

Policy Update

OFTO Build Model: Policy Update

Publication date:	9 December 2024
Contact:	Ho Man Lo, Anthony Nevin, Joe Underwood
Team:	OFTO Build Tender Development
Telephone:	020 7901 3073 / 020 3263 9830
Email:	oftobuild@ofgem.gov.uk

In April 2024, we consulted on initial proposals for the development of a late competition offshore transmission owner (**OFTO**) build model for non-radial transmission assets included in either the Holistic Network Design (**HND**) or Holistic Network Design Follow-Up Exercise (**HNDFUE**). This publication presents the consultation feedback alongside our consideration of these views. In it, we set out our reasons for deciding to move from a 'late' to an 'early' OFTO build model and outline what the model may look like. We present some high-level principles and initial ideas regarding the identification of asset use cases, managing risks of delayed asset delivery, and the OFTO revenue model, to facilitate further discussion and development of this model. Going forward, we intend to engage with relevant stakeholders to further develop the model and identify suitable pilot projects.

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Any enquiries related to the text of this publication should be sent to Ofgem at:

10 South Colonnade, Canary Wharf, London, E14 4PU.

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Executive Summary

This publication sets out our views on the feedback received from our April 2024 'Consultation on initial proposals for an OFTO Build model to deliver non-radial offshore transmission assets' (the **April 2024 Consultation**).¹ It also provides an update on policy direction and next steps.

The majority of responses to our April 2024 Consultation expressed reservations with a late competition model. Stakeholders supported earlier involvement from the OFTO in the process, e.g. detailed design, consenting, and procurement, to better address interface issues between generators and OFTOs.

We originally adopted a late competition model as a potential way forward because it has a shorter development and implementation timeframe compared with an early competition model. We considered a late competition model a more feasible option to facilitate project delivery in the short term to meet the delivery objectives of 2030.

However, recent developments in the HND² and HNDFUE shows that the number of potential non-radial assets is lower than previously expected. The planned connection dates of these non-radial assets are also later than expected. The time pressure of delivering the OFTO build model is therefore significantly reduced. This presents an opportunity for us to reconsider the merits of early competition and take into account the feedback and preference of stakeholders.

This publication also signals our intention to shift away from late competition, in favour of developing an early competition OFTO build model.

Going forward, we intend to identify projects in HND and HNDFUE that may be suitable projects to be taken forward as pilot projects under an early competition OFTO build model. We hope to better aid model development by working collaboratively with developers and prioritising the use cases that deliver best value to consumers. We will also reach out to stakeholders to discuss key issues and concerns relating to the development of an early competition model. The lessons learnt will enable us to progress towards the development of a permanent model that could be used in different future scenarios.

We aim to confirm by Q2 of 2025 whether suitable pilot project(s) has been identified.

¹ <u>Consultation on initial proposals for an OFTO Build model to deliver non-radial offshore transmission assets |</u> <u>Ofgem</u>

² <u>A Holistic Network Design for Offshore Wind | National Energy System Operator</u>

1. Introduction

Section summary

In this section we set out some of the background to our development of an OFTO build model prior to this publication, including the key themes outlined in our April 2024 Consultation and the responses received.

Background

- 1.1 Ofgem has been developing an OFTO build delivery model for non-radial offshore transmission assets. Our decision of March 2023 (the March 2023 Decision)³ set out our decision on delivery models to give developers the choice of either a very late competition generator build model, or a late competition OFTO build model for the delivery of non-radial offshore transmission assets.
- 1.2 We consulted in April 2024 (the April 2024 Consultation) on our initial proposals for the development of a late OFTO build model for non-radial in-scope projects⁴. The consultation covered six key themes:
 - **Procurement** whether generators or OFTOs should be responsible for procurement.
 - Tender process whether overlapping the generator's consenting process with the tender process was feasible, and whether it helps mitigate the risk of delayed delivery.
 - **Timely delivery** outlining two initial proposals to incentivise timely delivery of offshore transmission assets.
 - **Cost increase during construction** outlining initial proposals for treating cost increases during the construction.
 - **Refinancing Gain Share** whether we should expand the existing refinancing gain share mechanism to cover the gains from equity.
 - OFTO build failure during construction we set out our initial view on how the failure of an OFTO business during the construction phase could be addressed.
- 1.3 The majority of the feedback received for the April 2024 Consultation indicated a preference for earlier OFTO involvement in the project development process, because respondents considered this to better address potential coordination

³ Final Decision on Pathway to 2030 (ofgem.gov.uk)

⁴ In-scope projects referred to non-radial assets included within the scope of the HND and HNDFUE (including the floating wind projects in the Celtic Sea).

and interface issues between generators and OFTOs. These views depart from the March 2023 Decision to develop a late competition OFTO build model, and the model consideration put forward in our April 2024 Consultation.

What's in this publication?

- 1.4 In this publication, we respond to the consultation feedback and set out our next steps which include (1) shifting away from late competition towards an earlier tender model to better facilitate co-ordination; (2) focusing initial development on specific, identified pilot projects; (3) progressing to developing a permanent model that could be used in different future scenarios.
- 1.5 The remainder of this document is structured as follows:
 - Section 2 presents responses from the April 2024 Consultation alongside Ofgem's consideration of these views.
 - Section 3 sets out our views on the appropriateness of an early competition model of OFTO build.
 - Section 4 describes what an early competition OFTO build model may look like. We present some high-level principles regarding the identification of use cases, managing late delivery, and the OFTO revenue model, to facilitate further discussion and model development.
 - Section 5 set out the next steps including identifying suitable pilot projects.

Related Publications

May 2022 - Minded-to Decision and further consultation on Pathway to 2030 - <u>Minded-to</u> <u>Decision and further consultation on Pathway to 2030 (ofgem.gov.uk)</u>

July 2022 - The Pathway to 2030 Holistic Network Design - <u>download</u> (<u>nationalgrideso.com</u>)

December 2022 - Revised Minded-to Decision and further consultation on delivery models in Pathway to 2030 - <u>Revised Minded-to Decision and further consultation on</u> <u>PT2030 (ofgem.gov.uk)</u>

March 2023 - Decision on Pathway to 2030 - <u>Final Decision on Pathway to 2030</u> (ofgem.gov.uk)

April 2024 - initial proposals for an OFTO Build model to deliver non-radial offshore transmission assets - <u>Consultation on initial proposals for an OFTO Build model to deliver</u> <u>non-radial offshore transmission assets (sharepoint.com)</u>

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April 2024 - Offshore Transmission Network Review: Decision on asset classification for Holistic Network Design Follow Up Exercise - <u>Offshore Transmission Network Review:</u> <u>Decision on asset classification for Holistic Network Design Follow Up Exercise</u> (ofgem.gov.uk)

2. Stakeholder Feedback and Ofgem's View

Section Summary

The April 2024 Consultation sought feedback on our initial proposals for a late competition OFTO build model in six key areas. A summary of stakeholders' feedback is set out below, followed by Ofgem's view.

Procurement responsibilities

Summary of proposal

- 2.1 Our proposal set out two options for the allocation of responsibility for procurement under a late competition model. The two options were either generator led or OFTO led procurement.
- 2.2 Our initial preference was that generator procurement was the most feasible option to facilitate project delivery in the short to medium term, due to a constrained supply chain. This was because, under the generator procurement option, procurement activities can be overlapped with the consenting process and be completed earlier, which we considered would partly mitigate the risk of procurement-related delays.
- 2.3 We recognised that generator procurement may present risks and challenges for OFTOs, for example the inheritance of pre-appointed construction contractors from generator to OFTO.
- 2.4 In this context, we asked which party should be responsible for procurement in the late competition OFTO build model.

Summary of stakeholder views

- 2.5 We received 16 responses on the matter of procurement. Overall, the majority of stakeholders expressed a preference for an early competition approach where the OFTOs have greater and earlier involvement in the project development process.
- 2.6 Most respondents considered that under Option 1, where the OFTO is responsible for construction, the OFTO must also take responsibility for procurement. Respondents did not agree with separating the risks of procurement and construction. In their view, due to the inherently overlapping and inter-related nature of procurement and construction activities, procurement and construction should be handled by the same party.

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- 2.7 The global supply chain demands a considerable lead time (7-10 years) for the procurement of High Voltage Direct Current (**HVDC**) systems. In this context, some respondents considered that an earlier tender would enable earlier bidder engagement with the supply chain and limit the scope for the supply chain causing delays to project delivery.
- 2.8 Responses also indicated that OFTOs generally would much prefer earlier engagement in the process, including design stages, to provide a long-term outlook and greater supply chain certainty. Some respondents added that it would be challenging under a late competition model for the OFTO to be appointed early enough to secure HVDC reservations with cable manufacturers, even if OFTO procurement started at consent submission.
- 2.9 One manufacturer of HVDC technology emphasised the need for long-term visibility and commitment to projects to secure capacity. This manufacturer suggested a preference to work with parties ordering for multiple project commitments, rather than single projects.
- 2.10 Contract novation issues were raised by generators and OFTOs as a potential cause of delays across the process, as it may give rise to conflicts amongst parties and present uncertainty to suppliers regarding commitments to contract delivery and ownership. One respondent suggested transferring the management team to the OFTO alongside contracts, as a means of mitigating such issues if generator procurement is chosen.
- 2.11 One OFTO raised concerns about imposed contract conditions, increased bid price due to contract novation complexity, and lack of competition hindering innovation and cost savings.
- 2.12 A general theme in the responses was that, to take on the construction risk, an OFTO would need to be able to shape the commercial structuring of the project's procurement process and its contracts. The OFTO would also need to be familiar with the project design to ensure that they understand and can execute the delivery of the asset. However, some stakeholders consider conventional OFTOs to generally lack the technical expertise to carry out the pre-works of transmission projects.
- 2.13 Generators in favour of an early competition OFTO build model emphasised their need for certainty on the transmission asset costs before their contract for

difference (**CfD**) bid, so that likely Transmission Network Use of System⁵ (**TNUoS**) charges and risk around this can be priced in accordingly.

2.14 Stakeholders requested more clarity regarding which generator, in a non-radial multi-generator scenario, makes the decision to take an OFTO build, or generator build approach. Generators also held the view that for an OFTO build to be a viable alternative, they would require a more comprehensive end-to-end commercial model.

Tender Process

Summary of proposal

- 2.15 Our April 2024 Consultation set out two proposals regarding the potential timing for launching a competitive OFTO tender.
- 2.16 Our first proposal was to commence the OFTO tender process once any necessary planning consent(s) relating to the offshore transmission assets have been **granted** and once any period where the consent decision is open for legal challenge has passed.
- 2.17 Our second proposal was to allow developers to commence the OFTO tender process once the submission of either the Development Consent Order (DCO) under the Planning Act 2008⁶ or Section 36⁷ of the Act (Section 36) application for the project has been submitted to the relevant planning authority.
- 2.18 The intention of the proposals was to explore whether it was feasible to advance the OFTO tender process by overlapping it with the generator's consenting process to mitigate the risk of delayed delivery.

Summary of stakeholder views

- 2.19 Stakeholders expressed mixed views on their preference on the potential timing for launching a competitive OFTO tender, with respondents indicating a slight preference for starting the process at consent submission.
- 2.20 Regardless of their preferences, most stakeholders share the view that starting the tender process following consent approval provides for a clearer, less risky tender process but presents greater delay exposure. Some of the stakeholders

 ⁵ TNUoS is the Transmission Network Use of System charge and recovers the allowed revenue for Transmission Owners for the cost of building and maintaining transmission infrastructure.
 ⁶ <u>Planning Act 2008</u>

⁷ Section 36 of the <u>Electricity Act 1989</u> applies to proposals for the construction, extension or operation of electricity generating stations. It applies to all offshore generating stations whose capacity exceeds 1MW in the case of wind, wave or tidal power located up to the seaward limits of the territorial sea or in a Renewable Energy Zone.

were in favour of the tender process commencing following consent approval. They emphasised the need for a robust OFTO tender process that provides certainty for generators working towards their Final Investment Decision (**FID**), allowing earlier engagement with the supply chain, and lower costs to consumers.

2.21 Stakeholders preferring an earlier OFTO tender considered the consent risks to not be significant enough to justify the delay in starting the tender process.

Timely delivery of offshore transmission assets

Summary of proposal

- 2.22 Our April 2024 Consultation set out two proposals aimed at incentivising the timely delivery of offshore transmission assets and sought feedback on how these proposals might effectively manage the risk of delays.
- 2.23 Option 1 sought to provide a means of partially compensating generators for delayed delivery of transmission assets by imposing a standardised delay charge on the OFTO. The delay charge on the OFTO would only be payable to the generator upon completion of the transmission assets, to avoid any adverse impact on the OFTO's cash flow during the construction period.
- 2.24 Option 2 assumes generators would much prefer to have the transmission assets constructed and ready on time than to receive compensation from the OFTO for delays. As such, Option 2 placed an additional incentive on OFTOs, over and above the existing arrangement whereby the OFTO only receives their Tender Revenue Stream (**TRS**) on project completion, by proposing the introduction of a phased, progressive reduction in the TRS subject to an annual cap. Unlike Option 1, the generators would not receive compensation for any loss in revenue due to delayed delivery of transmission assets by the OFTO.
- 2.25 Further, we sought views on how the OFTO delay charge in Option 1, as well as the TRS loss in Option 2 could be appropriately set and executed.

Summary of stakeholder views

- 2.26 Option 1 was the preferred approach by most respondents as it was considered by stakeholders to be more conducive to reducing risk for both generators and OFTOs compared to Option 2.
- 2.27 There was some notable pushback from generators against Option 2. Generators considered Option 2 lacked adequate compensation for potentially significant

revenue losses and questioned whether TRS reductions alone would sufficiently incentivise OFTOs to avoid delays.

- 2.28 The appropriate level of the delay charge emerged as a key concern, with some stakeholders arguing for project specific and/or commercially negotiated penalties. Some stakeholders suggested the delay charges should be flexible enough to accommodate various project configurations and reflect the varying risk profiles of transmission and generation parties.
- 2.29 Furthermore, the allocation of delay risk was a critical issue raised by respondents. Both OFTOs and generators highlighted the importance of capped, constrained risks to make the regime viable. Generators were particularly resistant to having to bear any delay losses, especially under a new framework where they felt that full compensation was necessary to mitigate the risks in relinquishing construction responsibility to a third party OFTO.
- 2.30 Some developers raised concerns about the timing of the delay payment, preferring a payment to be made during the delay. Otherwise, these respondents argued, the TRS reduction would occur too late.
- 2.31 Lastly, there were concerns about the potential financeability impact on OFTOs regarding compensation for delays. One, stakeholders emphasised that full compensation for delays might be unrealistic and could severely affect the financial viability of OFTOs. Two, even with partial liability for delay losses, if OFTOs were exposed to multiple claims from integrated generators for delayed asset delivery, this could also severely affect the financial viability of OFTO.

Cost increases during construction

Summary of proposal

- 2.32 Our April 2024 Consultation set out four proposals that sought to address the treatment of cost increases during the construction phase of offshore transmission assets. These proposals considered the need for flexibility in the TRS and the potential sharing of increased costs among different parties to ensure the viability of the OFTO model.
 - Option 1 Post construction cost assessment. This utilises specific reopener mechanisms in a post construction cost assessment (to be carried out by Ofgem) for the OFTO to seek approval for variations in its TRS, post construction. The OFTO will need to justify any cost increase against the target cost envelope for the project and demonstrate that any such cost increases have been economically and efficiently incurred.

- **Option 2** Post construction cost assessment with materiality threshold which is a modified version of Option 1. The key difference being that the post construction cost assessment is only triggered when the construction cost increases, and exceeds a threshold set by Ofgem, e.g. 10% of the target cost envelope.
- **Option 3** Uncapped 'pain-gain' share mechanism. This is a 'pain-gain' share mechanism in which the OFTO shares outturn cost variations with generators. Under this option, a non project-specific pain-gain share mechanism would be set out in the OFTO licence, whereby outturn cost variations against the target cost for the project are shared between the OFTO and the generators.
- Option 4 Capped 'pain-gain' share mechanism. Under this option, the pain-gain share mechanism would apply as in Option 3 up to a non project specific cap, with cost variations beyond the cap allocated to consumers. The cost variations borne by consumers would need to go through a cost assessment process and proven to be economic and efficient in order to be approved by Ofgem.

Summary of stakeholder views

- 2.33 We received mixed responses to the four proposals for managing cost increases during construction. While some expressed no strong preference, others emphasised the need for specific cost allocation boundaries/parameters before offering further feedback.
- 2.34 Generators expressed a clear preference for an option that minimises the passthrough of cost increases to generators after setting their CfD. They highlighted the importance of having a degree of certainty with respect to the OFTO's TRS before submission of their CfD bid to avoid exposure to unknown TNUoS charges.
- 2.35 Stakeholders noted that the allocation of risk for cost overruns should depend on which party is responsible for the supply chain procurement. Generators showed reluctance to accept cost overrun risk, particularly where the OFTO is responsible for procurement.
- 2.36 Feedback from potential OFTO investors to our April 2024 Consultation suggested that if the generator manages procurement, the associated risks should primarily rest with that generator.

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- 2.37 Some stakeholders also compare the four proposed options against existing mechanisms for addressing cost overruns. Some viewed Option 1 as an established and generally accepted mechanism, while others saw parallels between Option 4 and other bankable models.
- 2.38 Lastly, OFTOs emphasised the need for early engagement with the project to well define their cost assumptions and subsequently develop their initial TRS bids.

Refinancing Gain Share

Summary of proposal

2.39 Our April 2024 Consultation introduced the idea of expanding the existing refinancing gain share mechanism in the OFTO licence to include scenarios where equity is converted to debt or where equity is sold. We sought views on whether this proposed expansion would be beneficial and how the mechanism could be structured in practice to ensure it aligns with the evolving risk profile of OFTOs.

Summary of stakeholder views

- 2.40 Stakeholders indicated minimal support for extending the refinancing gain share mechanism to cover the conversion of equity to debt or the sale of equity. The consensus was that such an extension could act as a barrier to market participation, particularly for traditional infrastructure players who rely on equity to fund new projects. Concerns were also raised about the potential complexity and legal difficulties of negotiating such clauses as well as the novelty of such a mechanism.
- 2.41 Some stakeholders acknowledged that if consumers bore risks during construction, such as through underwriting cost overruns or delays, it could be argued that they are entitled to a share of the equity gain post refinancing.

OFTO of Last Resort

Summary of proposal

- 2.42 Our April 2024 Consultation considered failure scenarios at two distinct points in the development process.
- 2.43 The first point being after a successful tender exercise to appoint an OFTO. After a successful tender, with the appointed OFTO taking on responsibility for construction, there is the risk of an OFTO business failure or abandonment scenario during construction. The 2014 Guidance on the OFTO of Last Resort

(**OLR**) Mechanism (**OLR Guidance**)⁸ outlines that, in such circumstances, it may be necessary to appoint an OLR after revoking the relevant OFTO licence.⁹

- 2.44 The second potential failure scenario could occur as a result of an unsuccessful OFTO build tender exercise. In line with the OLR Guidance, where an OFTO build tender exercise fails to appoint an OFTO, the generator is free to construct the transmission assets and take the project through a generator build tender exercise.
- 2.45 We sought views on how an OFTO failure during construction, or where an OFTO build tender exercise fails to appoint an OFTO, should be dealt with, and which party would be best suited to carry out the project.

Summary of stakeholder views

- 2.46 We received views from 13 respondents on how the failure of an OFTO build entity during the construction phase, or where an OFTO build tender exercise fails to appoint an OFTO, may be addressed.
- 2.47 Stakeholders provided mixed responses on which party is best placed to take over construction in the event of an OFTO business failure. Some believe the generators would be best placed to take over the project due to their familiarity, vested interest, and the timeliness of such a process. Other suggestions included retendering the asset to a new OFTO, or takeover by an onshore Transmission Owner (**TO**).
- 2.48 The recurring concern raised by shareholders was that Ofgem should seek to ensure that appropriate measures are in place to mitigate the risk of a failure scenario. Along those lines, stakeholders requested a rigorous qualification process to assess an OFTO bidders' technical expertise.
- 2.49 Lastly, one generator sought clarity on whether severe OFTO delays constitute a failure scenario and, if yes, the definition of severe delay.

Our Consideration of Stakeholder Responses

2.50 We have carefully reviewed responses to the April 2024 Consultation on regime parameters for OFTO build model development. While stakeholders gave different answers to the specific questions posed, respondents generally considered our proposals as not fully addressing the inherent problems of a late

⁸ Guidance on the Offshore Transmission Owner (OFTO) of Last Resort mechanism | Ofgem, paragraph 4.1.

⁹ Revocation of an OFTO licence can occur prior to the completion of the construction of the transmission assets in an OFTO build scenario.

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competition OFTO build; most notably, the complicated interface issues between generators and OFTOs.

Procurement

- 2.51 We noted in the April 2024 Consultation that our proposal of asking generators to undertake procurement activities may increase the dependencies between generators and OFTOs. However, at the time, we considered it to be the more feasible option to facilitate timely project delivery in the short and medium term, e.g. assets in scope of HND and HNDFUE. This was due to the fact that the generators have more experience in engaging with suppliers and can start the engagement earlier compared to prospective OFTOs.
- 2.52 We agree with the stakeholders' feedback that an OFTO undertaking procurement activities better addresses potential interfaces issues. Indeed, in view of changes to the offshore development landscape, we intend to move to an early competition model which will necessitate procurement responsibilities and activities to be undertaken by the OFTO. Further details and discussion are set out in Section 3.

Tender Process Timings

2.53 Stakeholders are split on whether the OFTO tender process should overlap with consenting procedures. We consider that the appropriate start time of the OFTO tender process should depend on whether OFTO build regulatory arrangements follow an early or late competition approach, and how early OFTO's involvement would be. As we now intend to move to an early competition model, the tender process may start before the detailed design and consenting stage such that an OFTO can be selected to undertake the preliminary works.

Timely Delivery

2.54 We acknowledge the feedback from some stakeholders that generators should be sufficiently compensated in cases of delay in the delivery of transmission assets. While the standard delay charge is preferred out of the options presented, we will need to revisit these options given our intention to move from a 'late' to an 'early' competition model. Some of our initial thinking on possible ways of addressing timely delivery under a late competition model is set out in Section 4.

Responsibility for Cost Increases

2.55 We note some stakeholder views that generators should not be responsible for any cost increases during the construction of transmission assets. This is a valid concern if we shift to early competition where generators have no role in procurement and other preliminary works. We will review how the cost increase will be handled in the context of designing a OFTO revenue model. Our initial thinking is set out in Section 4.

Generator/OFTO Interface Issues

2.56 We note that some respondents expressed a preference to retain the current generator build model. However, some respondents also pointed out that the generators face interface issues with each other about the responsibility for preworks and construction. This supports our view that an OFTO build model as a viable alternative when generator build is not preferrable.

3. Reasons for moving towards an early competition model

Section summary

This section outlines Ofgem's intention and reasoning for moving away from further developing a late competition OFTO build model in favour of developing an early competition OFTO build model as the preferred delivery model for non-radial offshore transmission assets.

Why we initially proposed to develop a late competition model

- 3.1 Our March 2023 Decision considered that a late competition OFTO build model would require fewer changes compared to the current very late competition developer build regime, as well as having a shorter development and implementation timeframe.
- 3.2 An early competition OFTO build model was considered very challenging at the time. We previously estimated a probable three to four years could be required to develop and implement an early competition tender, causing potential delays to projects that need OFTO build as an alternative.
- 3.3 While developing the late competition model, we recognised that the model would be unlikely to entirely address the complexity of interfaces between generators and OFTO. However, we still considered that, on balance, our proposals remained the more feasible option to facilitate project delivery in the short term.

Our move to an early competition OFTO build model

- 3.4 Since our April 2024 Consultation, we have considered non-radial assets in the HND and HNDFUE for OFTO build delivery. We note that:
 - There are fewer non-radial projects than previously expected. Currently
 there are five non-radial projects in the HND and the HNDFUE, and the
 number could be further reduced because there is a mechanism for
 developers to request to redesign the network into radial connections.
 - The assets that may be able to use an OFTO build model have target completion dates in the early or mid-2030s¹⁰. These assets fall outside the scope of Clean Power 2030¹¹.

¹⁰Transmission Entry Capacity (TEC) register | ESO (nationalgrideso.com)

¹¹ <u>Clean Power 2030 | National Energy System Operator</u>

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- 3.5 These developments have reduced the time pressure for an OFTO build model, as well as the risks of potential delays caused by pursuing an early competition model. This presents an opportunity to reconsider the merits of early competition and the preference of the stakeholders with respect to HND and HNDFUE projects.
- 3.6 From previous stakeholder engagements and the consultation responses, we understand that generators may encounter difficulties in coordinating with each other during the preliminary works of coordinated infrastructure under a late competition model. There may be a reluctance to cooperate with parties that are ultimately competitors. Generators may also find it difficult to reach a consensus for making collective decisions. Under an early competition model, an OFTO as a neutral party is well placed to improve coordination among generators and drive the preliminary works.
- 3.7 Interface issues may also be more prevalent, and potentially more complex, under a late competition model where project ownership would need to be transferred from the generator to the relevant OFTO in the middle of project development. Such issues may arise during contract novation due to different requirements of generators and OFTO in preliminary works and construction. An early competition OFTO build model would potentially reduce the interface issue as OFTOs will own and implement the project from an early stage.
- 3.8 Regarding global supply chains, an earlier tender would enable earlier bidder engagement with the supply chain and limit the scope for the supply chain causing delays to project delivery. Under a late competition model, the OFTO is unable to engage early with HVDC manufacturers and secure reservations, even if OFTO procurement started at consent submission. Currently, the global HVDC supply chain demands an approximate lead time of 7-10 years. Earlier OFTO engagement in the development process provides a long-term outlook and greater supply chain certainty, lowering costs for consumers.
- 3.9 In light of the above, we intend to shift away from late competition to an early competition OFTO build model for non-radial offshore transmission assets.
- 3.10 We consider that this move is an appropriate response to the feedback to our April 2024 Consultation. It should also be in line with the majority view of industry as reflected in a recent report¹² published by Offshore Wind Industry Council in November 2024.

¹² Offshore Wind: Building on the UK's Success

4. Initial thoughts on an Early Competition Model

Section summary

This section outlines some of the high-level principles and pertinent issues that will need to be carefully considered as we look to further develop an early competition OFTO build model.

- 4.1 Early competition broadly means running a competition to appoint an OFTO to finalise the detailed design, submit consenting application, procure from supply chains, and then construct and operate the offshore transmission asset.
- 4.2 In this section, we outline below some of the key issues that will need to be considered as we further develop an early competition OFTO build model.

Identifying use cases

- 4.3 The design of transmission assets in a non-radial network may take different forms according to its envisaged primary function (hereafter referred to as "use cases"), which may affect the interdependence and commercial relationships between generators and OFTOs. While a non-radial OFTO build model may have a set of design requirements that are applicable to most cases, it should also be sufficiently flexible to accommodate varying coordination and commercial issues that arise in different use cases.
- 4.4 Therefore, whilst we are developing as single OFTO Build model, we consider it important to ensure that the model has scope for some degree of flexibility to allow for specific circumstances of each use case to be taken into account. We may require some variations of an early competition model, and the first step is to identify the use cases and articulate the commercial and regulatory issues therein.
- 4.5 From the network designs in the HND and HNDFUE, we note that non-radial offshore transmission assets may serve as:
 - the primary route of export for offshore generation; and/or
 - both transmission infrastructure for offshore generation and network reinforcement.

Under each of these use cases, the OFTO may be required to undertake different roles and be exposed to different costs and commercial risks.

4.6 Offshore transmission assets serving as transmission infrastructure for offshore generation would be the generators' primary export route to market. Generators

connecting to these offshore transmission assets may be much more inclined to take the lead in preliminary works, which may include detailed design, consenting or procurement and may prefer not to leave such works to OFTOs because of the risk of potential delays or non-delivery of their primary route to market.

- 4.7 For an OFTO to be involved early in the process, generators would likely require strong safeguards like a robust compensation mechanism in the event of delayed delivery of the offshore transmission asset by the OFTO.
- 4.8 On the other hand, the offshore transmission assets may primarily be needed for network reinforcement and not serve as the primary export routes to market for generators.
- 4.9 If the construction and commissioning of the assets are separable from a generator's primary routes to market (i.e. they can be consented, designed, constructed, and commissioned to a largely independent timeline and schedule), then generators may more readily accept early involvement by an OFTO. In such circumstances, generators may be less concerned about the development timeline of the offshore transmission assets due to the lower impact of potential asset delivery delays on its business.
- 4.10 This would, therefore, negate the need for generators to have a role in detailed design, consenting and procurement of the asset. The generators may be more willing to allow the OFTO to assume a larger role in preliminary works even without a robust compensation mechanism, due to lower or no knock-on impact to the generators of any delays in the construction of the offshore transmission assets.
- 4.11 Other than the above use cases, we will also consider how OFTO build may fit in with other possible network development approaches. An example is a transmission-led network development where an entire cluster of transmission network, rather than one asset in the network, would be considered as one mega project. The relevant OFTO would be responsible for the preliminary works and construction for the whole network.
- 4.12 This approach may be appropriate for projects where there is a need for a strong single lead infrastructure provider across multiple assets. It would ensure that the series of offshore transmission assets in the cluster can be designed and integrated holistically, reducing the complexity of interface and coordination issues.

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4.13 A potential benefit of this approach is that the delay risk for offshore generators could be mitigated by the OFTO building a network to an agreed grid development schedule ahead of need. It means that the transmission network could be built first, with offshore windfarms connecting later.

Managing risk of late delivery

- 4.14 One of the primary concerns of generators for OFTO build is the risk of late delivery of a transmission asset, which affects their export of electricity. A viable OFTO build model should enable generators to properly manage the risk of late delivery.
- 4.15 A range of commercial solutions may be needed to manage the risk of delays. We are exploring a few initial, non-exhaustive, options as set out below. We hope to receive feedback from stakeholders about the feasibility of these options, as well as any other potential options in future engagement. We will also look to test some of these options when there is a suitable pilot project.
- 4.16 Option 1 Provide financial incentives to OFTOs for timely completion. The appointed OFTO would be subject to financial penalties (or rewards) if it fails to meet (or reaches) an agreed grid delivery date. This could be in the form of a step down in TRS or the allowed weighted average cost of capital (WACC). The extent of the financial incentive would need to be constrained so that it impacts an OFTO's equity returns but is unlikely to trigger debt default.
- 4.17 **Option 2** Ofgem would mandate the generator(s) and the OFTO to enter into a multi-party agreement that sets out how interfaces during pre-construction, construction and commissioning and delay scenarios will be managed. This could include project-specific negotiated payments paid between the OFTO and the generator(s) if defined delay events occur.
- 4.18 Option 3 Ofgem will seek to engage with the National Energy System
 Operator (NESO) and explore the feasibility of fixed payments to generator(s) for electricity that cannot be exported to the grid due to an OFTO missing an agreed grid delivery date.
- 4.19 Based on the earlier analysis of use cases, the impact of a delay will likely be different in different scenarios. We consider that a generic or common delay compensation mechanism may not work in a complex non-radial system context.
- 4.20 We will explore how a flexible delay compensation mechanism can be designed for different scenarios. It is possible that some form of multi-party / interface

agreement between generators and OFTOs may be needed to specify who bears what risks under different events and outline the scenarios where one or more options would be applied to manage the delay risks.

Revenue models for OFTOs

- 4.21 On the part of the OFTO, they would be tasked with undertaking certain activities, including consenting, procurement and construction, and the corresponding risks that involve a high degree of potential cost volatility. We recognise that the OFTOs will wish to understand the revenue model and how that would help manage the risks of cost changes under an early competition model.
- 4.22 As the tender to appoint an OFTO would take place well before these activities, the OFTO is likely to find it difficult to estimate the pricing with confidence. Therefore, an OFTO bidding a fixed TRS, like the current arrangement under generator build model, is unlikely to be workable. This raises questions about the nature of the competition that can be run at that point in time and how fixed the returns are.
- 4.23 We are exploring two initial options as set out below. We hope to receive feedback from stakeholders about their feasibility and identify further options in future engagement.
 - **Option 1** is to run a more price focused competition. Bidders could compete on revenue streams with the lowest price winning, given the technical capabilities are more or less equal.
 - TRS is bid at the early stage with a rough estimate of the project cost. There is a subsequent preliminary works cost assessment conducted by Ofgem to assess any changes to the costs as the project evolves. The cost variation allowed will be capped.
 - The benefit of this approach is that price competition will incentivise the bidders to lower project cost and bring savings to consumers.
 - Option 2 is to either adopt a regulated asset based (RAB) model, or the regime applied to determine Interconnector Cap and Floor revenues, incumbent TOs and Thames Tideway Tunnel/Sizewell C.
 - Under this option, the accurate cost of the transmission assets is not known at the time of tender. The cost will evolve through the development phase following completion of key activities such as consenting and procurement. In

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the process, OFTOs may be given incentives on achieving milestones or cost saving.

- OFTOs would be selected through competitive tender with a lower weighting on price. The focus would rather be on the technical capability to deliver the project.
- This option may require changes to the current tender regulations, and we would need to consider the best way to oversee, manage and incentivise the cost evolution between different stages.
- 4.24 Ofgem welcome stakeholders' feedback on the above options and other possible methods to manage delay risk and determine the revenue model. We are also eager to consider suggestions for addressing other issues faced by generators and OFTOs under an early competition OFTO build model.

5. Next Steps

- 5.1 We intend to further explore early competition OFTO build as a delivery model for non-radial offshore transmission assets after this publication.
- 5.2 We plan to engage NESO and generators in the HND and HNDFUE to identify possible non-radial transmission assets that may be suitable for applying an early competition OFTO build model in Q2 of 2025. If we identify such assets, subject to relevant stakeholders' interest, we will look to prioritise developing the OFTO build model for those use cases that deliver best value to consumers with respect to the specifics of the pilot projects
- 5.3 We consider the pilot project route will better aid the model development by working collaboratively with developers to produce a regulatory framework solution for those use cases that deliver best value for consumers. Lessons learnt from the pilot projects will be transferred to any long-term regulatory regime.
- 5.4 Currently there are a few non-radial transmission assets in HND and HNDFUE. Some of them have connection dates in early or mid-2030s. As compared with first developing general requirements and then adapting them to those projects, pursuing pilot projects may speed up model development and work best to meet their project timelines.
- 5.5 In parallel, we intend to approach a broad range of stakeholders to discuss how an early competition OFTO build model may work and the suitable regime parameters.
- 5.6 We welcome stakeholders to send us written feedback or reach out to us to discuss their views on the development of the early competition OFTO build model.
- 5.7 In the process, we aim to identify potential issues and concerns with early competition and explore how they may be best addressed. We hope the feedback from stakeholders will facilitate formulating a regulatory framework that is suitable for generators and OFTOs alike across a wide range of different use cases in the long term.
- 5.8 We will also review the tender regulations to ascertain what, if any, changes may be required to implement the OFTO build.

Timeline

- 5.9 We plan to ascertain whether there are suitable pilot projects for an early competition OFTO build model. We aim to confirm by Q2 of 2025 whether or not suitable pilot project(s) has been identified. In the event that:
 - a suitable pilot project(s) is identified we will commence developing a regulatory framework for the relevant pilot project, while bearing in mind the wider, enduring approach
 - we are unable to identify suitable pilot project(s) we will proceed to developing a generic OFTO build model that is applicable to different specific use cases in the long-term
- 5.10 In either case, we will keep the industry informed and gauge feedback as appropriate as our work develops during the course of 2025.