

Hywind by Statoil

The floating wind turbine

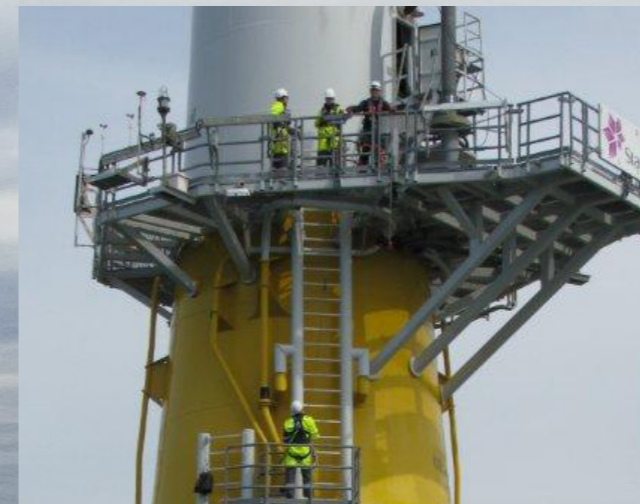


Statoil

Off the island of Karmøy, north of Stavanger, Statoil has installed the world's first full-scale floating wind turbine. The demonstration unit combines technology from the wind industry with technologies from the oil and gas industry and draws upon Statoil's longstanding offshore experience. Through the first two years of testing the concept is verified, and the performance is beyond expectations. With few operational challenges, excellent production output, and well-functioning technical systems, the Hywind concept could revolutionise the future of offshore wind.

“ The Hywind concept is a door opener for completely new renewable energy business opportunities, unlocking huge offshore areas for clean energy production. This is a direct result of Statoil's extensive offshore oil and gas experience.”

Ståle Tungesvik,
Senior Vice President Renewable Energy



Hywind – the next generation wind technology

Due to better wind conditions and reduced conflict potential when applying for acreage, the wind industry is currently moving offshore. Through Hywind, Statoil is moving one step further and into deep waters. The Hywind concept combines known technologies in a completely new setting, and opens up the possibility to capture wind energy within deep water environments.

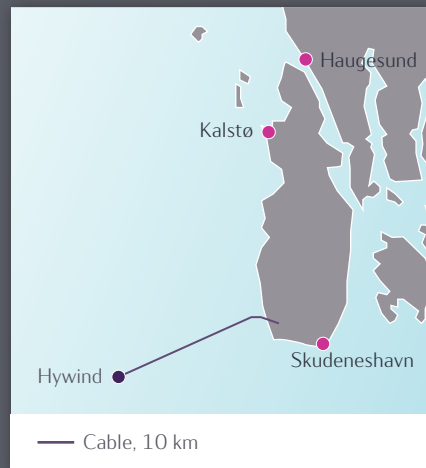
The Hywind pilot consists of a turbine placed on top of a ballasted steel cylinder. The floating turbine unit is fastened to the seabed by three mooring lines. The demonstration project has given proof to the technology, and based on the experiences gained, the concept

is being optimised. Further conceptual enhancements, combined with a matured supply chain will offer significant reductions in cost of energy in the future.

Statoil's competence as a leading offshore oil and gas project developer and experience as operator have proved vital in developing the Hywind concept. Combined with our financial strength and innovative skills, this makes us well positioned to take wind power to the areas we are most familiar with – deep water oceans.

Hywind Pilot Facts

- Turbine size: 2.3MW
- Turbine weight: 138tons
- Turbine height: 65m
- Rotor diameter: 82.4m
- Draft hull: 100m
- Displacement: 5300m³
- Diameter at water line: 6m
- Diam. submerged body: 8.3m
- Water depths: 200m
- Mooring: Three lines



Technology enabler

- delivering the future technology to the world

The Hywind concept is perfectly adapted to deep waters close to large power consumption regions throughout the world. The unique ability of flexible location choice provides considerable market opportunities. Our next step will be development of pilot parks. With the development of larger and lighter units and economies of scale, cost competitive floating offshore wind could soon be on the horizon.