



# Hywind Tampen

An industrial part of the solution





# Hywind Tampen – An industrial part of the solution

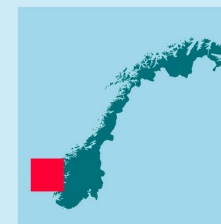
- Reduce CO<sub>2</sub> and NO<sub>x</sub> emissions on Gullfaks and Snorre
- Further develop floating wind and the Hywind concept, technology and execution methods
- Demonstrate a fully integrated gas and renewable power generation system with large global deployment potential

# 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
- 200.000 tons/year CO<sub>2</sub> emission reduction

- Snorre
- Hywind Tampen
- Gullfaks

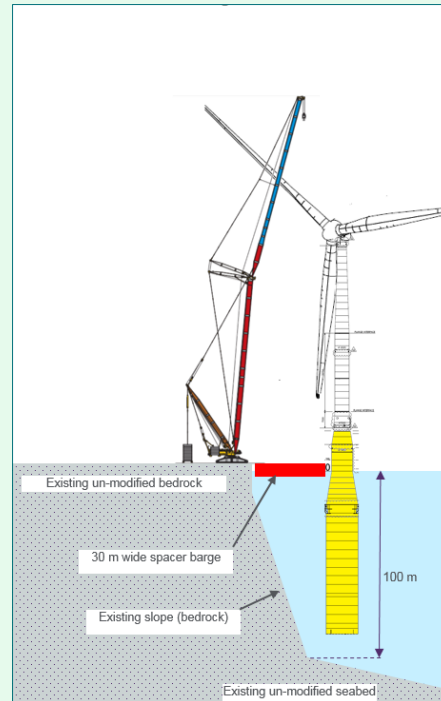


# Technology development at Hywind Tampen

Larger turbines



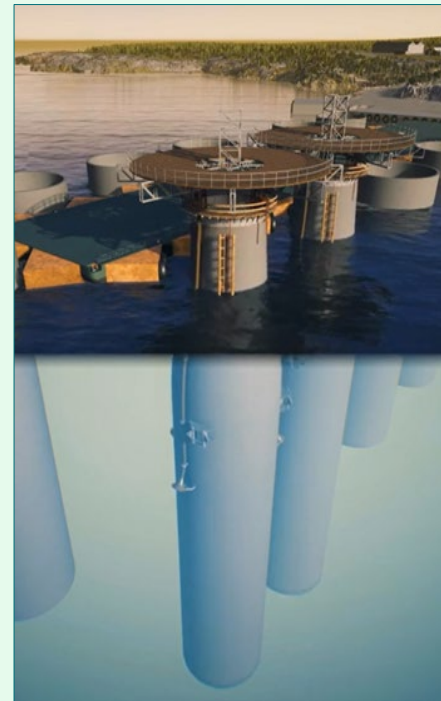
Installation method



Simplified mooring



Concrete substructure



Gas and wind power generation system integration

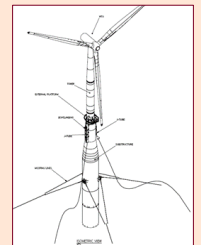
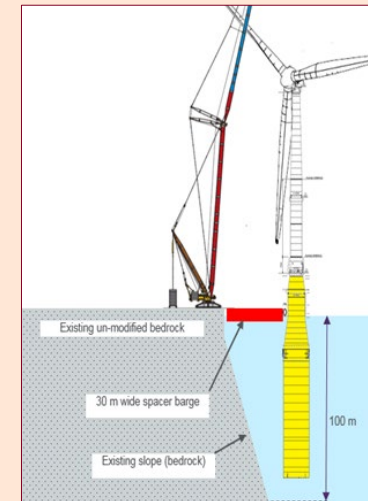
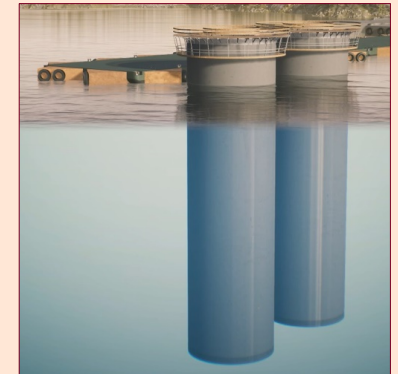




# Hywind Tampen Execution

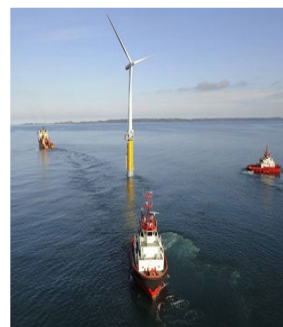
## Main contractors

Wind Turbine generators:	Siemens Gamesa Renewable Energy
Substructure and marine operations:	Kværner
Inter-array and export cables:	JDR Cable Systems
Cable installation:	Subsea 7 / Seaway 7
Topside modifications:	Wood Group Norway
Assembly site Sløvåg:	Wergeland Base
Onshore crane:	Mammoet Norway



# Stepping up floating wind to become a competitive source of energy

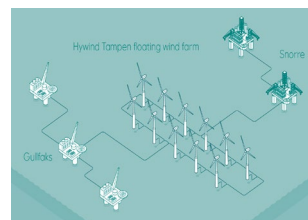
Equinor ambition: Remain the world leading developer and operator of floating wind



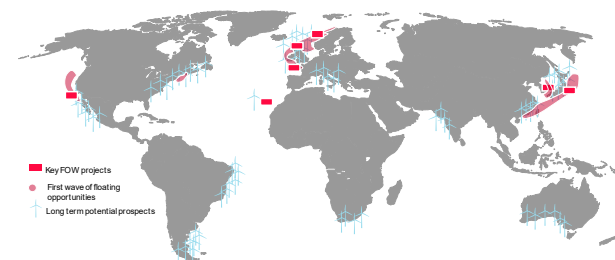
Hywind demo  
2.3 MW



Hywind  
Scotland  
30 MW



Hywind  
Tampen  
88 MW



Next floating  
project(s)  
>200 MW

Utility scale  
project  
500 - 1000  
GW

Key markets:  
Korea, Japan, US, Scotland, France, Spain  
(Canary Islands), Norway



Fully  
commercial  
technology  
40-60  
EUR/MWh

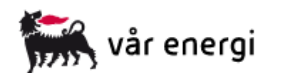
Technology development

Cost reduction

Industrialization

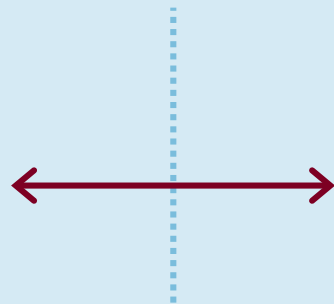
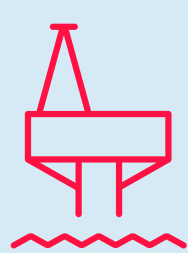


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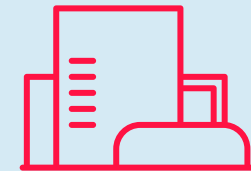
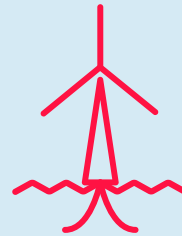


# Hywind Tampen Operations

Platforms



Wind farm



- Equinor is the operator on behalf of the licenses
- The Wind Farm will be operated and maintained by using synergies with oil and gas operations in the area
- Wind turbines are integrated into the existing power management systems

- Siemens Gamesa Renewables has a five-year service agreement
- Ring solution design allows for flexibility
- SOV used for corrective and planned (annual) service