REF
RENEWABLE ENERGY FOUNDATION

Press Release
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London Array power may be curtailed

Ambitious wind projects, including the London Array launched yesterday may need to have their output curtailed that is one of the implications of a new study launched by the Renewable Energy Foundation (REF) today.

Current UK projections entail upwards of 30% of electricity from wind power (as opposed to 1.5% at present) and whilst this looked possible with previously held views that Denmark had integrated some 20% of wind energy. In fact, the study shows the much larger entity, "Germany-and-Denmark" has integrated only 7%.

Although further interconnectors are in progress, the UK is not strongly linked with continental Europe. Even if all current plans proceed, the UK will be weakly connected in proportion to its market size. This means that if high levels of wind are to be built in the UK this can only occur with the provision of:

- Major, and probably costly, internal balancing services
- The timely provision of many further inter-connectors to mainland Europe and Norway, to facilitate electricity trading.

Unless the United Kingdom can maintain independence by providing its own internal system balancing services, prices over these new inter-connectors will most likely be unfavourable to the British economy. In the absence of a solution, the proposed UK wind fleet faces forced curtailment of output, with implications for cost and the attainment of environmental targets.

The UK has based its wind plans on the false assumption that Danish experience placed us comfortably behind the frontier of knowledge.

Danish and German experience of wind power is critical to our understanding of the potential for wind power development in the UK. REF has commissioned Mr Bach, formerly Planning Director for the Danish grid operator, Eltra, to conduct a major empirical study of the impact of wind power energy flows on

spot prices in Denmark and Germany.

The study breaks new ground in several areas:

1. Contrary to rumour, wind power has only a weak effect on average prices.

2. Wind power in fact causes significant increases in volatility of spot prices, with worrying implications for the stability of the power market and the willingness of investors to develop necessary system resources (reserve power) to balance the system.

3. Wind power energy flows in Denmark are strongly synchronised with wind power in Germany; there is little geographical smoothing even over such a large area.

4. The Danish and German spot price markets have converged; Denmark is now electrically part of Germany and thus economically tied.

5. Contrary to previously held views, Denmark has not integrated some 20% plus of wind energy. In fact, the much larger entity, Germany-and-Denmark has integrated only 7%.

6. REF infers that this work is of great significance for the UK. Far from being comfortably behind the frontier of understanding of wind power, the UK is about to leap into the dark, exposing itself to little understood difficulties and underestimated costs.

REF's Director of Policy and Research, Dr John Constable, said: "The lessons of the Danish experience are vastly more complicated and troubling than has been previously appreciated. We need take a system-wide perspective to ensure that the UK market is correctly redesigned."

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Notes for Editors

1. REF is a UK registered charity publishing data and analysis on the renewable and broader energy sector. It is supported by private donations, and has no corporate membership or political affiliation. For further information see www.ref.org.uk