

Electricity Transmission for Offshore Wind

Leasing Guide

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**Crown Estate
Scotland**
Oighreachd a' Chrùin Alba

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Section 1: Introduction

1.1 Overview

The aim of this document is to provide guidance on the requirements and process for securing property rights from Crown Estate Scotland in the 0 to 200 Nautical Miles (NM) for offshore export electricity transmission infrastructure for offshore wind (OSW) energy installations¹.

This document includes guidance on how and when offshore wind developers should apply for an Offshore Transmission Option Agreement (OFTO OA) and subsequent step through to Lease process for relevant offshore wind transmission assets (i.e. offshore substation(s) and transmission cables).

The guide is a generic document suitable for all new transmission infrastructure rights attached to offshore wind energy installations in Scottish waters. Adaptations may be required depending on the requirements of individual projects. For the avoidance of doubt, the legal documents will always take precedence, and the precise meaning of all relevant terms will be set out in Option Agreements and Leases.

1.2 Definitions

Term	Definition
Asset Classification	The process undertaken by Ofgem following the HND and HNDFUE to classify the assets as either onshore or offshore (radial and non-radial) using both technical and legal evaluation against the provisions of the 1989 Energy Act.
Bilateral Connection Agreement (BCA)	A grid connection agreement between the generator and NESO (or DNO) pursuant to the Connection and Use of System Code (CUSC).
Detailed Network Design (DND)	This phase will follow the HND process and will be carried out by the party identified by Ofgem through the Asset classification.
European Subsea Cables Association (ESCA)	A forum of national and international companies which own, operate or service submarine cables in European and surrounding waters.
Foreshore	The land between Mean High and Mean Low water springs, or between the water and cultivated or developed land.
Heads of Terms (HoTs)	A document, agreed in principle and signed between the parties, setting out the main terms of a commercial agreement proposed to be entered into.
Holistic Network Design (HND) and Holistic Network Design Follow Up Exercise (HNDFUE)	The exercise undertaken by NESO to set out the strategic network infrastructure to deliver 2030 offshore wind targets for the UK.
Letter of Future Rights	A letter issued by Crown Estate Scotland when requested, to provide assurance to the developer and to enable them to progress the development of the OFTO project through to the consenting process subject to the conditions being fulfilled.
Marine Licence	Certain activities in Scotland's seas require a Marine Licence before they can be carried out. These are determined by the regulator – the Scottish Government's Marine Directorate – Licensing Operations Team (MD-LOT). Please see further guidance here: https://www.gov.scot/publications/marine-licensing-overview .

¹ This does not include those assets that transmit electricity generated elsewhere, e.g. onshore.

Term	Definition
MD-LOT	Marine Directorate - Licensing Operations Team is the regulator on behalf of Scottish Ministers in the Scottish inshore region (between 0 and 12 nautical miles) under the Marine (Scotland) Act 2010, and in the Scottish offshore region (between 12 and 200 NM) under the Marine and Coastal Access Act 2009.
NESO	The National Energy System Operator, which replaced the National Grid Electricity System Operator (NGESO).
Non-radial (Coordinated) Offshore Assets	The assets that connect multiple offshore generation stations to the electricity network.
Offshore Network	Assets which are constructed wholly or mainly for the purpose of transmitting electricity generated in offshore waters.
Ofgem	The Office of Gas and Electricity Markets or a successor body to it.
OFTO	The offshore transmission owner or owners appointed and licensed by the Gas and Electricity Markets Authority (or any successor Authority) to acquire and own the infrastructure forming part of the offshore electricity transmission system.
OFTO asset	All offshore platforms, associated substations/converter stations, export cables and ancillary equipment that connect the wind farm project to the electricity grid.
OFTO Lease	Lease granted to the Tenant Organisation in terms of the OFTO Option Agreement.
OFTO Option Agreement	Option Agreement between Crown Estate Scotland and the Tenant Organisation in respect of the seabed for OFTO assets for the relevant wind farm project.
Onshore Network	Assets owned by TOs and regulated by Ofgem.
Option to Lease Agreement (OLA) or Agreement for Lease (AFL)	An agreement with Crown Estate Scotland for the use of the seabed. The OLA or AFL allows a developer to enter into a Lease to construct assets on the seabed provided certain conditions are met (including the securing of key project consents).
Pathway to 2030	See Holistic Network Design (HND). This is a single, integrated design to the large-scale delivery of electricity generated from offshore wind, taking power to where it's needed across Great Britain and aiming to deliver 2030 offshore wind targets.
Preferred Bidder	Successful bidder in Ofgem's OFTO competitive tender process, pending final due diligence and regulatory licence grant.
Radial Offshore Assets	Point-to-point offshore assets, which connect one generation station to the electricity network.
Renewable Energy Zone (REZ)	The area of sea outside the UK territorial sea over which the UK claims exclusive rights for production of energy from water and wind under Section 84 of the Energy Act 2004, i.e. between 12 and 200NM.
Scottish Territorial Waters (STW)	Scotland's territorial seas (the seabed to 12 Nautical Miles (NM)).
Sectoral Marine Plan (SMP)	Sectoral Marine Plan for Offshore Wind Energy, adopted by Scottish Ministers and accompanied by a Post-Adoption Statement, published on 28 October 2020.

Term	Definition
Small Works Consent (SWC)	A consent from Crown Estate Scotland for certain types of activity on the seabed, such as seabed investigation works like grab samples or boreholes, deployment of research equipment etc. The process is administered by Crown Estate Scotland's Managing Agents and can be requested via: https://www.crownestatescotland.com/scotlands-property/coastal/marine-works . All works are subject to the statutory consents.
Transmission Owner (TO)	The entity that owns, maintains, and expands the transmission system in the UK. There are three TOs in the UK: SSEN Transmission (North of Scotland), Scottish Power Transmission, SPT (Central and Southern Scotland), National Grid Electricity Transmission, NGET (England and Wales).
Tenant Organisation	The legal entity that enters into a property agreement with Crown Estate Scotland.
Tender Round (TR)	Ofgem's competitive tender process through which offshore transmission assets are sold, and licences are granted. Usually referred to as sequential Tender Rounds (TR's; at the time of publication of this guidance, TR13 had been launched)

Section 2: Background

2.1. Seabed rights and interactions

Crown Estate Scotland grants seabed rights for offshore renewable energy generation and transmission assets in the STW and REZ by way of Option Agreements and Leases. Offshore wind seabed leasing in Scotland (e.g. ScotWind and INTOG) is currently undertaken via a plan-led approach, in accordance with the relevant Scottish Government's Sectoral Marine Plan (SMP).

The Option Agreement grants rights to carry out site investigations and assessments only; it does not provide the rights to construct and operate a project – Crown Estate Scotland will only grant such rights once the project has secured all key project consents for the development and fulfilled the requirements set out in an Option Agreement for stepping into Lease.

Where an offshore wind project is to be connected to the electricity transmission network (offshore or onshore) via offshore transmission infrastructure (including offshore transmission cables and offshore substation/converter station(s) i.e. OFTO assets), separate rights will be granted for the transmission infrastructure in an OFTO Option Agreement (OFTO OA) at an appropriate stage in the wind farm development process (see 4.2 below). Where the connection point to the electricity network is located onshore, these rights will extend from the offshore wind farm² to Mean High Water Springs and can include the foreshore where it is owned by Crown Estate Scotland as shown in Figure 1. The OFTO OA will usually overlap the windfarm option area so as to give the developer flexibility as to the location of the OFTO assets within the windfarm during the design process.

Once an option notice is served by the Tenant Organisation and a Lease is granted, this will confer the rights required to construct both the windfarm and the OFTO assets. Once the OFTO export cable is energised and is transmitting power to the grid, the developer is required to dispose of the OFTO assets via Ofgem's OFTO Tender Round (see Section 6).

In the instances where an offshore renewables generation project is to connect to an alternative off-take (e.g. Oil and Gas installation, hydrogen plant, battery storage or interconnector) separate rights will similarly be granted in an Option Agreement and Lease. This will follow a similar process as for OFTOs at the Option Agreement stage, without the need for mandatory divestment by the generator once in the Lease and constructed.

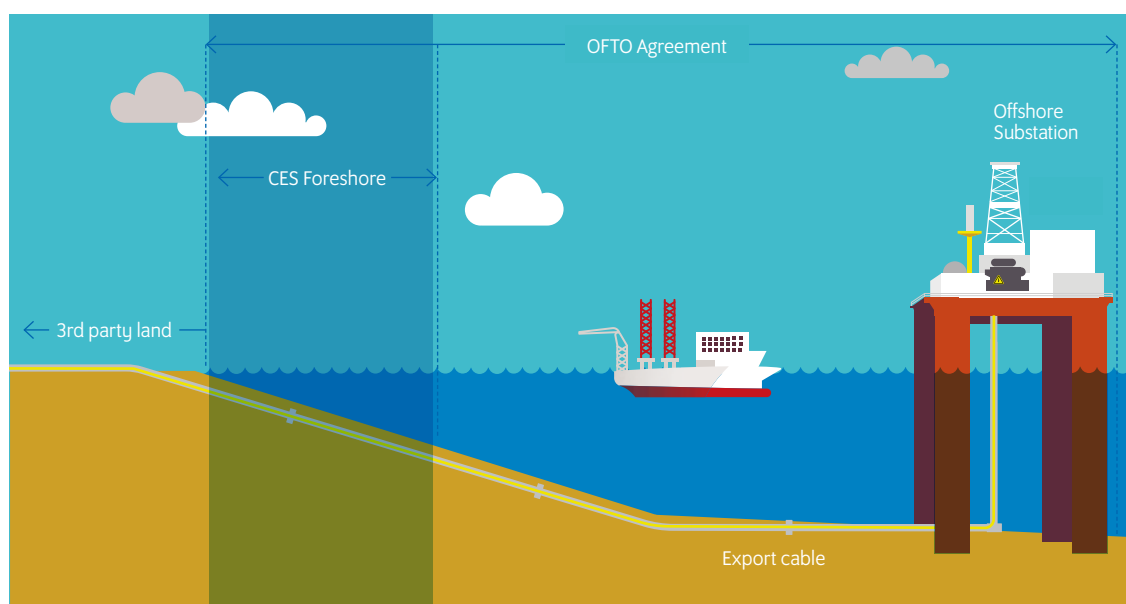


Figure 1 Extent of OFTO agreements (connecting onshore) issued by Crown Estate Scotland

² Except those instances where the cable rights will form part of the wind farm Lease (for assets under 132kV).

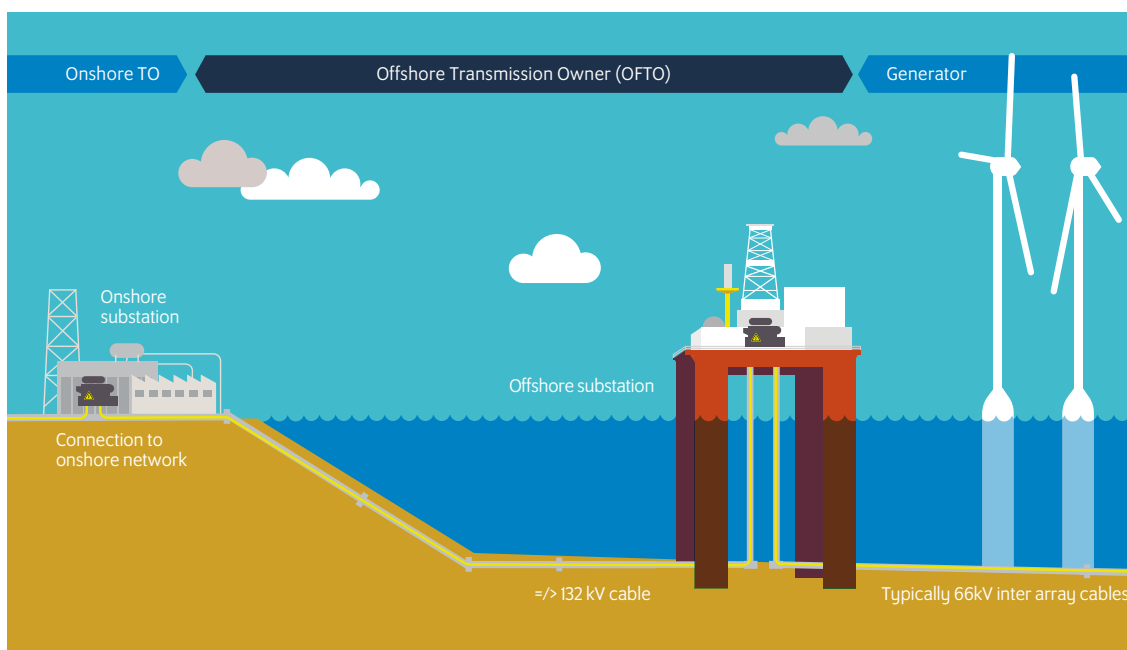


Figure 2 Typical arrangement (onshore connection point) between the Generator, OFTO and TO

It is appreciated that early certainty of the granting of cable rights is important for offshore wind developers to allow progress through development stages. However, it is recognised that cable Option Sites may overlap spatially with the activities of third parties. These may include:

- fisheries, shipping and navigation;
- other OFTO or wind farm sites;
- other rights granted by Crown Estate Scotland on Scottish Crown Estate foreshore and seabed within STW (e.g. outfalls, infrastructure within 12NM, harbour authority areas, aquaculture sites);
- other infrastructure in the REZ – carbon storage pipelines, carbon storage infrastructure (with rights granted by Crown Estate Scotland);
- other infrastructure in the REZ – cables and hydrocarbon related infrastructure (no rights granted by Crown Estate Scotland).

All of Crown Estate Scotland's agreements are issued subject to public rights of navigation and fishing and the rights of states or their nationals under rules of international law, over which Crown Estate Scotland has no control.

Cable development rights granted via an OFTO Option Agreement are non-exclusive, whereby Crown Estate Scotland can issue development rights for overlapping areas of seabed (subject to notification to existing tenant). Granting non-exclusive development rights is a deliberate policy to avoid ransom strips being created in congested areas of seabed and approaching shore. The policy is for the benefit of all parties to ensure access can be given to cable routes through suitable areas of seabed and to appropriate grid connection points.

Crown Estate Scotland's OFTO leasing policy has been designed to maximise engagement across marine sectors, whilst making use of existing processes and without duplicating formal stakeholder consultation activities that are already in place.

2.2. Engagement with fisheries

In relation to the public right of fishing, early engagement with fisheries, prior to decisions by offshore wind developers on potential cable route areas of search, is important so that the implications of cable routing on the fishing industry can be considered.

Engagement with fisheries at that early stage could realise benefits to developers by avoiding future conflicts and accessing knowledge of the seabed (e.g. locations where cable burial could be maximised) to help consider the cable route options. This early engagement will also benefit fisheries stakeholders by ensuring they are involved at the correct time, increasing their understanding of the project needs and having the opportunity to provide important relevant information.

The previous work of the Offshore Transmission Network Review (OTNR) Fisheries and Cabling Expert Group on cable routing and interaction with fisheries should be helpful in informing the engagement with fisheries stakeholders. The Scottish Government's Marine Directorate developed "Good Practice Guidance for Assessing Fisheries Displacement" which can be found [here](#).

Impacts of stakeholder interactions are formally tested later in the offshore wind development process through consultations as part of the existing marine licensing assessment by Marine Directorate (the regulator).

MD-LOT consults other sea users, including fisheries representatives, as part of the process of determining applications for marine licences. Evidence of the early engagement described above is anticipated to be important in the marine licensing process.

2.3. Connection to the electricity grid

To date, all offshore wind farms in the UK have connected to the electricity grid via a radial (point-to-point) connection to shore. The grid connection process followed a CION (Connection and Infrastructure Options Note) assessment by the system operator, Transmission Owner (TO) and developer.

The current significant expansion of offshore wind required to achieve net zero, has necessitated a review of the transmission network planning, design and connections processes initially via OTNR, which resulted in the Holistic Network Design processes (HND and HND FUE) and will ultimately be moving to the Centralised Strategic Network Plan (CSNP) developed by the National Energy System Operator (NESO).

The HND and HND FUE processes have set out a framework for Great Britain's electricity transmission network aimed at achieving more coordinated and strategic network planning in order for the UK to realise the ambition for the sector to 2030 and beyond. The Clean Power 2030 and the Connections Reform processes have been developed alongside the HND to support the 2030 ambition. Crown Estate Scotland supports these principles and has worked with NESO and all other relevant parties to maximise the opportunities to connect offshore wind generation to the transmission network in the most efficient way.

With increased offshore activity more generally, Crown Estate Scotland recognises that more spatial overlaps with other infrastructure and activities are likely to occur, which is why the strategic network planning process is important and why increased communication and collaboration across the sectors will be required.

The HND and HND FUE covered both the on and offshore network and showed how the power should be transported from offshore wind farms to where it is needed. It identified high-level interface points for each wind farm in scope (grid connection locations and any interconnections). A Bilateral Connection Agreement (BCA) between the developer and NESO will be put in place based on the outcome of the HND/HND FUE. Subsequently, the Detailed Network Design (DND) process can commence.

The Scottish Government is carrying out a high-level sensitivity analysis based on the HND/HND FUE recommendations to assess potential impacts of offshore transmission infrastructure in waters around the Scottish coastline; this will be included in the final Sectoral Marine Plan³.

3 Iterative Plan Review (IPR) for the Sectoral Marine Plan for Offshore Wind Energy (SMP-OWE).

2.4. Asset classification

All HND assets are classified by Ofgem as either “onshore” or “offshore”; this classification is based on the assets’ function, rather than where they are spatially⁴.

The asset classification exercise determines which party is responsible for the DND and consenting process (i.e. the “project promoter”):

- offshore wind developer (for those assets classified as offshore), or
- Transmission Owner (TO) (onshore assets).

In addition, for the offshore assets, Ofgem will establish which of those assets are radial and which are non-radial (i.e. coordinated)⁵. Offshore wind developers will have the choice between generator build model or offshore transmission owner (OFTO) build model for delivery of both radial and coordinated assets⁶. Ofgem is currently reviewing⁷ the OFTO-build models for coordinated assets based on recent stakeholder feedback and considering whether an early competition OFTO build model would be more appropriate for those.

For clarity, Crown Estate Scotland can grant rights in the REZ in relation to offshore wind export electricity transmission assets, only from the offshore generation facility to the network (i.e. those assets classified as offshore by Ofgem (both radial and coordinated))⁸. Crown Estate Scotland will not grant rights for the network assets in the REZ, this is shown in Figure 3.

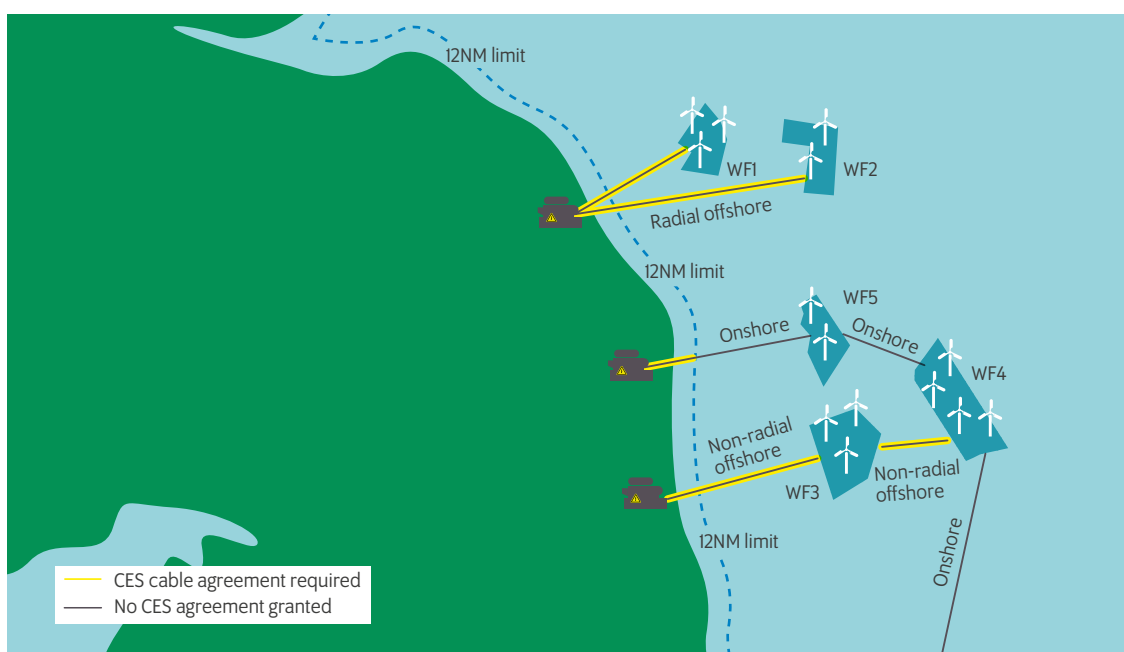


Figure 3 Asset Classification and requirement for Crown Estate Scotland agreement

4 The “onshore” transmission can be located in the sea (i.e. wet onshore).

5 <https://www.ofgem.gov.uk/publications/offshore-transmission-network-review-decision-asset-classification>

6 <https://www.ofgem.gov.uk/publications/decision-pathway-2030>

7 https://www.ofgem.gov.uk/decision/of-to-build-model-policy-update?utm_medium=email&utm_source=dotMailer&utm_campaign=Daily-Alert_09-12-2024&utm_content=OFTO+build+model%3a+policy+update&dm_i=1QCB,8T2SJ,6FUF9X,10N27R,1

8 However, in the 0-12NM all rights are granted by Crown Estate Scotland.

Section 3: Cable Route Planning

3.1. Cable route considerations

Marine cables route planning is largely based around technical, environmental, commercial, legal and practical considerations, including interactions with other sea users and stakeholders (discussed further at 3.2). These considerations apply both offshore and at landing points⁹.

Crown Estate Scotland expects all developers to plan their cable routes in accordance with the latest industry best practice, for example, [ESCA guidelines](#).

The Crown Estate's 2012 report on Export transmission cables for offshore renewable installations identified¹⁰ a number of key principles that will have a defining influence on the routing and spacing of transmission cables, these were:

- Route design and development
- Cable spacing to meet the requirements of Security and Quality of Supply Standard
- Installation/operation and maintenance of existing and future transmission cables
- The effects of electromagnetic fields on navigation and ecology.

3.2. Stakeholder engagement, proximities and conflicts

Cable route design and development decisions should be based on early feedback from key stakeholders and other users, both offshore and at landfall. These include commercial fisheries activity, oil & gas infrastructure, subsea telecommunications and power cables, marine protected areas, wrecks, UXOs, offshore renewables infrastructure, hard substrates etc. Potential interactions with existing or planned users may present significant constraints for landing new cables along the Scottish coastline, with increased demands for optimal landing points (Figure 4).



Figure 4 Potential cable interactions

⁹ Up to Mean High Water Springs (depending on foreshore ownership) – see also Figure 1 above.

¹⁰ <https://www.thecrownestate.co.uk/media/1781/ei-km-in-pc-cables-export-transmission-cables-for-offshore-renewable-installations.pdf>

As described earlier, offshore renewable energy developments and especially export cables coming to shore may have a displacement impact on fisheries. Therefore, early engagement with fisheries stakeholders is important in informing suitable cable routes and landing locations.

An OFTO cable requires a marine licence. MD-LOT is the regulator on behalf of Scottish Ministers for marine licence applications.

As part of the marine licence application process, a subsea cable developer is required to undertake a pre-application consultation. At this stage in the application process, a cable developer will consult on proposed cable routes and potentially impacted parties will be invited to engage in the consultation process and provide comment. Other seabed users are likely to become aware of new cable routes at this stage in the development process and have an opportunity to engage with the developer before the route is finalised.

Depending on their proximity to the final cable route, other seabed users may also be invited (by MD-LOT) to provide comments when the marine licence is formally under consideration.

It is expected that regular and iterative communication is undertaken as cable optioneering progresses and that third parties have ample opportunity to provide input to the process well before a final route is selected.

As the seabed manager, Crown Estate Scotland has a role in supporting each developer's discrete requirements and a collective solution that works for all parties through both providing access to seabed (granting rights) and as a potential facilitator/enabler of engagement where required.

Section 4: OFTO Option Agreements Process

4.1. Engagement on OFTO rights

Engagement with Crown Estate Scotland on OFTO rights (via 2 stages described below) can start during the DND phase, once both a wind farm OLA has been secured and an associated grid connection agreement (BCA with NESO) is in place. A cable route area of search is expected to be identified through preliminary engagement with stakeholders (including fisheries) as per 3.2 above.

Figure 5 summarises the process of securing OFTO seabed rights from Crown Estate Scotland:

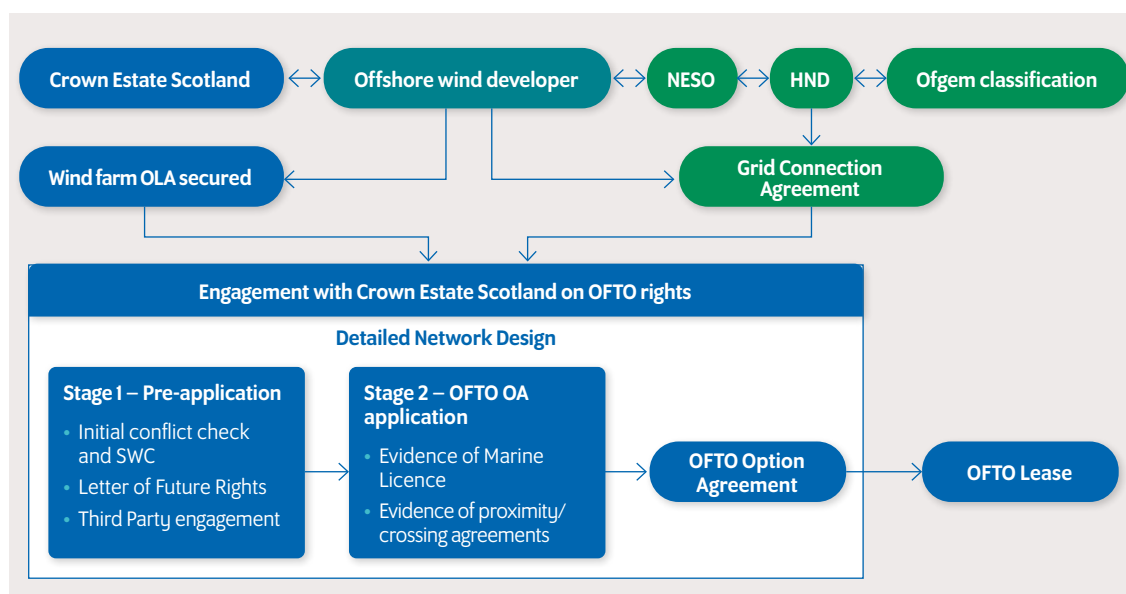


Figure 5 OFTO Option Agreement process

4.2. Stage 1 – Pre-application for OFTO Rights

This stage follows initial wind farm development and site investigation work. The key elements are:

- i. **Conflict check and Small Works Consent** – once a cable route area of search is identified through preliminary engagement with stakeholders, an initial spatial conflict check should be requested from Crown Estate Scotland. To enable this, the developer should submit their indicative cable route coordinates in the form of a GIS shape file, supplied as a .zip file in WGS84 format. The conflict check can confirm if any other seabed rights have been granted by Crown Estate Scotland in the area in question. Where possible, Crown Estate Scotland can provide information on other rights and assets that we are aware of¹¹.

The developer can then apply to Crown Estate Scotland for a Small Works Consent (SWC) which gives the rights to enter the proposed cable route area for site investigations, subject to necessary consents¹².

- ii. **Letter of Future Rights** – as illustrated in Figure 5, a Letter of Future Rights may be issued by Crown Estate Scotland as an assurance to the developer at this stage, if requested. This is a letter to confirm that Crown Estate Scotland will endeavour to grant an OFTO Option Agreement for a relevant cable corridor on the provision of evidence to our reasonable satisfaction as set out for Stage 2 below (see also Appendix 2 for a draft Heads of Terms for Letter of Future Rights).

¹¹ Conflict check is only valid on the day it is undertaken.

¹² This is done via <https://www.crownestatescotland.com/scotlands-property/coastal/marine-works>

The Letter is intended to provide assurance to the developer (or relevant third party) to enable them to progress the development of the project through to the consenting process subject to the conditions being fulfilled.

- iii. **Third-party engagement** – a high degree of stakeholder engagement and collaboration is expected throughout all stages of the cable route optioneering and routing processes. Crown Estate Scotland can support parties impacted by any proximity/overlaps to continue stakeholder engagement and will expect all parties to act reasonably to reach a satisfactory outcome regarding existing or planned agreements and rights.

To help support mutually acceptable outcomes, and if desirable and necessary, Crown Estate Scotland will consider facilitating regional discussions to help enable parties to discuss technical, practical, and contractual issues where potential spatial conflicts occur. Any such discussions will require to comply with any applicable competition law constraints.

4.3. Stage 2 – OFTO Option Agreement application

Before an OFTO Option Agreement for an agreed cable corridor can be granted, the following evidence will be required to Crown Estate Scotland's reasonable satisfaction as part of an OFTO Option Agreement application:

- i. **Evidence of Marine Licence** – the developer will need to demonstrate that a Marine Licence for the construction and operation of transmission infrastructure within the cable corridor is in place, and
- ii. **Evidence that proximity/crossing agreements will be entered into** – the developer will need to provide evidence to Crown Estate Scotland's reasonable satisfaction that a relevant proximity/crossing agreement is being progressed (such as Heads of Terms or collaboration agreement etc).

Crown Estate Scotland is unwilling to allow a position where a preferred cable route is put at risk due to an overlapping neighbouring third party not co-operating or unreasonably delaying the process. If that should occur Crown Estate Scotland will consider what rights may be granted in the circumstances, taking into account the rights of the overlapping third party, industry best practice and any other circumstances relevant to the specific case.

Crown Estate Scotland will not need to approve any such proximity agreement nor be a party to it but will request confirmation from all parties involved that an agreement has been reached and take that into account as part of the process of finalising Option Sites for the purposes of an OFTO Option Agreement.

The OFTO Option Agreement application is structured around four key areas:

1. Introduction and Background
2. Transmission Assets Specification and Justification
3. Third-party Engagement and Consenting
4. Corporate set-up and OFTO Strategy.

A template and guidance for OFTO Option Agreement application is provided in Appendix 1.

The application will be considered by Crown Estate Scotland and if accepted, the parties will proceed to formalising the Option Site in the legal agreement.

4.4. Overview of OFTO Option Agreement terms

The application will be for an OFTO OA and Lease. The model form of OFTO OA and Lease should be reviewed for the terms of the seabed agreements being offered. The agreements' Terms outlined below are intended as an indicative summary only (Table 1).

Table 1 – Summary of the OFTO OA Terms

OFTO OA Terms	
Cable Corridor	Part of the Cable Route (as approved by Crown Estate Scotland) running from the boundary of the Substation Site (or between the Substations), through the wind farm to the shore or offshore network connection point, having a width of 30 metres for each cable. The actual position will be confirmed by the as-built coordinates once constructed.
Cable Route	The area of seabed (and foreshore where appropriate) within the Option Site within which the Cable Corridors(s) will be situated.
Export Cables	Cables, wires other conduits, offshore platforms and ancillary structures and equipment owned by the OFTO on or under the Cable Corridor and the Substation Site for the passage or transmission of electricity generated by the wind farm (excluding the Generator Cables).
Generator Cables	The conduits owned by the wind farm company for the passage of electricity generated by each of the turbines at the wind farm to an offshore substation or other point of connection to the Export Cables.
Lease	The lease of the Substation Sites and/or grant of cable rights along the Cable Corridor(s) in respect of the wind farm in the form of the draft set out and attached to the OFTO OA.
Option Notice	Written notice served by the Tenant during the Option Period requiring the grant of the Lease to take place.
Option Period	A period of 6 months from the exercise of an option notice under the Wind Farm OLA (or other date as agreed between the parties).
Option Site	The area of the seabed as defined in the OFTO OA (and described in the coordinates in the Plan attached to the OFTO OA). The Option Site will usually include the entire wind farm option site so as to give flexibility as to where the substation may be located within the windfarm.
Permitted Operations	The carrying out of ground condition surveys and other investigations and assessments and the deployment of instrumentation reasonably required by the Transmission Company in connection with the identification of the Cable Corridor(s) and the obtaining of all Necessary Consents required for the laying of the Export Cables and associated works. These Operations are subject to all statutory consents having been secured prior to starting any works.
Substation Sites	The area on the Plan for the substations usually within the wind farm and defined by the coordinates attached to the Lease.

Under the OFTO OA the developer is granted a right to request a Lease from Crown Estate Scotland of the Substation Site and/or cable rights along the Cable Corridor and non-exclusive rights to carry out site investigations and assessments in the Option Site, including the deployment of appropriate instrumentation in connection with the identification of the Cable Corridor (i.e. Permitted Operations), subject to all statutory consents.

The Cable Corridor can either be defined by a redline boundary on the plan attached to the OFTO OA, or it could be defined as a number of meters either side of a centreline shown on the plan.

During the Option Period, Crown Estate Scotland is entitled to grant leases, licence or consents to third parties within the Cable Corridor, subject to a notification to the developer (and with a reservation made in the third-party lease to allow the future grant of the developer's OFTO Lease without consent). Where any such lease licence, or consent is for dredging rights it must be terminated by Crown Estate Scotland prior to the Commencement Date of the OFTO Lease insofar as it relates to the Cable Corridor, Substation Site and Dredging Restriction Zone.

There is a degree of flexibility under the OFTO OA with regard to the spatial footprint, to allow for input from stakeholders such as fisheries and statutory bodies and to avoid other third-party conflicts.

Crown Estate Scotland will consider a revised route, if required and agreed, through a variation to an existing OFTO OA. Should the new route be substantially different, the existing OA will be terminated, and a new one granted.

Note: once an OFTO OA has been entered, the developers should continue to provide Crown Estate Scotland with updated routes as these are refined further through the optioneering work.

Section 5: Option Call and OFTO Lease

5.1. Option Notice

In order for the project to enter into its OFTO Lease agreement, it needs to serve a valid Option Notice to Crown Estate Scotland as described in the Option Agreement. Upon acceptance of the Option Notice, Crown Estate Scotland will grant the Lease based on the terms described in the Option Agreement.

The Option Notice must provide evidence that all necessary consents are in place, the cable corridor and location of any substations must have been approved by Crown Estate Scotland and sufficient information must be provided to demonstrate what assets will be installed and the works that will be undertaken.

The Cable Corridor in the Lease must be part of the agreed Cable Route and may initially be wider than the final “as laid” coordinates to accommodate any issues identified during installation. The Cable Corridor agreed at the time of stepping through to the Lease is expected to be about 50-100m per cable with the final version of the agreement being updated with final coordinates, typically having a width of 30 metres.

Information required to step through to Lease will include details such as¹³:

- number and working voltage of the cables (AC or DC);
- substations (including details of foundation type and dimensions of structure);
- converter stations (including details of foundation type and dimensions of structure);
- any ancillary equipment;
- communications equipment or cables;
- cable protection (e.g. matting, rock dumping, inshore protection);
- cable joint chambers (this is relevant for the foreshore); and
- conduits.

The OFTO Option call will typically occur simultaneously with the wider offshore wind farm step through to Lease, and therefore the specification information for transmission will be provided to Crown Estate Scotland at that time and the lease plans will coordinate.

Projects are advised to discuss their intention to step through to lease with Crown Estate Scotland as soon as they have that clarity. At least six months should be allowed for this process.

5.2. Overview of OFTO Lease terms

Once the Lease has been granted, restriction zones and more extensive rights of protection are introduced. The Lease grants the exclusive right to install, inspect, maintain, repair, renew and remove the OFTO assets as defined in the Lease.

Once a lease is in place, the consent of the tenant is required (not to be unreasonably withheld or delayed) before Crown Estate Scotland grants any leases or licences which cross or come into conflict with the restriction zones of the cables or the cables themselves.

The Lease contains a Dredging Restriction Zone extending 235m on either side of each individual Cable Corridor. Table 2 contains an overview of typical Lease Terms (for illustration purposes only).

As-built coordinates must be submitted to Crown Estate Scotland (and forwarded on to KIS-ORCA) once the construction of the route has been completed in order that the GIS database can be updated accordingly with the final cable position and relevant Dredging Restriction Zones. Crown Estate Scotland reserves the option to require evidence, to its reasonable satisfaction, of works being completed in accordance with the agreed specification.

¹³ Refer to relevant Clauses in Option Agreement.

Table 2 – Summary of the OFTO Lease Terms

Term	Explanation
Cable Corridor	Part of the Cable Route (as approved by Crown Estate Scotland) running from the boundary of the Substation Site (or between the Substations), through the wind farm to the shore or offshore network connection point, having a width of 30 metres for each cable. The actual position will be confirmed by the as-built coordinates once constructed.
Dredging Restriction Zone	The area extending to 235 metres either side of the Cable Corridor.
Estimated Maximum Loss (EML)	The estimated maximum loss arising from the worst-case credible scenario that could be expected to affect the Specified Works and all renewals, replacements, alterations or additions to them (not including the Wind Farm). The EML is usually established for the Tenant Organisation by detailed technical studies and provided to Crown Estate Scotland.
Rent	Rent is payable under Lease from the date of commencement of operation and is defined in one of the Schedules of the Lease.
Rights	The exclusive right to install, operate, inspect, maintain, repair, renew and remove the Substation (and ancillary equipment) on the Substation Site and Export Cables in the Cable Corridor (subject to the conditions specified in the Lease).
Specified Works	The equipment and conduits within the Substation Site (excluding Generator Cables) and Export Cables within the Cable Corridor together with ancillary works as described in the Lease.
Term	The term is usually 60 years commencing on the Lease commencement date.
Works Completion Date (WCD)	The date on which the project begins commercial operation, after the satisfactory completion of all necessary procedures and tests in accordance with industrial standards and practices.

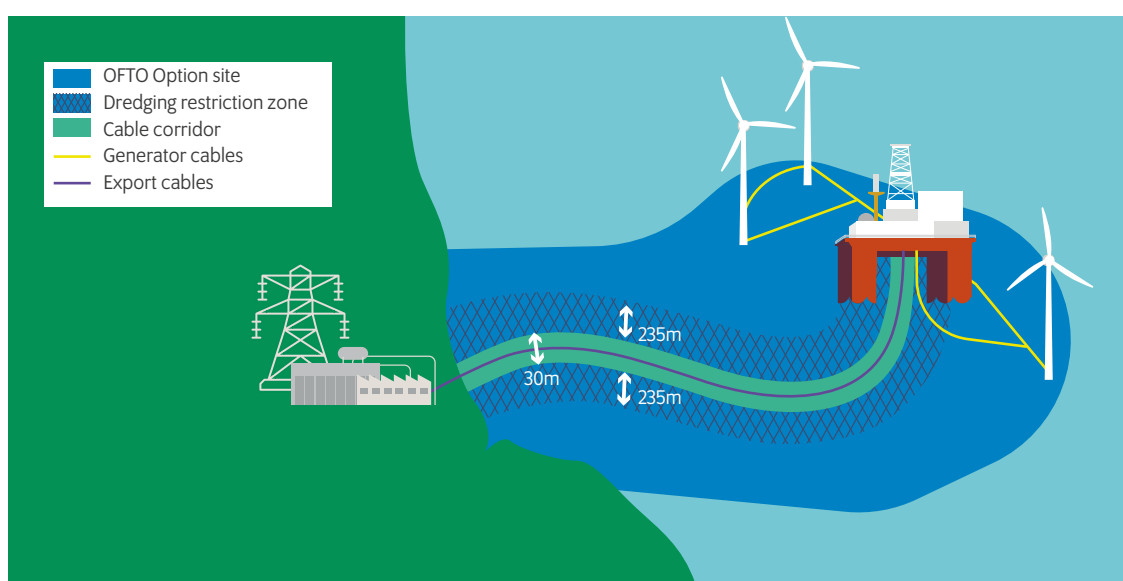


Figure 6 Illustration of terms used in agreements (example with single Export Cable)

Section 6: OFTO Divestment

Once the wind farm starts to generate electricity, by law, the developer must divest the OFTO asset. Developers are required to divest these assets because their generation licence forbids them from also owning transmission assets. The developer has an 18-month period to test the transmission assets before transferring them to an offshore transmission owner. This will reassure offshore transmission owners and investors that the transmission assets they are buying have been fully tested.

Ofgem is responsible for managing the competitive tender process through which offshore transmission assets are sold, and licences are granted – this is done through Ofgem's OFTO Tender Regime. The timing of Tender Rounds depends on when offshore wind farm developers are nearing the completion of the construction of their transmission assets. More than one OFTO may be tendered in each round.

OFTO bidders must provide evidence that they have the necessary experience and financial capability to own, operate and maintain the OFTO asset. The bidders are competing to secure the revenue stream to own, operate and maintain the OFTO asset – typically this will be for a 20-year period.

The tenant's interest in the OFTO Lease will be assigned by the developer to the OFTO owner. Usually, Crown Estate Scotland will issue a letter of consent to the Assignment, following conclusion of the offshore transmission tender process. In parallel with the offshore transmission tender process, Crown Estate Scotland will work with Ofgem, the wind farm developer and the OFTO owner to ensure completion of the Assignment.

Alongside the Assignment of the OFTO Lease, any crossing agreements with third party cable and pipeline owners will have to be novated to the OFTO owner. The Assignment of the OFTO Lease to the OFTO owner is not an opportunity for renegotiation of the lease terms. If, however, changes are required to ensure the leases align with the agreement reached between the wind farm developer and the OFTO owner as part of the OFTO offshore transmission tender, reasonable variations to the leases may be considered by Crown Estate Scotland.

Appendix 1

Crown Estate Scotland

OFTO Option Agreement Application: Template

This template is for use when submitting an OFTO Option Agreement (OFTO OA) application to Crown Estate Scotland. The purpose of this template and the guidance is to ensure that the submission provides the necessary spatial information, outline technical details and the strategy & approach for the development and delivery of the OFTO transmission assets to support the grant of an OFTO Option Agreement.

The template is structured in four short sections (including Introduction) and is intended to enable the submission of the relevant information in a succinct format. The submission should be no more than 20 pages.

Section	Topic	Indicative size	Notes
1	Introduction and Background: OSW project summary and grid connection overview.	1 page + maps	Provide a summary description of the relevant offshore wind project to which this application relates, background on the grid connection process and a high-level overview of the cable route proposal. Suggest supporting maps.
2	Transmission Assets Specification and Justification (offshore assets/cable route, landfall, onshore assets): 2.1. Details of the requested Option Site 2.2. Rationale for the proposed Option Site 2.3. Specification.	6 pages	This should include: 2.1. The proposed Option Site for Cable Route, please provide: 2.1.1. A GIS shape file of the proposed Option Site (WGS84 format). 2.1.2. The landfall location (larger scale) – if applicable 2.2. Describe the rationale for the proposed cable route and justification of the route width. Please outline the process for selection of the proposed cable route, including details of relevant site investigations and best practice used. Explain the rationale for the requested route width at the Option stage, including cable spacing. 2.3. A draft specification of the works: maximum number of cables (including voltage and AC/DC), any offshore substation(s)/converter station(s), any ancillary equipment; cable protection, the nature of works at the landfall (if applicable), the connection point to the onshore grid network, brief overview of the onshore works. The location and boundary of the Option Site are to be approved by Crown Estate Scotland based on the developer's requirements and associated justification.

Section	Topic	Indicative size	Notes
3	Third-party Engagement and Consenting 3.1. Stakeholder engagement on the cable route 3.2. Third-party interests and any proximity/ conflicts mitigation (if applicable, relevant evidence should be provided such as HoTs) 3.3. Evidence of Marine Licence	7 pages	3.1. Please provide detail of stakeholder/third-party engagement undertaken throughout all cable route development stages with e.g. fisheries, statutory bodies, other developers, TOs etc. Provide an explanation of how this influenced the chosen cable route. 3.2. Summary of any overlapping third-party interests on the selected route (or landfall if applicable) and mitigation/evidence of discussions/agreements to find mutually acceptable solutions/HoTs on proximities & overlaps, collaboration agreements or similar. 3.3. Brief summary of Marine Licence application and determination process and any conditions. Please provide links to the relevant web pages.
4	Ownership structure and OFTO Strategy: 4.1. Ownership structure of project entity 4.2. OFTO delivery model and strategy.	5 pages	4.1. Please provide a description of the ownership structure of the project entity for the OFTO Option Agreement and how it links to the wind farm developer. 4.2. Set out the chosen OFTO delivery model and OFTO strategy and rationale for this. Include a summary of key risks and mitigations (include the timeline).
	List of Figures (Maps, tables & programme)		

The submission should have an emphasis on providing accurate, factual spatial information supported by a succinct summary of the strategy for stakeholder engagement and consenting, grid connection, technical/ specification and any key risks and mitigation strategies.

Appendix 2

Letter of Future Rights for OFTO

Draft Heads of Terms

Issued by Crown Estate Scotland to relevant party responsible for Detailed Network Design of OFTO assets.

Dear [name],

[] (the Project)

This letter is provided in accordance with our published Electricity Transmission Leasing Policy for Offshore Wind, to confirm that, as soon as reasonably practicable after the provision of written evidence to us of the matters listed below to our reasonable satisfaction, Crown Estate Scotland will act in good faith and use reasonable endeavours to finalise with you and then sign a Cable Corridor Option Agreement (OFTO OA) for the agreed export cable route for the Project on the terms of our then standard Cable Corridor Option Agreement and Lease, the model forms of which we will make available on written request.

Matters referred to above:

1. evidence of Marine Licence for the construction and operation of transmission infrastructure within the cable corridor for the Project; and
2. evidence of a basis for agreement/s on proximity/crossings, such as Heads of Terms.

Yours faithfully etc

Edinburgh Head Office

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