



Offshore Wind development Industry role and possibilities

Halfdan Brustad Vice President

A strategy for superior profitability and growth

Upstream strategy



Strategic mid- and downstream positioning

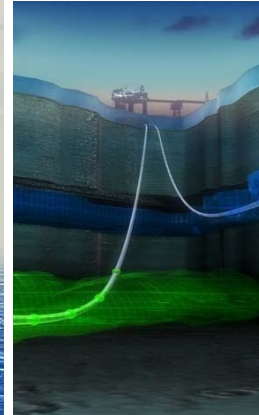


Renewable energy and low carbon technologies



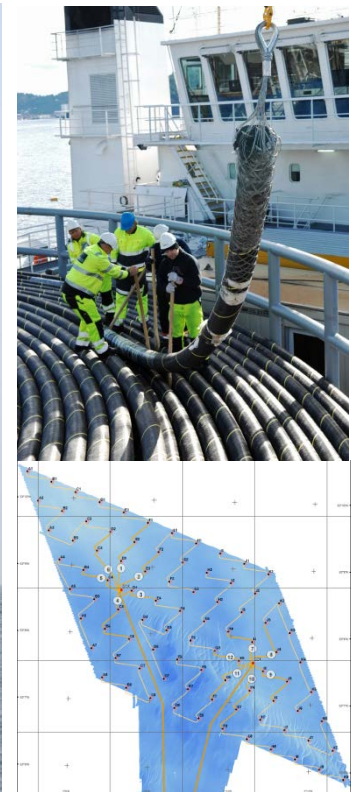
A focused Renewable Energy strategy

Efforts in renewables will be focused in areas where Statoil has technology and know-how to enhance value



Sheringham Shoal in the Statoil Portfolio

- Good commercial project
 - Met Statoil IRR
- Full production from 2012
 - 317MW installed capacity
 - 88 turbines
- Learning from Sheringham Shoal
 - Dogger Bank
 - Bringing down the costs



Corporate set up



Secondment Agreements

Service Level Agreements



FOREWIND LTD.

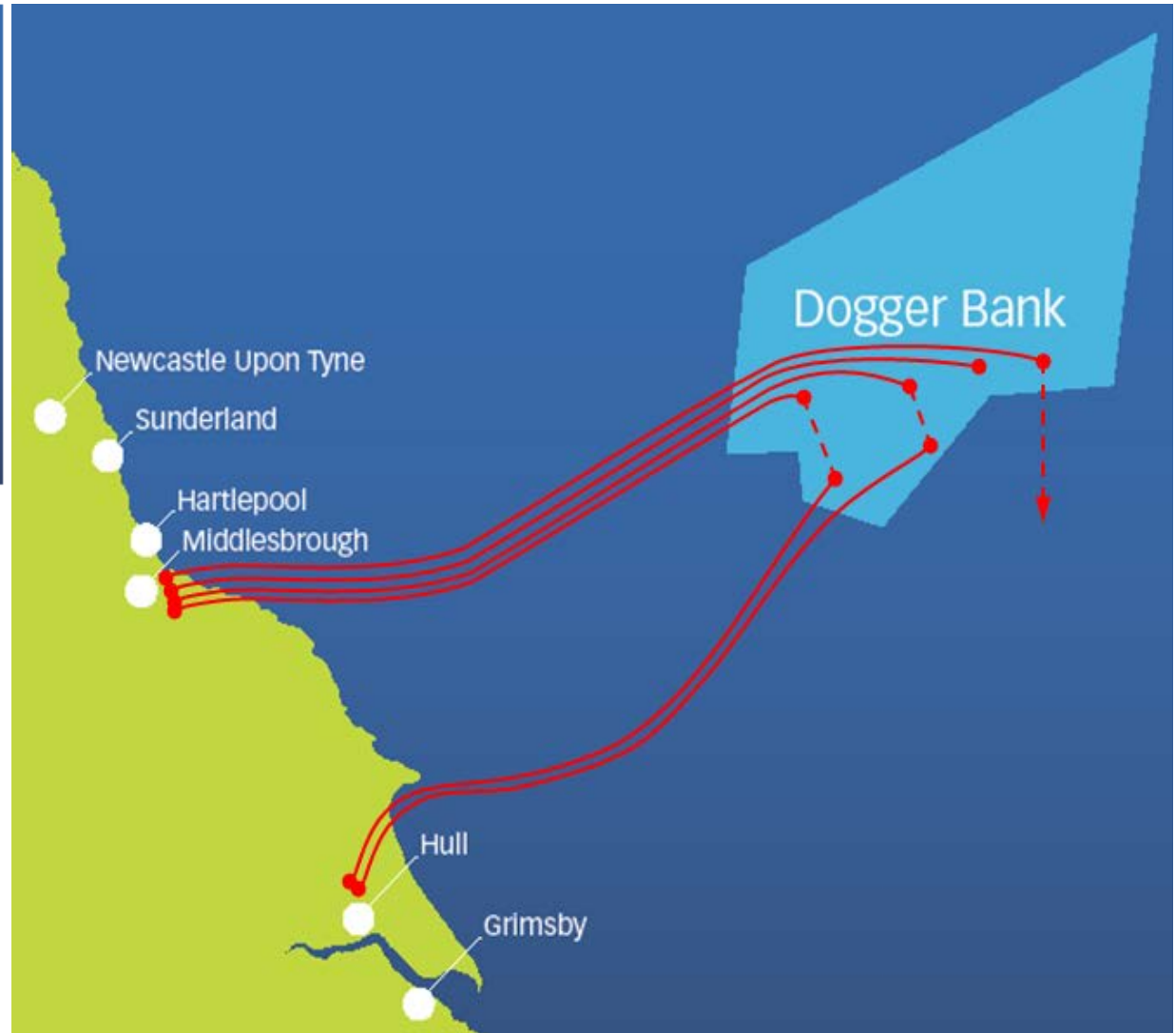
*Forewind is a consortium comprising
four leading European energy companies*

Key facts

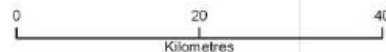


DOGGER BANK KEY FACTS

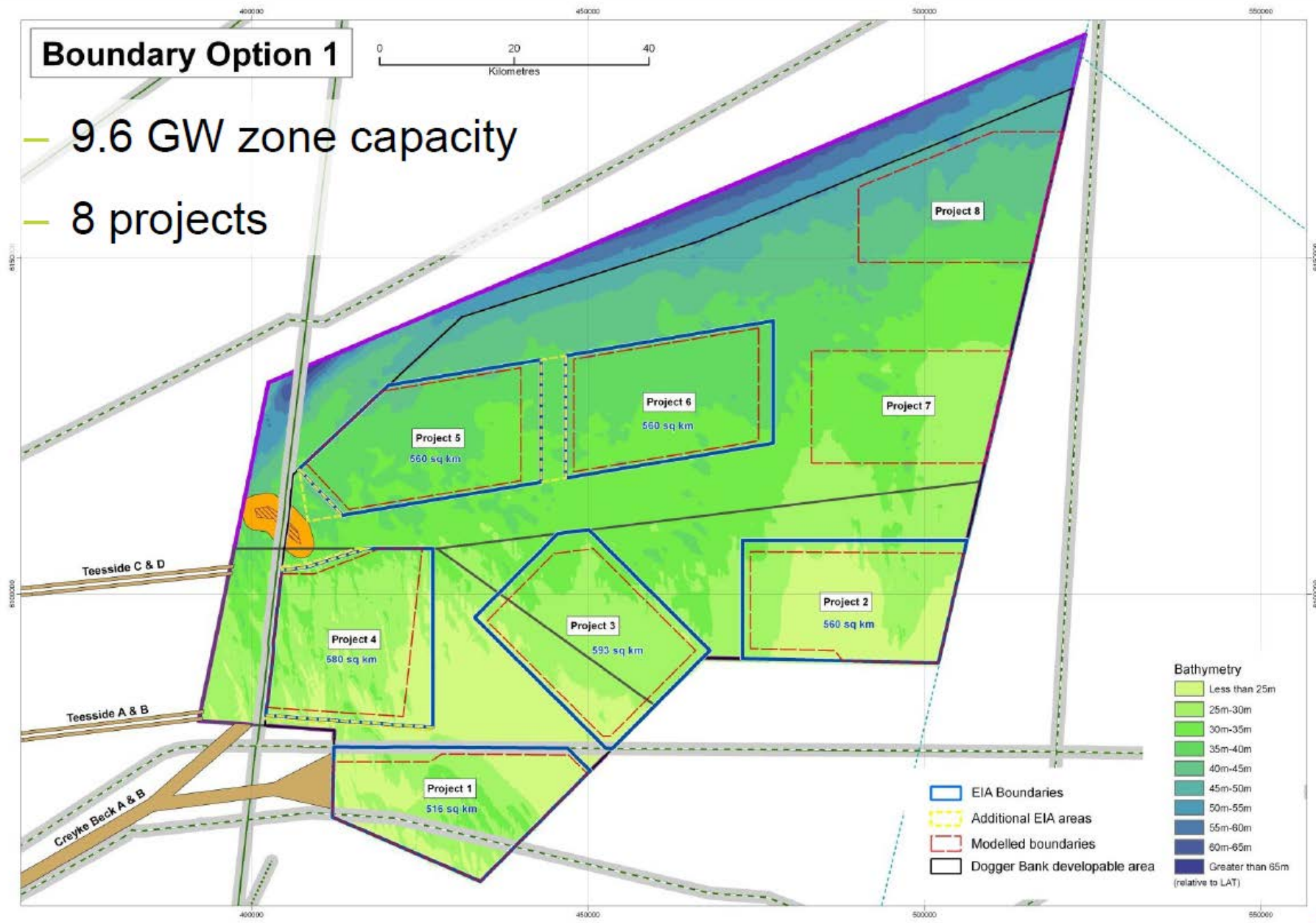
- Estimate capacity: Agreed target 9 GW by 2020, with the potential for c.13 GW
- Area: 8660km² (3343 square miles)
- Equivalent to Size of North Yorkshire
- Distance from shore: 125-290 km (77-180 miles)
- Water depth: 18-63 m (59 to 206 ft)
- c.4 GW in <30m water depth, c.8 GW in <35m water depth
- High wind speeds >10 m/s average wind speed across the zone



Boundary Option 1



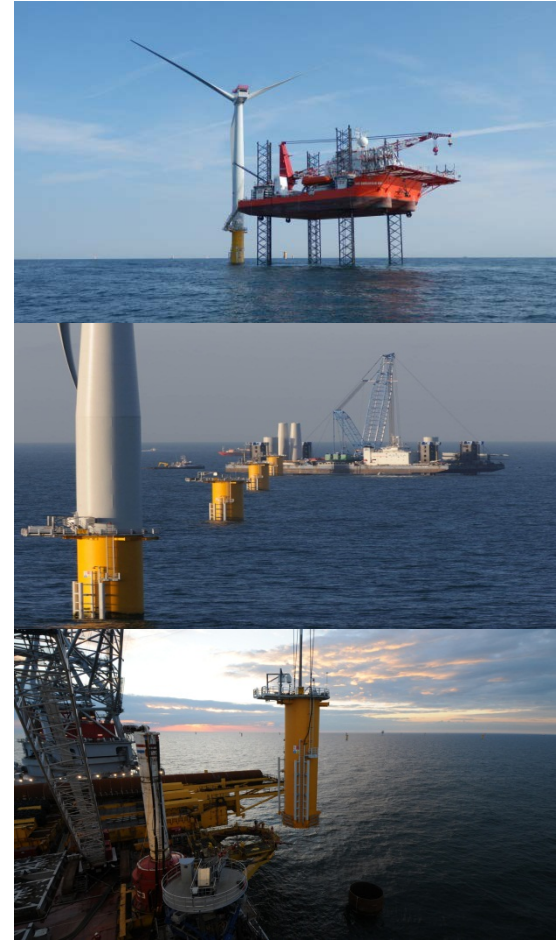
- 9.6 GW zone capacity
- 8 projects



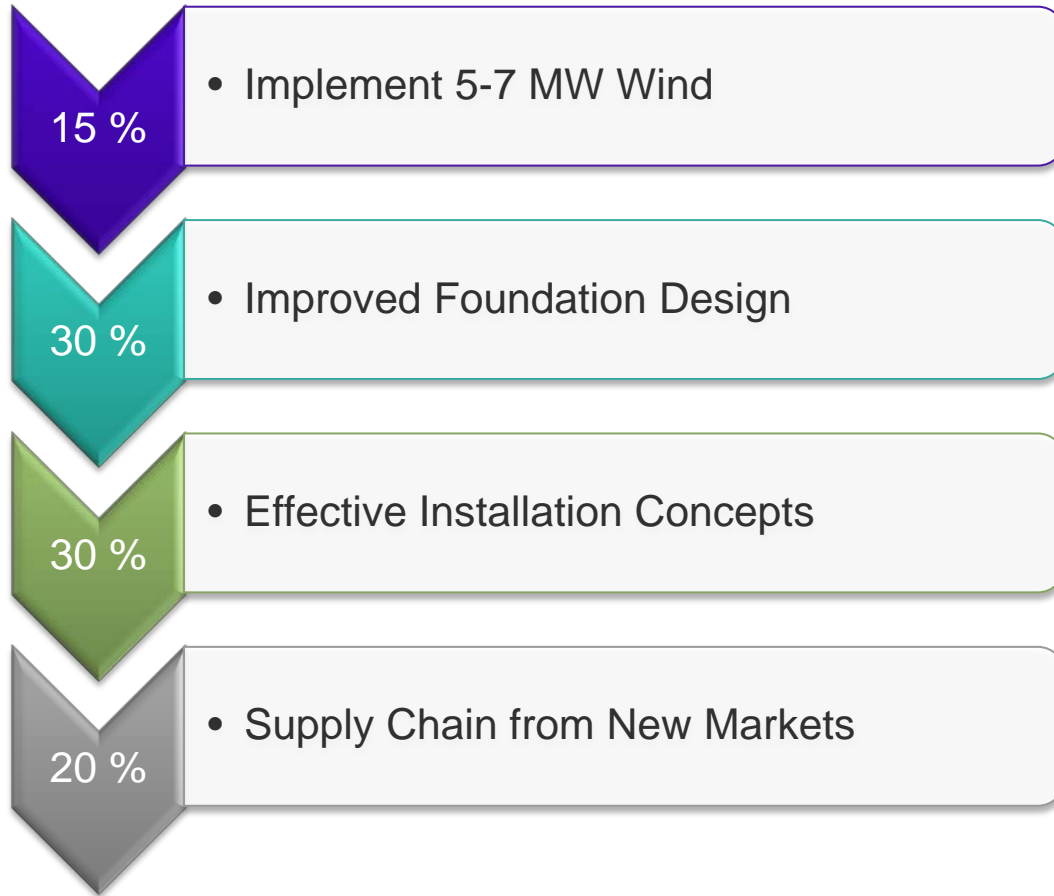
Current situation

Pioneering– still in its infancy

- The industry as a whole is still in an early learning phase
- Cost level too high – capital intensive industry
- Dependent on governmental support/subsidies
- Silo-oriented industry and solutions
- The supply chain constraints, but is developing fast
- Limited financial strength among players
- However: High potential for cost reductions in several areas



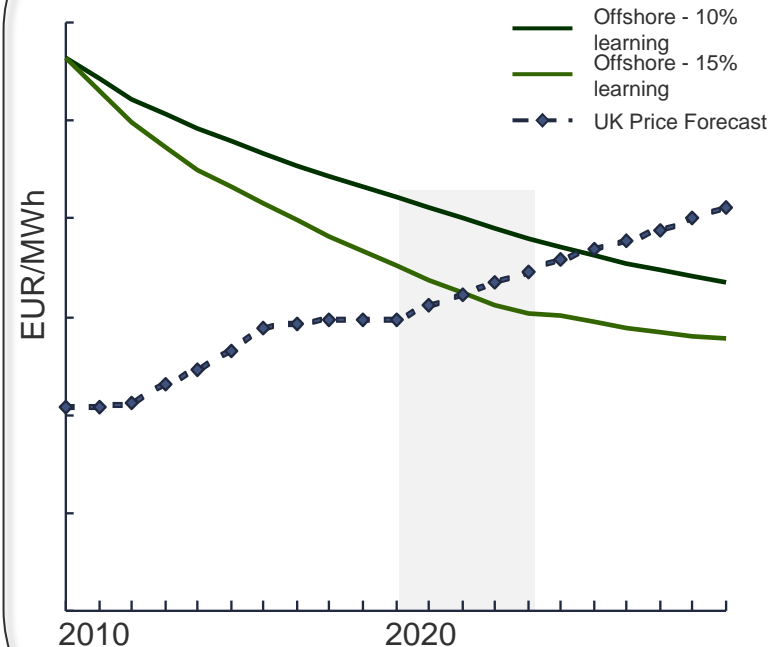
Main focus going forward – Cap Ex Reduction



Huge upside potential need critical mass to invest and take risk

- Time for new competitive commercial concepts (technical, operation, financing, insurance etc)
- Use technology break through from other industries
- Expand market place – competitiveness
- Need to balance innovation and standardization
- Demonstrate grid parity early 2020'ies
- **Floating wind?**

Levelized cost of electricity, CoE



10-15% cost reduction per market doubling expected for offshore wind, from a very low base

What is required to reduce COE drastically

- Right policy framework
- Entry of Stronger players willing to take risk
- Consolidation in construction sector
- Better financial structures(Financing, insurance)
- Holistic value chain approach

It has been done before in other industries



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time for **good ideas**

Presentation title

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