7 Regulatory framework and connection process

This section provides an overview of the framework for regulating the connection of offshore renewable energy generation projects to the onshore network in Great Britain (GB). The regulatory framework and transmission ownership is Northern Ireland is also briefly discussed.

7.1 Regulatory framework and transmission ownership

The following diagram and text summarises the structure of ownership and operation across the GB electricity network.

The policy and regulatory framework for Northern Ireland, which is synchronously connected to the national grid of the Republic of Ireland, differs from that of the GB network as shown in the following figure.

Ofgem’s role:
- protect the interests of existing and future consumers, wherever appropriate by promoting competition in gas and electricity markets, and regulating monopoly networks;
- help secure Britain’s energy supplies;
- contribute to the drive to curb climate change aimed at sustainable development;
- administers Renewables Obligation, Feed-in Tariff and Renewable Heat Incentive;
- regulating network activities of transmission and distribution in Great Britain.

Permission to undertake transmission and distribution network activity is granted through a licence issued by the regulator or through an exemption granted by the Secretary of State. There are three onshore transmission owners (TOs) in Great Britain (distribution is considered further below):
- National Grid in England & Wales;
- Scottish Power Transmission Limited in the south of Scotland; and
- Scottish Hydro Electricity Transmission Limited in the north of Scotland.

Licences for onshore transmission have been granted based on historic monopoly networks and reflect industry structure at the time of privatisation in 1990 and a major market restructuring in the early 2000s. The licences are specific to a particular geographic location and network licences are subject to direct regulation (typically in terms of revenue allowances and meeting key outputs).

There is a separate regulatory regime for offshore transmission, which was introduced in 2009. Offshore Transmission Owners (OFTO) licences are granted by means of a competitive tender process run by Ofgem.

* ‘Transmission’ defined as lines above 132kV in England and Wales onshore and 132kV and above in Scotland and offshore

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54 Given the majority of offshore generation projects in the UK currently do (and will continue) to connect into England, Scotland and Wales, the focus of this section of the document is on the arrangements in Great Britain. Whilst the policy and regulatory frameworks differ in Northern Ireland, they are considered sufficiently similar for the purpose of this document and not described in the same level of detail. The grid infrastructure described in this document will largely be the same for connections into Northern Ireland.
7.2 Grid connection process in Great Britain

7.2.1 Application process for transmission connection

In Great Britain, the basic process for obtaining a grid connection to the transmission system is to submit an application to National Grid in its role as NETSO. The process is as follows:

1. **Submit an application to National Grid**

2. **Applications for:**
   - **England and Wales transmission connection**
     - Following submission, a connection offer is developed on the basis of the required capacity, the nature of the generating plant, and status (current and planned future) of grid infrastructure in the region.
   - **Scotland transmission connection**
     - If the application is for connection to the Scottish part of the transmission system owned by SPTL or SHETL, National Grid will review the application in conjunction with the relevant entity (SPTL or SHETL).

3. **The NETSO is then obliged to issue the offer to the applicant within a statutory 90 day period from the date the application is validated.**

4. **Applicants then have a further 90 day period to decide whether to accept the offer. The 90 day period is subject to other interactive offers.**

5. **If there is a dispute in relation to the offer, which cannot be settled between the two parties, the case may be referred to Ofgem for determination.**
Upgrade works to the transmission network infrastructure which are required to ensure a connection is technically feasible must be carried out by the network owner for all works behind and including the Main Interconnected Transmission System (MITS) substation.

Securing a grid connection by generation developers and other network users will incur underwriting costs and, in the event of terminating a connection agreement, there will be cancellation liabilities.

7.2.2 Distribution network connection

If the application is for connection to a distribution network, then it should be submitted to the relevant DNO (note for offshore wind this is likely to be restricted to small demonstration sites only now that Round 1 of offshore wind has been built). The DNO will then review the application (if necessary, in consultation with National Grid) and issue a connection offer within three months of receiving the request.

7.2.3 Build options and responsibilities

The relevant onshore network owner will perform ‘deep’ network reinforcements (i.e. cover the full cost of upgrading the network) up to and including the MITS node (or substation) into which an offshore wind farm will connect, including the construction of a new MITS node if necessary.

Under the OFTO regime, offshore transmission assets can either be built by the developer of an offshore generation project or by an OFTO. However, post construction the transmission assets must be owned by an OFTO. This is illustrated in the diagram below.

To date, all offshore transmission assets have been constructed by developers of offshore generation projects and then transferred to an OFTO post construction. This approach is expected to continue for the foreseeable future, although decisions will be made based on the particular circumstances of each project.
### 7.3 Offshore transmission development in Great Britain

Since 2009, National Grid has published its Offshore Development Information Statement (ODIS) under their license requirement. The ODIS provided a range of scenarios for how the offshore transmission network could develop based on a range of generation deployment scenarios and also the design strategy adopted (either on point-to-point radial basis or under a more integrated approach). As of 2012, the ODIS and National Grid’s Seven Year Statement (SYS) have been combined into a single Electricity Ten Year Statement (E-TYS). The first of these was published on 5 December 2012. The document presents a range of likely scenarios for future onshore and offshore network development, and will be updated annually.

**Key source of scenarios for future onshore and offshore network development:**
- National Grid Electricity Ten Year Statement (E-TYS) 2012
- Yearly E-TYS updates going forward

Changes to transmission connection strategies are being considered for the future. Historically offshore generation projects have followed a radial connection model whereby individual connections are made for each wind farm direct to shore. Work is ongoing on the potential benefits of co-ordinating connections, potentially with transmission infrastructure being developed to connect more than one offshore generation project.

### 7.4 Regulatory framework and transmission ownership in Northern Ireland

The electricity industry in Northern Ireland was privatised in 1992. As for the rest of the UK, there are separate licences for each component of the value chain, with some companies holding multiple licences.

Northern Ireland is part of the ‘All Ireland Single Electricity Market’ and regulated by the Northern Ireland Authority for Utility Regulation (NIAUR or the Utility Regulator). The Utility Regulator ensures that each licensed activity is ring-fenced from other activities in the same group of companies. The Utility Regulator sets price limits for the monopolistic components of the electricity industry and ensures that end prices for consumers reflect efficient costs and reasonable levels of profitability.

**There are three transmission licences and also a market operator licence:**
- NIE Ltd holds a transmission licence in respect of the main transmission system.
- A second transmission licence is held by Moyle Interconnector Limited, a subsidiary of Mutual Energy Limited, who run the Moyle Interconnector assets linking the system to the GB system in Scotland.
- System Operator for Northern Ireland Limited (SONI), a subsidiary of EirGrid Plc., holds the transmission system operator licence for Northern Ireland.
- SONI also holds the Single Electricity Market operator licence for Northern Ireland, in conjunction with EirGrid.

Source: Royal HaskoningDHV