

World's First Floating Offshore Wind Farm Could Revolutionise Renewable Energy Industry

Source: ibtimes.co.uk

Published: July 24, 2017



The towers, which stand taller than Big Ben, are floated into place. Statoil

By [James Billington](#)

Wind power technology is growing at a rapid pace with larger turbines and more efficient design putting puff into the sails of the renewable energy industry. Now, we're set to see the world's first floating wind turbines anchor off the coast of Scotland.

Being able to be placed in waters too deep for traditional construction methods, the revolutionary design of the 175 metre (575ft) high towers will be anchored to the seabed and kept upright thanks to its bottom third acting as a spar buoy, extending beneath the surface filled with 3,000 litres of sea water and 5,500 tonnes of ballast.

The project will serve as a trial to see whether the floating turbines could be deployed in kilometre-deep waters around the world once considered impossible to build on, such as off the coast of the US or Japan, reports the BBC.

Currently, one turbine is in place with another four ready to make the trip via tug boat across the North Sea from Norway. They will form an offshore wind farm known as Hywind, 15 miles from the coast of Peterhead, Aberdeenshire, producing enough power for 20,000 homes.

The floating turbines are being built by Statoil and the entire cost of the project is a reported £190m, which has been subsidised by UK bill payers as part of the government's Renewable Obligation Certificates.

The price for offshore wind power, however, has seen a dramatic drop in recent years with it expected to be cheaper than new nuclear power. The construction costs for wind farms also pale in comparison to [Hinkley Point](#), the UK's planned nuclear project, which EDF believes could cost nearly £20bn.



The Hywind project will have five turbines all built onshore and can be placed in waters up to a kilometre deep. Statoil

The UK also is home to the world's largest wind turbines at the Burbo Bank wind farm capable of generating enough electricity to power the average home for 29 hours with a single rotation of its giant blades.

Located in the Irish Sea in Liverpool Bay off the north-west of England. The project is led by Danish company Dong Energy and sees 32 turbines spread over an area equivalent to 6,000 football pitches.

The [wind turbines are the tallest in use](#), anywhere in the world. Each stands at 195 metres (640ft) high – taller than the 'Gherkin' and feature 80m (262ft) blades that span a diameter larger than the London Eye.



The Burbo Bank wind farm is the world's largest offshore wind farm, capable of producing energy for 80,000 homes. (Getty Images)

The UK now owns the biggest collection of wind power on the planet. According to the Guardian, they collectively have the capacity to produce 5.3 gigawatts, which can power 4.3

million homes. The UK's expansion of offshore wind capacity aims to be doubled by 2020, and this is a stark comparison the US which only just activated its first offshore wind farm in 2016.
