

# Offshore Transmission

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## Consultants' reports on the potential for offshore transmission coordination

### Welcome

**We hope you will find this newsletter interesting and informative.**

Following the launch by the Department of Energy and Climate Change and Ofgem of the Offshore Transmission Owners (OFTO) regulatory regime in 2009, we have made good progress during 2011. Achievements include the granting of four OFTO licences, with more in the pipeline, an initial investor appetite of over £4 billion for our first tender round and our initial work around coordination.

As you are aware, the Government has set ambitious targets for both the deployment of renewable energy over the next decade and for carbon emission reductions of 80% by 2050, relative to 1990. Offshore renewable technologies, including wind power, will play a major part in meeting these targets and in maintaining secure energy supplies. The Offshore Transmission programme has established a regime for regulating the offshore transmission networks. Our approach has already delivered significant cost savings to consumers, through competition and innovation.

It is important to us that our stakeholders are kept informed of the work that we are doing. We hope our new newsletter will provide an informal and informative method of improving our communications with you in the future.

#### Overview/Highlights

The reports that we commissioned from TNEI/PPA Energy and Redpoint Energy, to support the work of our Offshore Transmission Coordination Project, have recently been published. These look at the technical, commercial and regulatory aspects associated with a potentially more coordinated approach to future offshore network connections.

The reports present the consultants' findings, and have taken into account evidence provided by stakeholders through the Offshore Transmission Coordination Group and stakeholder expert working groups, as well as TNEI/PPA Energy's and Redpoint Energy's own analysis.<sup>1</sup>

#### Background

In response to stakeholder feedback, DECC and Ofgem set up the Offshore Transmission Coordination Project in early 2011. The Project is assessing whether supportive changes to the regulatory framework may be required to realise the potential benefits of a more coordinated approach to future offshore network connections. The findings will feed into a number of projects, including Ofgem's ongoing development of the Enduring offshore regime and the North Sea Countries Offshore Grid Initiative.

Ofgem commissioned two consultants to provide specialist input and advice to the project. The consultants were:

- TNEI/PPA Energy, who assessed possible cost-effective network configurations and investments required to connect offshore generation to the National Electricity Transmission System (NETS);
- Redpoint Energy, who carried out a review of the current policy and regulatory framework and commercial incentives to understand

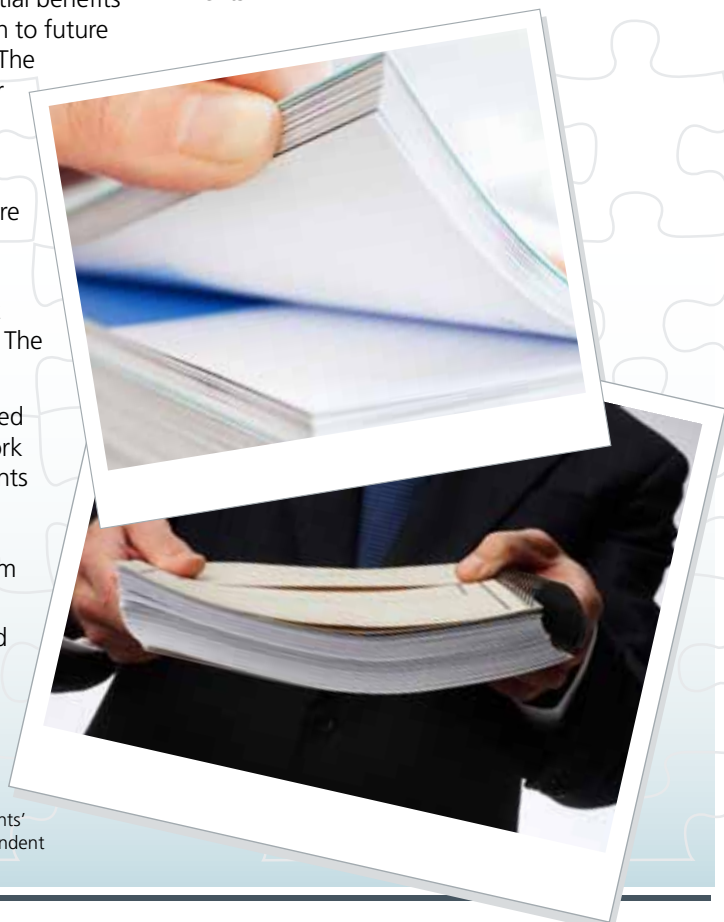
where there may be inadequate incentives for, or barriers to, coordination.

#### Key points

The consultants' analysis suggests that there could be cost savings of up to 8-15% (£0.5-3.5 billion) from greater coordination of offshore network development across a selection of future generation scenarios.

TNEI's analysis also suggests that there could be significant overall cost savings from coordination as a result of reduced cabling requirements and the potential to reduce the need for onshore network improvements. In addition, coordination could also yield environmental benefits due to the potential to reduce the number of cabling and landing sites.

The analysis also suggests that there are possible situations where greater coordination could in fact be more expensive. Therefore it will be important to assess future coordination opportunities in specific areas based on their merits.



<sup>1</sup> The views contained within the consultants' reports are those expressed by the independent consultants, not by Ofgem.

## Walney 1: the fourth Offshore Transmission Owner (OFTO) licence is granted

In addition, uncertainty over the level and timing of offshore wind build-out, the development of new technologies and the possibility of asset stranding will also impact on where coordination will be desirable.

The findings also suggest that a meshed offshore transmission network may emerge organically over time as viable links emerge. This may include the development of a North Sea grid, so we will continue to work closely with the North Sea Countries Offshore Grid Initiative.

Generators' commercial considerations will be a key driver in determining the extent of coordinated outcomes. Redpoint's analysis highlights that there are some areas where current regulation could be making it more difficult to take forward investment that would support a more coordinated network. Their work also suggests options for supporting the build out of coordinated networks more effectively.

One particular finding is that anticipatory investment is a key component of achieving a more integrated offshore network, and uncertainty over the process for dealing with anticipatory investment in the offshore regime is a potential barrier to coordination. To ensure that potentially beneficial options for future coordination are kept open, pre-construction anticipatory investment is likely to be a priority consideration in the short term.

We are considering the findings of the reports and plan to publish a joint Project Conclusions Report with DECC in early 2012. This will be accompanied by an Ofgem consultation document, which will set out proposed changes to the offshore regime to ensure a coordinated approach is taken where this can help deliver value for consumers and cost-effective and timely connection of renewable generation.

The consultants' reports can be found on the Offshore Transmission webpage on the Ofgem website ([www.ofgem.gov.uk/offshore](http://www.ofgem.gov.uk/offshore)).

For further information on the Coordination Project, or to join our stakeholder community, please email:  
[offshore.coordination@ofgem.gov.uk](mailto:offshore.coordination@ofgem.gov.uk).

**Blue Transmission Walney 1 Limited was granted a licence to own and operate the offshore transmission subsea cable to the Walney 1 wind farm (182MW) on 21 October 2011. Blue Transmission Walney 1 Limited is a consortium of Mitsubishi and Barclays Integrated Infrastructure Fund (Mitsubishi bought Macquarie's shareholding following financial close). The licence ensures that the OFTO is entitled to a twenty-year revenue stream.**

The consortium was selected by Ofgem to take over the asset from DONG Energy, Scottish and Southern Energy (SSE) and OPW (a company jointly owned by Dutch pension administrator PGGM and Ampère Equity Fund) following a competitive tender process.

Blue Transmission acquired the transmission asset for £105.4 million, with £52 million of debt funding provided by the European Investment Bank (EIB) and the remainder from commercial lenders. The EIB brings benefits through significantly lower costs of funds compared with the commercial counterparts. The bank is providing £300 million worth of funding for six of the nine transmission cable

links to offshore wind farms from the first transitional tender round.

The funds from the EIB will contribute to the reduction of the overall cost of energy produced by offshore wind and further encourage investment in the renewable energy sector.

The Walney 1 OFTO licence is the fourth to be granted by Ofgem this year. This follows the granting of licences for the Barrow (which achieved financial close on 27 September 2011), Gunfleet Sands and Robin Rigg projects to Transmission Capital Partners (which is a consortium comprising International Public Partnerships Ltd, Amber Infrastructure Group and Transmission Capital Ltd).

## Consultation on tender exercises under the Enduring regime

**Over 20 projects are likely to qualify for the Enduring regime, delivering up to 30GW of additional capacity with potential assets valued at up to £14 billion. This offers a significant investment opportunity as well as a chance for the industry to participate in a growing and innovative market. Given the scale and complexity of Enduring projects, it is necessary to ensure that the regime which underpins it is fit for purpose and meets the needs of developers, OFTOs and consumers. Therefore, Ofgem is running a further consultation on the Enduring regime from 16 December 2011 until 17 February 2012.**

This consultation builds on lessons learnt through the Transitional tender regime, from previous consultations and from our ongoing engagement with stakeholders in order to set out our proposed approach to the 'OFTO build' model under the Enduring regime.

The 'OFTO build' approach, as detailed in the consultation document, is expected to deliver significant commercial benefits for industry participants as well as ensuring value for money for consumers. The consultation document also briefly considers proposed changes to the 'Generator build' model where this departs from the Transitional regime approach, and sets out our initial thinking on phased or staged construction of transmission assets.

As part of the first tender round (Transitional Round 1) four licences have been granted during 2011 with a total transfer value of **£254 million**. Preferred bidders have been appointed for the remaining five projects with an estimated transfer value of **£867 million**. In addition to helping to drive down the costs of delivering offshore wind, this recycling of capital plays an

important role in encouraging further renewable investment in the future.

Transitional Round 1 attracted an investment appetite of £4 billion. Ofgem expects to conclude the granting of licences in the first round during 2012.

**An outline of all TR1 projects is set out below**

Project	OFTO/Preferred Bidder	Final Transfer Value <sub>1</sub>	Estimated Transfer value <sub>2</sub>	OFTO Revenue <sub>3</sub>	Status <sub>4</sub>
1. Robin Rigg	Transmission Capital Partners (a consortium comprising International Public Partnerships Ltd, Amber Infrastructure Group and Transmission Capital Ltd)	£65.5m	N/A	£6.5m	Licence granted: Mar 2011 ✓
2. Gunfleet Sands		£49.5m	N/A	£6.0m	Licence granted: Jul 2011 ✓
3. Barrow		£33.6m	N/A	£4.8m	Licence granted: Sept 2011 ✓
4. Walney I	Mitsubishi and Barclays Infrastructure Fund <sub>5</sub>	£105.4m	N/A	£10.9m	Licence granted: Oct 2011 ✓
5. Walney II	Macquarie and Barclays Infrastructure Fund	TBD	£104.4m	TBD	Pre licence consultation
6. Sheringham Shoal		TBD	£182.2m	TBD	Pre licence consultation
7. Ormonde	Transmission Capital Partners	TBD	£101.1m	TBD	Pre licence consultation
8. Thanet	Balfour Beatty	TBD	£163.1m	TBD	Pre licence consultation
9. Greater Gabbard	Balfour Beatty/Green Energy Transmission	TBD	£316.6m	TBD	Pre licence consultation

**Footnotes**

- The assessed costs of the transmission assets payable by the OFTO to the developer, as determined by Ofgem.
- The estimate of the costs of the transmission assets payable by the OFTO to the developer, as determined by Ofgem.
- The annual revenue stream payable to the OFTO for the period of the revenue entitlement of 20 years, (Barrow is an exception at 18.5 years) as defined in the OFTO licence. The revenue stream is subject to an availability based mechanism with up to 10% of annual revenue being at risk in each year.
- Licence Grant is the point at which the projects reach successful conclusion of the tender process, financially close and Ofgem grant the OFTO a licence to own and operate the transmission assets.
- Macquarie sold down their shareholding to Mitsubishi post financial close.

## Transitional Round 2 | Qualifying projects

Transitional Round 2 has been split into two Tranches (A and B) as set out below.

Tranche A	Tranche B
Lincs (250 MW, £282m)	Humber Gateway (300 MW, £128m)
London Array (630 MW, £428.4m)	Race Bank (600 MW, c. £500m)
Gwynt-y-Mor (576 MW, £306)	West of Duddon Sands (389 MW, £255m)

Tranche A began on 17 November 2010 with three projects qualifying. The tender process for Lincs launched in July 2011 and a preferred bidder is due to be selected in Spring 2012. The tender process for London Array launched in November 2011 with a preferred bidder expected to be selected in Summer 2012. The Invitation To Tender stage for Gwynt-y-Mor is expected in Summer 2012. The shortlist for Tranche A projects is:

- Balfour Beatty Equitix Consortium** (Balfour Beatty Capital Ltd, Equitix Ltd) Offshore Ltd, Britel Fund Trustees Ltd (as nominee for the BT Pension Fund), Universities Superannuation Scheme Ltd)
- Blue Transmission** (Macquarie Capital Group Ltd, Barclays Infrastructure Funds Management Ltd, Mitsubishi Corporation)
- National Grid Offshore Consortium** (National Grid)
- Transmission Capital Partners** (a consortium comprising International Public Partnerships Ltd, Amber Infrastructure Group and Transmission Capital Ltd)