19
Point 18
Point 21
Point 20

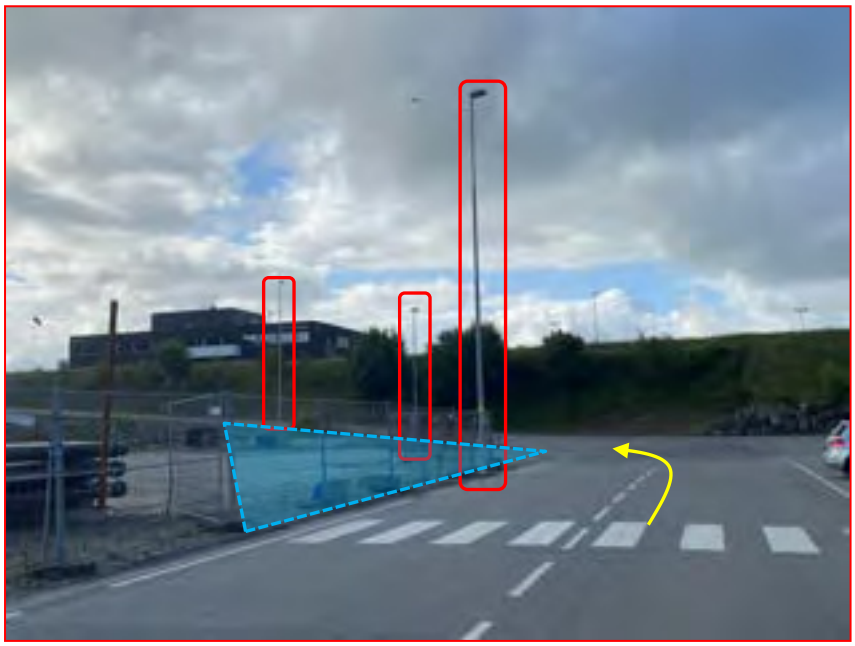

Map 4
Point 25
Point 28
Point 27
Point 23


Point 42
Map 5
Point 43
Point 45


Point 50
Map 6
Point 52
Point 55

Public

Point 1 - Exit at Port of Risavika near Tjora

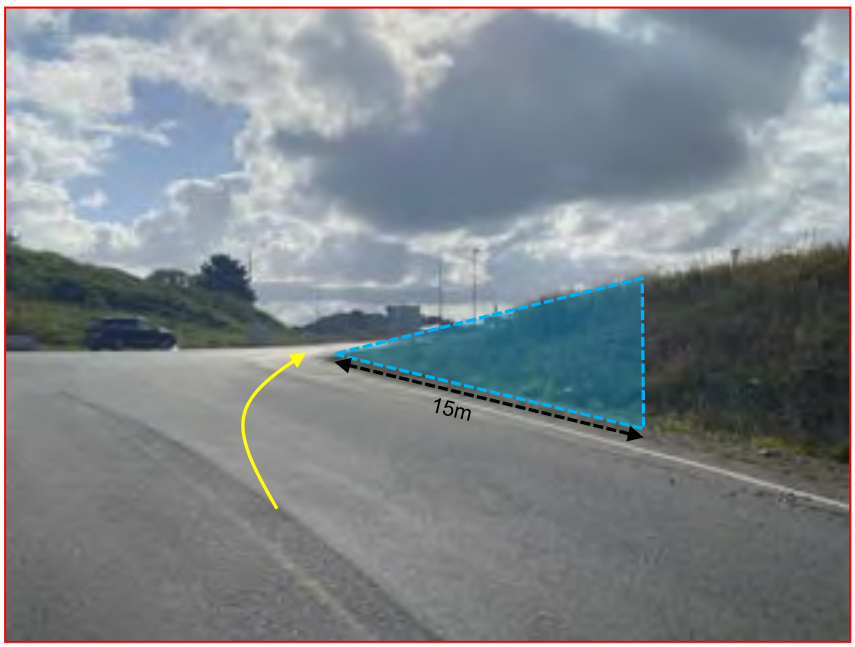


Actions or Info

Transports will turn left towards the exit of the port.

- 3 light poles must be removed to allow for oversail.
- Fence must be removed to allow over sail.

Point 2.1 – Exit at Port of Risavika near Tjora



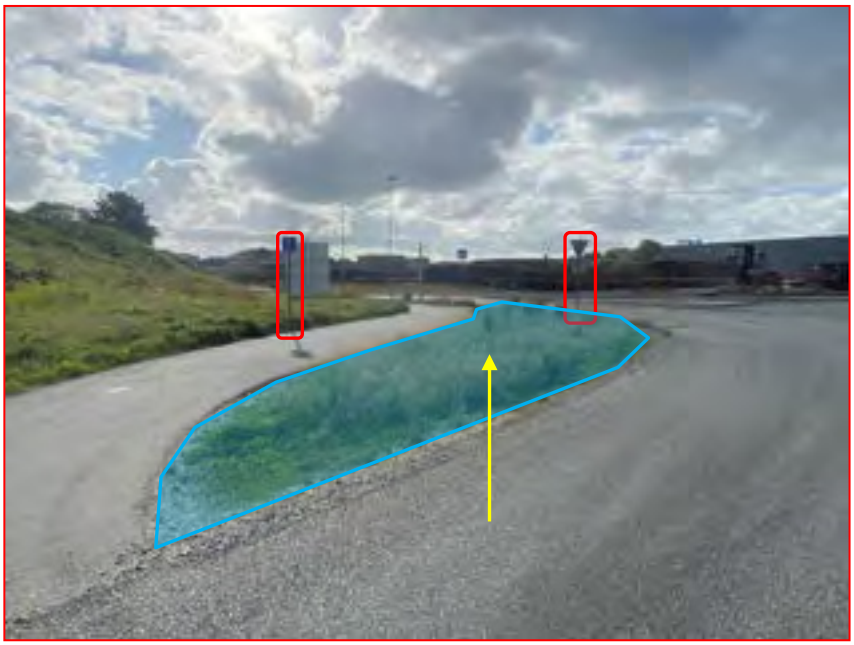
Actions or Info

Transports will enter the roundabout coming from the port of Risavika.

- Embankment must be lovered down to road level to allwo for oversail.

See attached PDF file: Point 2.

Point 2.2 - Exit Port of Tananger onto Kontinentalvegen near Tjora



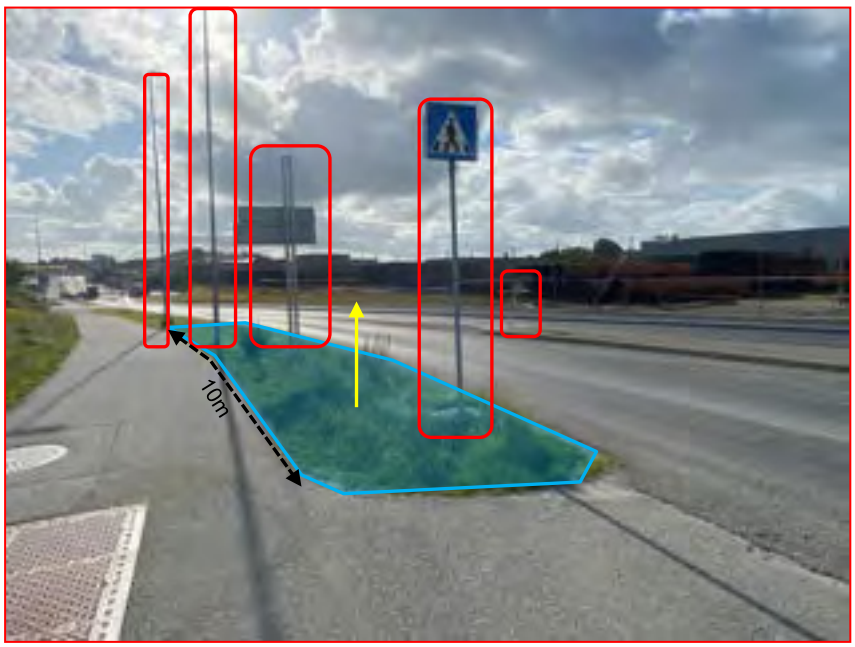
Actions or Info

The transports will turn left in the roundabout.

- Driving against flow of traffic requried.
- 2 signs must be made removable to allow for oversail.
- The grass verge must be in road level and made suitable to drive on.

See attached PDF file: Point 2.

Point 2.3 - Exit Port of Tananger onto Kontinentalvegen near Tanager



Actions or Info

The transports will turn left in the roundabout.

- Driving against flow of traffic requried.
- 3 signs must be made removable to allow for oversail.
- 2 lamp posts must be removed to allow for oversail.
- The grass verge must be in road level and made suitable to drive on.

See attached PDF file: Point 2.

Point 3 – Kontinentalvegen near Tanager



Actions or Info

The transports will go straight in the roundabout.

- 1 sign must be made removable to allow for blade overhang.

Point 4 – Kontinentalvegen onto Route 509 near Tanager



Actions or Info

The transports will turn right towards the airport.

- The roundabout is currently under construction, but no further restrictions expected upon completion.
- 2 signs must be made removable to allow for blade overhang/oversail.

Point 5 – Route 509 near Snøde

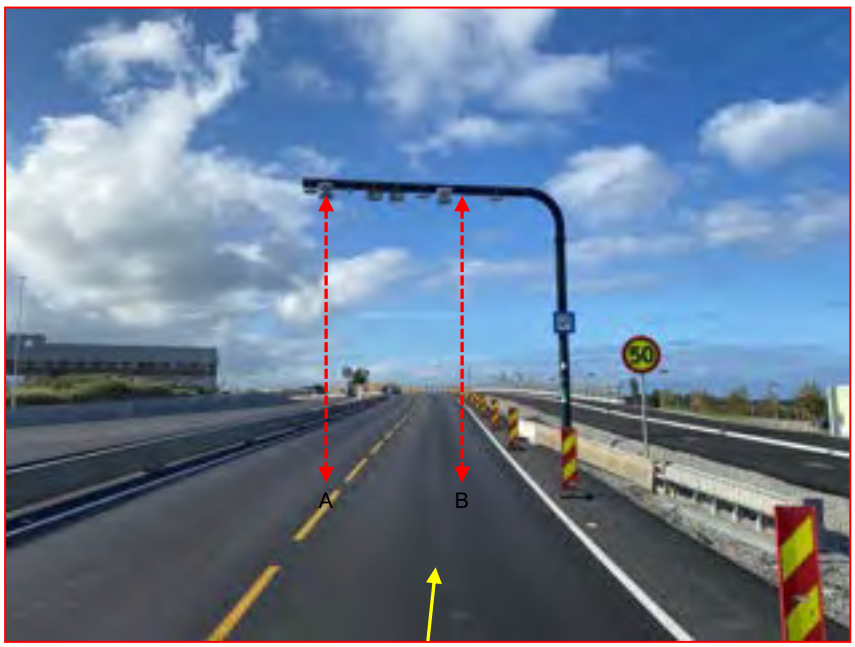


Actions or Info

The transports will continue towards the airport on route 509.

- Route 509 is currently construction, but no restrictions expected upon completion, as the current road is being upgraded.

Point 6 – Route 509 near Snøde



Actions or Info

The transports will continue towards the airport on route 509.

- Obstacle clearances:

A. 6,87m
B. 6,90m

Point 7 – Route 509 near Snøde

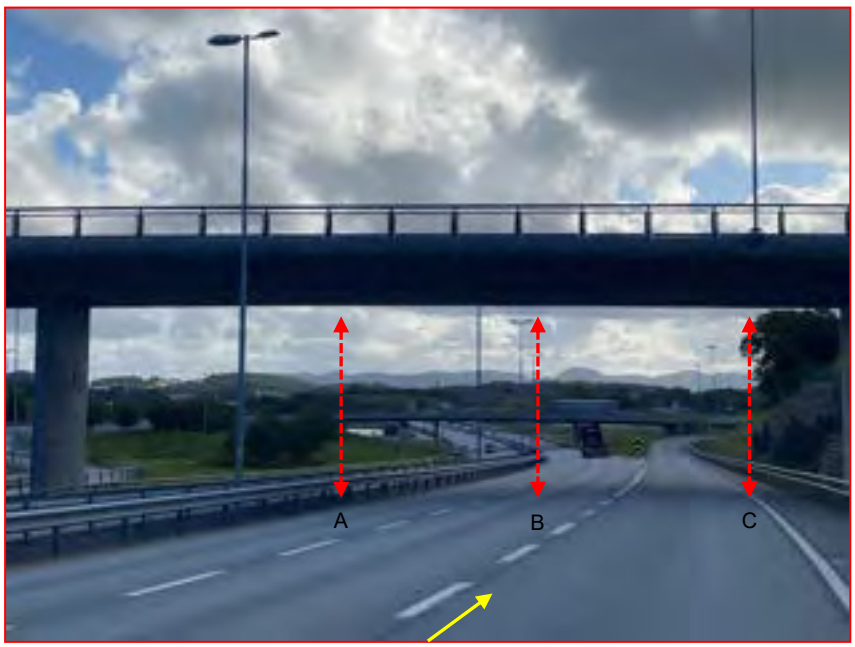


Actions or Info

The transports will pass through the roundabout in their own side of the road.

- 1 sign must be made removable to allow for blade overhang.
- Vegetation in center of roundabout must be trimmed to a maximum height of 0,8 meters above streel level.

Point 8 – Route 509 near Sola



Actions or Info

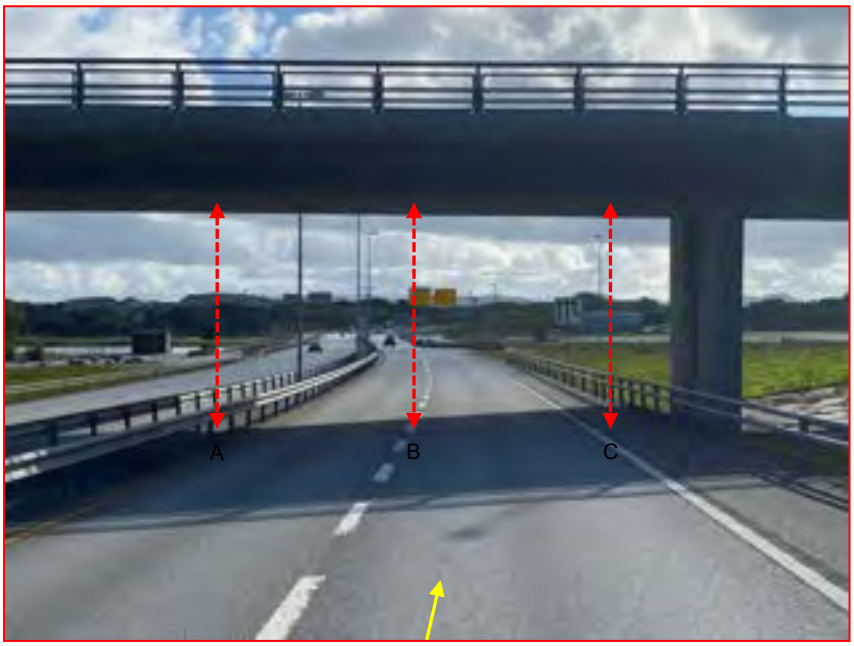
The transports will continue towards the airport on route 509.

- Obstacle clearances:

A. 6,74m
B. 6,52m
C. 6,34m

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Point 9 – Route 509 near Sola



Actions or Info

The transports will continue towards the airport on route 509.

- Obstacle clearances:

A. 6,74m
B. 6,52m
C. 6,34m

Point 10 – Route 509 near Sola



Actions or Info

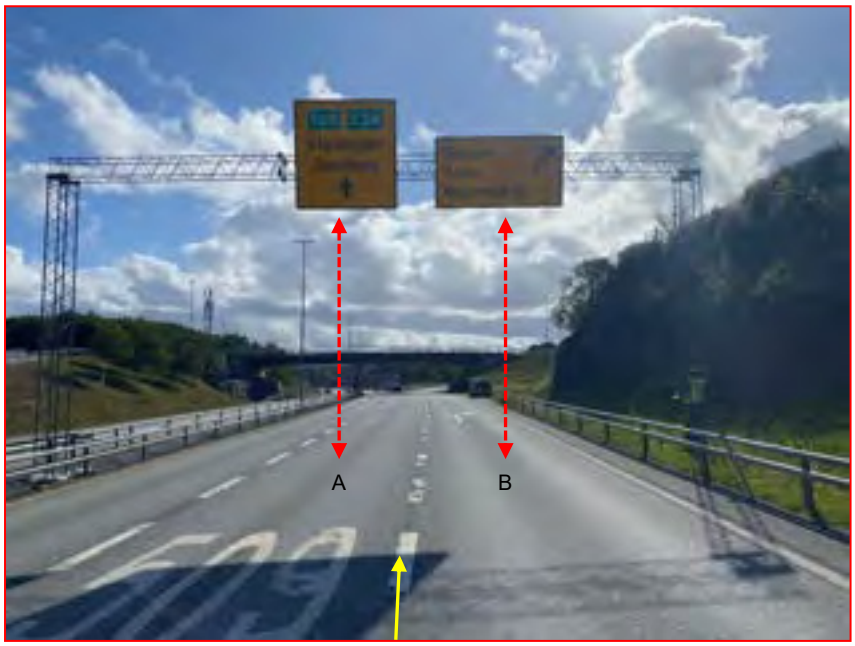
The transports will on route 509 passing the airport.

- Obstacle clearances:

A. 5,96m
B. 5,90m

Public

Point 11 – Route 509 near Sola



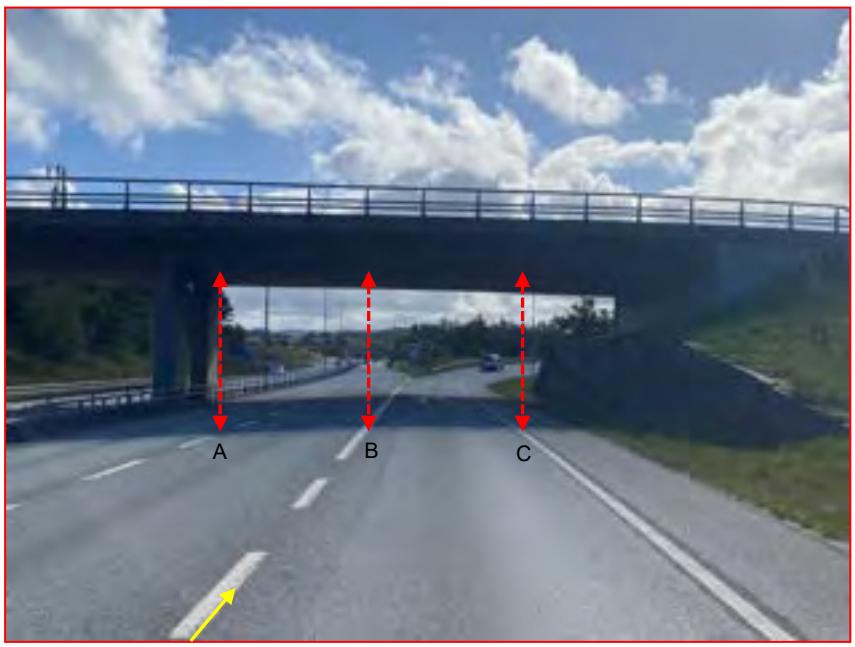
Actions or Info

The tranpsorts will prepare to leave route 509 at the junction towards route 510.

- Obstacle clearances:

A. 5,73m
B. 5,88m

Point 12 – Route 509 near Sola



Actions or Info

The tranpsorts will prepare to leave route 509 at the junction towards route 510

Obstacle clearances:

A. 5,25m
B. 5,30m
C. 5,21m

Point 13.1 – Route 509 onto Route 510 near Sola



Actions or Info

The transports will enter the junction leading towards route 510.

- 2 signs in the right side of the road must be made removable to allow for blade overhang.
- 1 light pole must be removed to allow for blade overhang.
- 3 signs in the left side of the road must be lowered to 1,5m to allow for blade oversail.

See attached PDF file: Point 13.

Point 13.2 – Route 509 onto Route 510 near Sola



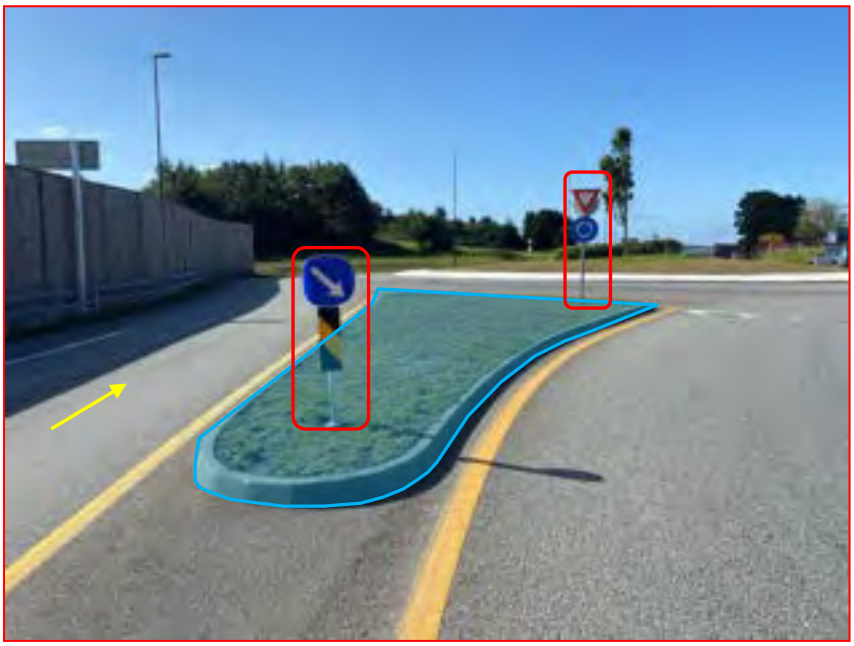
Actions or Info

The transports will pass onto the wrong lane when entering the roundabout.

- Driving against flow of traffic required.
- 1 sign must be removable to allow for blade oversail.
- 2 light pole must be removed to allow for blade oversail.

See attached PDF file: Point 13.

Point 13.3 – Route 509 onto Route 510 near Sola



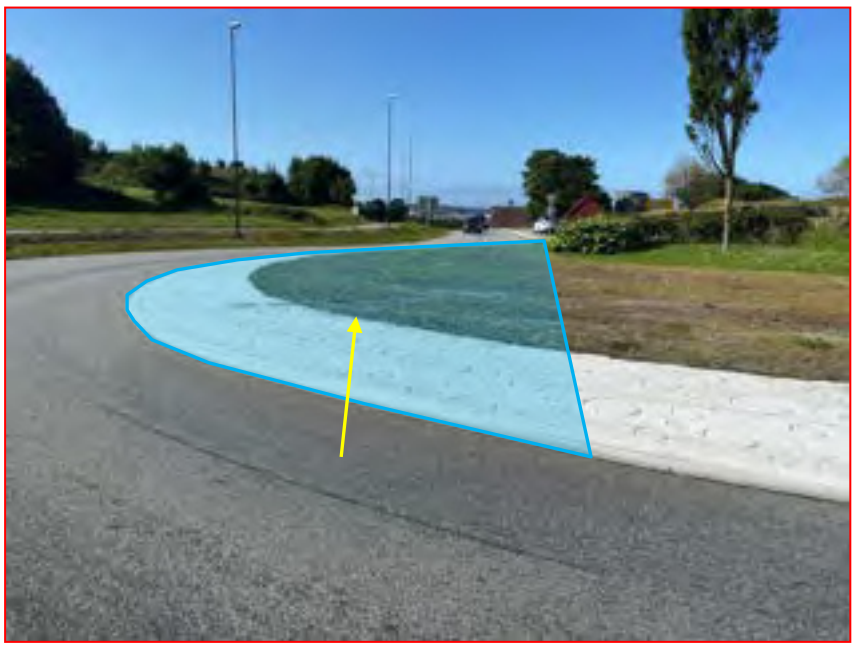
Actions or Info

The transports will clear the roundabout in the opposite lane.

- Driving against flow of traffic required.
- 2 signs must be made removable to allow space for the transports.
- Traffic island must be in road level and suitable to drive on.

See attached PDF file: Point 13.

Point 13.4 – Route 509 onto Route 510 near Sola



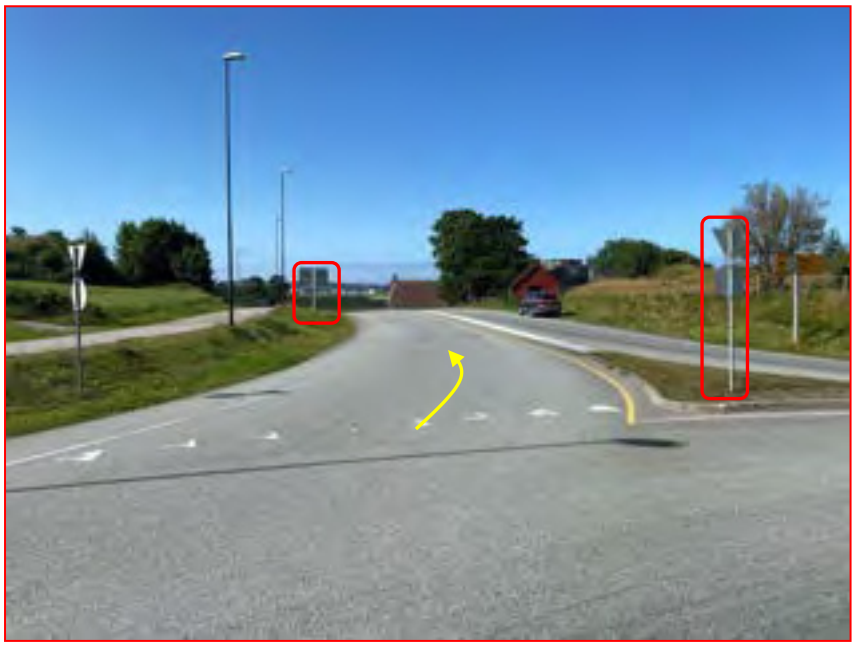
Actions or Info

The transports will clear the roundabout in the opposite lane.

- Driving against flow of traffic required.
- Center of roundabout must be in road level and be suitable to drive on.

See attached PDF file: Point 13.

Point 14 – Route 510 near Sola.



Actions or Info

The transports will leave the roundabout and remain in the opposite lane up until point 15.

- Driving against flow of traffic until next roundabout requried.
- 2 signs must be made removable to allow for blade overhang/oversail.

Point 15.1 – Route 510 near Sola.

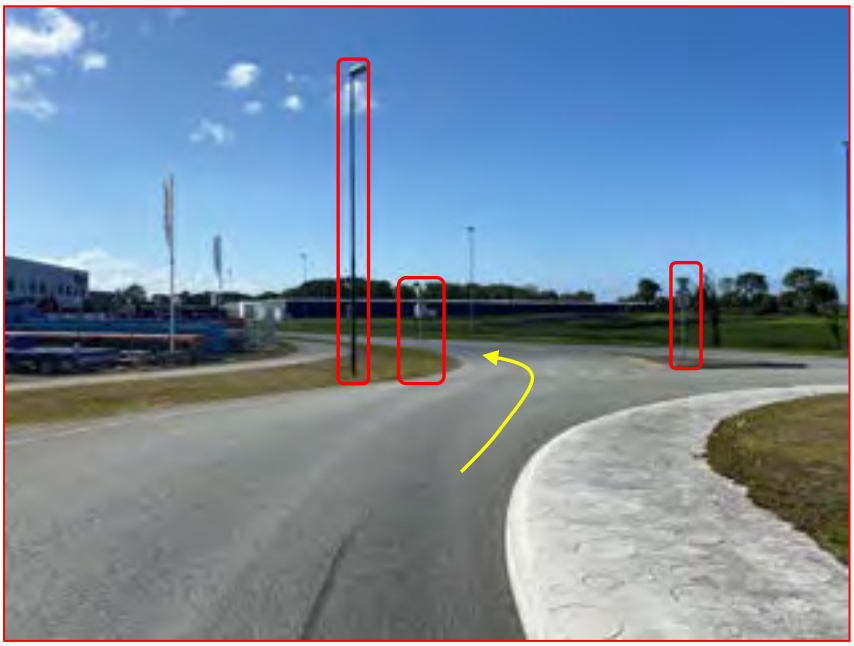


Actions or Info

The transports will enter and exit the roundabout in the opposite lane.

- Driving against flow of traffic requried.

Point 15.2 – Route 510 near Sola



Actions or Info

The transports will enter and exit the roundabout in the opposite lane.

- Driving against flow of traffic required.
- 2 signs must be made removable to allow for blade overhang/oversail.
- 1 light pole must be removed to allow for blade ovesail.

Point 16 – Route 510 near Sola



Actions or Info

The transports will continue on route 510, now back in the right lane.

- 4 signs in center reservation must be mde removable to allow for blade oversail.

Point 17 – Route 510 near Sola



Actions or Info

The transports will continue on route 510, now back in the right lane.

- 2 signs in center reservation must be made removable to allow for blade oversail.

Point 18 – Route 510 near Sola

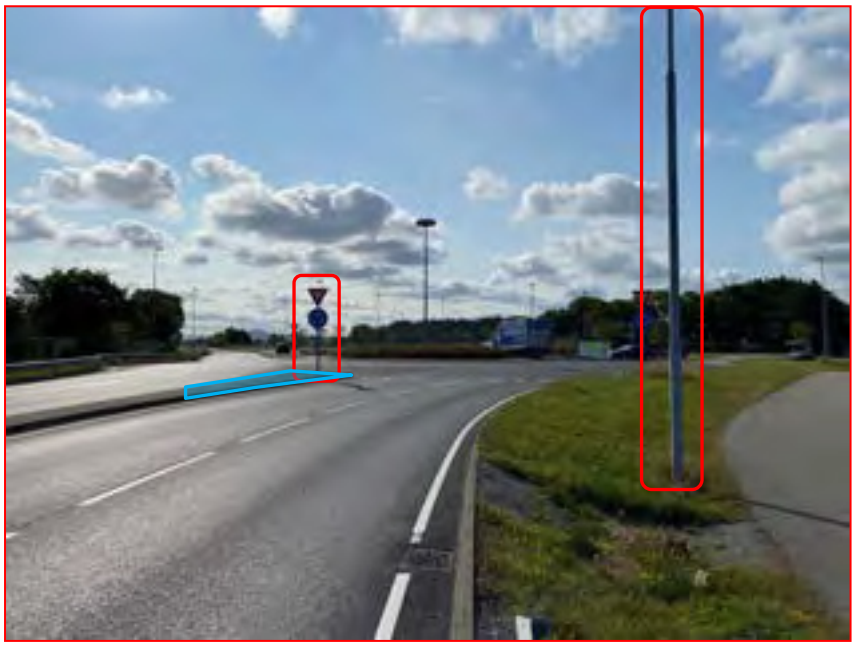


Actions or Info

The transports will enter the roundabout in theur own lane.

- 1 sign must be removable to allow for blade overhang.
- Traffic island must be kept in road level.

Point 19.1 – Route 510 near Sola



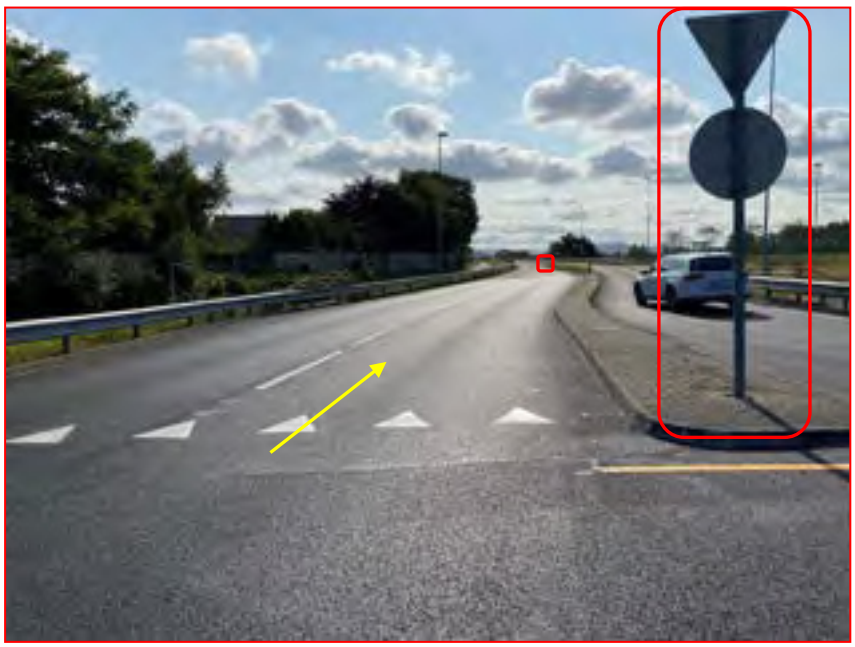
Actions or Info

The transports will pass into the opposite lane when entering the roundabout.

- Driving against flow of traffic required.
- 1 sign must be made removable to allow for blade oversail.
- 1 light pole must be removed to allow for blade overhang.
- The marked area will have to be made level with the road and suitable to travel on.

See attached PDF file: Point 19.

Point 19.2 – Route 510 near Sola



Actions or Info

The transports will leave the roundabout in the opposite lane and pass back into the right lane at the end of the traffic island.

- Driving against flow of traffic required.
- 2 signs must be removable to allow for blade overhang/oversail.

See attached PDF file: Point 19.

Point 20.1 – Fv 443 near Sola



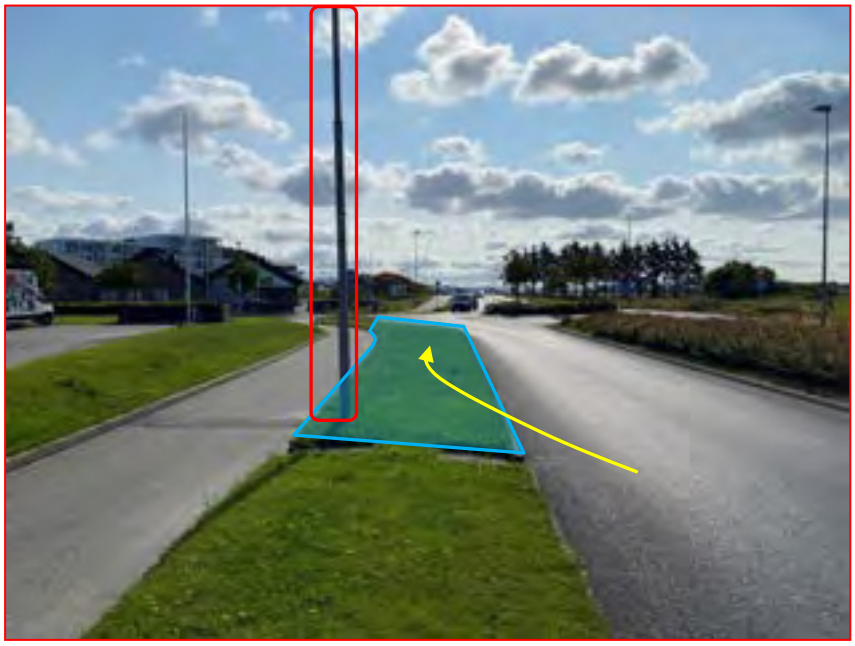
Actions or Info

The transports will pass onto the opposite land in order to get a better approach to the oncoming roundabout.

- These modifications are made to avoid removing trees in center of the roundabout.
- Driving against flow of traffic required.
- 1 sign must be removable to allow for blade oversail.

See attached PDF file: Point 20.

Point 20.2 – Fv 443 near Sola



Actions or Info

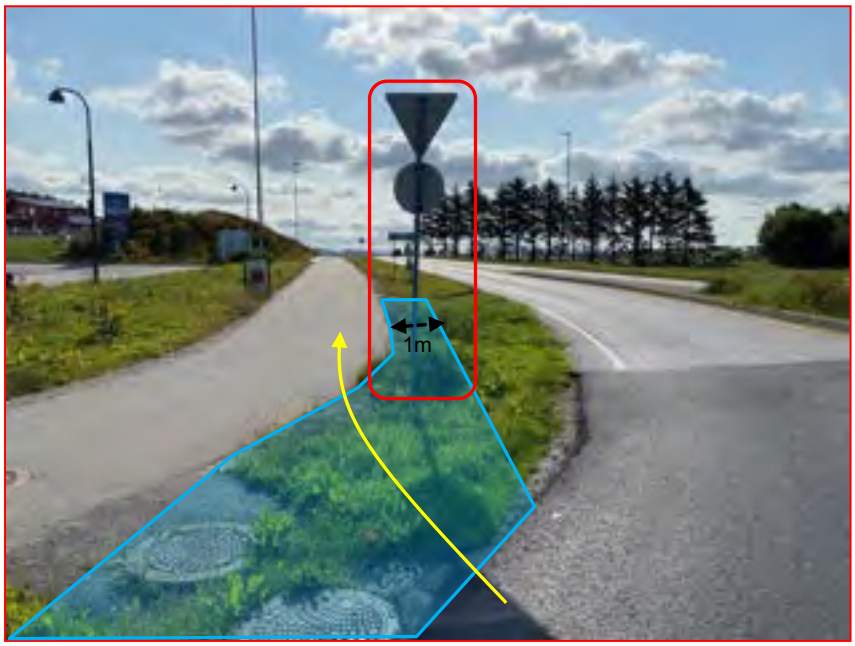
The transports will remain in the opposite land in order to get a better approach to the oncoming roundabout.

- Driving against flow of traffic required.
- 1 light pole must be removed to allow for blade overhang.
- The grass verge must be suitable to drive on and not higher than curb stone.
- The curbstone must be ramped to allow as smooth entry onto the blue area.
- Side walk must be approved to drive on.

See attached PDF file: Point 20.

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Point 20.3 – Fv 443 near Sola



Actions or Info

The transports will leave the roundabout in the opposite lane, using the side walk as well.

- Driving against flow of traffic required.
- 1 sign must be made removable to allow space for the transport.
- Sewer cover must be re-inforced and protected.
- The grass verge must be made suitable to drive on.
- Side walk must be approved to drive on.

See attached PDF file: Point 20.

Point 20.4 – Fv 443 near Sola



Actions or Info

The transports will drive back onto the road, leaving the side walk in the marked area.

- Driving against flow of traffic required.
- 2 signs must be removable to allow space for the truck as well as oversail for the blade.
- The grass verge must be in road level and made suitable to drive on.

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Point 21.1 – Fv 443 near Sandnes

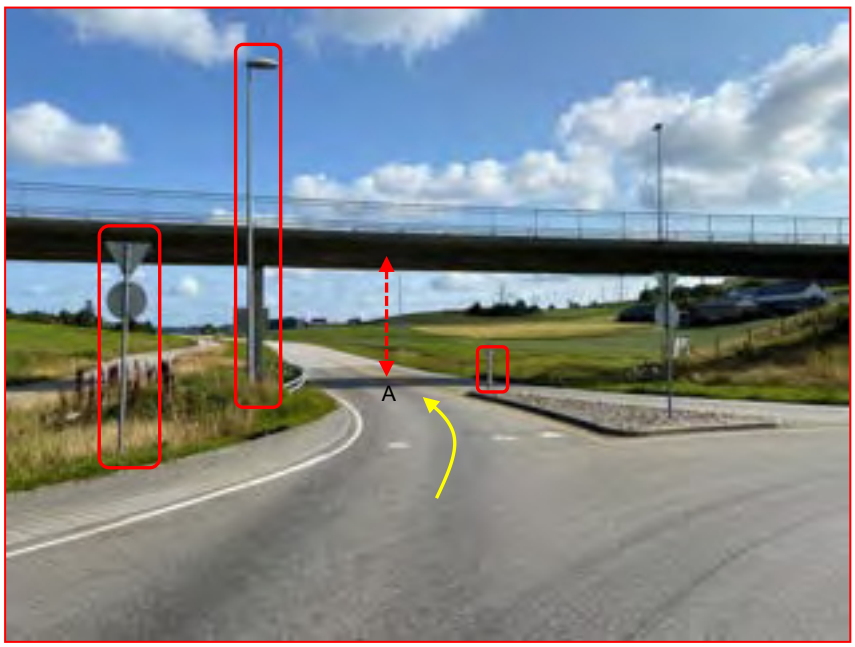


Actions or Info

The transports will enter the roundabout in the opposite lane to avoid road modifications.

- Driving against flow of traffic required.

Point 21.2 – Fv 443 near Sandnes



Actions or *Info*

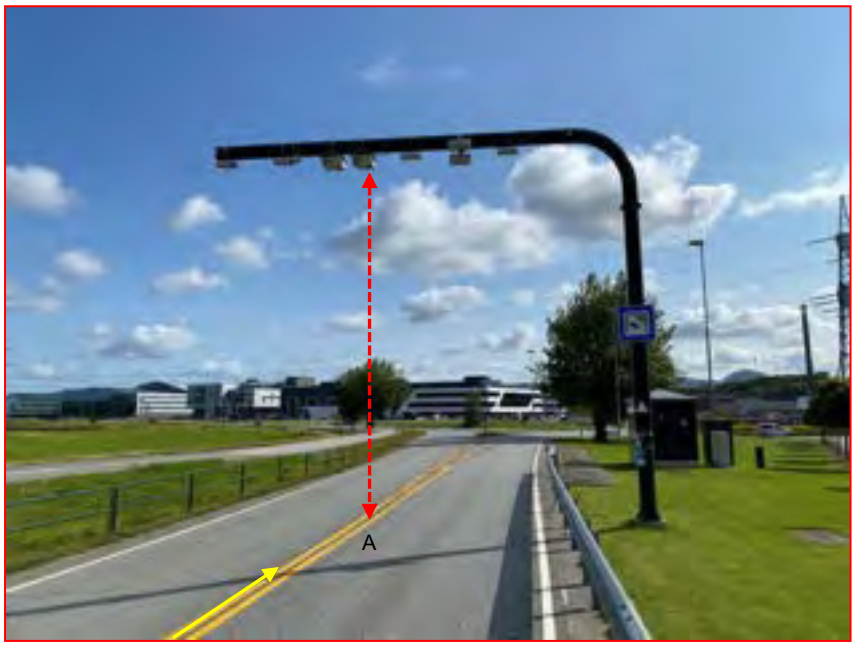
The transports will leave the roundabout in the opposite lane to avoid road modifications.

- Driving against flow of traffic requied-
- 2 signs must be removable to allow for blade oversail/overhang.
- 1 light pole must be removed to allow for blade oversail.

- Obstacle clearances:

A. 6,18m

Point 22 – Fv 443 near Sandnes



Actions or Info

The transports will continue on Forusbeen.

Obstacle clearances:
A. 6,85m

Point 23.1 – Fv 443 near Sandnes

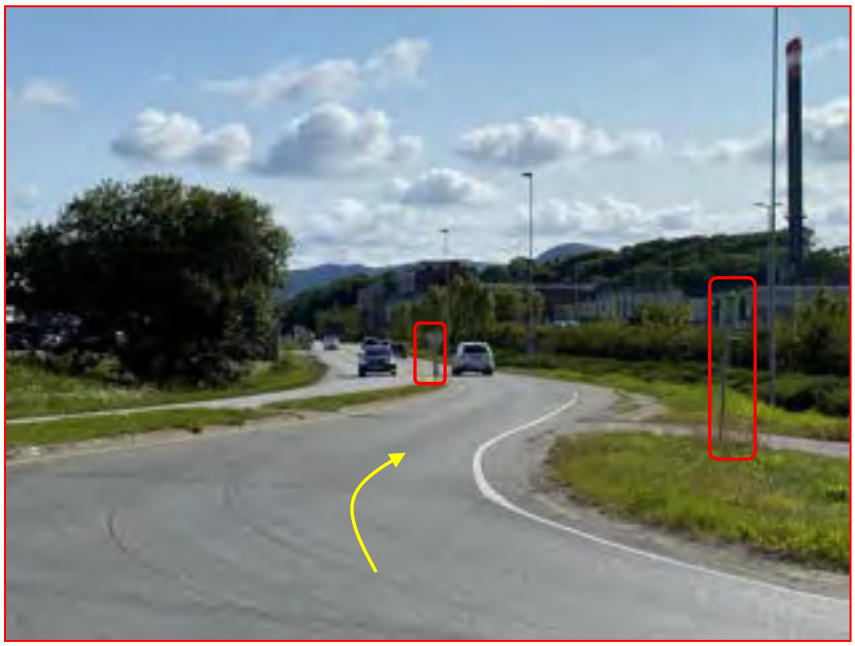


Actions or Info

The transports will enter the roundabout in the right lane.

- 4 signs must be removable to allow for blade overhang/oversail.
- Tree must be trimmed into the trunk and to a height of 4,5 meters.

Point 23.2 – Fv 443 near Sandnes

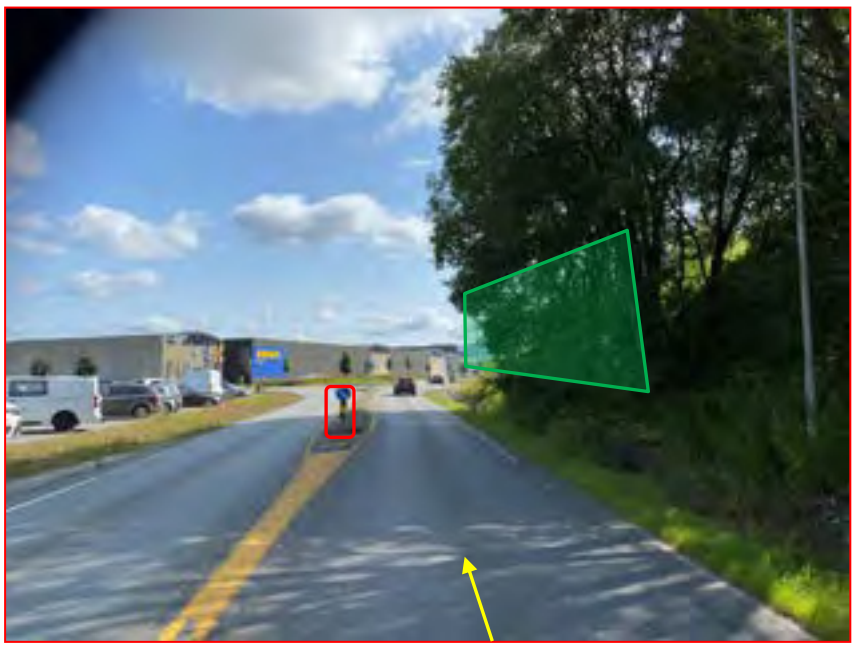


Actions or Info

Transports will leave the roundabout and onto Løwenstrasse in the right land.

- 2 signs must be removable to allow for blade oversail.

Point 24 – Fv 443 near Sandnes



Actions or Info

The transports will continue on Løwenstrasse.

- 1 sign must be removable to allow room for the tower trucks.
- Trees must be trimmed into the trunk and in a height of 4,50 meters.

Point 25 – Fv 443 near Sandnes



Actions or Info

The transports will enter and leave the roundabout on Løwenstrasse in the right lane.

- 3 signs must be removable to allow for blade overhang/oversail.

Point 26 – Fv 443 near Sandnes

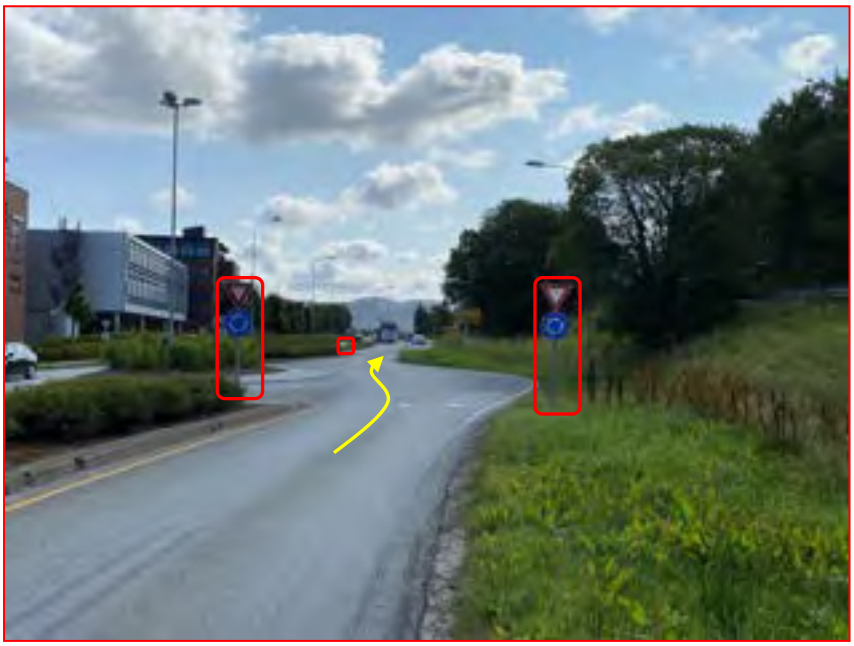


Actions or Info

The transports will continue on Løwenstrasse.

- 1 sign must be removed to allow for blade oversail.

Point 27 – Fv 443 near Sandnes



Actions or Info

The transports will enter and leave the roundabout on Løwenstrasse in the right lane.

- 3 signs must be removable to allow for blade oversail/overhang.

Point 28.1 – From Fv 443 onto E39 near Sandnes



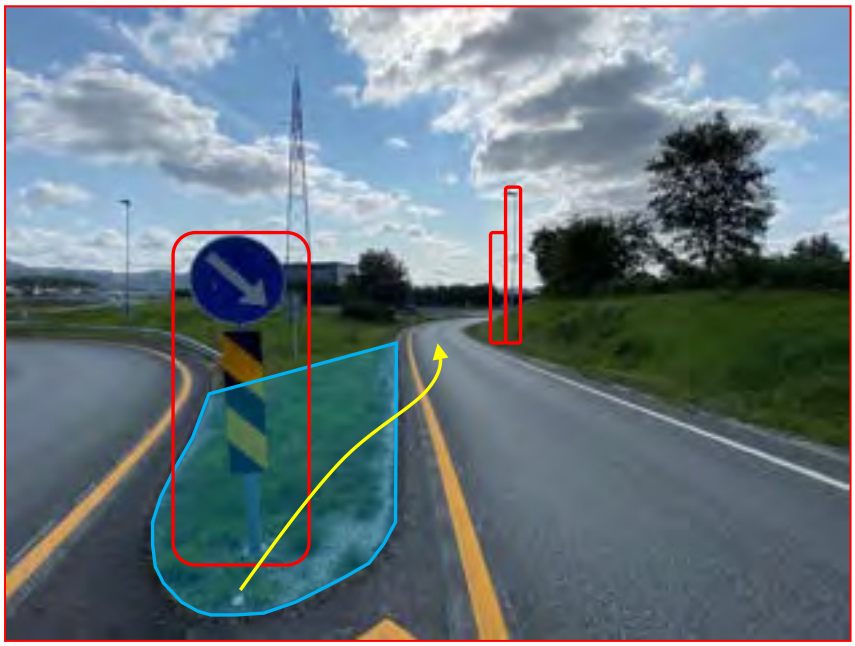
Actions or Info

The transports will turn right in the roundabout to enter the E39.

- Driving against flow of traffic required.
- 4 signs must be removable to allow for blade oversail/overhang.
- 1 light pole must be removed to allow for blade overhang.

See attached PDF file: Point 28.

Point 28.2 – Onto the E39 near Sandnes



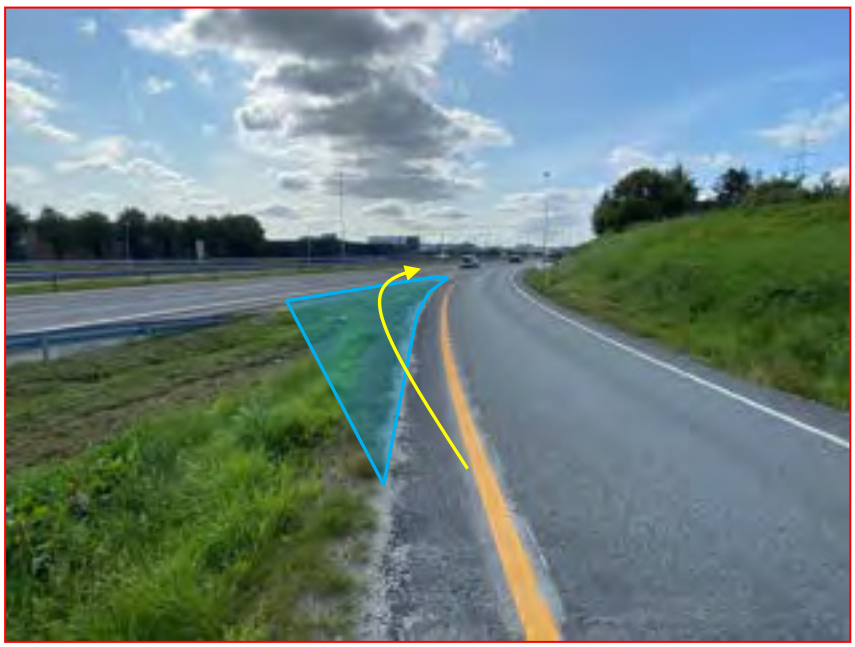
Actions or Info

The transports will drive down the access ramp to enter the E39.

- Driving against flow of traffic required.
- 1 sign must be removable to allow the transports space to pass.
- 2 light poles must be removed to allow room for blade oversail.
- Drivable area must be in road level and be suitable drive on.

See attached PDF file: Point 28.

Point 28.3 – Onto the E39 near Sandnes



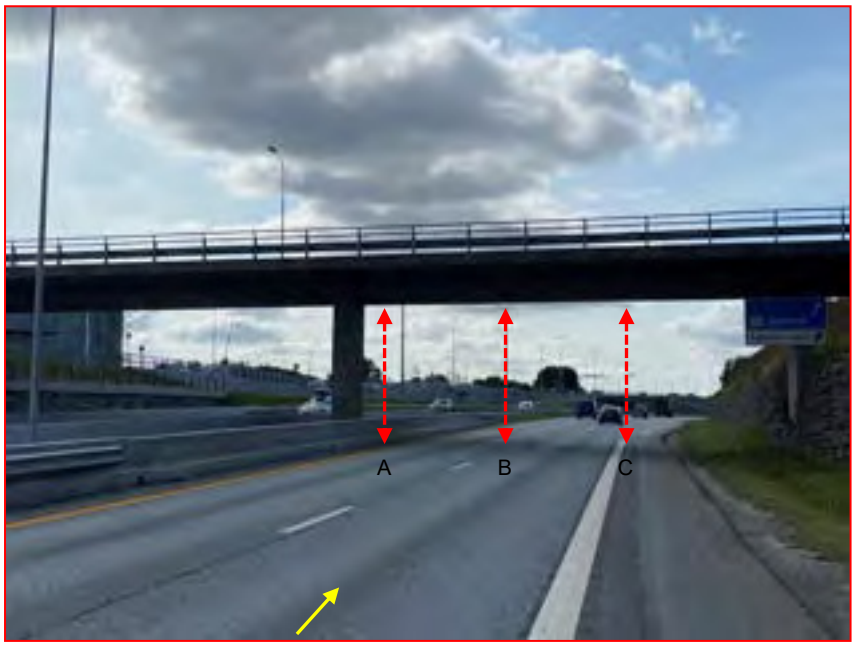
Actions or Info

The transports will drive down the access ramp to enter the E39.

- Drivable area must be in road level and be suitable to drive on.

See attached PDF file: Point 28.

Point 29 – South on E39 near Sandnes



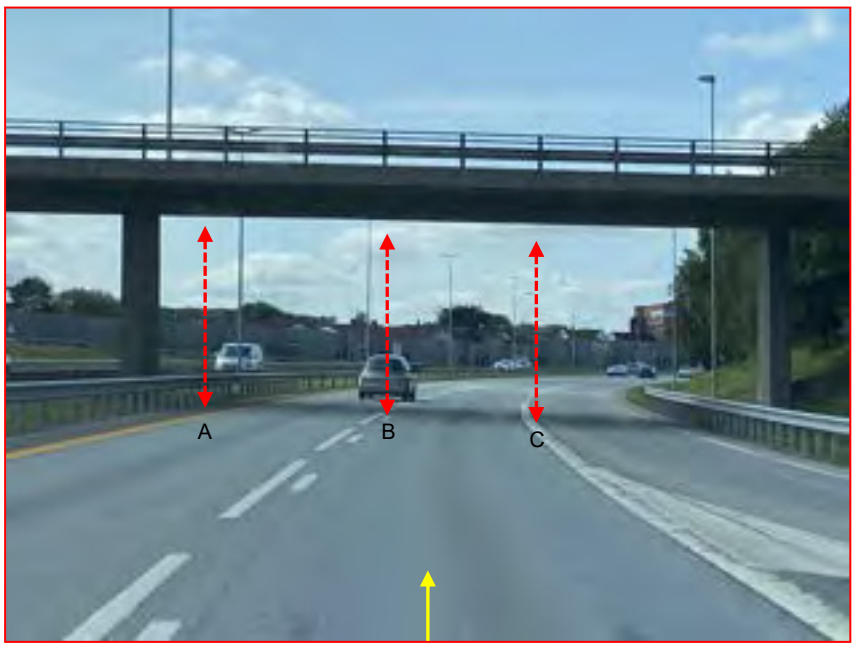
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 5,35m
B. 5,40m
C. 5,45m

Point 30 – South on E39 near Sandnes



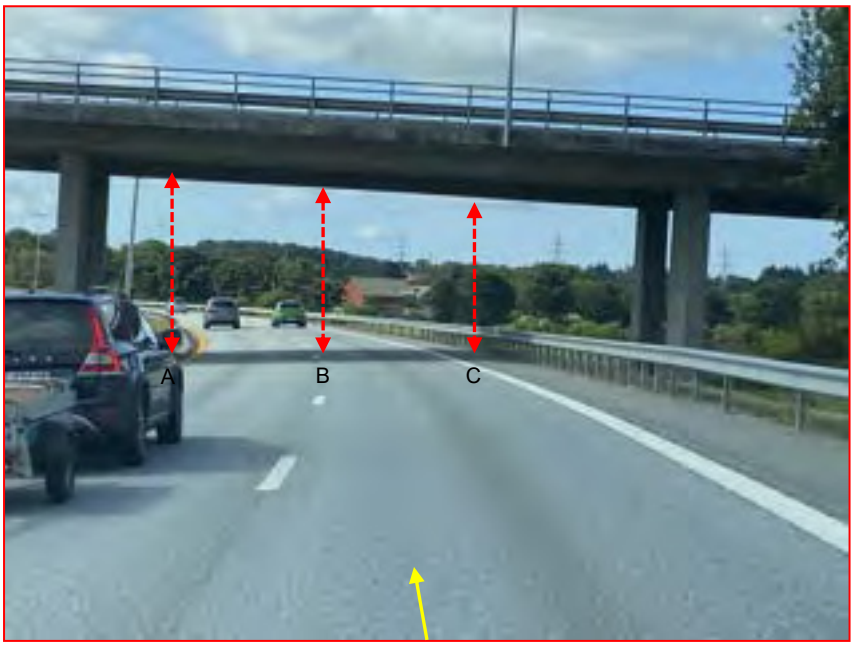
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 4,82m
B. 4,90m
C. 4,82m

Point 31 – South on E39 near Sandnes



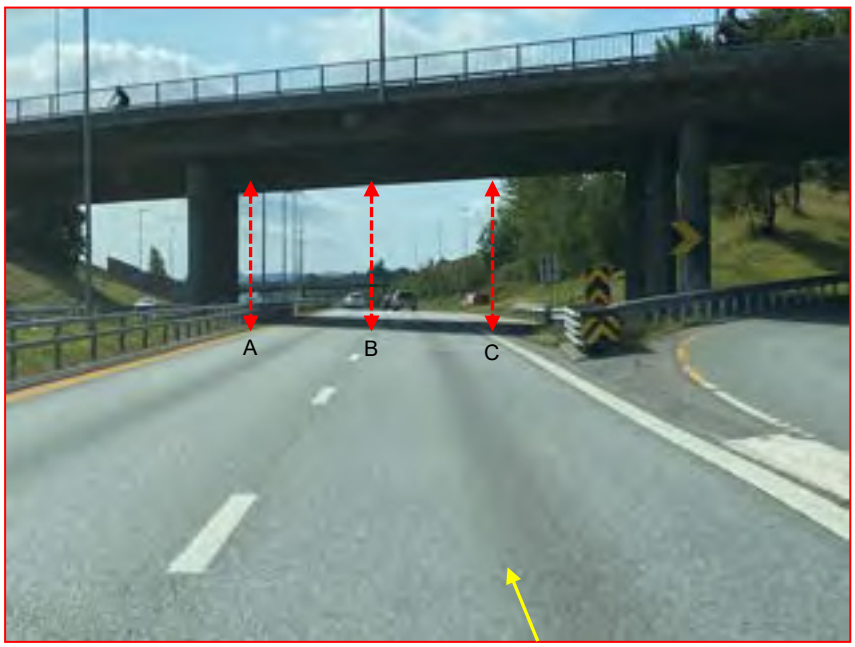
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 5,50m
B. 5,25m
C. 5,00m

Point 32 – South on E39 near Sandnes



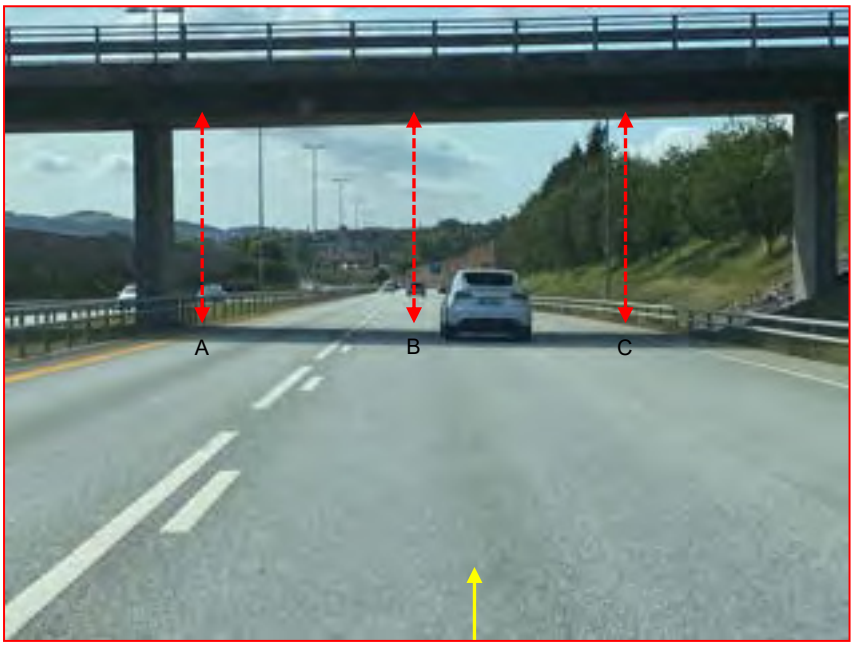
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 5,85m
B. 5,95m
C. 6,05m

Point 33 – South on E39 near Sandnes



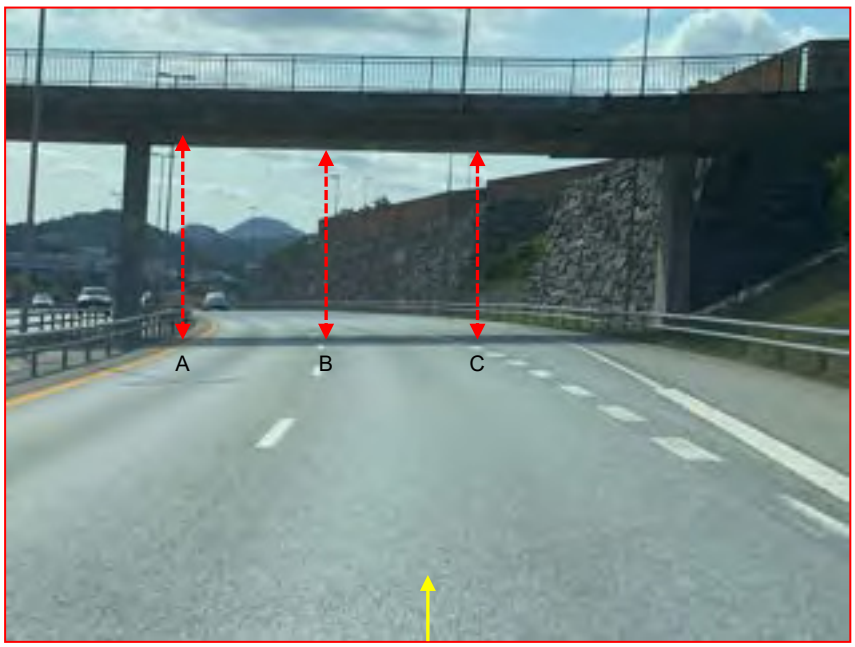
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 5,12m
B. 5,20m
C. 5,12m

Point 34 – South on E39 near Sandnes



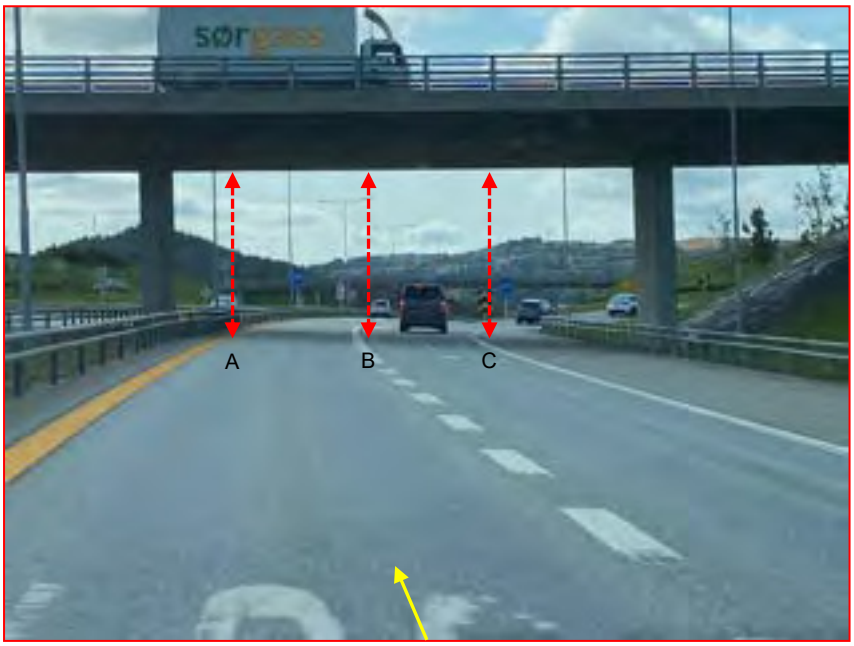
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 6,20m
B. 6,30m
C. 6,30m

Point 35 – South on E39 near Sandnes



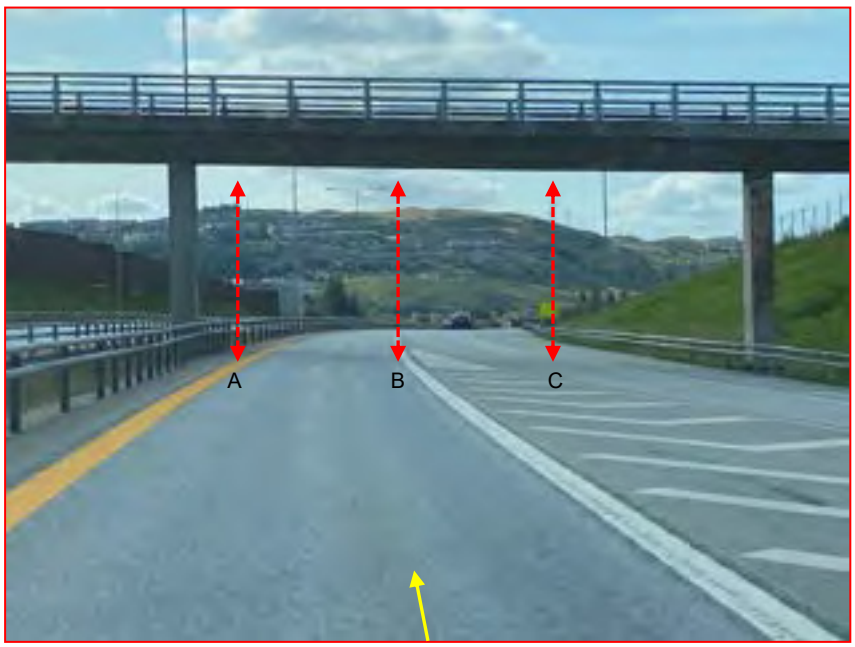
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 5,25m
B. 5,30m
C. 5,21m

Point 36 – South on E39 near Sandnes



Actions or *Info*

The transports will continue south on the E39

- Obstacle clearances:

A. 5,25m
B. 5,30m
C. 5,21m

Point 37 – South on E39 near Håbet



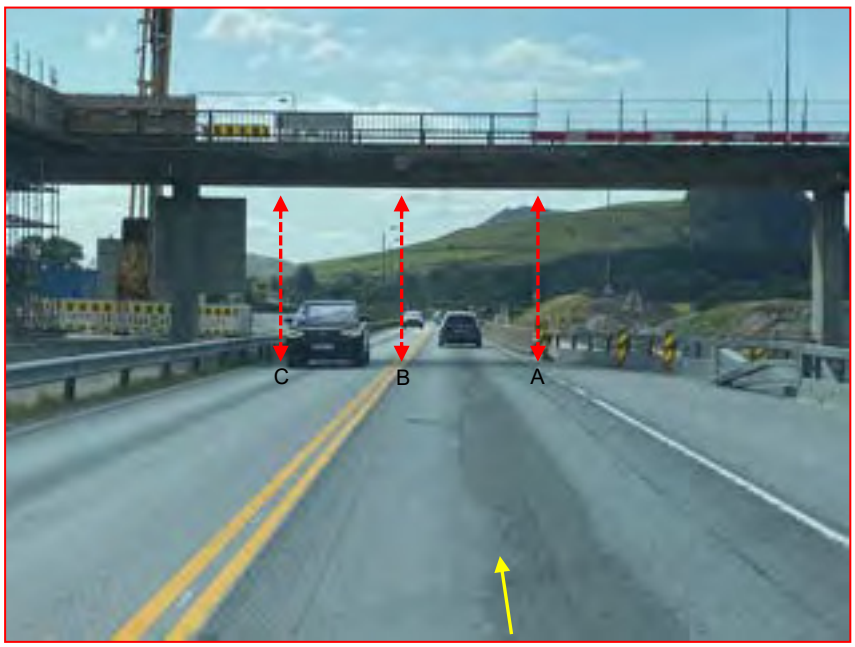
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 6,80m

Point 38 – South on E39 near Håbet



Actions or Info

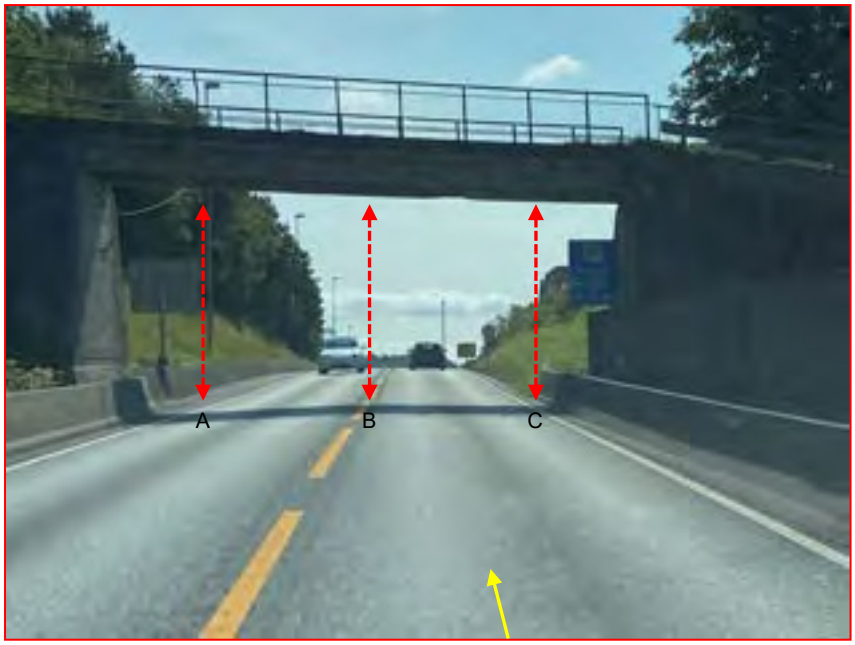
The transports will continue south on the E39

- Obstacle clearances:

A. 5,10m
B. 5,10m
C. 5,10m

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Point 39 – South on E39 near Opstad



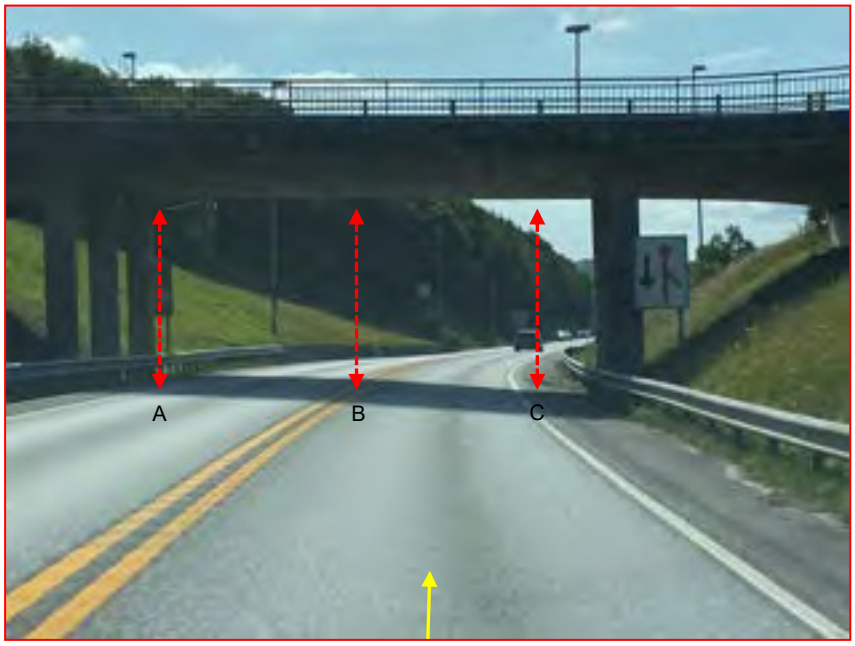
Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 4,80m
B. 4,80m
C. 4,80m

Point 40 – South on E39 near Opstad



Actions or Info

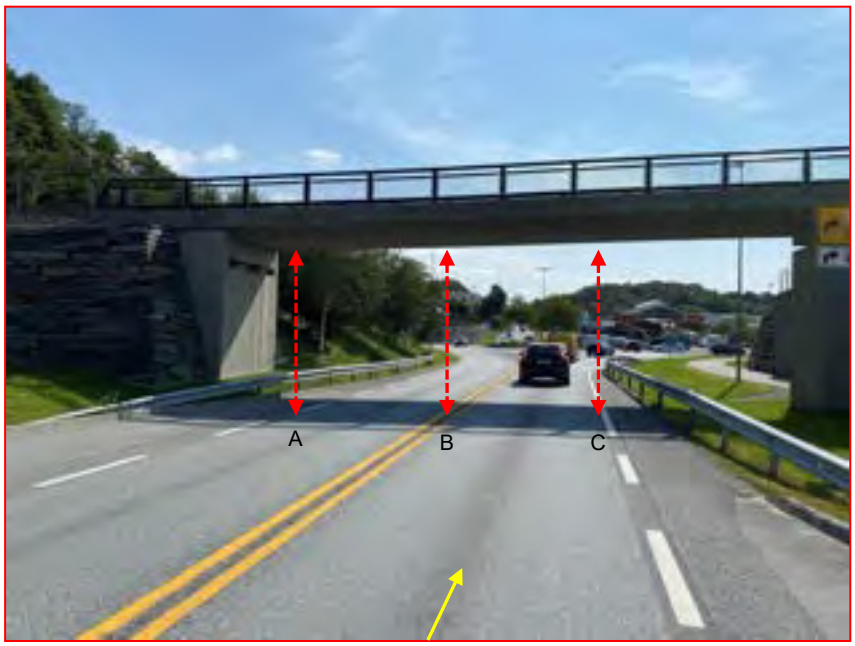
The transports will continue south on the E39

- Obstacle clearances:

A. 4,98m
B. 4,79m
C. 4,75m

Public

Point 41 – South on E39 near Ålgård



Actions or Info

The transports will continue south on the E39

- Obstacle clearances:

A. 4,93m
B. 4,95m
C. 4,95m

Point 42.1 – South on E39 near Ålgård



Actions or Info

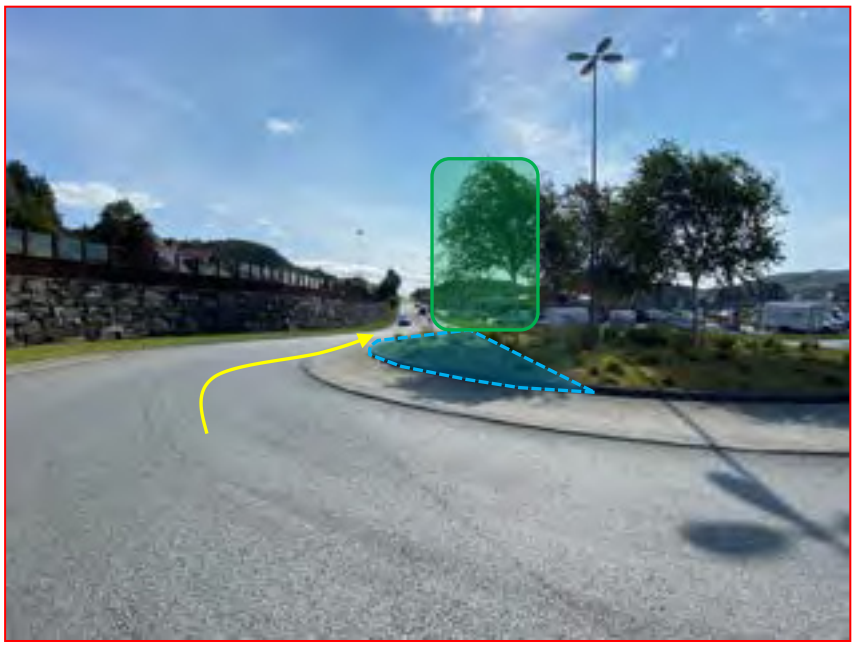
The transports will pass the roundabout in the opposite lane to minimize the required road modifications.

- Driving against flow of traffic requried.
- 1 sign must be made removable to allow space for the transports to pass.
- 1 light pole must be removed to allow for blade overhang.

See attached PDF file: Point 42.

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Point 42.2 – South on E39 near Ålgård



Actions or Info

The transports will pass the roundabout in the opposite lane to minimize the required road modifications.

- Driving against flow of traffic is requried.
- The marked oversail area cannot be higher than 0,80 meters from road level.
- Trees must be removed in center of roundabout in over sail area.

See attached PDF file: Point 42.

Point 42.3 – South on E39 near Ålgård



Actions or Info

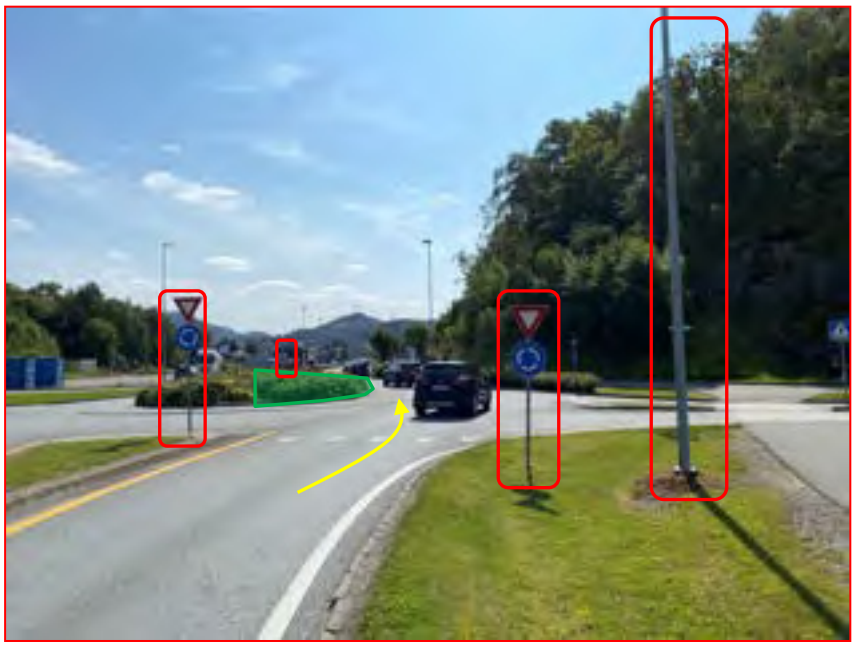
The transports will pass the roundabout in the opposite lane to minimize the required road modifications.

- Driving against flow of traffic is required.
- 2 signs must be removable to allow overhang/oversail for blades.

See attached PDF file: Point 42.

Public

Point 43 – South on E39 near Ålgård



Actions or Info

The transports will pass the roundabout in the right lane.

- 3 signs must be made removable to allow for blade overhang/oversail.
- 1 light pole must be removed to allow for blade overhang.
- Vegetation in center of the roundabout cannot exceed a height of 0,80 meters.

Point 44 – South on E39 near Ålgård

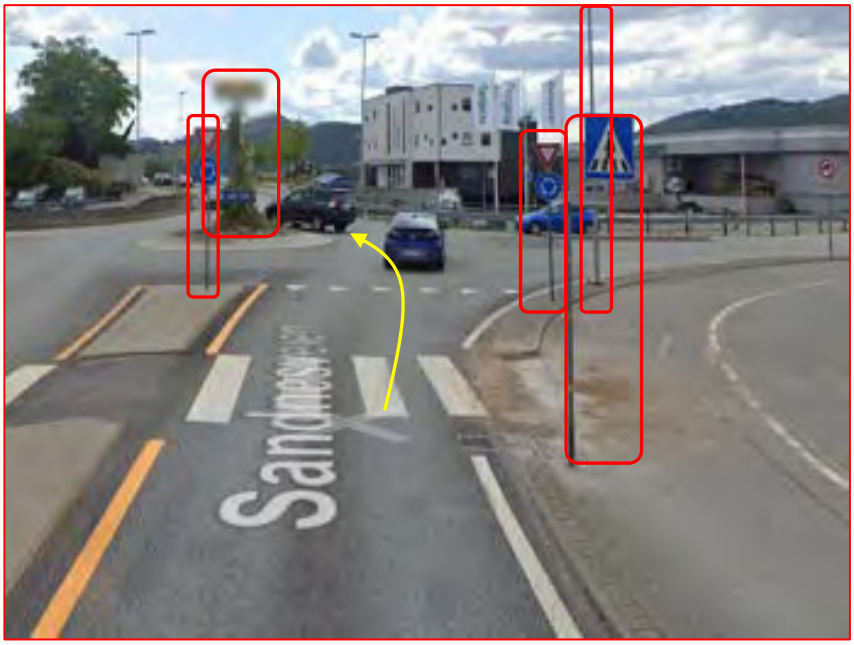


Actions or Info

The transports will continue south on the E39.

- 1 sign must be made removable.

Point 45 – South on E39 near Fiske



Actions or Info

The transports will pass the roundabout in the right lane.

- 4 signs must be made removable to allow for blade oversail/overhang.
- 1 light pole must be removed to allow for blade overhang.

Point 46 – South on E39 near Fiske

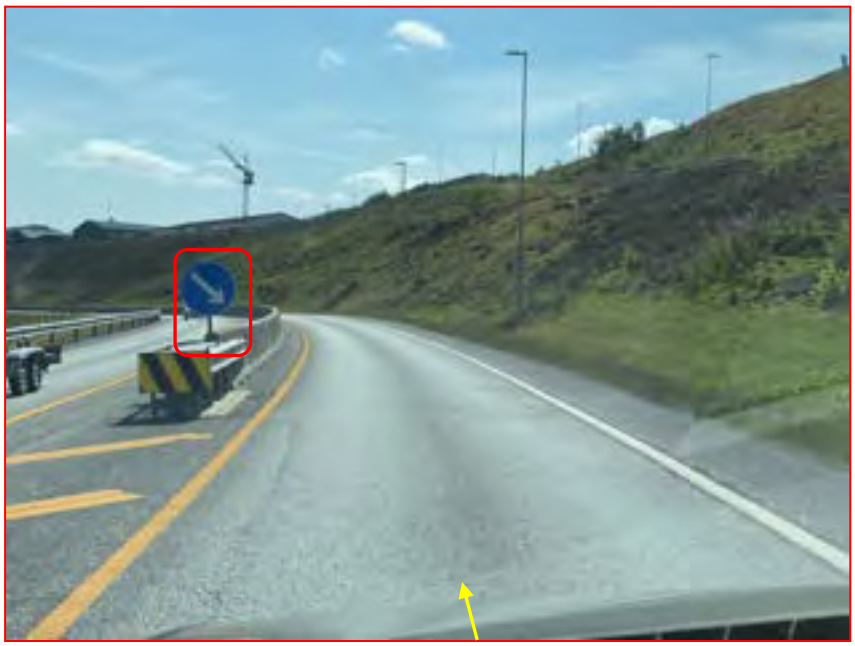


Actions or Info

The transports will continue south on the E39.

- 1 sign must be made removable.

Point 47 – South on E39 near Fiske



Actions or Info

The transports will continue south on the E39.

- 1 sign must be made removable.

Point 48 – South on E39 near Gjesdal



Actions or Info

The transports will continue south on the E39.

- 3 light poles must be removed.

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Point 49 – South on E39 near Gjesdal



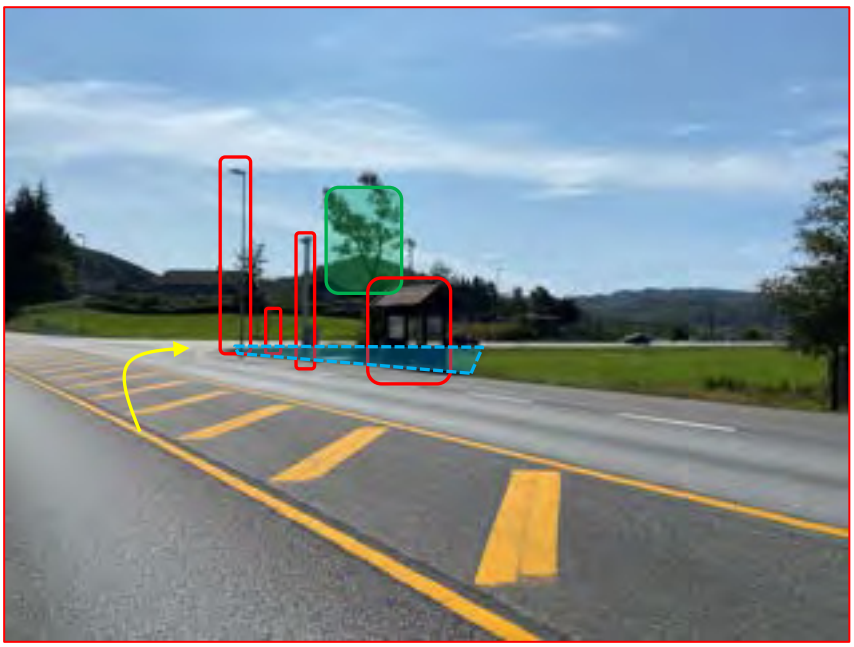
Actions or Info

The transports will continue south on the E39.

- Obstacle clearances:

A. 5,25m
B. 5,30m

Point 50 – Right turn onto Rv504 near Bue



Actions or Info

The transports will turn right onto Buevegen.

- 1 sign must be made removable.
- 2 light poles must be removed.
- 1 tree must be removed.
- 1 bus shelter must be relocated to outside the over sail area.

See attached PDF file: Point 50.

Public

Point 51 – Rv504 near Bue

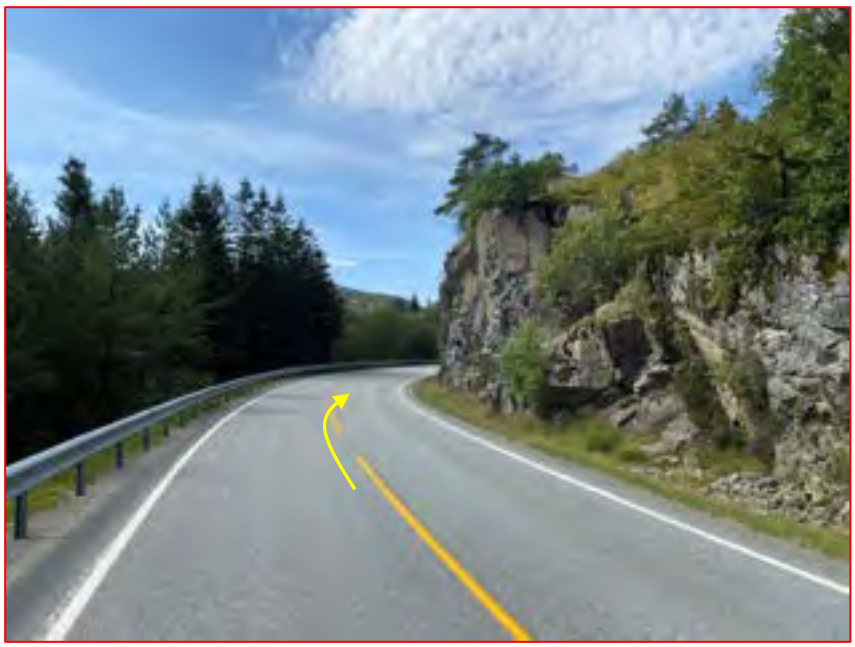


Actions or Info

The transports will continue on route 504 towards the site entrance.

- 2 signs must be made removable.

Point 52 – Rv504 near Bue



Actions or Info

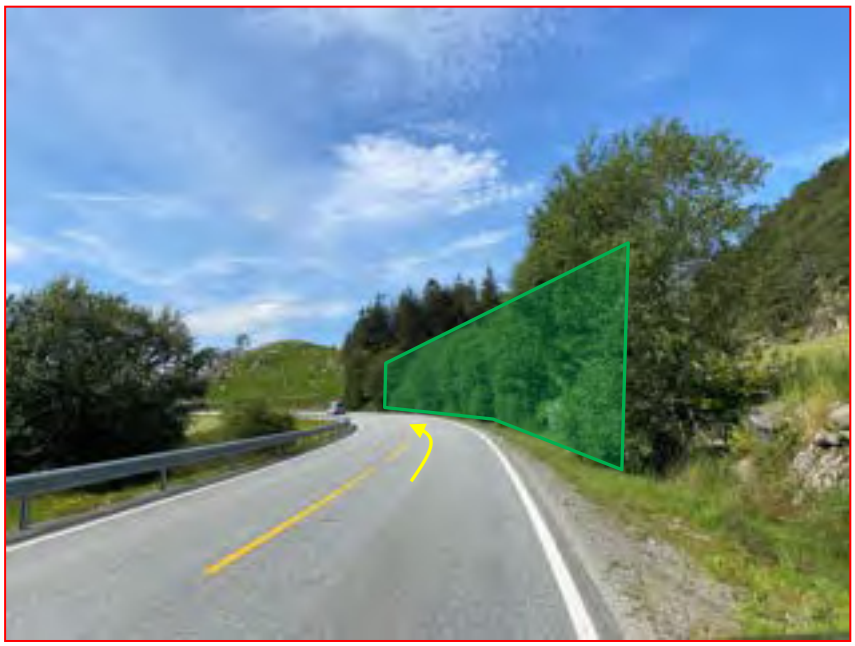
Transports will follow the right curve on route 504 towards site. There are two options for passing this curve.

Option 1:
- Rocks blasted away to allow over sail.

Option 2:
- Road must be extended outside the crashbarrier, where there is considerable height difference.

See attached PDF file: Point 52.

Point 53 – Rv504 near Bue



Actions or Info

The transports will follow the left curve.

- Trees must be trimmed into the trunk to allow tip over sail.

Point 54 – Relevant route point for access 1



Actions or Info

The transports will turn left onto the site roads.

- The access turn will have to the built according to the site specific requirements for the appointed supplier.

Point 55 – Rv504 near Helland



Actions or Info

Transports will follow the right curve on route 504 towards site. There are two options for passing this curve.

Option 1:
- Rocks blasted away to allow over sail.

Option 2:
- Road must be extended outside the crashbarrier, where the height difference is limited.

See attached PDF file: Point 55.

Point 56 – Relevant route point for access 2



Actions or Info

The transports will turn left onto the site roads.

- The access turn will have to the built according to the site specific requirements for the appointed supplier.

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Measured in 18°

Cable overview

NO.:	HEIGHT:	HIGH VOLTAGE:	CRITICAL:	GOOGLE LINK:
1	9,59m	Yes	No	https://maps.app.goo.gl/ry84a6RMCTp3K7zN9
2	18,39m	Yes	No	https://maps.app.goo.gl/jJUX7tJGJ7N9U9pj8
3	6,51m		No	https://maps.app.goo.gl/1xJjbcamqtGAPgf5A
4	10,33m	Yes	No	https://maps.app.goo.gl/TXgJPmfusvh7rCvt6
5	7,56m		No	https://maps.app.goo.gl/XV54x3F82UjxohRp6
6	6,56m		No	https://maps.app.goo.gl/459wG2oeRstGUPTJ8

Public

Conclusion

The route is suitable for transport of wind turbine components of SG170 6.0 MW – 115MHH to Moifjellet if the road modifications described in the document are carried out.

Besides the already highlighted modifications mentioned in this report, Mammoet have the following comments:

- Mammoet recommend to transport the base and mid-section towers by use of clamp-sets with hydraulic suspension, due to the road camber on route 509 between points 4 and 7.
- The base tower and mid-section 1 must be transported without tower feet mounted.
- All bridge clearances on the E39 are based on measurements taken by the Norwegian Authorities which is shared on the homepage www.Vegkart.no .
    - No cables were measured on the E39, but all were deemed to have the necessary clearance.
- All cables are measured in approximately 18°
- The modifications required in point 20 can be reduced significantly if the trees are removed and half of the center island made suitable to drive on.
- Tree trimming should be expected between points 42 and 43, but the exact amount should be determined closer to the actual execution.
- Towers with a diameter up to 5,15 meters can be transported to site by using an alternative route (https://maps.app.goo.gl/qUkeDWadEg1PEDHJ7). This would however require the railroad bridge in Varhaug to be levelled out, due to the steep convex radius of the bridge. The proposed route will travel on Nordsjøvegen which is very narrow and might have to be widened in areas and lay-bys built to allow traffic to pass the transports. The expected travelling time is longer than for the proposed route.
- It is expected that blades, tower sections and main components are able to travel to the full distance to site without the need for breaks, why possible parking areas and lay-by's have not been considered during the survey.
- Due to the nature of the transport and the, in areas, narrow roads between the port and site there will be a need for well planned and executed traffic management.
- This route survey only covers the areas and modifications required for transporting the described wind turbine generators to site and is subject to obtaining permits for all relevant Norwegian authorities, third-party landowner agreements where needed, approved bridge calculations and permits issued from Statens Vegvesen for the transport equipment considered.

Public



MAP LEGEND: Body over sail | Tip over sail | Drivable area

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PROJECT: Moifjellet

TITLE: Point 2. RM

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MAP LEGEND: Body over sail | Tip over sail | Drivable area

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MAP LEGEND:

Body over sail

Tip over sail

Drivable area

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MAP LEGEND: Body over sail | Tip over sail | Drivable area

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3 signs must be removable

1 light pole must be removed

Over sail area
Clearance 0,8m above road level
Approx 750m2

Over sail area
Clearance 0,8m above road level
Approx 270m2

Drivable area must be in road level
and be suitable to drive on
Approx 200m2

Drivable area must be in road level
and be suitable to drive on
Approx 70m2

MAP LEGEND:

Body over sail

Tip over sail

Drivable area

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PROJECT: Moifjellet

TITLE: Point 28. RM

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CLIENT: Statkraft

PROJECT: Moifjellet

TITLE: Point 42. RM

MAP LEGEND: Body over sail | Tip over sail | Drivable area

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MAP LEGEND: Body over sail | Tip over sail | Drivable area

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CLIENT: Statkraft

PROJECT: Moifjellet

TITLE: Point 50. RM

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MAP LEGEND: Body over sail | Tip over sail | Drivable area

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CLIENT: Statkraft

PROJECT: Moifjellet

TITLE: Option 1
Point 52. RM

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MAP LEGEND:

Body over sail

Tip over sail

Drivable area

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PROJECT: Moifjellet

TITLE: Option 2
Point 52. RM

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PROJECT: Moifjellet

TITLE: Option 2
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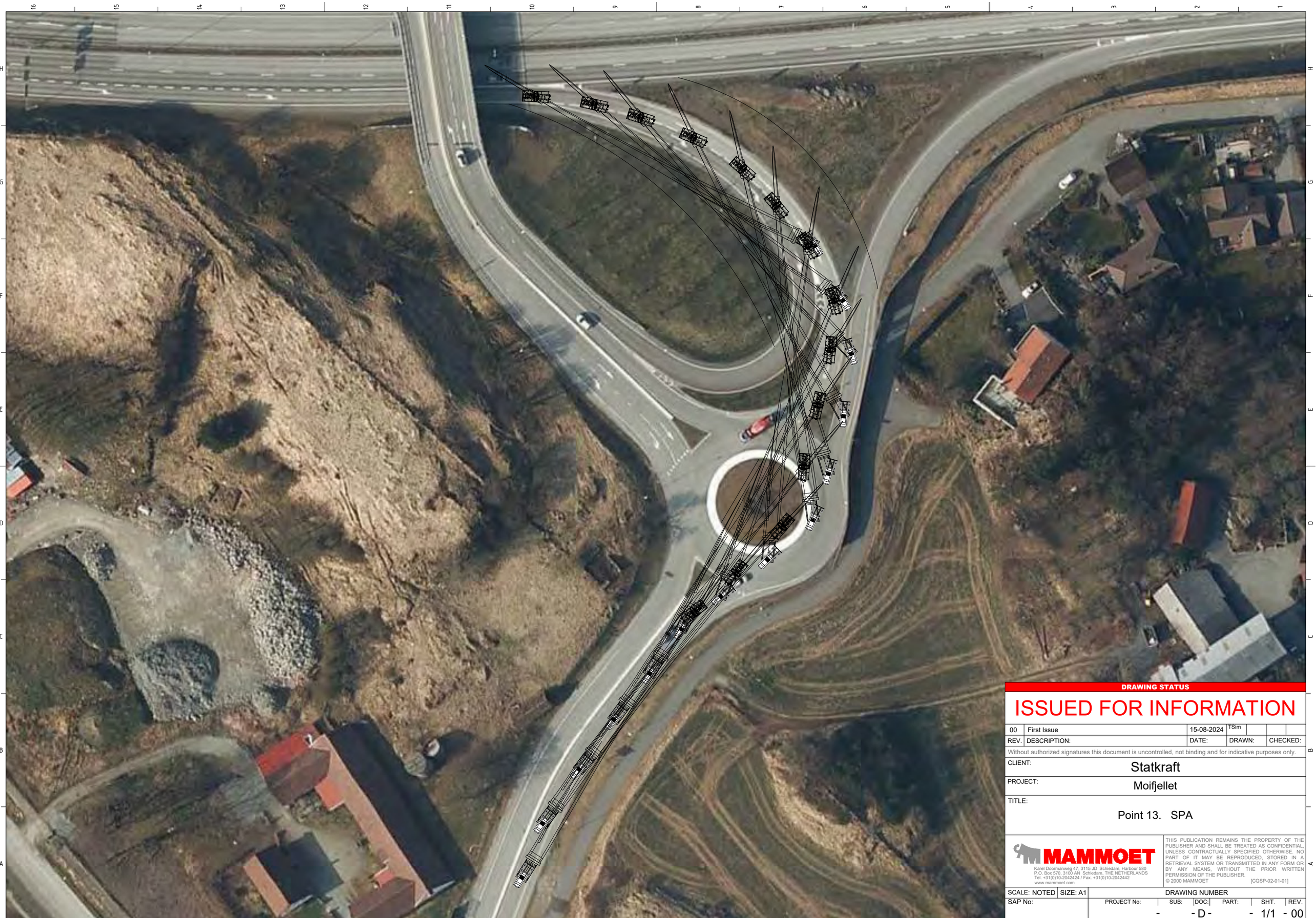
PROJECT: Moifjellet

TITLE: Point 2. SPA

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PROJECT: Moifjellet

TITLE: Point 13. SPA

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CLIENT: Statkraft

PROJECT: Moifjellet

TITLE: Point 19. SPA

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PROJECT: Moifjellet

TITLE: Point 20. SPA

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PROJECT: Moifjellet

TITLE: Point 28. SPA

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PROJECT: Moifjellet

TITLE: Point 42. SPA

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PROJECT: Moifjellet

TITLE: Option 1
Point 52. SPA

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PROJECT: Moifjellet

TITLE: Option 2
Point 52. SPA

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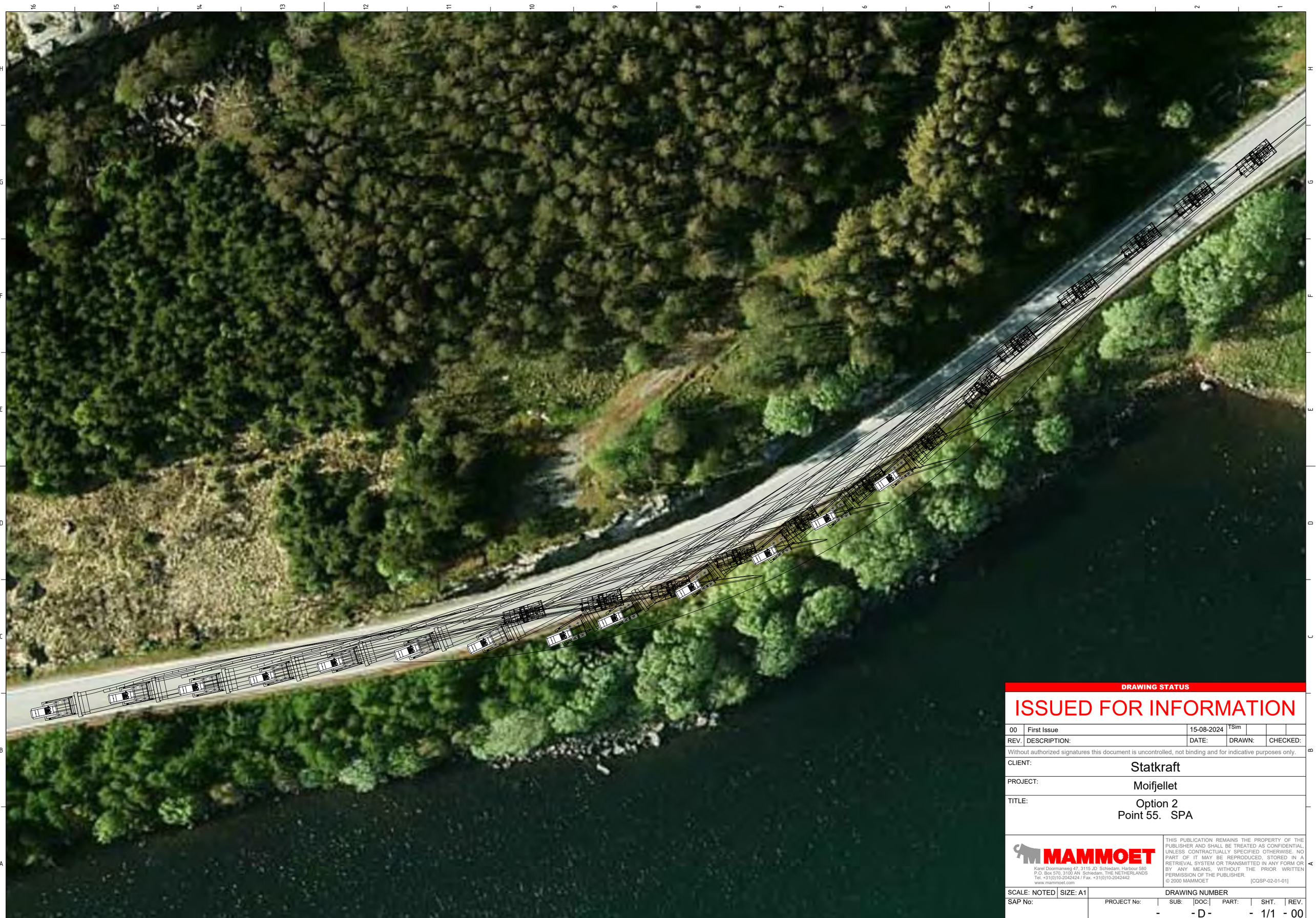
PROJECT: Moifjellet

TITLE: Option 1
Point 55. SPA

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PROJECT: Moifjellet

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Point 55. SPA

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Fagrapport:

Vær og kystradar



Impact of the Proposed Moifjellet Wind Farm on the Hægebostad Weather Radar

Vince Savage
Radar Impact Assessment Technical Lead
QINETIQ/24/03776/2
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30 SEP 2024

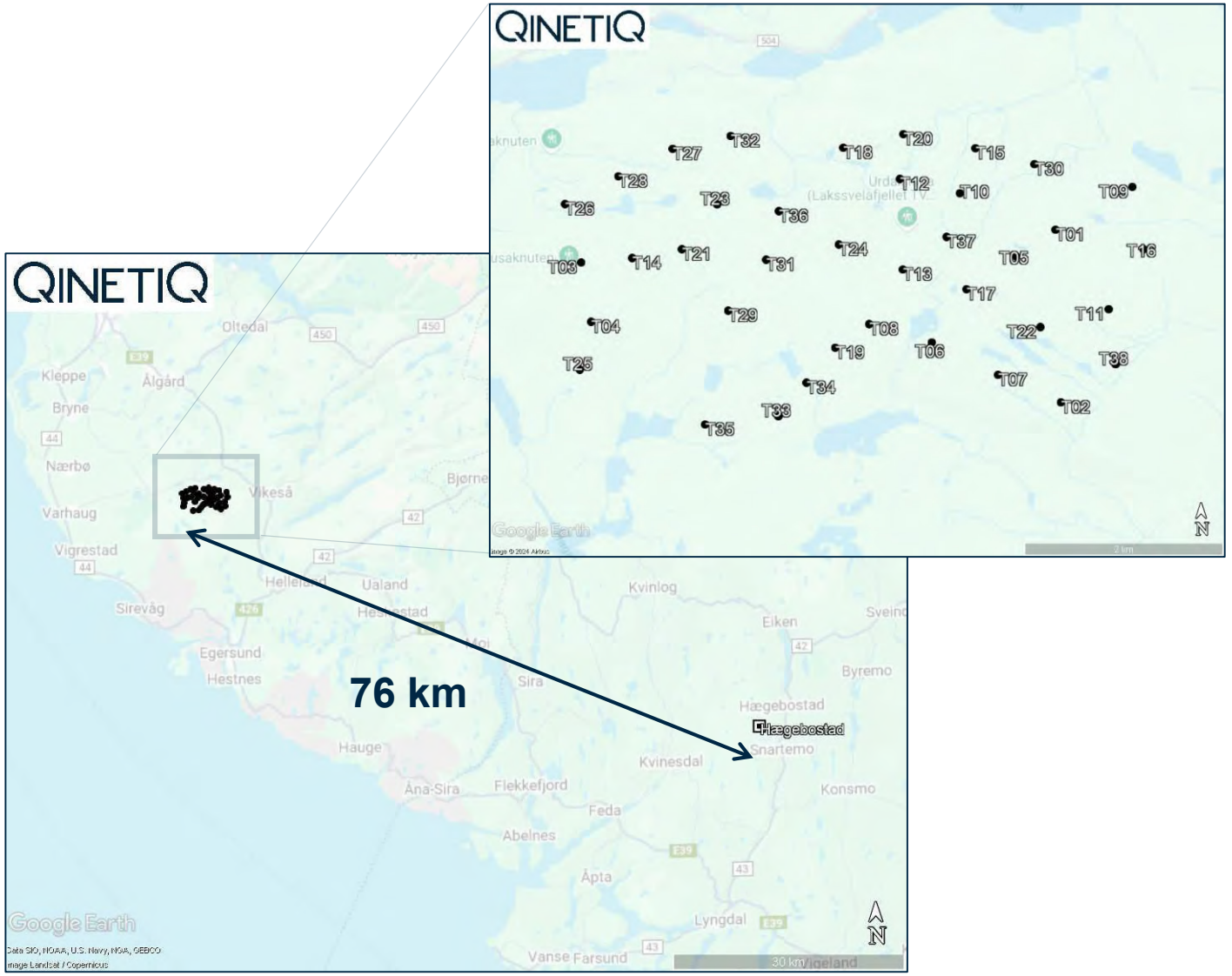
QINETIQ

Introduction

QINETIQ IN CONFIDENCE

Background

- Statkraft intends to develop the Moifjellet wind farm: 38 turbines with a maximum height of 200m
- The Moifjellet wind farm project definition is taken from [1]
- The locations and dimensions of other wind farms in the vicinity are also taken from [1]
- The Norwegian Meteorological Institute (NMI) are concerned that the project will have a negative impact on the operation of the Hægebostad weather radar [2].



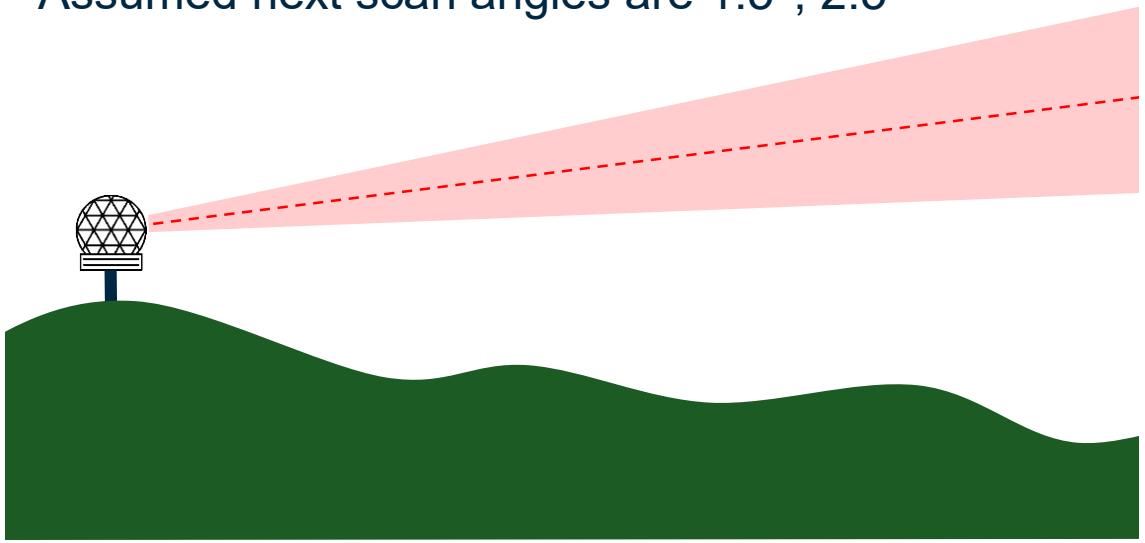
[1] Savage, V. (QinetiQ), “Impact of the Proposed Moifjellet Wind Farm on the Skykula Military Radar”, September 2024, QinetiQ/23/02032/2
[2] Magnus, L. M. (Statkraft), “Updated radar assessment for Moifjellet wind farm”, email to Savage, V. (QinetiQ), 25 JUL 2024

QINETIQ IN CONFIDENCE

Hægebostad Weather Radar

- Radar location WGS84
  58.360145°N 7.164810°E [1]
- Antenna height = 631m above sea level
- Frequency = 5.64 GHz (C-band)
- Beam width = 1.0°
- Lowest scan elevation angle = 0.5°
- Assumed next scan angles are 1.5°, 2.5°

The radar uses a ‘pencil’ beam, narrow in horizontal and vertical angle. The radar makes one full 360° horizontal rotation at the lowest scan angle. It then makes rotations at increasing elevation angles to build-up a 3D radar picture of precipitation.

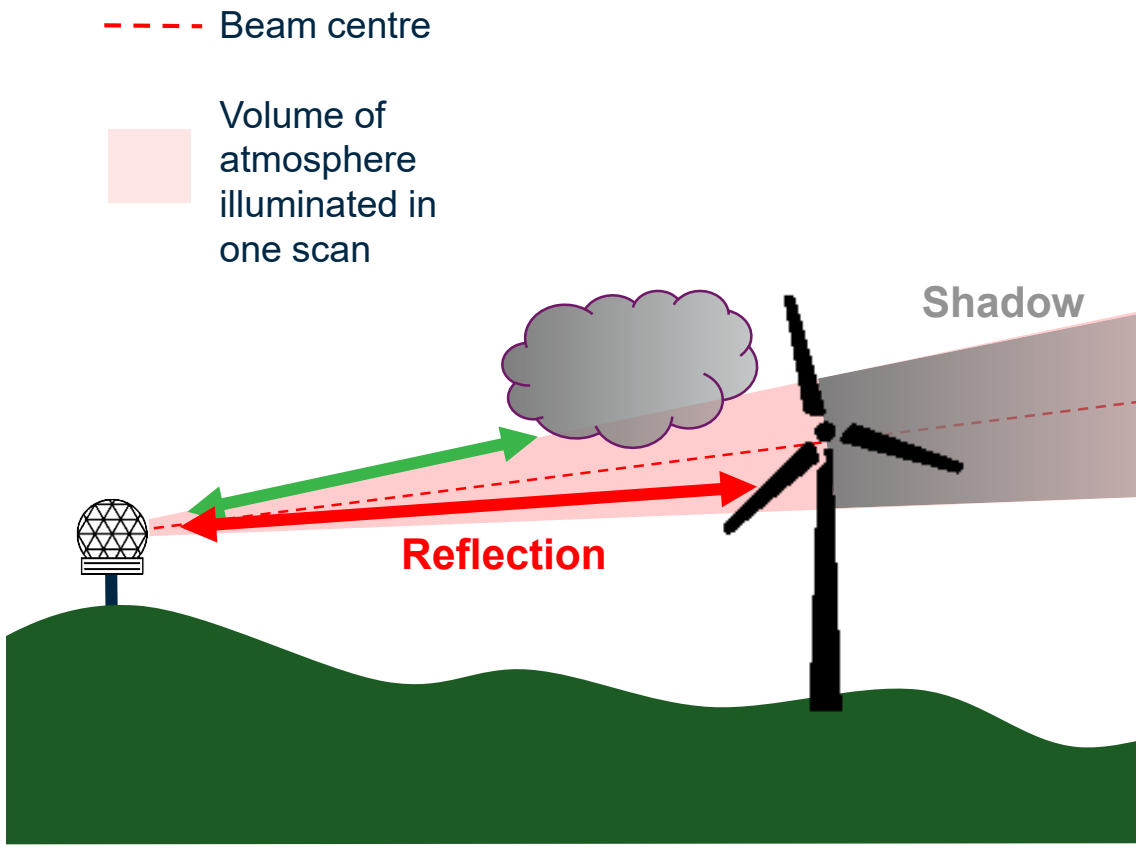


[1] Magnus, L. M. (Statkraft), “Updated radar assessment for Moifjellet wind farm”, email to Savage, V. (QinetiQ), 25 JUL 2024

QINETIQ IN CONFIDENCE

Wind Turbine Impacts

- **Green** = intended operation = reflections from precipitation (rain, hail, mist etc.)
- Wind turbines have two main impacts
  - **Red** = reflection from turbine = fictitious increase in precipitation estimate
  - **Grey** = shadow (signal blockage) behind the turbine = decrease in precipitation estimate

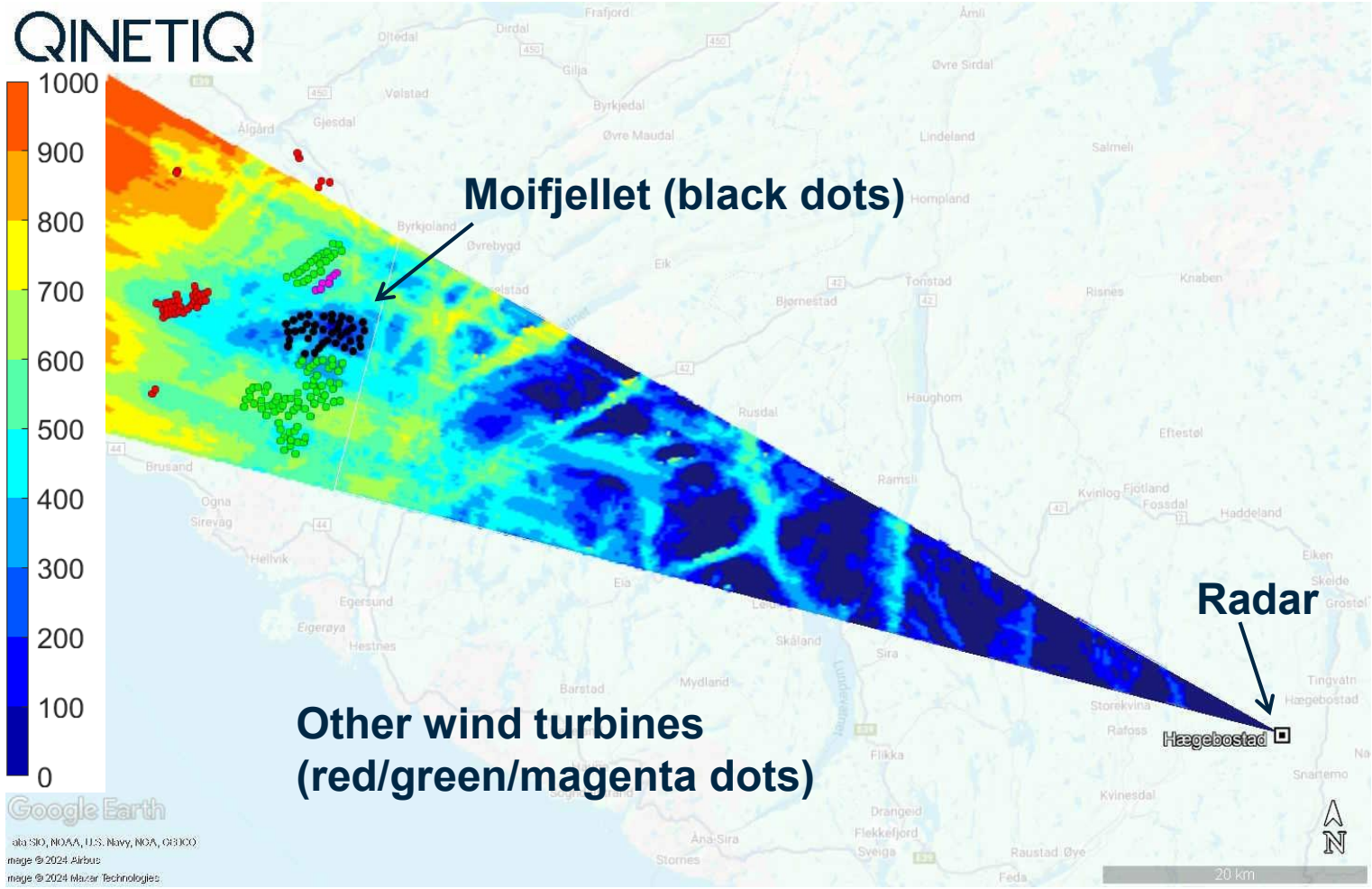


Wind farm visibility

QINETIQ IN CONFIDENCE

Turbine Visibility (1/4)

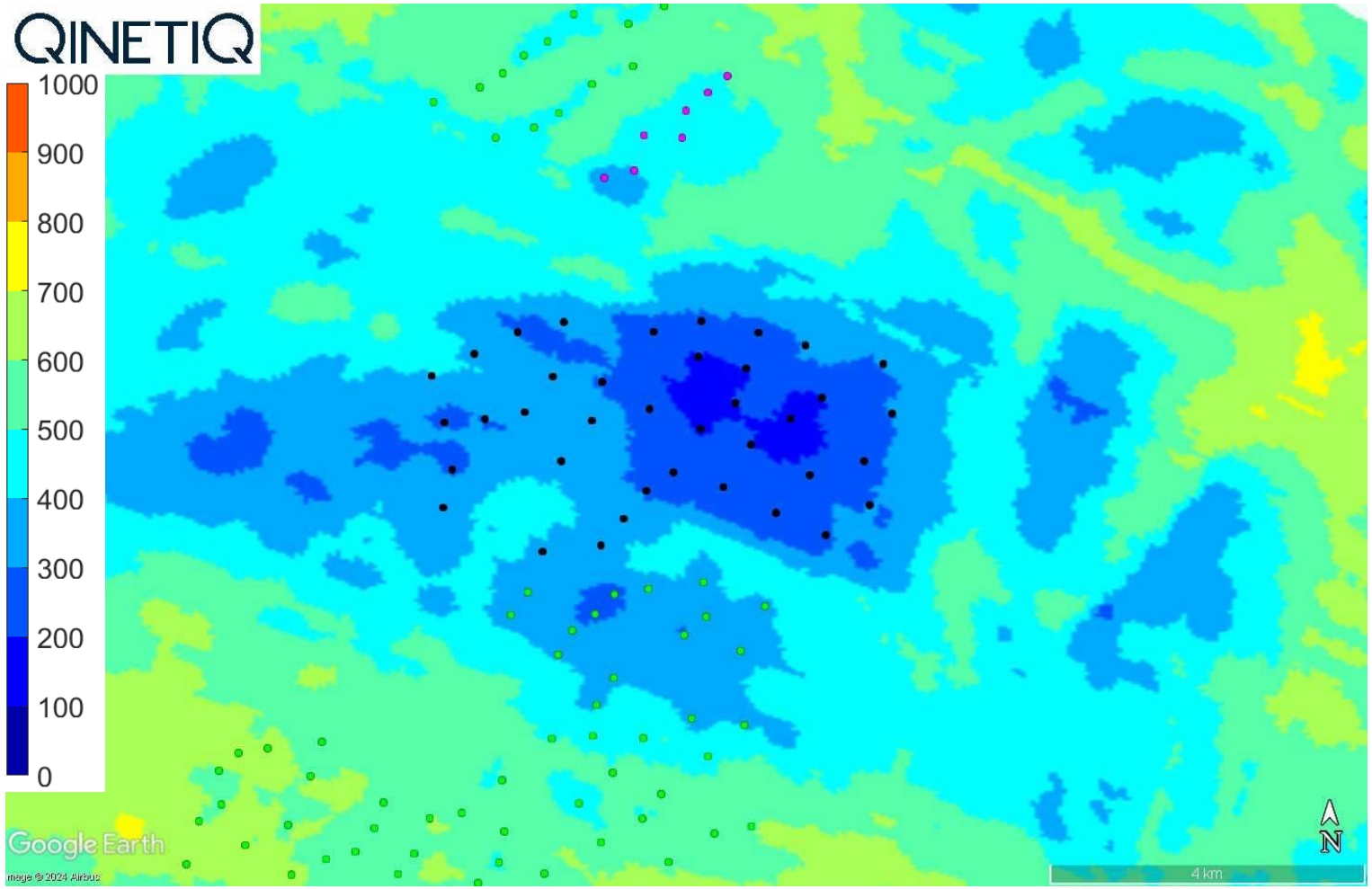
- Colour shows height to radar line of sight (LOS) from the Hægebostad weather radar
- For example, yellow areas indicate where an object 700m or smaller is not in LoS (not directly visible) from the Hægebostad weather radar



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Turbine Visibility (2/4)

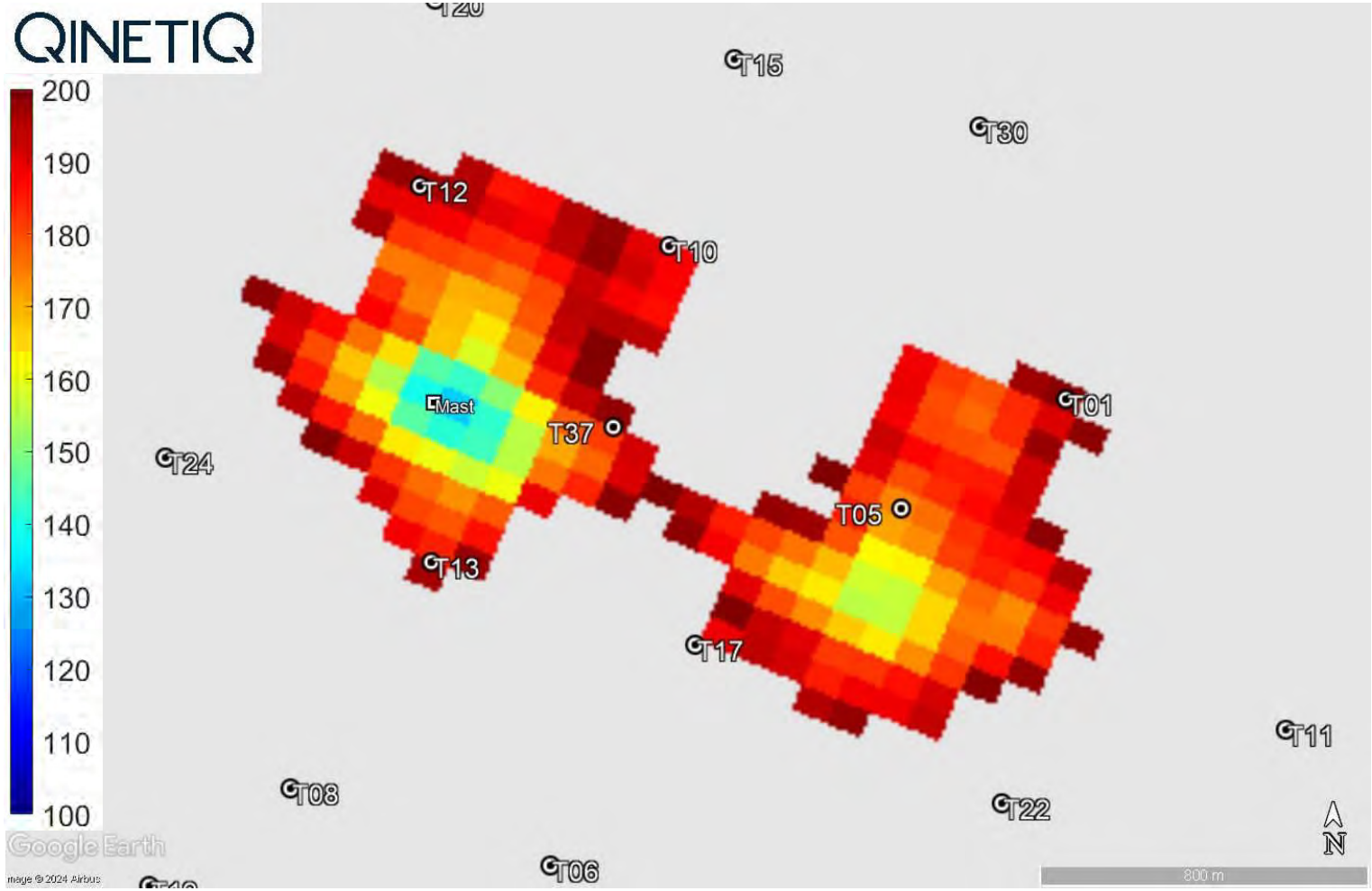
- The radar LoS in the vicinity of the proposed Moifjellet wind farm varies from 174m to 391m
- All other wind farms are out of radar LoS from the weather radar



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Turbine Visibility (3/4)

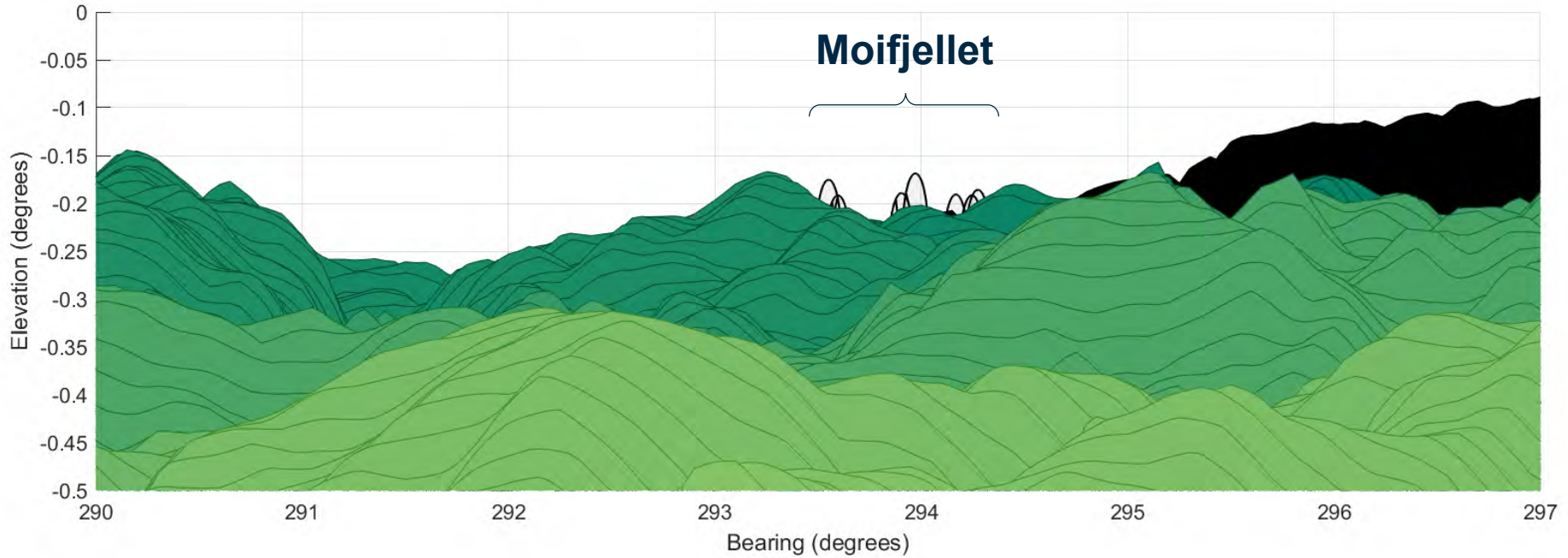
- Radar LOS detail – only turbines T01, T05, T10, T12, T13, T17 and T37 are directly visible from the radar (HTLOS ≤ 200m)



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Turbine Visibility (4/4)

- Radar view. Visible turbines:
  - Azimuth (horizontal) sector 0.9° [293.4°N to 294.3°N]
  - Elevation (vertical) sector 0.06° [-0.23° to -0.17°]



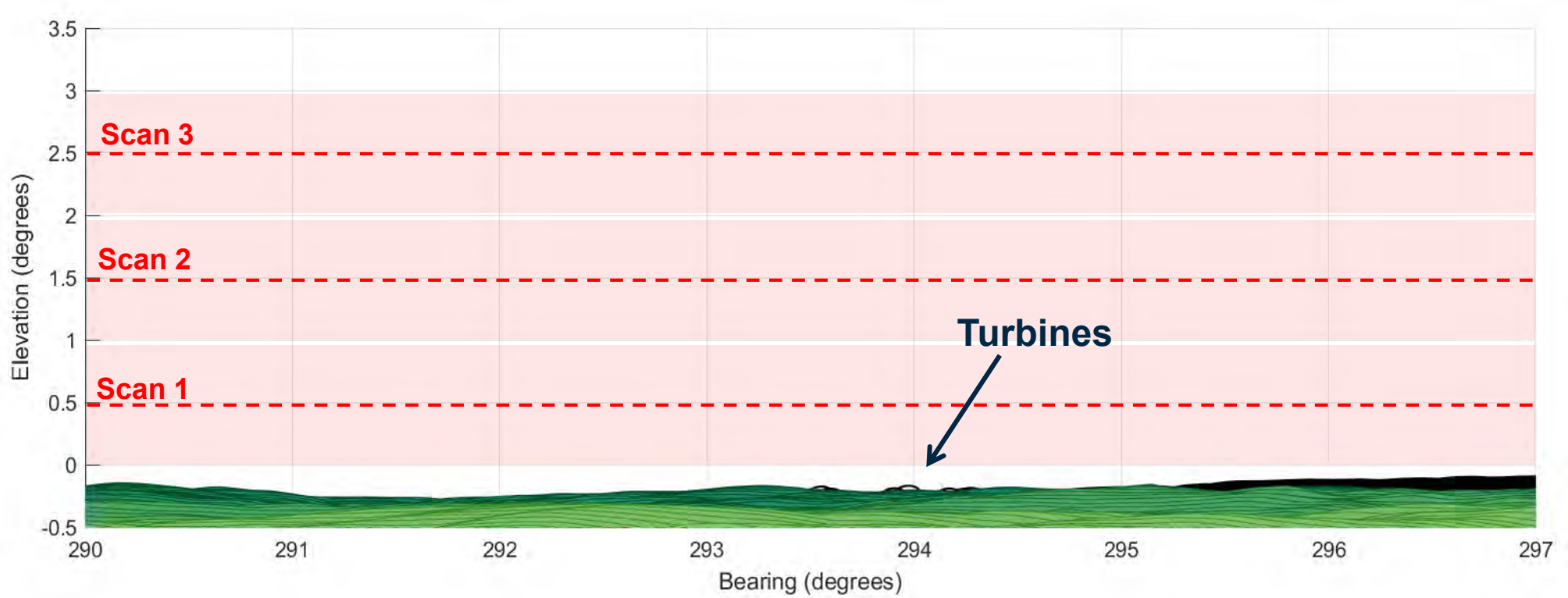
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Shadowing

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Scan angles

- Visible turbines are entirely underneath the lowest scan angle
- Impact judged to be negligible



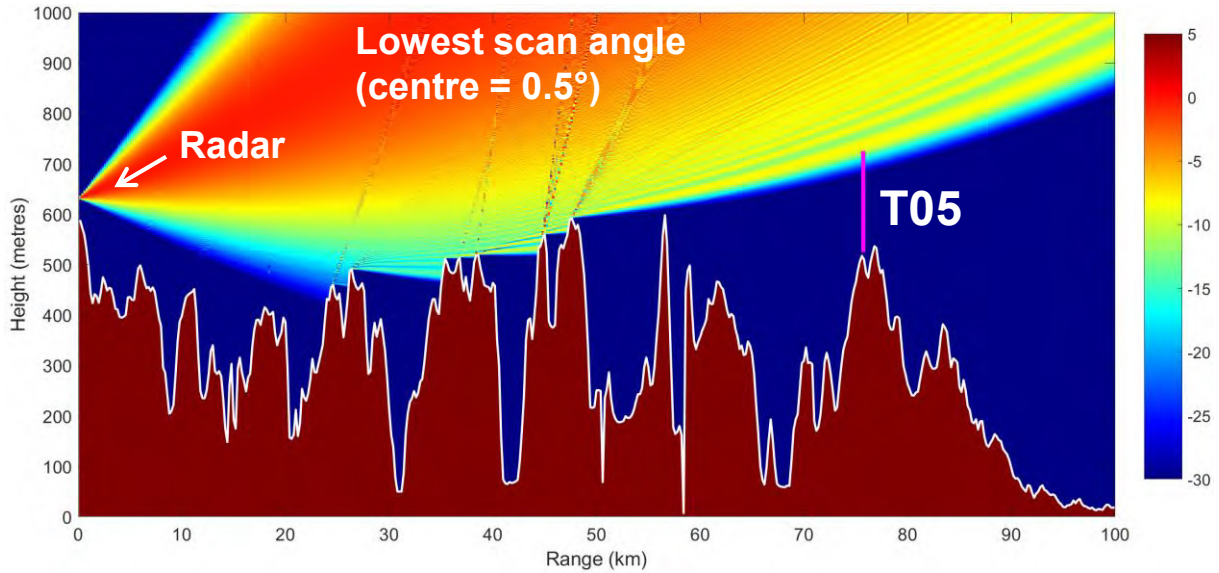
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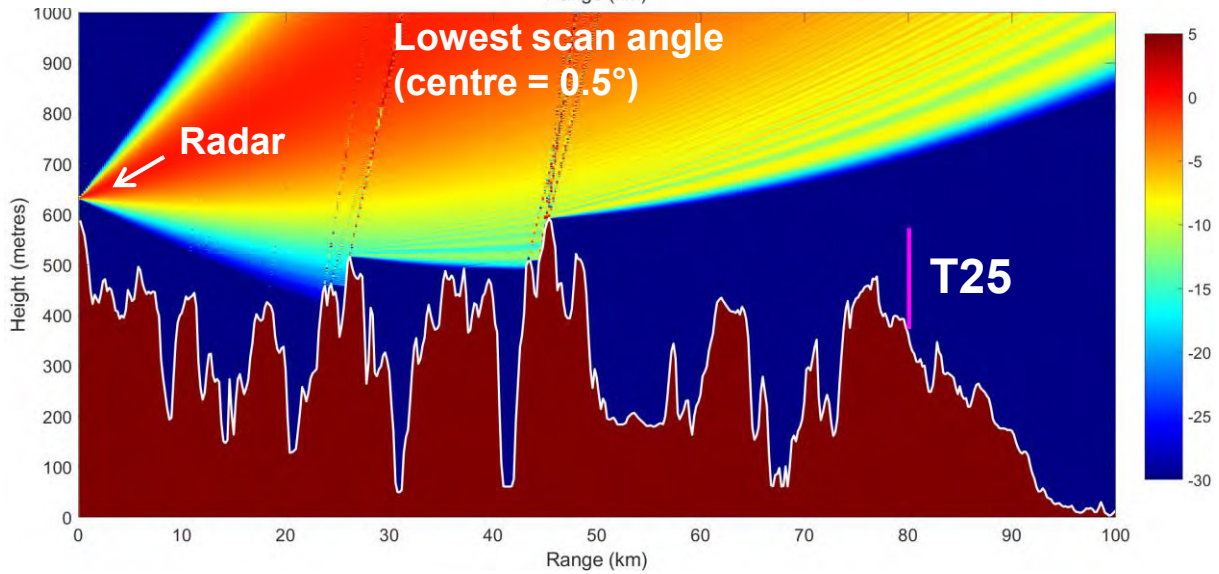
Reflections

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Signal propagation

- Representative* radar signal propagation at lowest scan angle shown to right, for T05 (most visible turbine) and T25 (out of LOS on similar bearing)
- Colour indicates 2-way power signal strength relative to free-space (no terrain)





This slide shows some radar signal reaches the turbines in radar LoS. Compare with Slide 12 which uses a simpler “3dB half-width” antenna beam model. The red/orange colour in this slide corresponds to the pink polygon “Scan 1” in Slide 12.

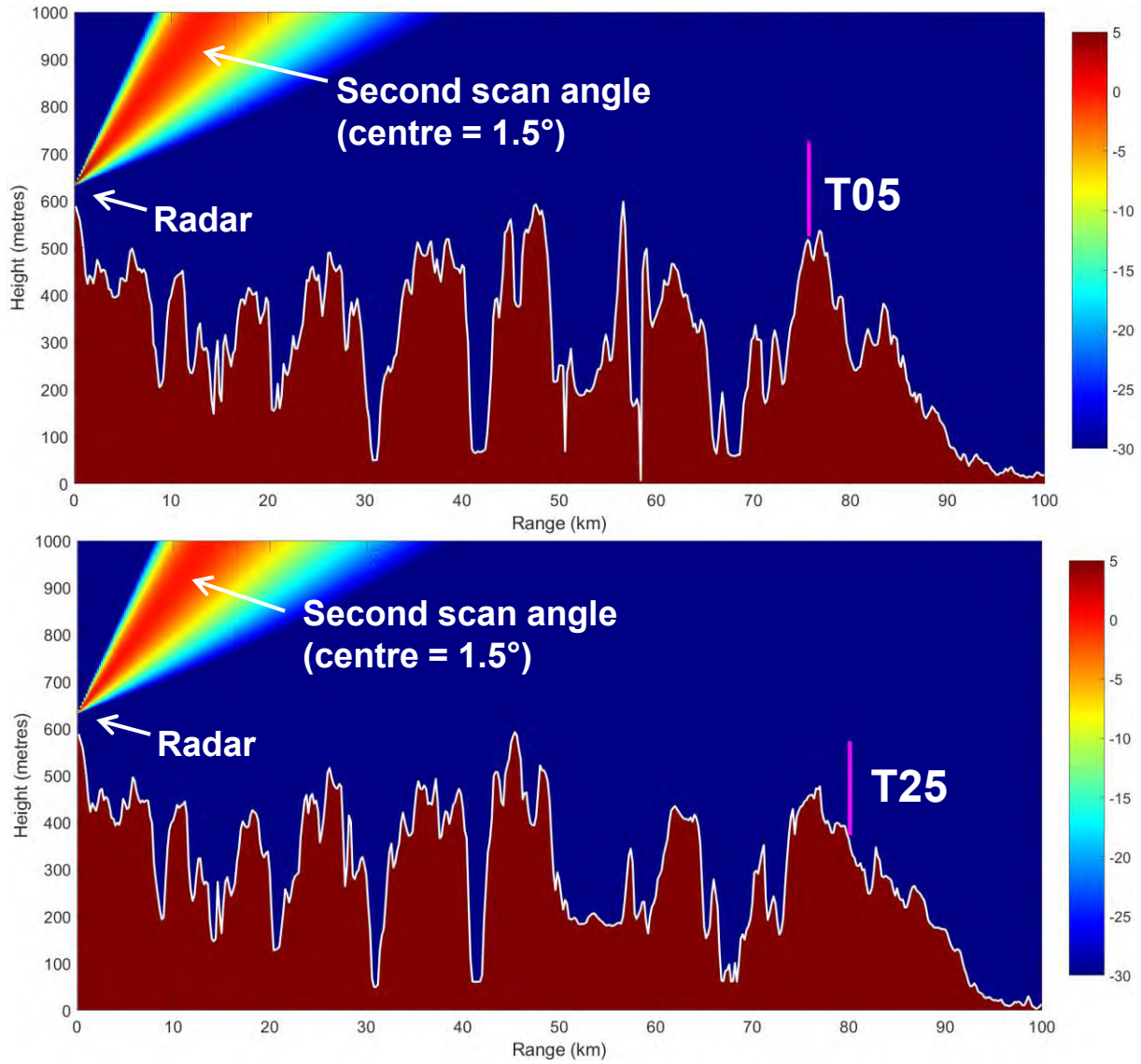
Radar signals appear to bend “up” in the figures. This is a result of Earth curvature and atmospheric refraction

* the beam pattern has not been provided for this assessment. A typical weather radar pencil beam with 1° beam width is used in this example

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Signal propagation

- Analysis repeated with second scan angle
- Unlikely to see significant reflections at this scan angle (or higher scan angles)



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Reflection strength

- Reflectivity (dBZ) from turbines estimated based on scaling strength of reflections from measurements
- Estimate for Moifjellet for 7x turbines in radar LoS (see Slide 9)
    - 53 dBZ (maximum infrequent blade flash) ≈ “heavy rain”
    - 33 dBZ (average blade reflection) ≈ “moderate rain”

  Clutter impacts will appear at the location of the turbines (see next slide)

- Turbines out of LOS: reflections possible due to diffraction over the terrain, but strength will be significantly reduced



Reflectivity in dBZ and Rainrate

L_Z (dBZ)	*R* (mm/h)	*R* (in/h)	Intensity
5	0.07	< 0.01	Trace accumulation or mist
10	0.15	< 0.01	Trace accumulation or mist
15	0.3	0.01	Trace accumulation
20	0.6	0.02	Light rain
25	1.3	0.05	Light rain
30	2.7	0.10	Light to moderate rain
35	5.6	0.22	Moderate rain
40	11.53	0.45	Moderate to heavy rain
45	23.7	0.92	Heavy rain
50	48.6	1.90	Heavy rain, small hail possible
55	100	4	Very heavy rain, hail possible.
60	205	8	Very heavy rain, hail likely.
65	421	16.6	Very heavy rain, hail very likely, large hail possible.

https://en.wikipedia.org/wiki/DBZ_(meteorology)

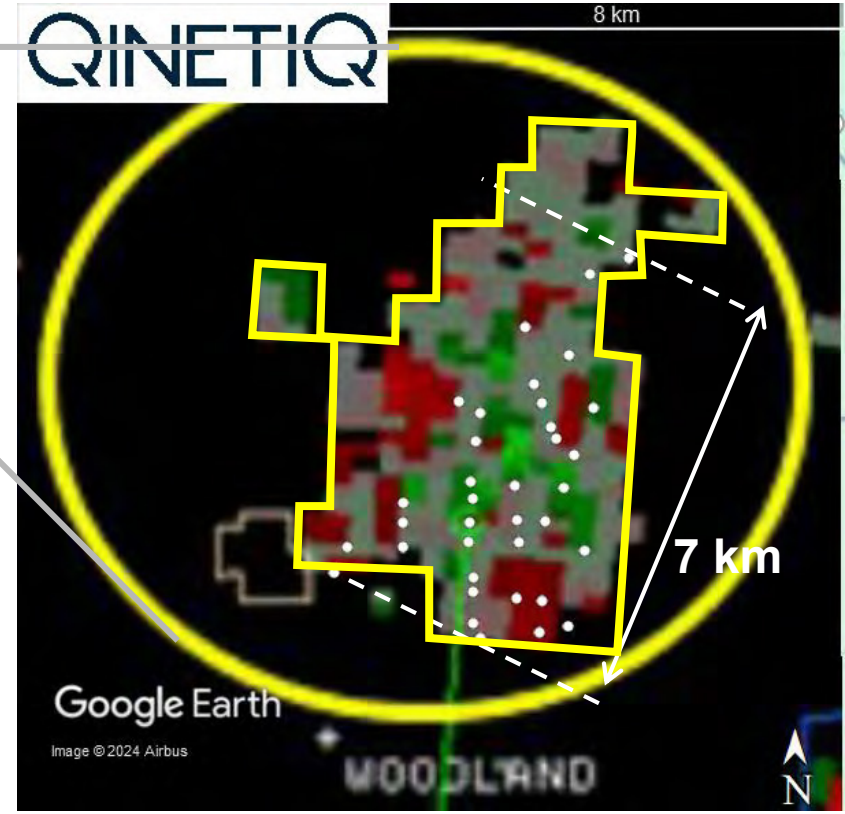
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Reflection strength

- Example of wind farm clutter from United States National Weather Service (NWS)
- Clutter (yellow polygon) local to wind turbines (white dots); extending a few km from the turbine locations





Data from
https://www.weather.gov/mkx/windfarm

Radar

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Acceptability

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Acceptability

- What level of interference is acceptable?
- The acceptance criteria are not known
- For comparison: the impacts would be acceptable in e.g. France* and the UK (safeguarding distances = 20km for a C-band radar).

*

	Distance minimale d'éloignement en kilomètres
Radar de bande de fréquence C	20
Radar de bande de fréquence S	30
Radar de bande de fréquence X	10

https://www.legifrance.gouv.fr/loda/id/JORFTEXT000024507365

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Summary

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Summary

- Statkraft intend to develop the Moifjellet wind farm approximately 76km north west from the Hægebostad weather radar
- The NMI are concerned that the project will have a negative impact on the operation of the radar
- A top level estimate of the impact concludes
  - Visibility (Slides 6 to 10): Seven* turbines in radar LOS.
  - Shadowing (Slide 11 to 12): No significant impact. Turbines are entirely below the strongest part of the lowest elevation scan angle
  - Clutter (Slide 13 to 17). Reflections from the turbines are possible, likely to be within a few km from the turbines. Reflection strength estimates in table to right
- Acceptability (Slide 19)
  - NMI acceptance criteria not known
  - The impacts would be acceptable in e.g. France / UK …
  - … but it is for NMI to determine the acceptable interference levels for their radar

Impact	Turbines in direct radar LOS*	Remaining turbines
Maximum (infrequent) reflection from rotating blade flash	53 dBZ ≈ “heavy rain”	Reflections possible due to diffraction over terrain but less than from turbines in LOS.
Average reflection	33 dBZ ≈ “moderate rain”	

*T01, T05, T10, T12, T13, T17 and T37

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