

Preliminary Information Memorandum

March 2017



EXECUTIVE SUMMARY

Investment opportunity

Tender Round 5 (**TR5**) provides an opportunity for interested parties to bid for five licences to own and operate offshore transmission assets as an Offshore Transmission Owner (**OFTO**). Four offshore windfarm developers are currently constructing the projects, and Ofgem will determine the transfer value of each project. Following transfer of ownership, the OFTO will own and manage the transmission assets (including the cables and associated connection equipment) between the offshore point of connection with the generator and the point of connection with the onshore network.

During the tender process, prospective OFTOs will bid a 20-year revenue stream, calculated on its required return on investment on the transfer value and the ongoing cost of financing, operating and managing the asset. Prospective OFTOs also have the option to bid the portion of their revenues to be indexed to inflation. At the end of the 20-year revenue period, Ofgem will make a decision as to the most appropriate form of ongoing regulation of the asset (depending on remaining demand). This is discussed in more detail in the licence and revenue stream section of this document.

The options would include: (1) decommissioning the assets and revoking the OFTO's licence; (2) extending the revenue stream for a limited period to cover appropriate costs; (3) running a tender to appoint a new OFTO and revoking the existing OFTO's licence.

We have qualified five projects for TR5: Dudgeon, Galloper, Race Bank, Rampion and Walney Extension. Their locations are shown in Figure 1: Location map of TR5 Projects.



Figure 1: Location map of TR5 projects

Investment Highlights of the OFTO Regime

The OFTO regime continues to attract significant investor interest right across the capital structure with substantial investor appetite demonstrated from capital markets, commercial banks and equity sponsors. The Greater Gabbard project of Tender Round 1 (**TR1**) had the first OFTO bond launch, saw bids in excess of £800m for a bond sized at £305m. The Gwynt-y-Mor project of Tender Round 2 (**TR2**) deal was nearly three times

oversubscribed for a bond sized at £339 million. Equity interest is strong: seven different equity investors hold OFTO stakes currently, and several others participated in TR1, TR2 and Tender Round 3 (**TR3**) and are currently participating in Tender Round 4 (**TR4**).

Key investment highlights in respect of the assets and regime include the following:

- Strong political and regulatory support for UK offshore transmission
- Lenders now familiar with the regulatory regime and tender process
- Robust and transparent competitive process
- Construction risk taken by developers for generator-build projects
- Regulated revenue stream for a 20-year period
- Creditworthiness of revenue stream counterparty (NETSO)
- Upside potential from cost outperformance and incentives mechanisms
- Limited operational risk
- Limited interface risk

We have developed the tender regime to be robust, fair and transparent to developers and bidders, with the ultimate objective of delivering value to consumers through a competitive process. We have refined the process over the course of TR1-4 and we now consider that the regime is established and mature.

The tender process will consist of two stages for each TR5 project: an Enhanced Pre-Qualification (EPQ) followed by an Invitation to Tender (ITT) which will result in the selection of a preferred bidder. Given the number and timing of projects in TR5, we have decided to split the EPQs into two groups. The first group will include Dudgeon, Rampion and Race Bank, and the second group will include Galloper and Walney Extension. We currently intend to stagger the ITTs based on the projects' individual first power dates.

INTRODUCTION

This generic Preliminary Information Memorandum (**PIM**) outlines an opportunity for investors to acquire offshore transmission assets under TR5. As in previous Tender Rounds, the OFTO licensed through TR5 will receive a 20-year revenue stream in return for purchasing the transmission assets from the offshore wind generator and providing transmission services in accordance with the requirements of the Offshore Transmission Licence (**OFTO Licence**). Importantly, the revenue stream will be dependent upon transmission asset availability, rather than actual utilisation or wind farm availability.

This generic PIM covers the key aspects of the tender process, regulatory regime and investment opportunities, including:

- Background to the opportunity
- Overview of the opportunity
- Investment highlights
- Overview of the regulatory regime
- Overview of the tender process
- Provisional timelines

In order to provide potential bidders with sufficient information about the opportunities available, an additional, project-specific PIM will be available for each project. The project-specific PIM should be read in conjunction with the regime overview in this document and with the round-specific documentation published at the launch of EPQ and ITT.

Context

Great Britain continues to be a global leader in the development of offshore wind energy. Since 2009, we have run competitive tenders to select and licence Offshore Transmission Owners (OFTOs) to own and operate the assets that connect offshore wind farms to the onshore network.

From the outset the offshore transmission regime has encouraged innovation and attracted new sources of technical expertise and finance, whilst ensuring that grid connections are delivered efficiently and effectively. In 2014 we published a study by CEPA/BDO, which found that using tendering saved consumers between £200m and £400m in TR1. We have also published a further study by CEPA¹ which evaluated the benefits of competition delivered by TR2 and TR3 and estimated further savings to consumers of between £428m and £749m.

We have completed 15 OFTO tenders to date. This has resulted in total OFTO investment of approximately £3.1bn in offshore transmission networks. TR5 has an initial transfer value in excess of £2bn, making it the most valuable round to date.

The TR5 projects are all being built by offshore generators (under the 'generator build' model). The regime also gives generators the choice of an OFTO designing and constructing the transmission assets, under the OFTO build model, which may be used in future tender rounds. We expect a steady pipeline of future projects, which will provide a significant investment opportunity that is likely to deliver billions of pounds of investment in offshore transmission over the next decade.

Commitment to Offshore Wind

The UK is already a world leader in offshore wind power with 5GW of offshore wind capacity installed and operating. Offshore wind developers continue to plan and construct further offshore wind farms. In addition to the 258MW Burbo Bank Extension in TR4, TR5 projects will add 2.3GW of offshore wind capacity to connect through OFTOs.

A key part in achieving this is the government's ongoing support for offshore wind generation. The Energy Secretary announced in November 2015 that the government could support up to 10GW of new offshore wind projects in the 2020s on the condition that necessary cost reductions are made within the industry. Following this, in March 2016 the government announced that further funding has been made available under the Contracts for Difference (CfDs) subsidy regime. CfDs are intended to provide long-term revenue stabilisation, which enables renewables investment to come forward. The government plans to hold three auctions of up to £730m by the end of the current parliament. The first will have a budget of £290m, and support for offshore wind will be capped at £105 per MWh². Further information on how CfDs will work under the EMR is available online³.

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Regulating Offshore Transmission

Ofgem and government have developed and refined the offshore transmission regime with stakeholder input. Under the enduring regime, Ofgem runs competitive tenders to grant OFTO licences.

The regime has the following key objectives:

- deliver transmission infrastructure to connect offshore generation;
- provide certainty and best value to consumers through the competitive process; and
- attract new entrants to the sector.

We have granted 15 OFTO licences over three tender rounds to date.

OVERVIEW OF THE OPPORTUNITY

The Transmission Assets

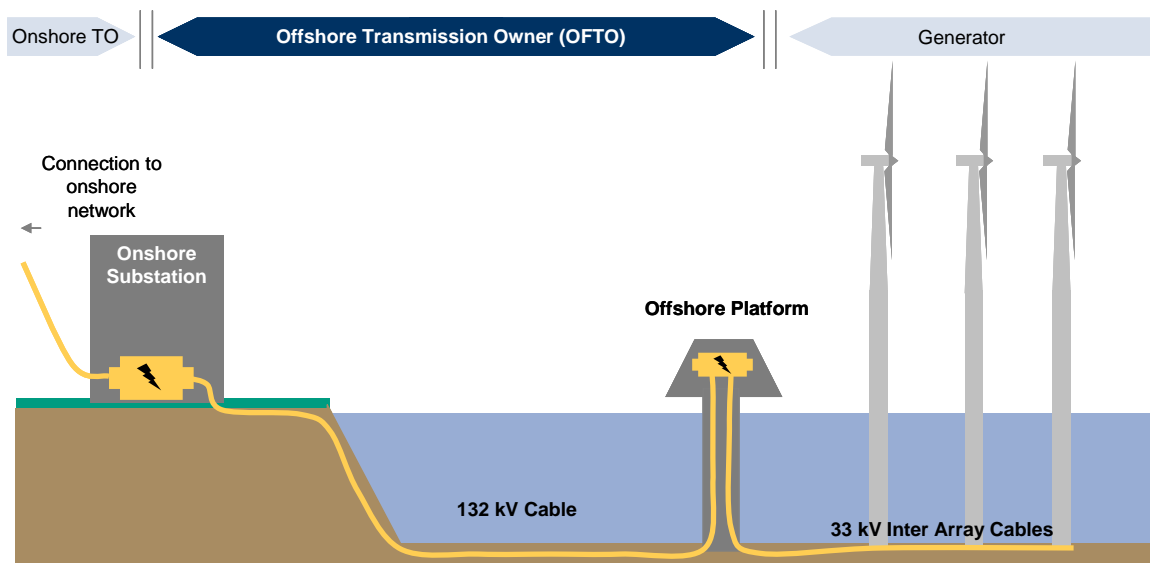
The OFTO will own the transmission assets between the offshore point of connection with the generator and the point of connection with the onshore transmission operator. This will include the cables and associated connection equipment. The diagram at Figure 2 shows what the transmission assets to be transferred to the OFTO are likely to include. Please see the project-specific PIM for details of the individual assets and expected ownership boundaries.

¹ <https://www.ofgem.gov.uk/publications-and-updates/evaluation-of-to-tender-round-2-and-3-benefits>

² <https://www.gov.uk/government/topical-events/budget-2016>

³ <https://www.gov.uk/government/publications/electricity-market-reform-contracts-for-difference>

Figure 2: Diagram of the Generic Ownership Breakdown



Qualifying Project Requirements for TR5

The five TR5 projects have all demonstrated to our satisfaction that they meet the Qualifying Project requirements, which are as follows:

- entered into a bilateral connection agreement with NGET (in its capacity as the NETSO);
- entered into an agreement for lease of the seabed;
- obtained all necessary consents and property rights for the transmission assets to be constructed and maintained and ensured that any such consents or property rights which are capable of being assignable to the OFTO are so assignable;
- completed construction of, or entered into all necessary contracts for the construction of the transmission assets and ensured that any such contracts are assignable to the OFTO; and
- secured financing to construct the transmission assets.

The projects have all also met the Tender Entry Conditions, which are detailed in the the Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2015 (the **Tender Regulations**)⁴.

Cost Assessment

Under the Tender Regulations, Ofgem determines the transfer value of the transmission assets to be transferred to the OFTO. For the purposes of commencing TR5, the developers have provided an initial transfer value for each qualifying project. Those values are set out in the following table:

| Project Name | Initial Transfer Value Amount (£m) |
|---------------------------|------------------------------------|
| Dudgeon | £377.2 |
| Galloper | £329.1 |
| Race Bank | £530.4 |
| Rampion | £313.1 |
| Walney Extension | £517.0 |
| Total value of TR5 | £2,066.8 |

⁴ http://www.legislation.gov.uk/ukxi/2015/1555/pdfs/ukxi_20151555_en.pdf

Ofgem will conduct a cost assessment exercise ahead of the ITT stage in order to provide an indicative transfer value. This will be based on Ofgem's estimate of the economic and efficient costs which ought to be incurred in developing and constructing the relevant transmission assets. Bidders will be asked to incorporate the indicative transfer value into their ITT revenue stream bids as the transfer price for the transmission assets. Once construction of the transmission assets is complete and they are available for use, Ofgem will conduct its final cost assessment to determine the economic and efficient costs which ought to have been incurred in developing and constructing the transmission assets. This assessment will form the basis of Ofgem's determination of the final transfer value of the transmission assets. The revenue stream bid by the successful OFTO will be adjusted to take into account any changes between the indicative and final transfer values.

For further detail, please see our cost assessment guidance⁵.

Transfer agreement

Developers will produce an individual transfer agreement for each TR5 project, and we provide guidance on our expectations for this in the tender documentation published at EPQ and ITT stage.

The Licence and Revenue Stream

The successful bidder will be awarded an OFTO licence entitling it to a revenue stream for a 20-year period, during which there is no automatic periodic price review. The revenue stream will be paid to the OFTO by National Grid Electricity Transmission (**NGET**) in its capacity as the National Electricity Transmission System Operator (**NETSO**). In the event that the wind farm ceases to operate, NGET's obligation to pay the OFTO will continue.

The revenue stream received by the OFTO will be largely dependent on the revenue stream bid during the ITT stage of the tender exercise. However there may be adjustments to the revenue stream during the ongoing operation of the transmission assets including under the circumstances outlined below.

Availability Incentive

The OFTO will be subject to a capacity-weighted availability incentive which will allow it to gain bonuses or incur penalties based on asset availability. Importantly, the revenue stream will not be dependent on asset utilisation. The OFTO can gain up to 5 per cent of base revenue annually if availability is above the target of 98 per cent. The OFTO can incur a penalty of up to 10 per cent base revenue in any one year if availability drops below 98 per cent. The OFTO can accrue penalties up to a maximum of 50 per cent of a year's revenue but these penalties are paid over a period of up to five years. During that time, additional penalties can be incurred for future payment. However the maximum annual penalty for unavailability remains at 10 per cent of revenue throughout the 20-year incentive period.

TR3 introduced a capacity weighting mechanism to the availability incentive, which remains for TR5. This weights larger capacity outages more heavily than smaller capacity outages. This is intended to incentivise OFTOs to take smaller capacity outages where it is most economic to do so in order to avoid larger outages.

Additional Capacity

An OFTO will be entitled to additional revenue for investment in increased transmission capacity (if needed) provided the additional investment does not exceed 20 per cent of the initial capital cost.

Pass-through costs

An OFTO may pass through certain costs, including costs incurred as a result of changes to decommissioning legislation, network rates, force majeure events and Ofgem tender fees.

Refinancing Gain Share

The refinancing gain share requires OFTOs to share 50 per cent of any refinancing gain, except where the refinancing was undertaken to remove the OFTO from financial distress. Further information on the refinancing gain share can be found in the 2013 statement on future generator build tenders⁶.

⁵ <https://www.ofgem.gov.uk/ofgem-publications/51530/cost-assessment-guidance.pdf>.

⁶ <https://www.ofgem.gov.uk/ofgem-publications/75428/offshore-electricity-transmission-statement-future-generator-build-tenders.pdf>

Biddable Indexation

The OFTO's revenue will be subject to indexation to the Retail Prices Index (RPI). For TR5 we have continued to include 'biddable indexation' whereby bidders can choose the proportion of their revenue stream they would like indexed to RPI.

End of Revenue Term

In Year 16 of the revenue stream, the OFTO is required to set aside a financial security equivalent to 50 per cent of a year's base revenue. This security is intended to cover any penalties incurred under the availability incentive which have not been paid through the normal revenue adjustment method.

At the end of the 20-year revenue period, Ofgem will make a decision as to the most appropriate form of ongoing regulation of the asset (depending on remaining demand).. These options include:

- In the event that the offshore transmission assets are no longer required, the OFTO's licence would be revoked once decommissioning of the assets had been completed.
- In the event that the offshore transmission assets are still required, either:
 - The OFTO's licence could be amended to extend the revenue stream for a limited period of time to cover appropriate costs that will be determined at the time;
 - Or Ofgem could run a tender exercise to appoint a new OFTO and then revoke the licence of the existing OFTO.

OFTO of Last Resort

In certain circumstances, such as the failure of an OFTO business, there is a risk of the generator becoming stranded and unable to export electricity to the onshore transmission network. To mitigate this risk, we introduced the OFTO of Last Resort mechanism to the transmission licence (standard conditions B18 and E21), which allows us to appoint an existing OFTO or TO as the OFTO for another project outside of a competitive tender process. In the event that an OFTO business was in difficulty, we would first proactively engage with the licensee to try and resolve any problems and would only expect to use the OFTO of Last Resort process once other options for ensuring ongoing transmission have been exhausted. Further guidance on the OFTO of Last Resort mechanism can be found on our website⁷.

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INVESTMENT HIGHLIGHTS

Strong political and regulatory support for UK offshore transmission

As part of the government's commitment to renewable energy and, in particular, the ongoing expansion of the UK's offshore wind industry, the independent ownership and operation of offshore transmission in the UK still enjoys strong political, regulatory and stakeholder support.

Lenders now familiar with offshore transmission regulatory regime and tender process

Through experience gained during TR 1-4, supporting lenders have developed their understanding of OFTO assets, the regulatory regime and tender process. This demonstrates that there is strong appetite for OFTO financing from debt providers.

Robust and transparent competitive process

The tender process has been developed in accordance with best practice principles. The process is designed to provide a level playing field and to encourage the widest possible participation from potential investors, including new entrants to the electricity transmission market in Great Britain (GB).

⁷ <https://www.ofgem.gov.uk/publications-and-updates/guidance-offshore-transmission-owner-ofto-last-resort-mechanism-0>

Construction risk for projects under generator build taken by Developers

We will grant the TR5 OFTO licences after completion of construction of the transmission assets. This gives the OFTO some protection against delays and other associated construction risks (although there may be some ongoing commissioning activities in relation to the transmission and generation assets after transfer). Where possible, Ofgem expects the benefit of construction warranties in relation to the transmission assets to be passed to the OFTO.

Regulated revenue stream for a 20-year period

The 20-year revenue stream bid by the prospective OFTO will be incorporated into its OFTO licence, and will be fixed, subject to agreed adjustment mechanisms set out in the licence and summarised above.

Creditworthiness of revenue stream counterparty

The OFTO's revenue stream will be paid by NGET as NETSO, which is the regulated entity responsible for the operation of the transmission system in the UK. Its cost base (including payments it will be required to make to OFTOs) is eligible to be passed through to system users and ultimately consumers. NGET is rated A- by Standard & Poor's, A3 by Moody's and A by Fitch Ratings. In keeping with its licence obligations, NGET will always have to meet specified credit rating requirements. Furthermore, when carrying out its functions, the Authority must have regard to the need to ensure that licence holders are able to finance the activities which are the subject of statutory obligations placed upon them.

Upside potential

In addition to potential cost savings throughout the life cycle of the assets, OFTOs have the opportunity to earn additional revenues for better than expected operational performance, increased capacity and certain non-regulated services.

Limited operational risk

Operational risk associated with electricity transmission is typically low, and transmission assets typically incur relatively low ongoing operation and maintenance costs compared to their capital investment. An OFTO's revenue stream will also not be dependent on the operational performance of the wind farm that it serves.

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OVERVIEW OF THE REGULATORY REGIME

In the electricity industry, the regulatory framework is set out in a number of instruments, including legislation (European, primary and secondary), licences granted by Ofgem, and industry codes and technical standards. We expect that some bidders may not have previous experience of the GB electricity market. This section and Appendix 1 give bidders an overview of the regulatory and contractual framework.

Figure 3 summarises the current regulatory framework governing electricity transmission in GB.

Figure 4 summarises the key industry codes which constitute the contractual framework by which owners, operators and users of the various parts of the electricity network in GB are bound and interact with each other.

Figure 5 outlines the key parties and commercial structure.

Figure 3: Current Regulatory Framework

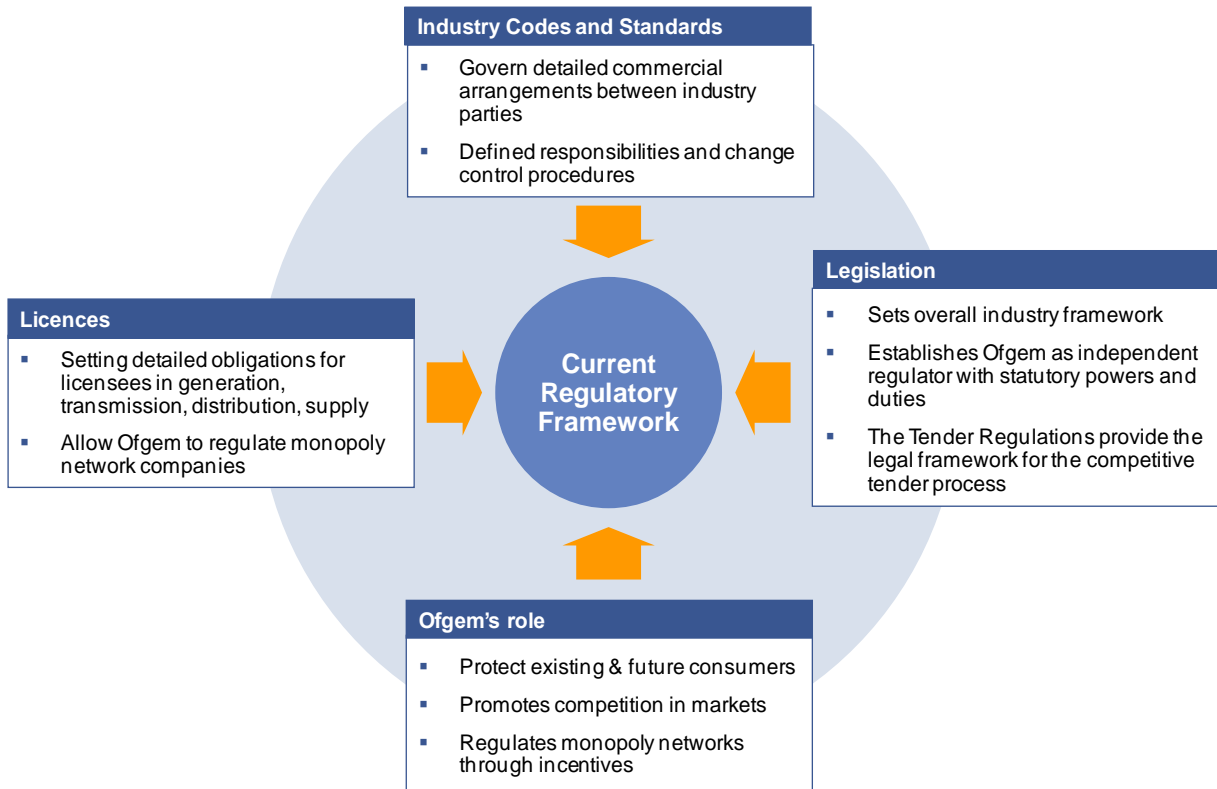
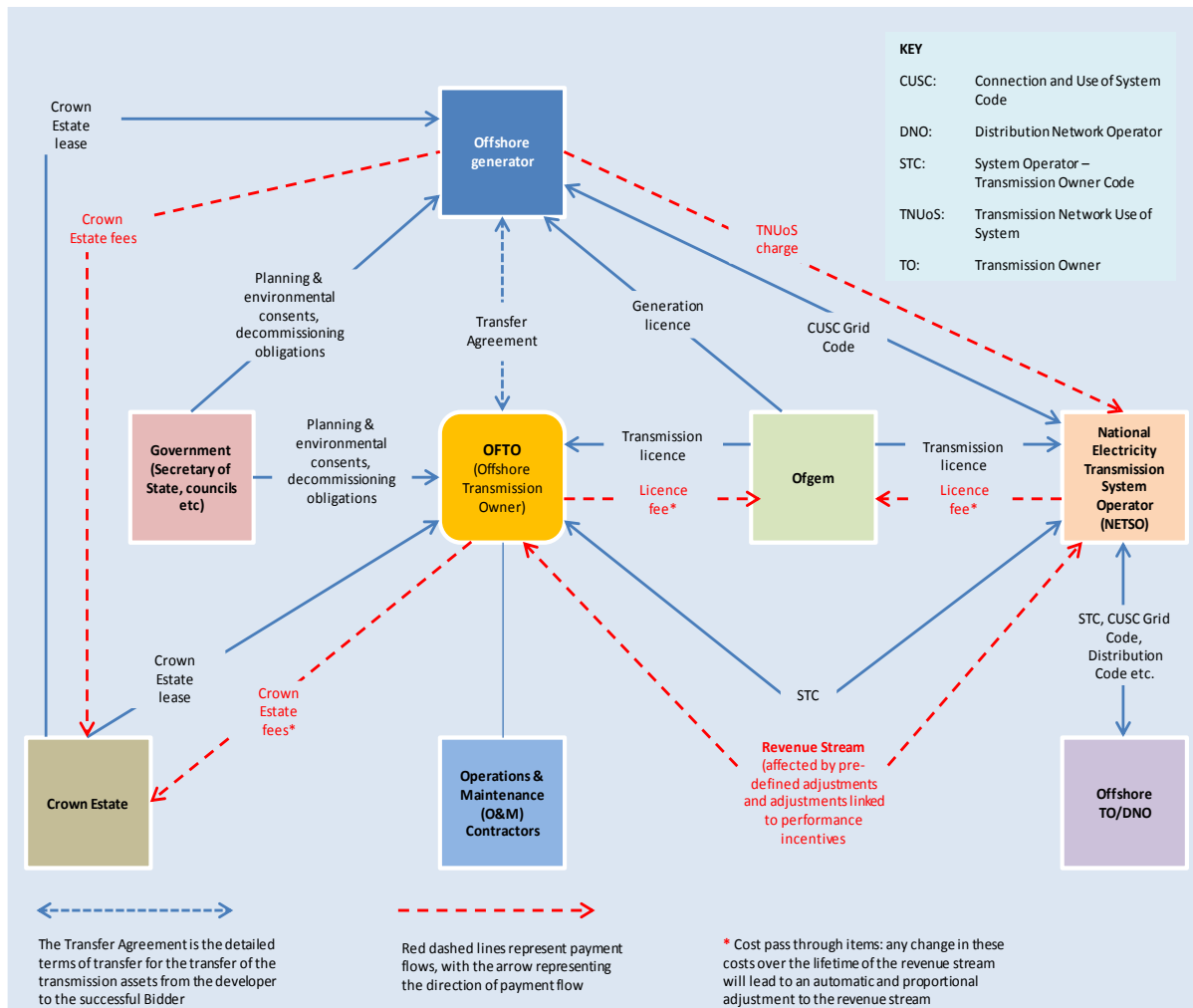


Figure 4: Key Industry Codes

| <p>nationalgrid STC</p> | <p>nationalgrid CUSC</p> | <p>nationalgrid Grid Codes</p> | <p>DCode Distribution Codes</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>The STC Code defines the high-level relationship between the GB System Operator and the Transmission Owners. It is supported by a number of procedures (SOTO Code Procedures or STCPs) that set out in greater detail the roles, responsibilities, obligations and rights etc of the NETSO and the TOs.</p> | <p>The Connection and Use of System Code (CUSC), which constitutes the contractual framework for connection to, and use of, National Grid's high voltage transmission system.</p> | <p>The Grid Code is required to cover all material technical aspects relating to connections to and the operation and use of the transmission system or, in as far as relevant to the operation and use of the transmission system, the operation of the electric lines and electrical plant connected to it or to a distribution system.</p> <p>The Grid Code also specifies data which system users are obliged to provide to National Grid for use in the planning and operation of the transmission system</p> | <p>Licensed electricity distribution businesses, or Distribution Network Operators (DNOs), are obliged under Condition 21 of their licences to maintain a Distribution Code detailing the technical parameters and considerations relating to connexion to, and use of, their electrical networks.</p> |

Figure 5: Key Parties and Outline Commercial Structure



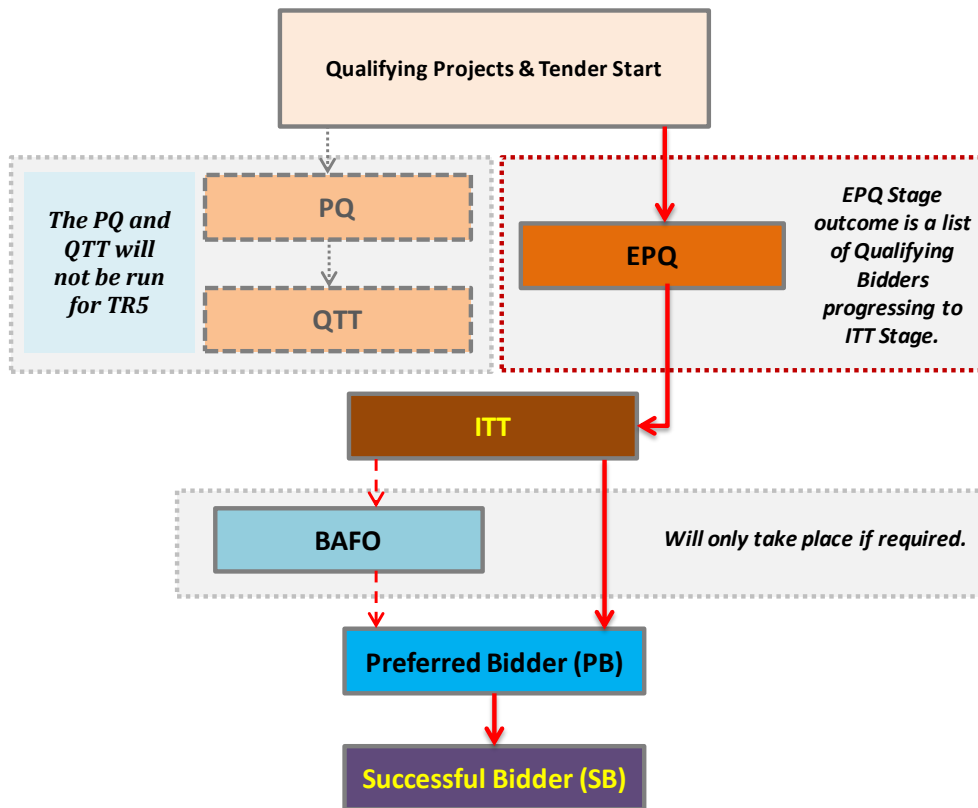
The Tender Regulations set out the tender process framework for the granting of an OFTO Licence, including how Ofgem will run a competitive tender process for Generator-Build and OFTO-Build projects. The current Tender Regulations came into force on 3 August 2015⁸.

OVERVIEW OF THE TENDER PROCESS

The tender process has been developed to be robust, fair and transparent to developers and bidders. The process has been demonstrated and established through previous Tender Rounds. At the early stages of the process limited resources are required by bidders to participate. Bidders can participate in the EPQ with relatively limited resource and bid costs compared to the ITT stage. Figure 6 provides an outline of the tender process:

⁸ The Tender Regulations revoke, subject to Regulation 2, the Electricity (Competitive Tenders for Offshore Transmission Licenses) Regulations 2013.

Figure 6: The Stages of the Tender Process for TR5



1. EPQ

For TR5, we will run a similar EPQ process to those in TR3 and TR4. This will combine the Pre-qualification (PQ) and the Qualification to tender (QTT) stages that were undertaken for TR1-2. We will set out the EPQ questionnaire, process and evaluation criteria in the EPQ document published at EPQ launch.

The outcome of this stage will be a shortlist of qualifying bidders who will be invited to participate in the ITT Stage for the qualifying project.

As there are 5 projects in TR5 with varying first power dates, we have decided to split the EPQ phase into two groups; EPQ Group One and EPQ Group Two. EPQ Group One consists of Dudgeon, Rampion and Race Bank, EPQ Group Two consists of Walney Extension and Galloper. The groups are detailed in the TR5 timing diagram.

2. Invitation to Tender

The purpose of the ITT Stage is to identify a preferred bidder for each project. At the ITT Stage, shortlisted qualifying bidders will be granted access to the data room for the relevant qualifying project(s), which will be populated predominantly with information provided by the developer. The data room will include sufficient information relating to the qualifying project(s) to enable bidders to make an informed investment decision. This will include information relating to contracts, leases, warranties, assets and liabilities, investment and operating plans, sea-bed surveys and evidence of compliance with all applicable legislation and regulations.

During the ITT Stage, Ofgem will evaluate the tenders submitted by each shortlisted qualifying bidder for each Qualifying Project. It will evaluate tenders against a set of evaluation criteria, which will be published at the start of the ITT Stage.”

This will include an evaluation of the financial and non-financial deliverability of each qualifying bidder's submission, including the tender revenue stream submitted by each qualifying bidder to compensate it for the cost of acquisition, financing and operation of the transmission assets over the 20-year revenue stream.

The outcome of this stage will either be selection of a preferred bidder (and possibly also a reserve bidder) for each qualifying project, or a decision to run a BAFO stage.

3. Best and Final Offer (optional)

The purpose of the optional BAFO Stage is to determine a preferred bidder for a qualifying project. We will set out the criteria for running a BAFO Stage in the ITT document.

The outcome of this stage will be selection of a preferred bidder (and possibly also a reserve bidder) for the qualifying project.

4. Preferred Bidder and OFTO licence grant

After the preferred bidder is selected, the preferred bidder and the relevant developer will work together to finalise arrangements for transfer of the transmission assets from the developer to the licenced OFTO. We expect that most of the issues arising during this stage will be resolved on a commercial basis between the preferred bidder, the developer and any other relevant parties. Once arrangements are finalized, there will be a 28-day public consultation on the proposed modifications to the OFTO licence in order to incorporate the OFTO-specific provisions in the licence. Following the consultation the OFTO licence can be granted. Financial close usually occurs the day after the OFTO licence is granted and asset transfer takes place on the same day or shortly after financial close. Licence grant and asset transfer will not occur until construction has been completed.⁹

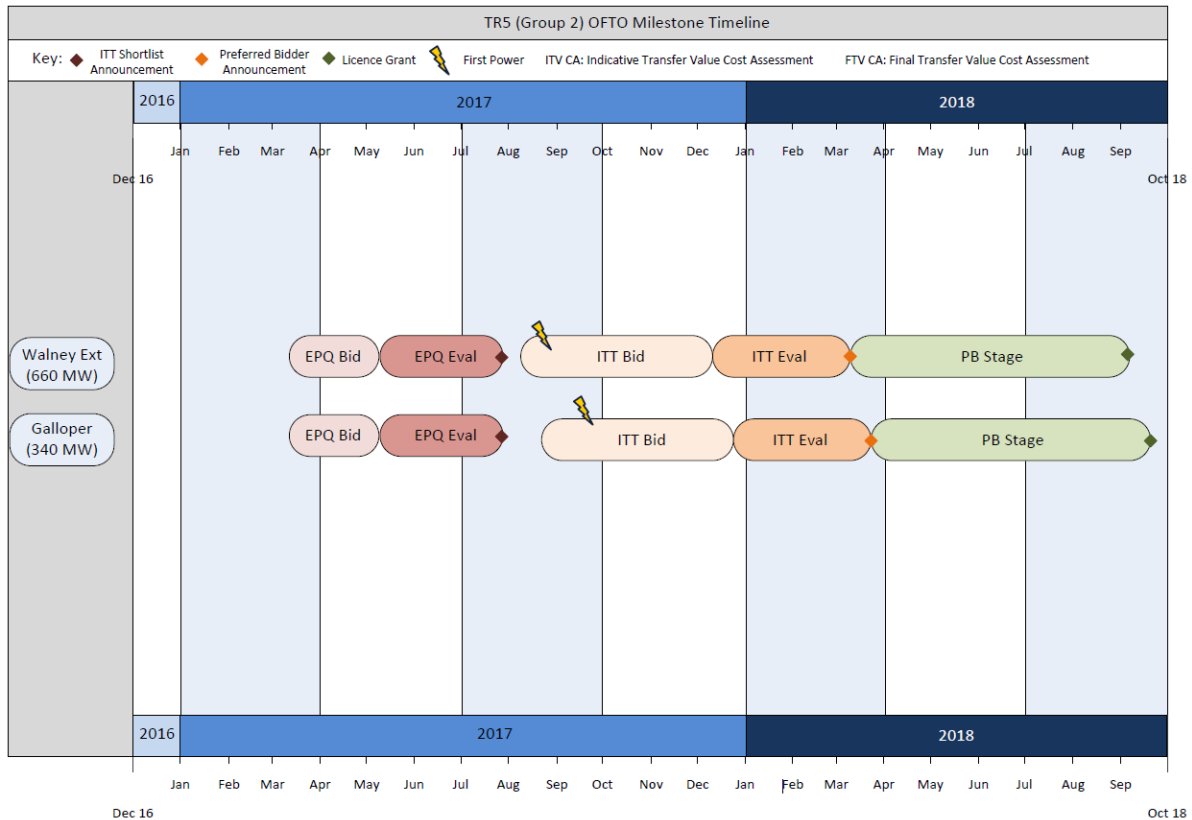
PROVISIONAL TIMELINES

Below are provisional timelines for the TR5 tender exercise. Ofgem may amend the timelines at its discretion and at any time during TR5, subject to individual project circumstances and other considerations. We will make a good-faith effort to communicate any such variations with as much advance notice as possible.

| | |
|------------------------|----------------------------------------------------------------------|
| 10 October 2016 | Tender launch and release of EPQ documents. EPQ Group One commences. |
| 2 December 2016 | EPQ Group One submission deadline. |
| 13 March 2017 | Release of updated EPQ documents. EPQ Group Two commences. |
| 8 May 2017 | EPQ Group Two submission deadline. |

The key decision dates beyond EPQ Group One shortlist for the ITT stage differs for each project in TR5. The key decision dates by project are detailed in the diagram below.

⁹ The most recent guidance document is available on the Ofgem website here at <https://www.ofgem.gov.uk/ofgem-publications/86337/20140226TR3guidenoteprocessstoclose.pdf>, however we also expect to issue slightly revised guidance in advance of TR4 EPQ commencing.



PROCESS AND CONTACT PERSONS

Documentation for the EPQ stage and other relevant information, including all guidance and related documents, may be accessed via the Ofgem website¹⁰. Project-specific information, such as Confidentiality Agreements, Information Memoranda and draft Transfer Agreements are only available on the Ofgem eTendering Portal (the Portal). Access to confidential information will be granted once prospective bidders have provided a signed Confidentiality Agreement and Conflicts of Interest Declaration. Guidance is available on our website for how to do this.

The information in this document is provided for information purposes only. All enquiries or communications, including requests for additional information, should be sent to tendercoordinator@ofgem.gov.uk.

¹⁰<http://www.ofgem.gov.uk/Networks/offtrans/Pages/Offshoretransmission.aspx>

APPENDIX 1 – OVERVIEW OF LEGISLATION SETTING OUT REGULATORY FRAMEWORK FOR ELECTRICITY TRANSMISSION IN GB

Electricity Act 1989 (as amended)

The Electricity Act 1989 is the primary legislation governing the electricity industry in Great Britain. It:

- 1) sets out the Authority's principal objectives;
- 2) outlines the way in which the Authority must carry out its functions;
- 3) provides for the granting of licences to transmit, distribute, generate and supply electricity in Great Britain;
- 4) provides for the modification of such licences; and
- 5) provides for the granting of offshore transmission licences by way of competitive tender run by the Authority.

Energy Act 2004

The Energy Act 2004 amended the Electricity Act 1989 to facilitate the introduction of the offshore electricity transmission regime, including the extension of the prohibition on the transmission of electricity to the offshore environment. It also enabled the Secretary of State to designate changes to relevant industry codes and the standard licence conditions of the transmission licence to accommodate offshore electricity transmission. The Energy Act 2004 also extended the onshore system operator role offshore.

The Energy Act 2004 applies a special insolvency regime, known as an Energy Administration, to entities which operate or own essential energy infrastructure. The objective of an Energy Administration is to secure that essential energy infrastructure (including electricity transmission systems) is, and continues to be, maintained and developed as an economical system in the event of financial failure. Energy Administration would apply to OFTOs. The details of Energy Administration are set out in Part 3 Chapter 3 of the Energy Act 2004.

Energy Act 2008

The Energy Act 2008 amended the Electricity Act 1989 to provide further detail on the competitive tender process for the granting of OFTO Licences. This included the ability for the Authority to make a property transfer scheme if commercial negotiations for the transfer of assets between parties fail, in order to ensure that property is transferred from the developer of offshore wind generation assets to the OFTO, and also the ability for the Authority to recover its costs for running competitive tenders.

Energy Act 2013

The Energy Act 2013 amended the Electricity Act 1989 to allow generators constructing offshore transmission assets to commission those assets without being in breach of the prohibition on transmission without a licence. The generator commissioning clause¹¹ enables generators to convey electricity for a defined period in certain circumstances by providing an exception to the prohibition on transmission without a licence during generator commissioning activities and during the period leading to OFTO Licence grant, while still ensuring that generators transfer the transmission assets to the OFTO in a timely manner.

Third Package, including European Network Codes

The Third Energy Package of 2009 is a suite of EU legislation for European gas and electricity markets to promote the completion and efficient functioning of the single European energy market. It provides for "European network codes" covering electricity market arrangements, grid connection and system operation. Ofgem is working with BEIS and industry to implement the Third Package in GB. Where this work requires modifications to the existing GB regulatory framework, our principle is that modifications should only make changes where needed; and where changes are needed, we will make only those changes necessary to the relevant industry document(s) to ensure compliance with European codes and guidelines.¹²

The Third Package also requires transmission system operators to demonstrate compliance with ownership unbundling requirements through a certification process.¹³

¹¹ <https://www.ofgem.gov.uk/publications-and-updates/consultation-implementation-generator-commissioning-clause>

¹² Further information on Ofgem's approach to implementing European Network Codes can be found at: <https://www.ofgem.gov.uk/publications-and-updates/implementing-eu-electricity-network-codes-and-consulting-ofgem%E2%80%99s-proposed-application-process-nemo-designation>

¹³ <https://www.ofgem.gov.uk/publications-and-updates/certification-arrangements-great-britain-following-amendments-ownership-unbundling-requirements-gas-act-1986-and-electricity-act-1989>

Tender Regulations

The Tender Regulations were made on 11 July 2015 and came into force on 3 August 2015. They provide the legal framework for the competitive tender process¹⁴. The Tender Regulations set out Ofgem's main role under in relation to TR5, which is to:

- determine the projects that qualify for the tender round;
- run competitive tender exercises in order to determine the entities to whom OFTO Licences will be granted for each qualifying project (summarised in this document);
- calculate the costs incurred in developing and constructing transmission assets.

Licences

The Authority may grant licences in relation to the following activities in Great Britain under the Electricity Act 1989:

- 1) participation in the transmission of electricity;
- 2) distribution of electricity;
- 3) generation of electricity;
- 4) supply of electricity; and
- 5) participation in the operation of an electricity interconnector

Licences issued by the Authority are available on the Authority's electronic public register¹⁵ and contain:

- A. standard conditions applicable to all licensees of the same class;
- B. special conditions or amended standard conditions relevant to a single licensee; and
- C. general terms as to duration and revocation of the licence.

Industry Codes and Technical Standards

In addition to the legislation and licences, a large number of the regulatory requirements for electricity transmission are contained in detailed industry codes and technical standards. These are collectively known as the standard framework documents. There are provisions contained in the relevant licences which oblige licence holders to comply with the requirements of these documents.

Each of the industry codes has a separate defined process for:

- 1) initiating a review of code obligations;
- 2) proposing changes to code obligations;
- 3) developing a code change proposal; and
- 4) requesting a decision on a change proposal.

Bidders are required to satisfy themselves of the requirements of each relevant industry code and technical standard. However, for assistance, below is a short description of each. This summary should not be used as a substitute for an understanding of and familiarity with the industry codes and standards.

The Connection and Use of System Code (CUSC)

The CUSC¹⁶ is a legal document that constitutes the contractual framework for connection to or use of the National Electricity Transmission System (**NETS**). Parties to the CUSC are the NETSO, generators, distribution licensees and suppliers (not an exhaustive list). It defines arrangements for:

- 1) Connection – it sets out arrangements that define the stages for connection. These include: application; connection; and termination of a connection agreement.
- 2) Use of system – it sets out arrangements that define the stages for application to, and termination of, a use of system agreement, including the different types of transmission access products available to users of the NETS.
- 3) De-energisation and disconnection – it sets out arrangements that cater for de-energisation and disconnection of the system for safety issues and non-payment reasons.

¹⁴ The Tender Regulations 2015 revoke the Tender Regulations 2013

¹⁵ <http://epr.ofgem.gov.uk/>

¹⁶ <http://www2.nationalgrid.com/uk/Industry-information/Electricity-codes/Connection-and-Use-of-System-Code/>

The System Operator Transmission Owner Code (STC)

The STC¹⁷ defines the obligations and responsibilities of the transmission licensees and the NETSO. Current parties to the STC are NGET, Scottish Power Transmission Limited (**SPTL**), Scottish Hydro-Electric Transmission Limited (**SHETL**) and 9 OFTOs as transmission licensees. An OFTO, as a transmission licensee, will be required to be a party to the STC in accordance with its OFTO Licence.

The STC makes provision for certain interactions between the transmission licensees and the NETSO:

- 1) the provision of transmission services by the transmission licensees to the NETSO;
- 2) directions from the NETSO to configure the NETS;
- 3) transmission outage planning;
- 4) joint transmission investment planning;
- 5) governance of the STC and amendments to it (including accession to the STC); and
- 6) dispute resolution.

Grid Code

The Grid Code¹⁸ is a technical code which sets out, among other things, the planning, connection conditions and testing requirements for the management of the NETS. It is designed to permit the development, maintenance and operation of the NETS. Parties to the Grid Code are NGET and all users of the NETS. OFTOs will be obliged by the STC to comply with specific sections of the Grid Code.

The Great Britain Security and Quality of Supply Standard (NETS SQSS)

The NETS SQSS¹⁹ sets out a coordinated set of criteria and methodologies that transmission licensees must use in the planning and operation of the NETS. The criterion presented in the NETS SQSS represents the minimum requirements for the planning and operation of the NETS. Additional criteria, for example covering more detailed and other aspects of quality of supply, are contained in the Grid Code and the STC, which should be read in conjunction with the NETS SQSS. The NETS SQSS is subject to informal governance arrangements that were put in place by NGET, SPTL and SHETL.

Other Industry Codes and Charging Methodologies

The industry codes and charging methodologies described below are not applicable to OFTOs. However, we include a brief description of the documents and charging methodologies as they form part of the overall regulatory framework which applies to the electricity industry.

The Balancing and Settlement Code (BSC)

- 1) The BSC contains the governance arrangements for electricity balancing and settlement in Great Britain. The BSC is largely a commercially based code which focuses on balancing and settlement arrangements. Parties to the BSC are NGET, distribution licensees, trading parties, interconnector administrators and suppliers. The BSC sets out the detailed arrangements for:
 - A. Balancing – allows each party to the BSC to advise the NETSO of its terms for making a change to its forecast export to or import from the NETS close to real time. The energy balancing aspect allows parties to make submissions to the NETSO to either buy or sell electricity into/out of the market at close to real time in order to keep the system from moving too far out of phase.
 - B. Settlement – provides for the reconciliation of actual exports (from generators) and imports (from suppliers) with the forecast, contracted position. The settlement aspect relates to monitoring and metering the actual positions of generators and suppliers (and interconnectors) against their contracted positions and settling imbalances when actual delivery or offtake does not match contractual positions.
 - C. Metering – specific standards are defined for equipment used to record electricity flows for use in the settlement processes.

The BSC is owned by Elexon. A copy of the document can be found on Elexon's website²⁰.

¹⁷ <http://www2.nationalgrid.com/uk/Industry-information/Electricity-codes/System-Operator-Transmission-Owner-Code/>

¹⁸ <http://www2.nationalgrid.com/uk/Industry-information/Electricity-codes/Grid-code/>

¹⁹ <http://www2.nationalgrid.com/uk/Industry-information/Electricity-codes/System-Security-and-Quality-of-Supply-Standards/>

²⁰ <http://www.elexon.co.uk/bsc-related-documents/>

Transmission Charging

Assets that facilitate connection to the NETS are (normally) owned, built and maintained by the relevant transmission licensee, the cost of which is recovered through connection charges or Transmission Network Use of System (TNUoS) charges. The NETSO is required to prepare charging methodologies in respect of these charges, including for parties wishing to connect to the NETS²¹ and in respect of use of systems charges payable (TNUoS and BSUoS)²²

Miscellaneous parts of the Regulatory and Contractual Framework

Crown Estate Leases

As landowner of the seabed and areas of foreshore by virtue of the Crown Estate Act 1961, The Crown Estate's permission is necessary to place structures on or pass cables over the seabed and its foreshore. In addition to permission from the landowner, potential developers also require statutory consents from a number of government departments responsible for the offshore wind development process. Only when all the necessary statutory consents are obtained will The Crown Estate grant a lease for development. The Crown Estate will issue leases for the development of sites within the 12 nautical mile territorial limit, whilst the Energy Act 2004 gave it rights to issue leases for development beyond the territorial limit within Renewable Energy Zones (REZ) out to 200 nautical miles.

Round one and two projects were initially granted full-term leases of twenty-two and forty years respectively with a further three years allowed for decommissioning. However, on 6 July 2009, the Crown Estate announced that all wind farm operators will be given the opportunity to extend their lease terms to 50 years. For TR5 projects, the Crown Estate has granted 50-year leases.

Decommissioning

Sections 105 to 114 of the Energy Act 2004 introduce a decommissioning scheme for offshore wind and marine energy installations. Under the terms of the Energy Act 2004, the Secretary of State may require a person who is responsible for one of these installations to submit (and eventually carry out) a decommissioning programme for the installation.

These decommissioning provisions reflect the government's view – taking into account the UK's international obligations under UNCLOS (United Nations Convention on the Law of the Sea) and the OSPAR Convention (the Convention for the Protection of the Marine Environment of the North-East Atlantic) – that anyone who constructs, extends, operates or uses an installation should be responsible for the costs of ensuring that it is decommissioned at the end of its useful life in accordance with the 'polluter pays' principle.

BEIS considers that imposing a legal obligation on businesses to prepare and carry out a decommissioning programme – and potentially requiring them to provide financial security – reduces the risk of them defaulting on their decommissioning liabilities. At the same time, it does not want to hinder the development of offshore renewable energy installations.

BEIS's approach²³ is to seek decommissioning solutions which are consistent with its international obligations, as well as UK legislation, and which have a proper regard for safety, the environment, other legitimate uses of the sea and economic considerations. BEIS will act in line with the principles of sustainable development, and aims to ensure that interested parties are given clear information on the operation of the decommissioning scheme. BEIS intends that processes for approving decommissioning programmes should be open and transparent, and that decisions should be taken in an efficient way, with as little administrative work as possible.

Offshore wind farm developers are likely to have already prepared a decommissioning proposal during the development of the offshore wind project.

²¹ <http://www.nationalgrid.com/NR/ronlyres/4811E6E0-3AA5-468F-9ADC-740FE9424180/24473/GBCCMI4R0FINAL.pdf>

²² <http://www.nationalgrid.com/NR/ronlyres/BC5D87D0-4682-4C56-9375-7B932A1BD726/24713/UoSCMI4R0FINALBSUoS.pdf>

²³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80786/orei_guide.pdf

APPENDIX 2 – DISCLAIMER AND NOTICES

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