Hywind will be generating energy by the end of 2017. The Norwegian energy company, Statoil, will build five 6 MW floating turbines to be anchored in waters exceeding 100 meters. The selected location has strong and steady winds that requires reliable anchoring.

The floating foundation consists of a cylinder that is ballasted to be upright and it is anchored to the seabed by three suction anchors.

NGI performed the soil interpretation and the detailed geotechnical design of the suction anchors subcontracted by Aibel. A floating wind turbine is a large structure and combined with strong winds, waves and currents, the loads that have to be taken by the seabed soils are large.

The Hywind Scotland Project is the world’s first floating wind farm located 25 km off the coast of Scotland. NGI has provided geotechnical engineering services related to soil parameter interpretation and geotechnical design of the suction anchors used as mooring for the floating turbines.
Offshore turbines are much taller and have much greater power (6 MW) than onshore wind turbines, where 2 MW and 3 MW turbines are the norm.

/ CONTACTS

Knut Schröder  
POSITION | Expert Adviser  
Offshore Geotechnics  
E | knut.schroder@ngi.no  
M | +47 952 72 202

Young Jae Choi  
POSITION | Senior Engineer  
NGI Houston  
E | youngjae.choi@ngi.no  
M | +1 281 221 9448