



## Forewind December 2011

## 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.

#### What is Forewind?

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

Each of the four owners – all leading players in their own right – recognised that by joining forces they have a unique ability to both make a significant contribution to the future of wind energy in the UK and demonstrate commitment to the continuing development of offshore wind.

Forewind is committed to securing all the necessary consents required for the development and construction of Dogger Bank, the first of which is anticipated around 2014.

#### Background

The Forewind consortium was formed in November 2008 in response to The Crown Estate's third licence round for UK offshore wind farms (Round 3). The following month, it was named "Forewind".

Under the Round 3 process, The Crown Estate identified nine offshore wind energy development zones, and the aim is that they will have the generation capacity to deliver a quarter of the UK's total electricity needs by 2020.

In January 2010, Forewind was announced as development partner for Dogger Bank, the largest of the Round 3 zones.

As development partner for Dogger Bank, Forewind has the objective to achieve consent for an agreed target installed capacity of 9GW of offshore wind farm projects by 2020, however the zone has a potential for up to 13GW. This figure equates to almost 10 per cent of the UK's projected electricity requirements. If fully developed, it will be the world's largest offshore wind project.

#### 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 km<sup>2</sup> with its outer limit aligned to the UK continental shelf limit as defined by the UK Hydrographic Office.

#### Grid

In March 2010 Forewind signed a connection agreement for the first project, to connect at Creyke Beck, north of the Humber Estuary. In October 2011, Forewind signed two more connection agreements for an additional two projects likely to be located at an existing National Grid substation site at Lackenby, east of Middlesbrough.

Forewind is engaged with National Grid to identify further suitable connection points to provide timely, cost-effective and environmentally acceptable solutions for subsequent projects.

Dogger Bank is the largest of the Round 3 zones but with water depths ranging from 18 to 63 metres, it is also one of the shallowest. It has the potential for approximately 4GW development capacity in less than 30m water depths and 8GW in less than 35m water depths.

The Crown Estate Round 3 zones are much larger than those awarded in Round 2 so the sheer size of these developments dwarfs previous projects.

Forewind will work with The Crown Estate to identify suitable sites within the Dogger Bank Zone and then carry out thorough environmental impact assessments and consultation on these sites before submitting applications for consent to build.

## Development of Dogger Bank

The Dogger Bank project heralds a completely new era for offshore wind due to its huge size and distance from shore. This means there are many technical and logistical challenges to be addressed. Forewind will draw fully on the experience of each of the owner companies and also look for innovative suppliers and contractors to help meet the challenges and achieve consent.

To ensure that the work associated with meeting Forewind's objective is managed effectively, and to distribute demands on stakeholders and the supply chain more evenly, Forewind will develop the zone sequentially in four stages, known as tranches. Each tranche will be developed as a series of wind farm projects.

Tranche A was selected in late 2010 and is an area of 2000 km<sup>2</sup> in the south west section of the Dogger Bank Zone. Forewind will seek to develop three similarly sized offshore wind farm projects within this area. Tranche A was chosen after stakeholder consultations, consideration of safety and examinations of environmental and consenting issues related to the zone. Tranche B was defined in the second half of 2011 with Tranches C and D to be identified at a later stage.

In total, the Dogger Bank development will consist of a number of offshore wind farm projects, each with an onshore grid connection and a capacity of up to 1.4GW. These wind farms will individually comprise some hundreds of wind turbines (depending on the size of turbines selected), up to three offshore substations, export cables, onshore converter stations and associated infrastructure.

The first project to be developed will be Dogger Bank Creyke Beck. It is an area located within Tranche A and connecting into the existing Creyke Beck substation, in the East Riding of Yorkshire. Work on the Environmental Impact Assessment for this project, including surveys, studies and ongoing consultation, is well underway with the planning application due for submission by the end of 2012.

The location of the cable routes and onshore infrastructure for each subsequent project will be significantly influenced by the grid connection offers made by National Grid. As these grid connection offers are received, Forewind will work to identify the optimum route for each export cable, from the offshore tranche or project location to the onshore converter substation(s).

### 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.*



Source: R3 Zone © TCE, 2010  
Country Boundaries © ESRI, 2011

## Key facts



**Size**  
8660 km<sup>2</sup>  
(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. It has the potential for approximately 4GW development capacity in less than 30m water depths and 8GW in less than 35m water depths**



**Estimated capacity**  
Agreed target 9GW, with the potential for approximately 13GW.



**CO<sub>2</sub> reduction**  
The 9GW Dogger Bank development would reduce CO<sub>2</sub> emissions by approximately 13.7 million tonnes per annum, based on the current UK energy mix and an assumed capacity factor of 40%.

## 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](http://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](http://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 a major player on the European energy exchanges. Headquartered in Norway, Statkraft is active in more than 20 countries.

[www.statkraft.com](http://www.statkraft.com)

### Statoil

Statoil is an international energy company 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, applying technology and creating innovative business solutions. Statoil is headquartered in Norway with 20,000 employees worldwide, and is listed on the New York and Oslo Stock Exchanges.

[www.statoil.com](http://www.statoil.com)



## Contact

For further information on Forewind, please visit [www.forewind.co.uk](http://www.forewind.co.uk) or email [info@forewind.co.uk](mailto:info@forewind.co.uk).