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Floating wind - the next big thing

Industry Meets Science, Trondheim, June 13'th, 2019 Geir Olav Berg, Head of Engineering – Floating Wind



175 Years of Change











Our Vision

A leader in forging a sustainable future for the global energy industry and the world it serves

World Electricity Generation by Source



Source: DNV GL, Energy Transition Outlook 2018



Strong Drivers – Some Competing

Key drivers speeding the transition

 Consumer behaviours and public opinion changing

Key factors slowing the transition

- Cost of floating wind vs. other renewables
- Immature regional regulatory and fiscal regimes
- Lack of offshore understanding in wind industry





Floating Wind Makes Industrial Sense

For commercial wind farms with 10MW turbines, the most optimal will be floating wind energy





Offshore bottom-fixed (<50m)



Offshore floating



Economy of Scale is Increasing with the Turbine Size

Floating wind pre-commercial projects performance exceeds expectations



Global Potential for Offshore Floating Wind



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Norway Potential for Offshore Floating Wind



Slik ser et område på 80×80 kilometer ut på sokkelen. Foto: Google /My Maps

Dette området kan produsere like mye strøm som all norsk vannkraft

Et område på 6400 kvadratkilometer på sokkelen er det som trengs for at havvind skal bli like stort som vannkraft her til lands, sier havvindnestor Finn Gunnar Nielsen.

av Sigrid Haaland

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Aker Solutions will be a leading provider of offshore wind energy solutions



Floater – Cost-Effective, Flexible Technology

- Semi submersible with shallow draft
- Quay side final assembly, commissioning and major maintenance
- Water depths: 40-1000m
- Inherently stable in transit
- Cost effective mooring system
- Connect/disconnect for maintenance
- Turbine agnostic





Floating Wind Projects

Kincardine

- 50 MW, Scotland, 25 km from Aberdeen
- Kincardine Offshore Windfarm Ltd (majority owner Cobra)
- Detailing / Operation
- Online September 2018

Leucate EFGL

- 24 MW, France, 18 km from Leucate
- Consortium of ENGIE, EDPR & Caisse de Depots
- Detailing
- Online by 2021



Valras-Plage

Wind Float Atlantic

- 24 MW, Portugal, 20 km from Viana do Castelo
- Windplus Consortium of EDPR, Repsol & Principle Power Inc
- Detailing / Construction
- Online by 2019



Humboldt Bay

- 110-150MW, 25 miles from Eureka in Northern California
- Consortium of Redwood Coast Energy Authority, EDPR, Aker Solutions & Principle Power.
- Early Development
- Online by 2024



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Offshore Wind Solutions

Lézignan-Corbières

Cucugnar

Narbon

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