

Offshore Transmission

Economically and efficiently connecting offshore wind generation to the onshore network, to deliver electricity to homes and businesses.

What is offshore transmission?

Offshore transmission systems provide the connections between offshore renewable energy generation, such as an offshore wind farm, and the onshore electricity network. The offshore transmission system is made up of a number of parts and generally includes offshore and onshore cables and onshore and offshore sub-stations.

incorporates using a competitive tender process to deliver transmission connections on time whilst driving down the long-term costs of the connections. Our role also involves regulating the construction and operation of offshore transmission systems. By doing this we are ensuring that the transmission systems of offshore renewable energy projects provide value for money for consumers.

Why do we need offshore transmission?

Offshore wind power is playing a major part in helping the UK to reach its domestic and European renewable energy and carbon reduction targets. It already accounts for 3.6GW of the UK's installed capacity and the Department of Energy and Climate Change (DECC) expects to see connection of 8-15GW of offshore wind power. Offshore wind also helps to maintain our energy security. As well as investment in wind farms, billions of pounds of investment are required in a new offshore transmission network. This is needed to ensure that electricity generated by wind farms is connected to the onshore electricity network, which delivers to homes and businesses.

Our role

In 2009, together with the Department for Energy and Climate Change (DECC), we introduced a new regulatory regime for offshore transmission. The regime, a world first,

Progress to date:

- 3: the number of tender rounds we have initiated¹
- 15: the total number of projects in the first three tender rounds
- 9: the number of wind farm projects that currently have operational OFTOs in place running the offshore transmission systems to deliver electricity to shore
- £1.4bn: the amount of investment the regime has delivered to date
- 3.6GW: the amount of offshore wind capacity currently installed in the UK

Future developments:

- £2.9bn: the amount of investment that will have been delivered by the first three tender rounds once all OFTOs are in place
- 20+: the number of projects we currently expect to come forward for tendering under future tender rounds
- 8-15GW: the Department of Energy and Climate Change (DECC) expects to see connection of 8-15GW of offshore wind power

¹ For more information on offshore tenders see our website at: <https://www.ofgem.gov.uk/electricity/transmission-networks/offshore-transmission/offshore-transmission-tenders>

Developments to date

From the beginning we have sought to use the regime to encourage innovation in transmission and to attract new sources of technical expertise and finance into the UK transmission sector. The initial two tender rounds were made up of 13 projects. Once all projects reach financial close and have been granted licences, they will have attracted around £2.5bn of investment and connected 3.9GW of offshore wind.

More recently, we launched Tender Round 3 (TR3). Worth approximately £400m in total, TR3 comprises the transmission systems of two offshore wind farms, Westernmost Rough (205MW) and Humber Gateway (220MW). Both projects are located in the North Sea off the coast of East Yorkshire, UK, and will start producing electricity during the course of 2014.

The regulatory regime

DECC and Ofgem decided to introduce competitive tendering for offshore transmission systems because it:

- lowers the cost of building and operating the assets
- allows new players to bring innovative technical, operational and financial solutions to the connection of offshore renewable energy projects
- leads to a lighter touch regulatory approach, since there is no need for regular price control reviews for OFTOs.

Benefits for investors

- Unique opportunity to invest in electricity transmission and gain availability-based exposure to 'green' assets.
- Simple investment characteristic that blends aspects of traditional network regulation with PPP/PFI models.

Benefits for generators

- Generators have the certainty that they will get a connection to the onshore network that meets their needs.
- Competitively-priced OFTO revenue payments lower transmission charges for generators and other network users.
- Capital investment required by generators is reduced. Transfer of transmission systems enables them to re-invest capital in future wind farm projects.
- Financial incentives on OFTOs to maintain transmission system availability ensures generators are able to transmit electricity to the National Grid with minimal disruption.

Benefits for consumers

- Offshore renewable energy projects are connected to the onshore electricity network on time
- Competitive tendering of the transmission system ensures value for money for consumers. Considerable savings are forecast for current and future projects.

Further Information

If you are interested in finding out more about the offshore transmission regime, or about opportunities to invest in the future projects that we will be tendering, please contact us at offshore@ofgem.gov.uk.

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