

# DUDGEON OFFSHORE WIND FARM

Warwick Energy is pleased to be leading plans to develop the Dudgeon Offshore Wind Farm project. This development will make a significant contribution to the UK's energy generation capacity and will help in efforts to reduce greenhouse gas emissions and the effects of climate change. We are grateful for the encouragement we have already received from the general public in Norfolk. We hope that you will continue to support our efforts on this project.

Mark Petterson  
Executive Director, Warwick Energy Limited

## Dudgeon Offshore Wind Farm

Dudgeon Offshore Wind Limited is a subsidiary of Warwick Energy Limited (Warwick), and was formed to develop the Dudgeon Offshore Wind Farm (Dudgeon) project, located 32km north of Cromer. Warwick's previous experience of developing such projects includes the Barrow and Thanet offshore wind farms.

The UK Government's energy strategy includes a target to generate 20% of the UK's electricity needs from renewable sources by 2020. Currently, the UK only generates around 5% of its electricity from renewable sources but the proposed development of the Dudgeon area could alone provide over 1% of the UK's electricity needs. The development of offshore wind farms is key to the Government's renewable energy targets and will contribute to the UK's electricity supply security.

If consent is successfully obtained for this project, then Dudgeon could be operational by the end of 2013. A second stage of offshore development is also planned and the full development of the Dudgeon area could be complete by 2016.

## Onshore Electrical Connection

The Dudgeon project requires an onshore electrical connection in order to feed into the national electricity network. The second stage of development in the Dudgeon area would, if approved, utilise much of the same onshore infrastructure.

Buried subsea cables will bring the electricity from the offshore wind farm site to the landfall point at Weybourne Hope in North Norfolk District. The electricity will then be transmitted down a 45km buried cable system from Weybourne Hope to a new electricity substation just south of Little Dunham, in Breckland District.

This brochure summarises the works proposed for this onshore electrical connection.

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## WHAT WILL THE SUBSTATION LOOK LIKE?



Draft layout of the substation site, showing proposals for screening and landscaping

## Representative photomontage of the view from the gardens of the nearest residents (viewpoint 14)

Existing view



Photomontage of substation site (without screening or landscaping)



Photomontage of substation site after 10 years (with screening and landscaping)



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## BENEFITS

A range of potential benefits may accrue to the Norfolk area from this development, including:

- Capital cost of the first stage of development project of approx £1.3bn. A proportion of this could be spent locally, with potential benefits for local suppliers and service providers.
- A significant contribution towards renewable energy targets to help tackle climate change.

## KEY FACTS

- The first stage of development of the Dudgeon area could consist of up to 168 wind turbines generating up to 560MW<sub>e</sub> of renewable electricity, enough to power approx 400,000 homes.
- The planning applications to construct and operate the onshore works required for the Dudgeon project are due to be made to the Local Planning Authorities in December 2009.
- The cable landfall at Weybourne Hope was covered under the offshore consent application submitted in June 2009 to the Department for Energy and Climate Change.
- The onshore electrical connection will comprise buried cables and a new electrical substation.
- All cables will be buried to approx 1m. No additional pylons or overhead lines are proposed.
- The cable route has been designed to avoid domestic properties and is predominantly through agricultural land. Its 45km route will make it the longest high voltage buried cable in the UK.
- Dudgeon Offshore Wind Limited has carried out a detailed site selection process considering over 100 potential substation sites before the Little Dunham site was chosen.
- The Little Dunham site, located under the existing overhead lines, will be well screened and will normally operate unmanned and will therefore be unlit at night.
- Most structures at the substation will be 5 – 10m high; the tallest items will be 15m high.
- The award of consents will hopefully be achieved by April 2010.
- Onshore construction works for the first stage of development could span March 2011 to March 2013 in total.
- The Dudgeon offshore wind farm could become operational by November 2013.
- A second stage of development in the Dudgeon area (more than doubling the output) could follow requiring some further onshore construction works in the 2013 – 2015 period.

***For further details please contact: The Project Manager, Dudgeon Offshore Wind Limited, Wellesbourne House, Wellesbourne, Warwickshire CV35 9JB***

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