

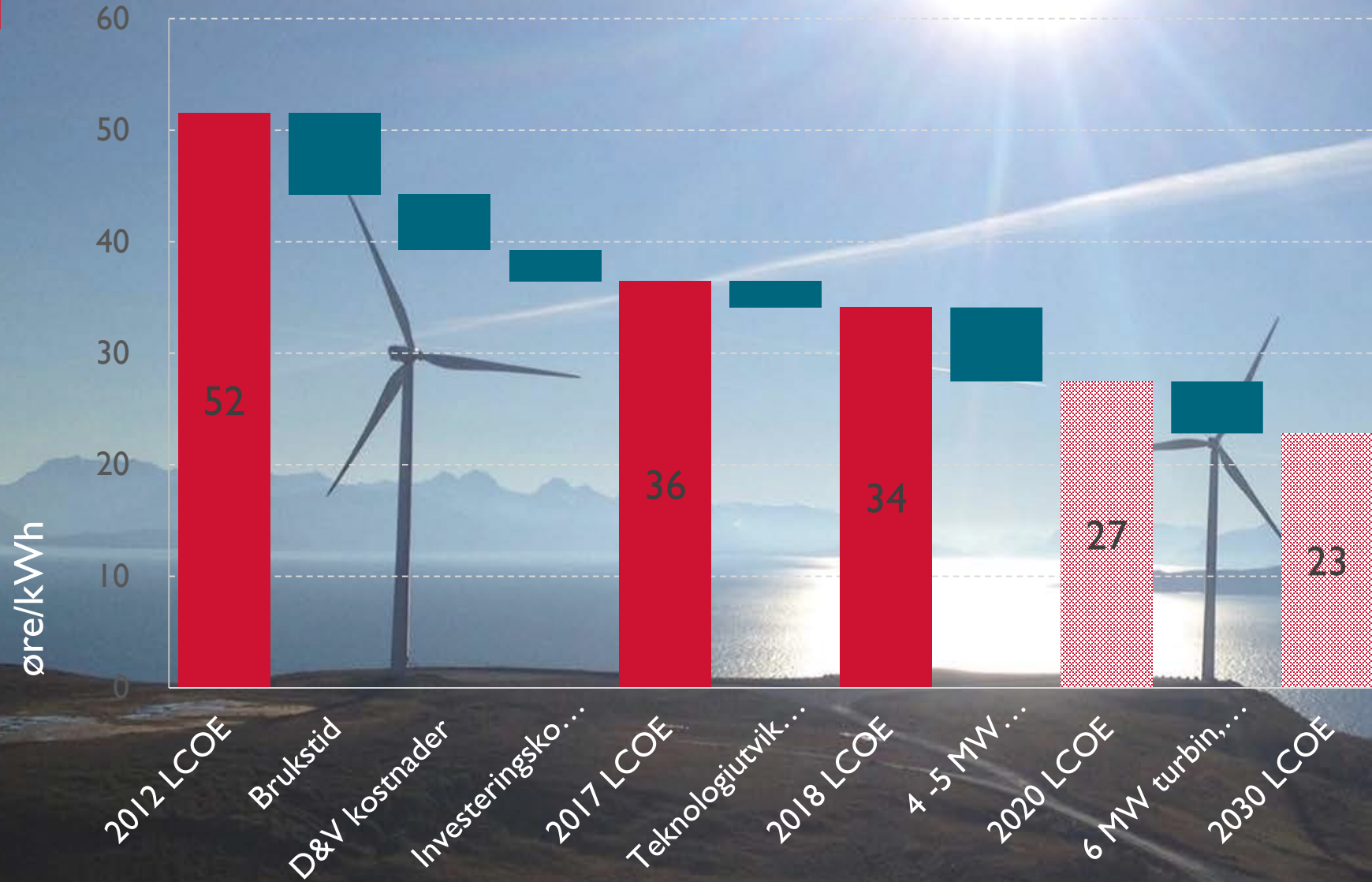


NVE

# MORGENDAGENS TURBINTEKNOLOGI

Ann Myhrer Østenby  
Senioringenør vindkraft/NVE

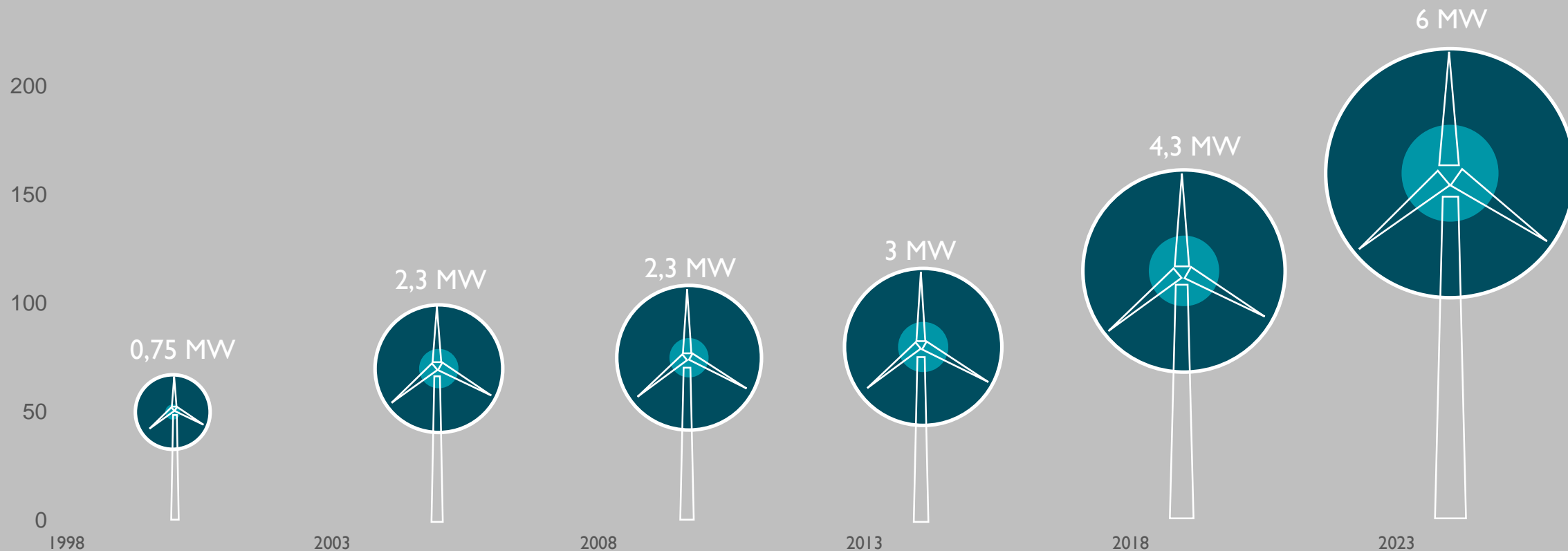
# Kostnadene blir lavere





# Turbinene blir større

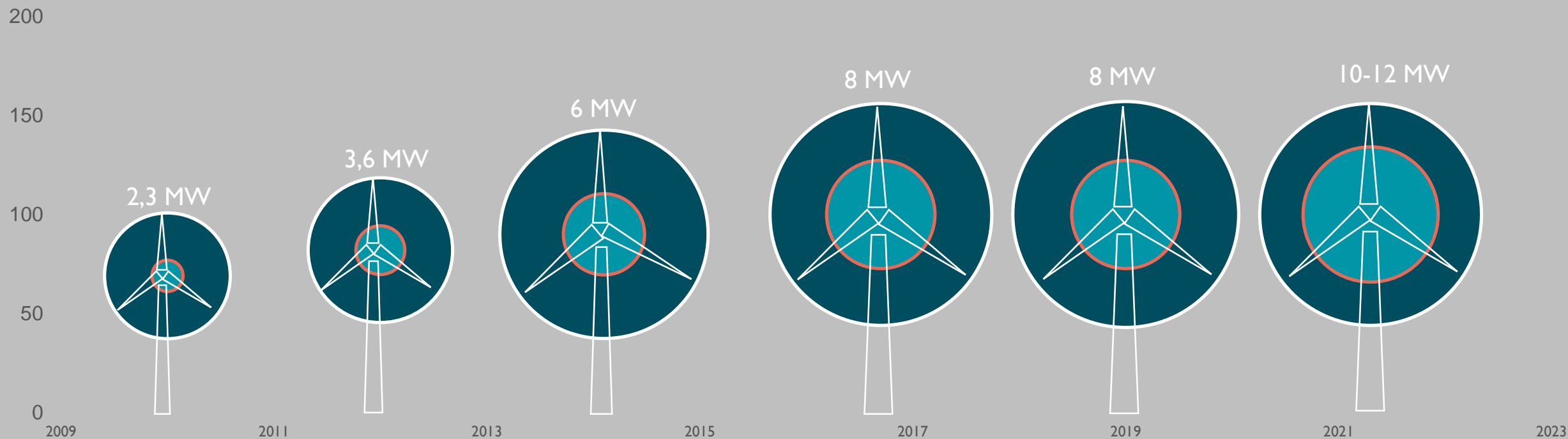
- Generatorytelse
- Rotordiameter



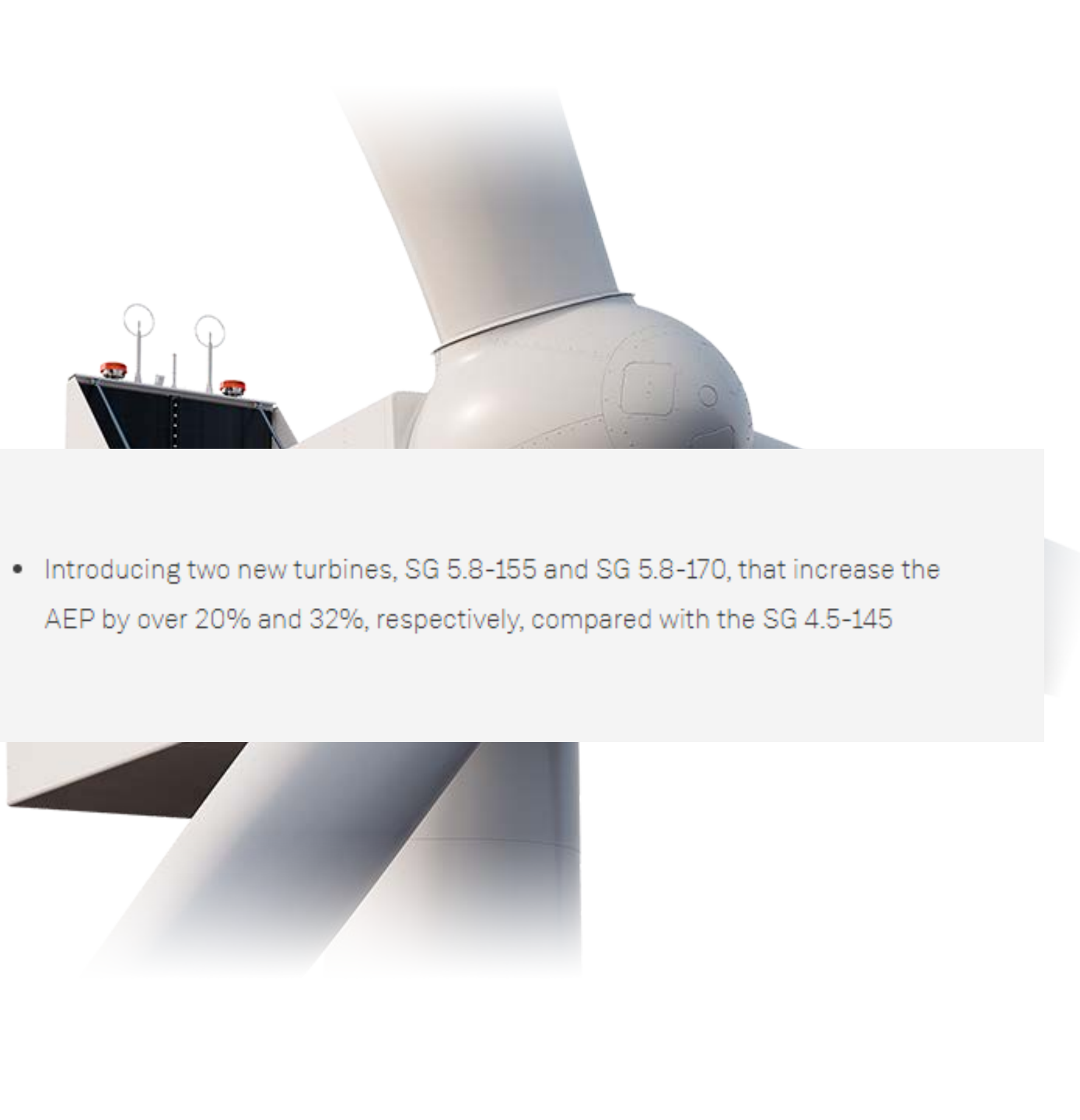


# Også til sjøs

- Generatorytelse
- Rotordiameter





- 
- Introducing two new turbines, SG 5.8-155 and SG 5.8-170, that increase the AEP by over 20% and 32%, respectively, compared with the SG 4.5-145



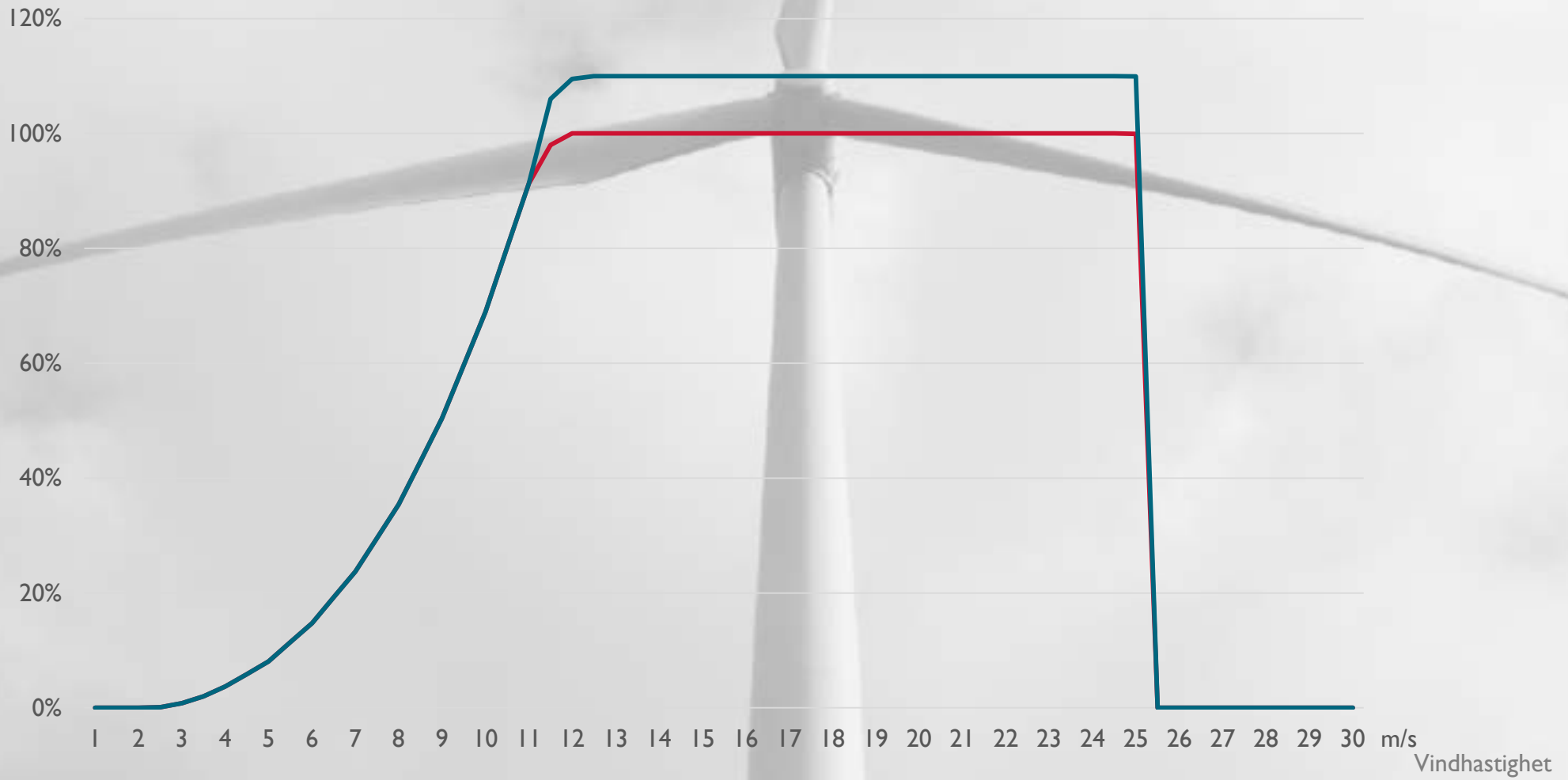
# Hvorfor vil man at vindturbinene skal bli større?





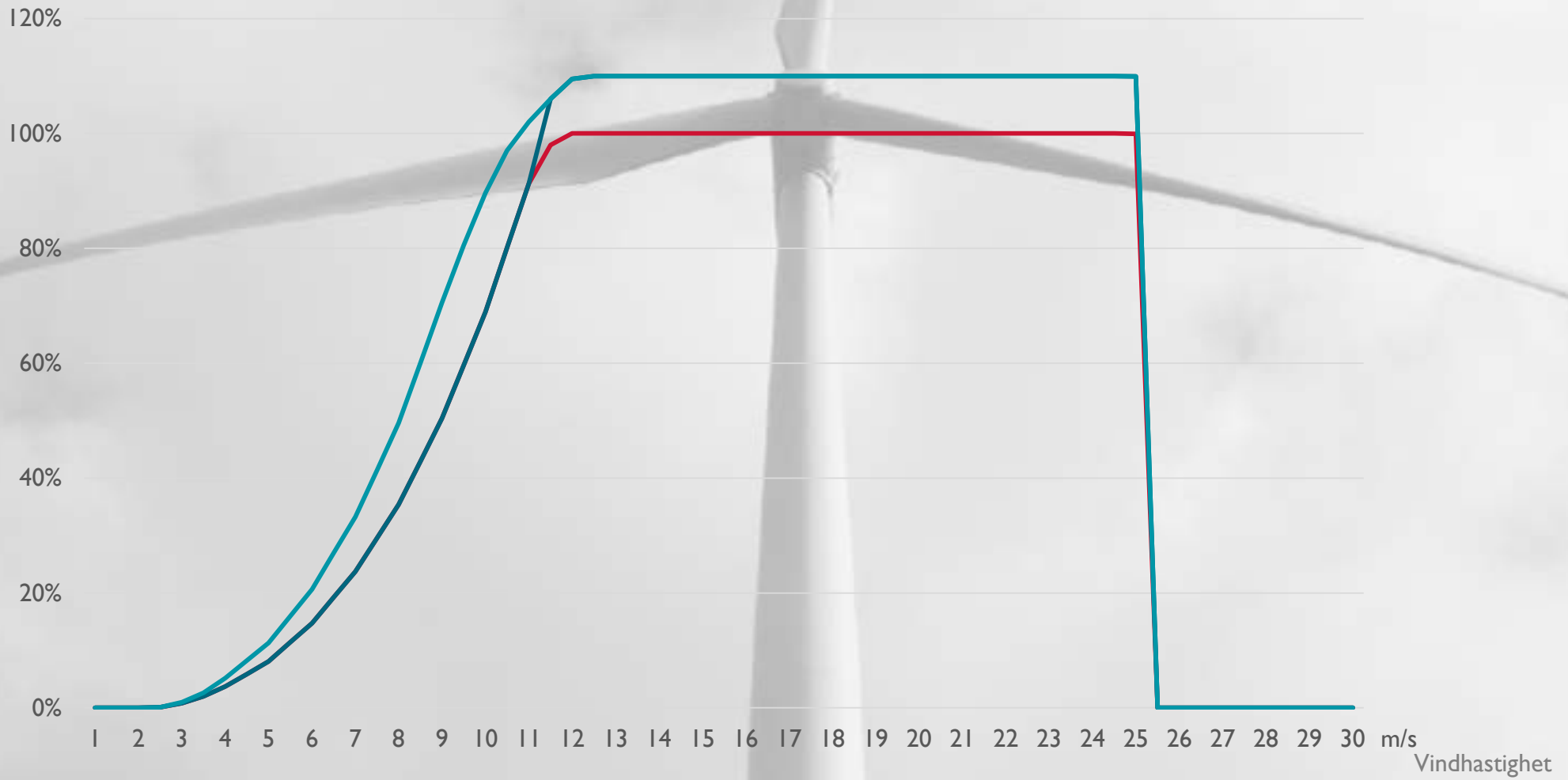


# Økt effekt



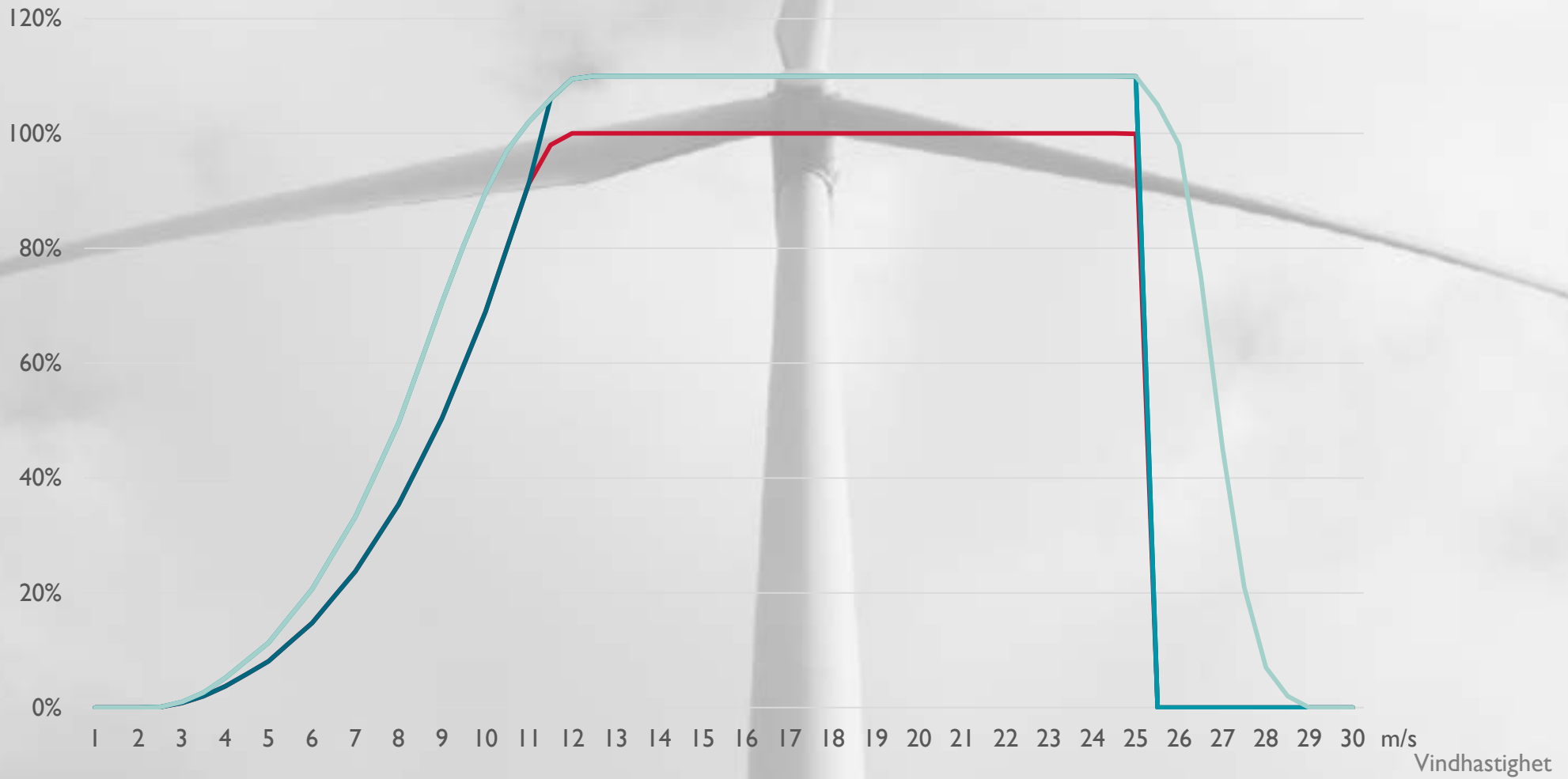


# Større rotordiameter



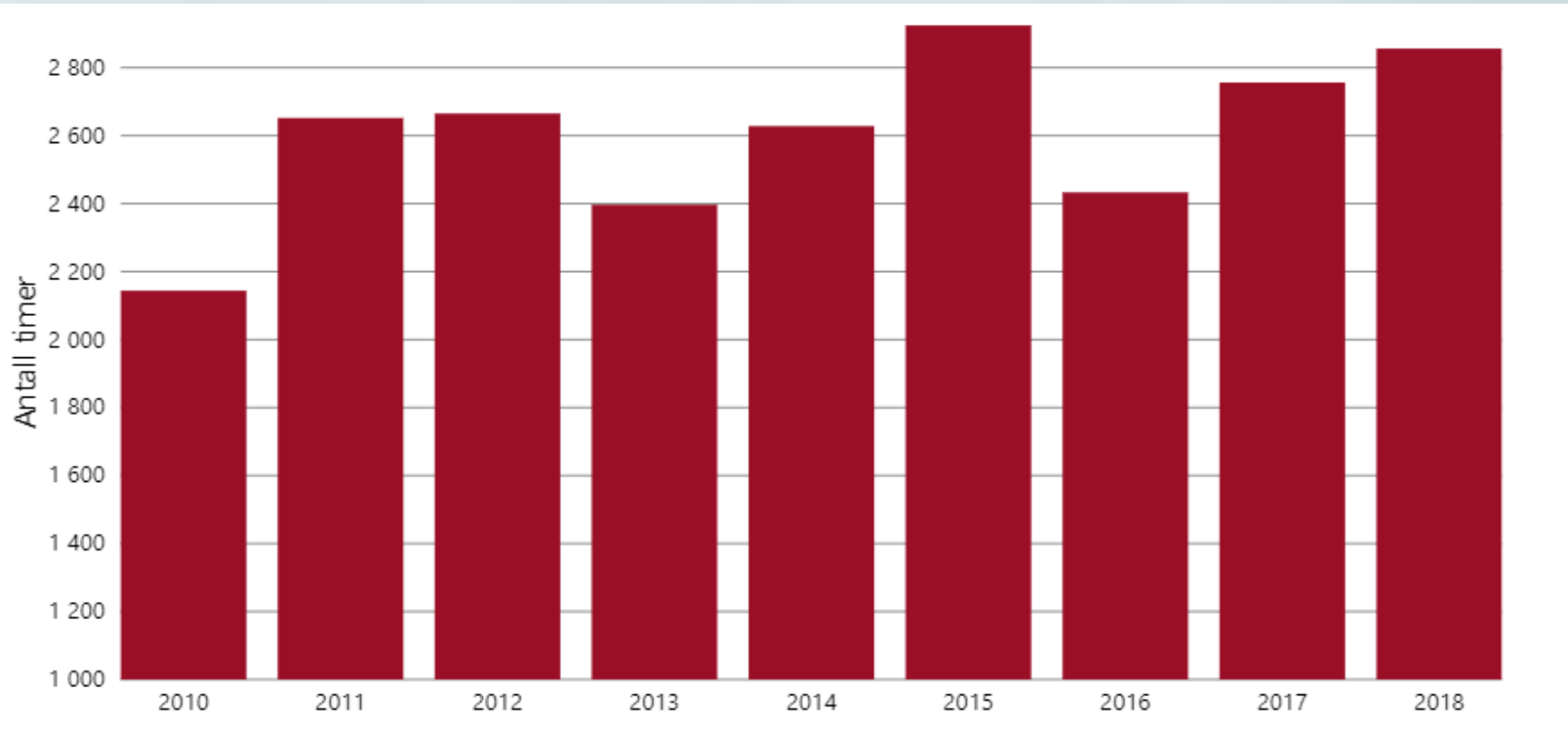


# Produksjon når det blåser mye





# Brukstiden blir høyere



## Økt energi – færre turbiner



# Utvikling av turbinkostnader

Mill kr

1 400

1 200

1 000

800

600

400

200

-

2002-2005

2006-2008

2010-2011

2012-2013

2014-2015

2017

2018





# Utvikling av turbinkostnader

Mill kr

1 400

1 200

1 000

800

600

400

200

-

Kr/kWh

5

4

3

2

1

0

2002-2005

2006-2008

2010-2011

2012-2013

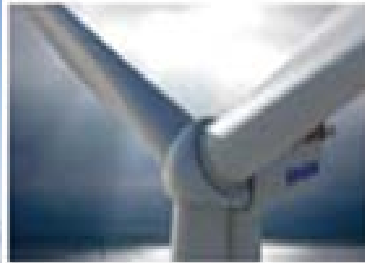
2014-2015

2017

2018



## Vestas Chair: Offshore turbines will reach 20 MW in the future



Renewables: Even though Vestas is currently working on developing 10 MW offshore wind turbines, the company is already planning even larger turbines long term. 🔑



## Vestas Chair: Offshore turbines will reach 20 MW in the future



Renewable energy. Even though Vestas is currently working on developing 10 MW offshore wind turbines, the company is already planning even larger turbines long term. 🔑



Takk for oppmerksomheten!

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