



Major Study on Offshore Energy Grid Published

Integrated Planning of Offshore Assets will Result in Lower Investment Costs

EirGrid Group has today published the executive report from a pioneering study into the design and architecture of a future Offshore Energy Grid. A key finding was that a well designed offshore grid to cater for offshore generation, could minimise the need for combined onshore and offshore reinforcement and would facilitate the development of more interconnector capacity between Ireland and Great Britain, and potentially France.

EirGrid Group includes the operator of the power grid in Ireland, as well as System Operator Northern Ireland (SONI), and the Single Electricity Market Operator (SEMO) which manages the wholesale power market across the island.

“The development of energy production and transmission systems requires long term planning and this study is an important piece of analysis which sets out the appropriate architecture for a future offshore grid. Although focussed on the Irish Sea, the approach adopted in the study can be used for the development of transmission grids in all the seas around Ireland” according to Mark Norton, Manager of Technology and Standards of EirGrid.

The Report has already attracted considerable attention from European and international transmission operators who are examining the development of offshore energy facilities. The full report will be released shortly.

Applications by wind farms in the Irish Sea which are either in development or awaiting an offer for connection to the network total 11,000MW (megawatts) of projects. These include 4,000MW in Irish territorial waters and a further 7,000MW in British waters.

This EirGrid study was carried out using bespoke software developed specifically by RSE, the Italian Agency for Research on Energy System Development, for this analysis to allow a large number of potential system configurations to be automatically evaluated.

The key findings of the study include:

- **Interconnection.** Integrated planning of the offshore network optimises the development needed to connect offshore generation and interconnection. This provides the opportunity to limit the overall length of network for interconnection between national networks. This is particularly relevant to the connections

between Britain and Ireland (historically only between two onshore points). Future Celtic Sea generation would also offer optimisation opportunities with interconnection between Ireland and France.

- The overall cost of offshore generation connection would be minimised by the development of "**Meshed**" or interlinked networks.
- Offshore networks will make use of '**smart**' **devices** to enhance flexibility and minimise the scale of the offshore network.
- Synergies onshore/offshore. The report shows strong technical/economical relationship between onshore and offshore. Reinforcement onshore can be minimised by using the offshore backbones which both guarantees offshore connection and alternative power transfer patterns.

"This comprehensive EirGrid Study will provide a valuable source of information to stakeholders and also inform debate on a number of issues relating to offshore network development" concluded Mr Andrew Cooke, Executive Director of Grid Development at EirGrid.

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