



Forewind
April 2013

Fact Sheet

Forewind Development partner for the Dogger Bank Zone

Forewind is committed to securing all the necessary consents required for the development and construction of the Dogger Bank offshore wind farm zone.

Forewind

Forewind is a consortium comprising four leading international energy companies – RWE, SSE, Statkraft and Statoil – which joined forces to bid as part of The Crown Estate's third licence round for UK offshore wind farms (Round 3).

Successful in winning the rights to develop the largest zone – Dogger Bank – Forewind is committed to securing all the necessary consents required for its development and construction. The first consent is anticipated around late 2014.

Dogger Bank Zone

The Dogger Bank Zone is in the North Sea, located between 125 and 290 kilometres off the east coast of Yorkshire. It extends over approximately 8660 km² with its outer limit aligned to the UK continental shelf limit as defined by the UK Hydrographic Office.

While Dogger Bank is the largest of the Round 3 zones, it is also one of the shallowest with water depths ranging from

18 to 63 metres. It has the potential for approximately 8GW development capacity in less than 35m water depths.

If fully realised Dogger Bank will be the largest offshore wind development in the world and could supply up to 10 per cent of the UK's electricity. There are potentially tens of thousands of jobs in the fabrication of the components needed as well as in the construction of the wind farms themselves.

The development of Dogger Bank, and other Round 3 wind farms will help the UK to become more self-sufficient and rely less heavily on overseas sources for its energy.

Grid

The key link in any wind farm project is the grid connection, where the power generated by the wind farm feeds into the national grid transmission system.

Forewind's first grid agreement with the National Grid was signed in March 2010, for a 1GW connection at Creyke Beck, north of the Humber Estuary. In October 2011, Forewind signed two more agreements for a pair of 1GW connections likely to be located at an existing substation site at Lackenby, east of Middlesbrough.

In March 2012, Forewind signed agreements for a further three 1GW grid connections. One will be at Creyke Beck, taking the total of the grid connection

agreements for that site to 2GW, and the remaining two in Teesside at a yet to be finalised site.

Forewind now has a total of 6GW of offshore wind farm generation capacity in development and will continue to work closely with the National Grid to identify suitable locations for at least a further 2GW of grid connection.

Development of Dogger Bank

The Dogger Bank Zone is too large to be developed at once so a phased approach has been implemented. Using environmental data collected through bird, marine mammal, geotechnical, geophysical and other offshore surveys, Forewind refined the zone into tranches, each large enough to hold a number of wind farm projects.

Tranche A was selected in late 2010 and Tranche B was defined in the second half of 2011 after stakeholder consultations, consideration of safety and examinations of environmental and consenting issues. Tranches C and D were finalised in 2013.

Through use of sophisticated modelling techniques Forewind has to date identified the project boundaries for four wind farms. Each has a secured grid connection capacity of 1GW but their capacity will be up to 1.2GW to maximise efficiency.

Each wind farm boundary is large enough to cater for all the potential requirements including some hundreds of wind turbines (depending on the size of turbines selected), up to three offshore substations, export cables and associated infrastructure.

Dogger Bank Creyke Beck

Dogger Bank Creyke Beck is the first stage of development in the Dogger Bank Zone. It will have an installed capacity of up to 2.4GW and will connect into the existing Creyke Beck substation near Cottingham, in the East Riding of Yorkshire. It will comprise **Dogger Bank Creyke Beck A**, which is 515km² and 131 kilometres from shore at its closest point, and **Dogger Bank Creyke Beck B** which is 599km² and also 131 kilometres from shore at its closest point.

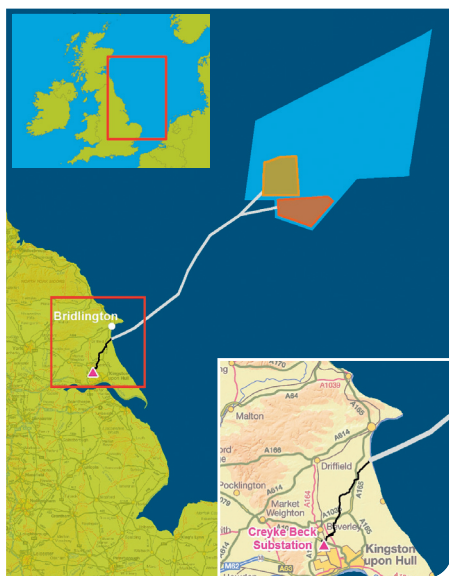
Work on the draft Environmental Statement for Dogger Bank Creyke Beck is well underway with the planning application due for submission by late 2013.

Dogger Bank Teesside

Dogger Bank Teesside is Forewind's second stage of development. This stage will comprise up to four wind farms and they are expected to connect to the national grid at two separate connection points in Teesside, just south of the Tees Estuary.

The first two wind farms are the 560km² **Dogger Bank Teesside A**, with its closest point from shore at 196km, and **Dogger Bank Teesside B**, which is 593km² and 165km from shore at its closest point. Boundaries for two further wind farms will be identified at a later date.

Dogger Bank Teesside will be divided into two separate Development Consent Order applications.



Key facts



Size
8660 km² (3343 square miles)
Largest of the Round 3 zones



Distance from UK coast
125 to 290 kilometres
(77 to 180 miles)



Water depth
18 to 63 metres (59 to 206 feet)
One of the shallowest of the Round 3 zones.



Estimated capacity
Agreed target is 9GW.



CO₂ reduction
The 9GW Dogger Bank development would reduce CO₂ emissions by approximately 13.7 million tonnes per annum, based on the current UK energy mix and an assumed capacity factor of 40%.

Forewind Mission

Achieve development consent for a minimum of 9GW of safe, technically deliverable and economically viable offshore wind capacity on the Dogger Bank that will provide an attractive opportunity for investors.

- ▲ Dogger Bank Creyke Beck Substation
- Onshore export cable route
- Offshore export cable route
- Dogger Bank Round 3 Zone

Project boundaries

- Dogger Bank Creyke Beck A
- Dogger Bank Creyke Beck B

Source: Round 3 zone boundary © The Crown Estate, 2010. National Grid Substations © National Grid, 2010. Ordnance Survey data © Crown copyright and database right, 2013.

Forewind owners

Forewind's owner companies are:

RWE npower renewables

RWE npower renewables is the UK subsidiary of the German renewable energy company RWE Innogy (part of RWE AG) and has a strong, diversified position in renewables with significant ambition for growth throughout Europe.

www.rwe.com

SSE

SSE is one of the largest energy companies in the UK and is involved in the generation, transmission, distribution and supply of electricity; the storage, distribution and supply of gas; telecommunications; contracting; and other energy services.

www.sse.com

Statkraft

Statkraft is Europe's leader in renewable energy. The group develops and generates hydropower, wind power, gas power and district heating, and is active in more than 20 countries.

www.statkraft.com

Statoil

Statoil is an international energy company headquartered in Norway and with operations in 34 countries. Building on more than 35 years of experience from oil and gas production on the Norwegian continental shelf, Statoil is committed to accommodating the world's energy needs in a responsible manner.

www.statoil.com



Contact

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