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The prospects for offshore wind in the European energy transition to 2030 and beyond.

Knut M. Aanstad, VP Offshore Wind Business Development, Equinor
Nordic-Baltic Energy Conference 2019

Equinor New Energy Solutions – Strategic Objectives

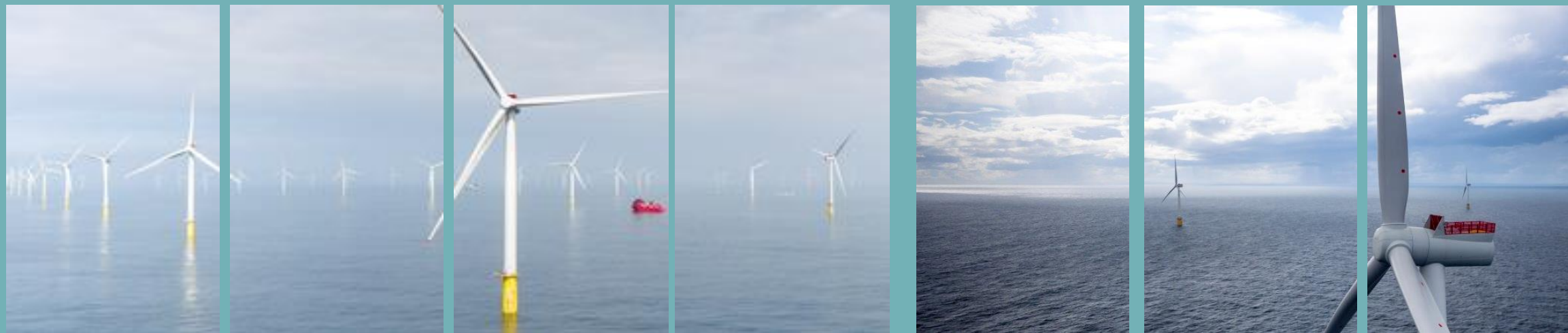


Build a profitable renewable business



Develop new lower-carbon business opportunities for Equinor's core products

Building a profitable offshore wind portfolio*



Bottom fixed

Sheringham Shoal
In production

317_{MW}

Dudgeon
In production

402_{MW}

Arkona
In production

385_{MW}

Empire Wind
In development

816_{MW}

Dogger Bank
In development

3,6_{GW}

Floating

Hywind demo**
In production

2.3_{MW}

Hywind Scotland
In production

30_{MW}

Hywind Tampen
In development

88_{MW}

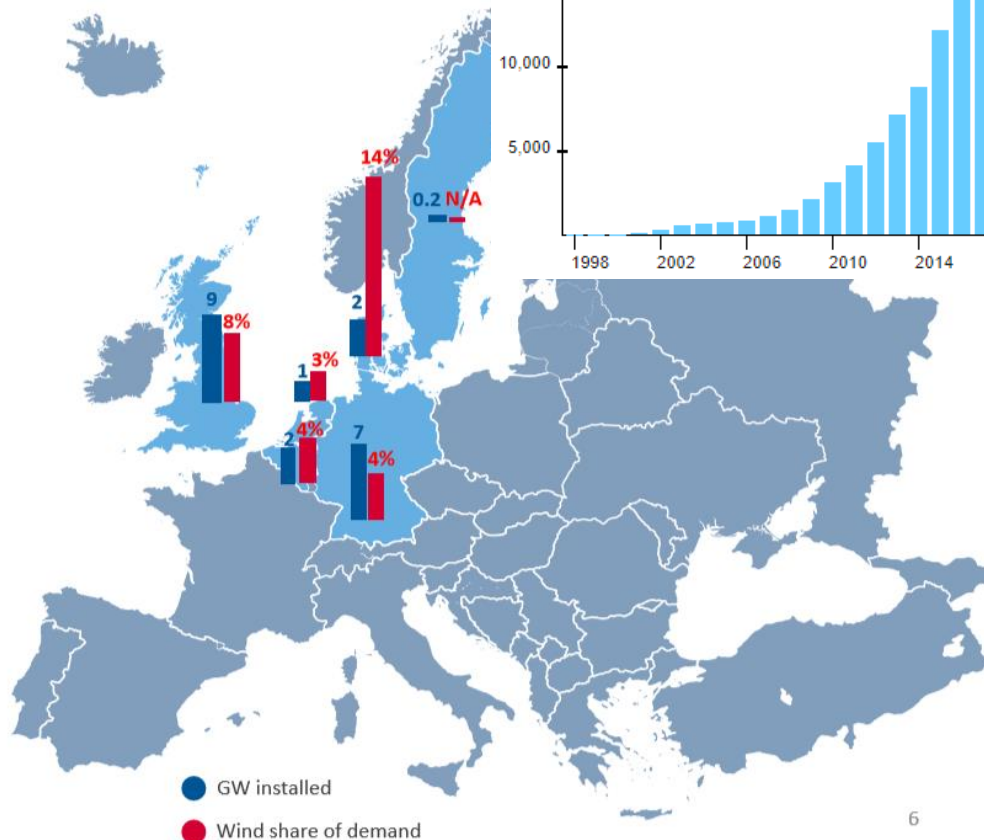
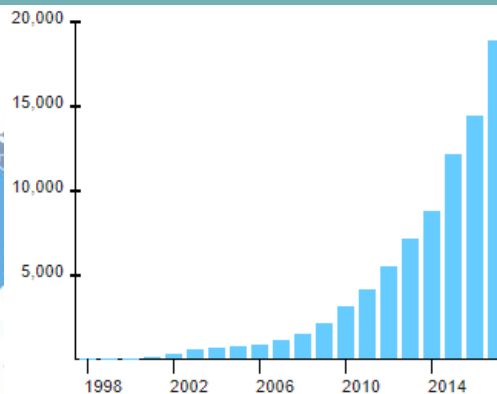
* Figures: Installed capacity, 100% basis.

** Sold to Unitech, January 2019

Offshore wind in Europe

20 GW

2%
of 2018 EU
power demand

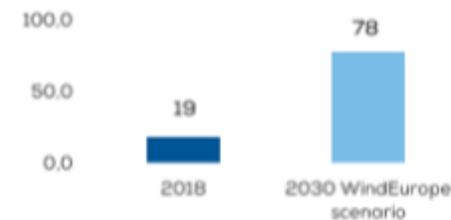


Wind
EUROPE

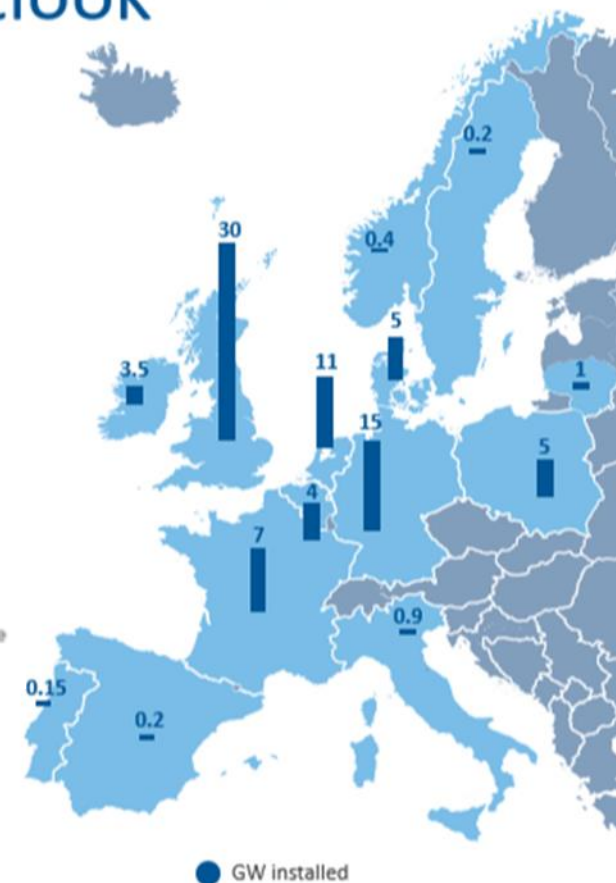
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Offshore outlook

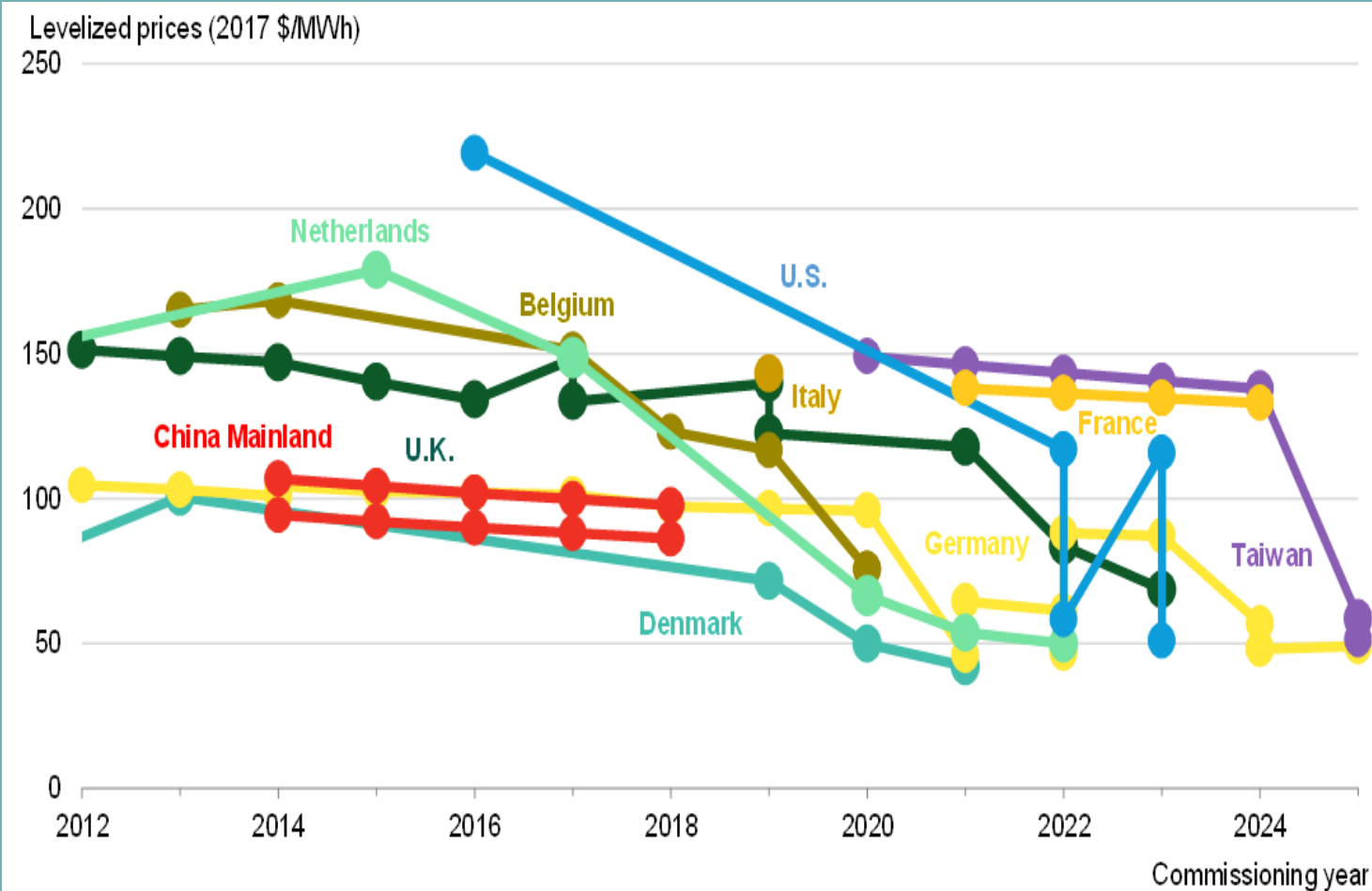
2030



Wind
EUROPE



GW installed

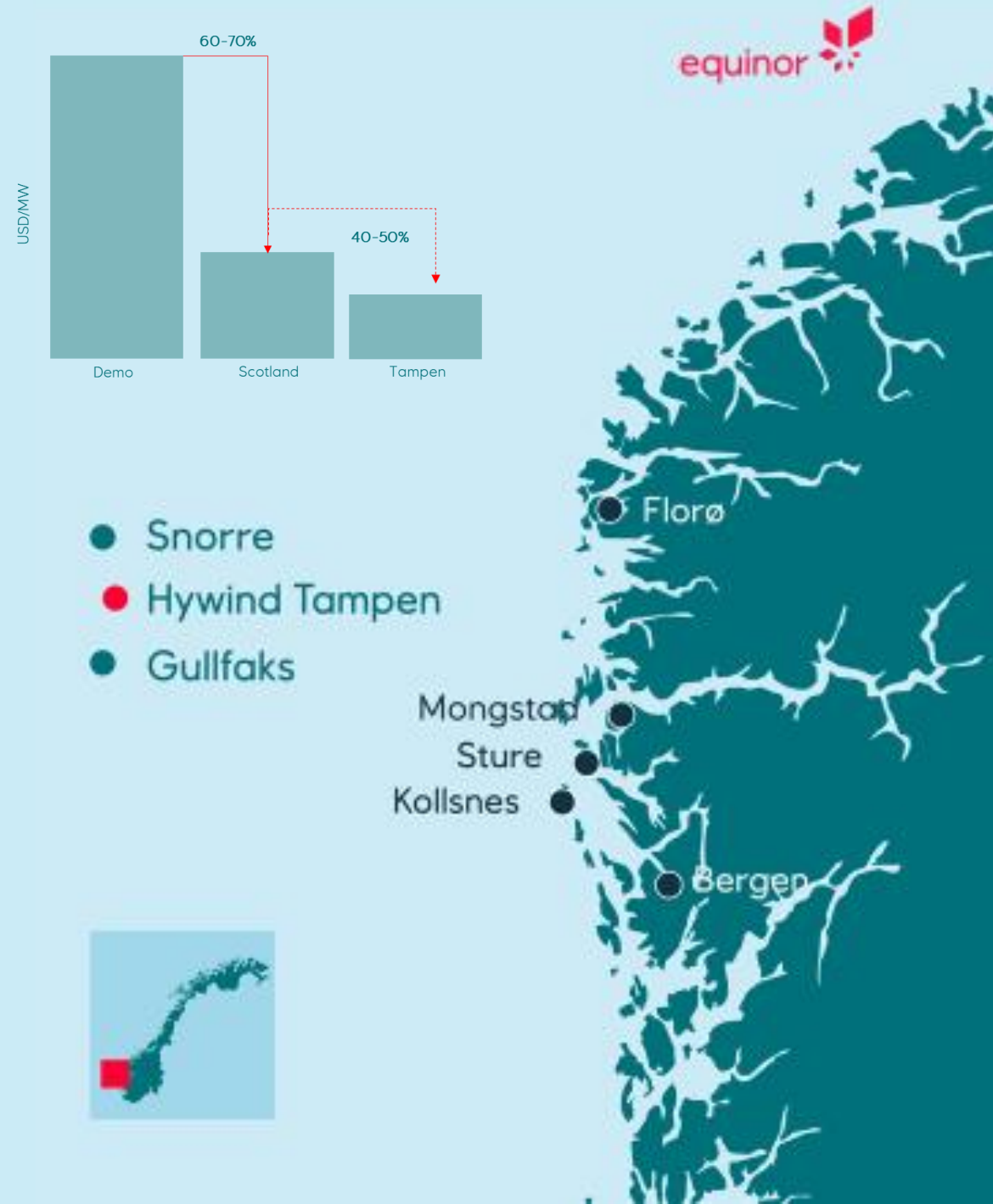
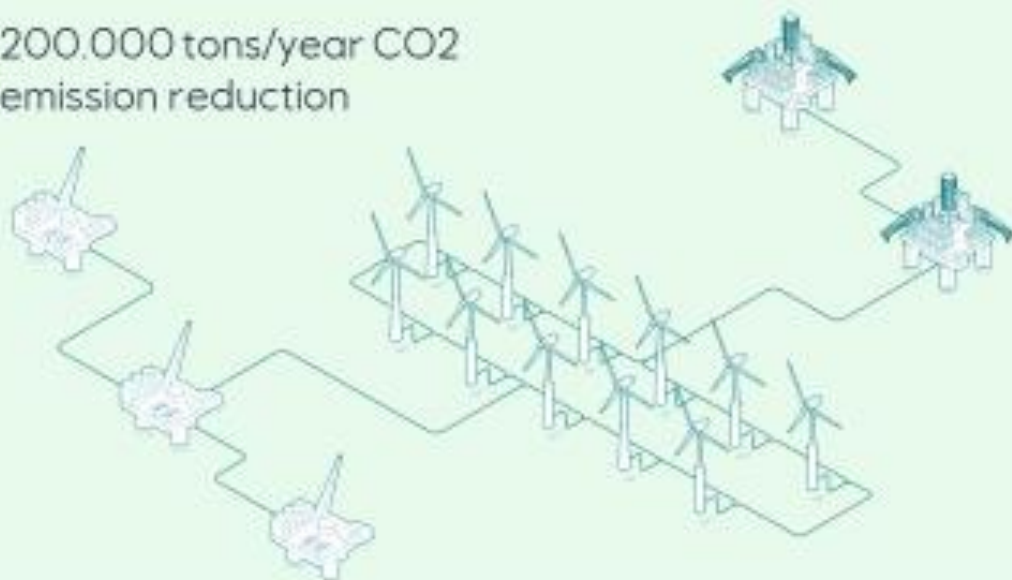


Source: BloombergNEF. Notes: Figures refer to an estimated levelised price, taking into account tariff price and length, inflation, a merchant tail assumption and a 25-year project lifetime.

Hywind Tampen

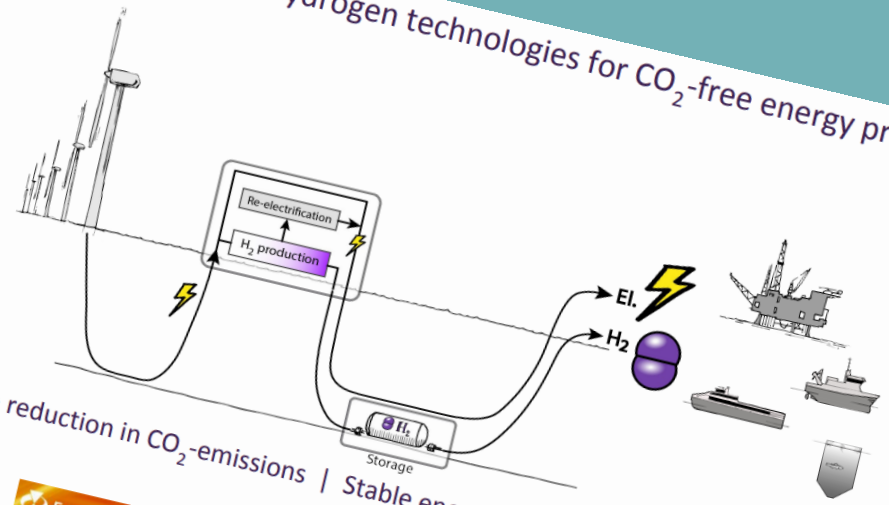
The world's first **floating** offshore wind farm to supply renewable power to offshore oil and gas installations.

- 11 wind turbines
- Combined capacity of 88MW
- Concrete substructures and shared anchors
- 200.000 tons/year CO2 emission reduction





Deep Purple - Offshore hydrogen technologies for CO₂-free energy production



Change reduction in CO₂-emissions | Stable energy supply | Local energy production

TechnipFMC

Forskningsrådet

SINTEF

hub for ocean

OCE Ocean Technology

energy valley

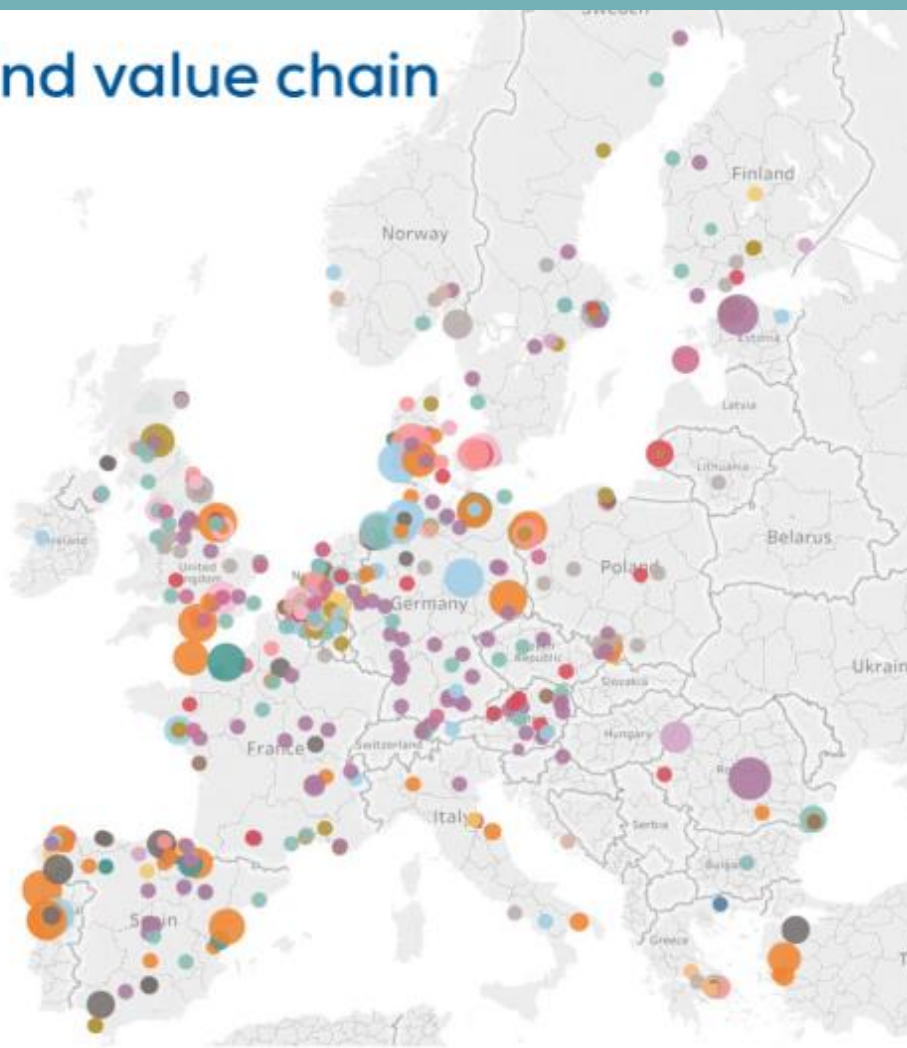
Deep Purple



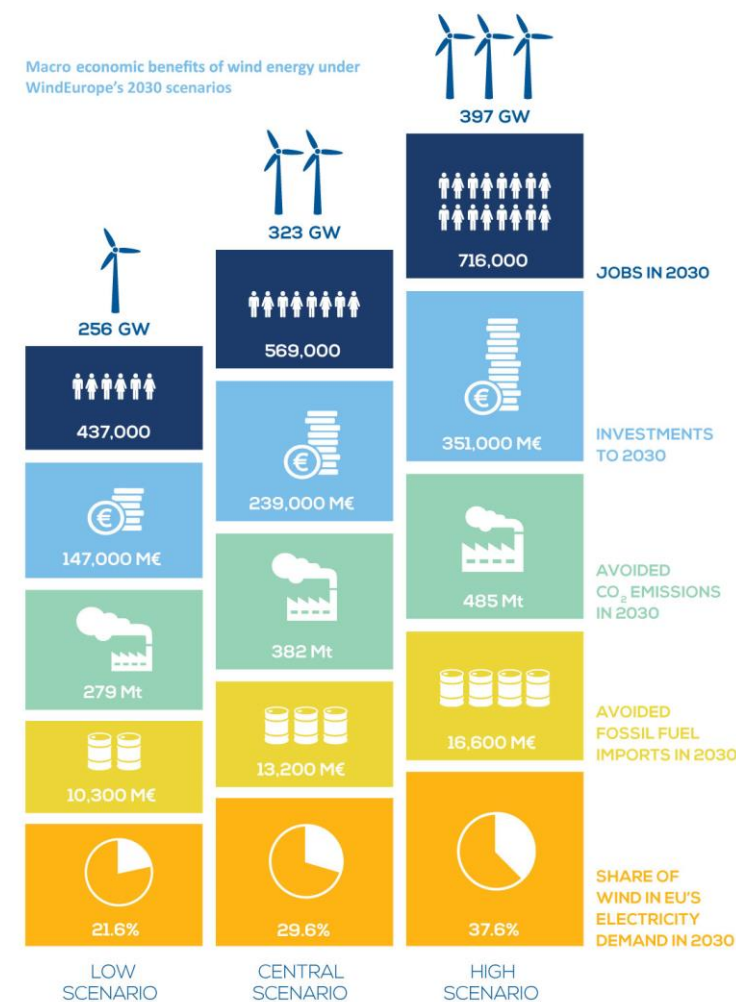
European wind value chain

- Components
- Assembly
- Blades
- Foundations
- Gearboxes
- Nacelles
- O&M
- Other
- R&D
- Towers
- Cables
- Generators
- Logistics
- Port

Wind
EUROPE



Macro economic benefits of wind energy under WindEurope's 2030 scenarios





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Thank you