



Energy for  
generations

# ESB Generation and Trading's Response to Ofgem's Consultation on initial proposals for an OFTO build model to deliver non-radial offshore transmission assets

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## 1. INTRODUCTION

ESB Generation and Trading (ESB GT) welcomes the opportunity to respond to the Ofgem consultation on initial proposals for an OFTO Build model to deliver non-radial offshore transmission assets. The developer build and OFTO competitive auction process, to date, has shown success in delivering large-scale low carbon electricity generation in Great Britain (GB) in a timely, efficient and low-cost manner. This approach has been, and will continue to be, critical in aiding to support the delivery of the UK Government's climate agenda and in achieving targets of 50GW off offshore wind by 2030<sup>1</sup>, a fully decarbonised electricity system by 2035<sup>2</sup> and Net Zero carbon emissions by 2050<sup>3</sup>. Considering this, there is a need to reconsider the current regulatory framework which have been put in place for the introduction of non-radial offshore transmission assets<sup>4</sup>, as per the Holistic Network Design<sup>5</sup> (HND). The current developer build model, and proposals set out within this consultation, create a substantial risk of higher than necessary costs as GB decarbonises, whilst potentially eroding the investor confidence that is required to enable timely attainment of climate ambitions.

ESB GT has written the response in two sections, the first an introduction and the second section details ESB GT's high level comments on Ofgem's proposals for a developer and OFTO build model for the delivery of non-radial offshore transmission assets.

## 2. HIGH-LEVEL COMMENTS

In this section, ESB GT has provided comments on the key issues within the paper and areas for future consideration.

### 2.1 Need to reconsider the developer build model for non-radial offshore transmission infrastructure

#### **Key issues within the current developer build model**

ESB GT believes that it is vital that Ofgem reconsider and reconsult upon the developer build model for non-radial offshore transmission infrastructure<sup>6</sup>. Currently, the decisions made by Ofgem set out a model which introduces high levels of uncertainty and risk, creating a framework which is potentially undeliverable. Examples of this include, but are not limited, to:

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<sup>1</sup> [Offshore Wind Net Zero Investment Roadmap \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/671112/Offshore-Wind-Net-Zero-Investment-Roadmap.pdf)

<sup>2</sup> [Plans unveiled to decarbonise UK power system by 2035 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035)

<sup>3</sup> [Climate Change Act 2008 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2008/27/section/1)

<sup>4</sup> [Decision on Pathway to 2030 | Ofgem](https://www.ofgem.gov.uk/consult/condocs/pathway2030/pathway2030.pdf)

<sup>5</sup> [Beyond 2030 | ESO \(nationalgrideso.com\)](https://www.nationalgrideso.com/beyond-2030)

<sup>6</sup> [Final Decision on Pathway to 2030 \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/consult/condocs/pathway2030/pathway2030.pdf)

1. Financing: There is substantial risk and difficulty in developers gaining finance for the construction of anticipatory investment infrastructure, which may or may not be approved by Ofgem as part of the Early Stage Assessment. The lack of certainty in receiving this funding back from the regulator may prevent developers from being able to access financing to construct any non-radial assets. It is important that Ofgem are cognisant of this risk. If the non-radial design is not economically viable, there is a chance that no developer is able to engage with this model. For example, this was seen within the GB Contracts for Difference (CfD) auction whereby no offshore generators bid into Allocation Round 5 (AR5) as the UK government did not factor in the increased risk facing industry (i.e. rising supply chain costs, higher interest rates and cost of capital<sup>7</sup>) when setting the price cap. By enforcing a regulatory model that carries such a high degree of risk, there is a chance that no developers are capable of constructing non-radial offshore transmission infrastructure. As this is a plan led approach, this would also prevent them from investing in GB's energy market, risking system security and decarbonisation.
2. Responsibility for construction: To date, it appears that Ofgem has only considered the non-radial developer build model when two or more generators are connecting at a later date, with the first developer being responsible for construction of the shared transmission asset. There is no guidance provided on the scenario of when two developers are at the same level of readiness. As developers have no ability to opt-in or out of the non-radial design, processes need to be put in place to determine which body would be responsible for design and construction, for example highest level of experience, earliest connection application date etc.
3. Ensuring quality: By requiring one developer to construct anticipatory transmission assets, it removes the benefits of the current radial model e.g. flexibility and reduced risk as each developer can ensure outputs are of the highest standard and delivered at the pace required. There are no processes or incentives in place to ensure quality and timely delivery, protecting the developers who are not in charge of design and construction. The risk of inefficient design or delays, whilst lower than in comparison to the OFTO build model, may result in increased costs elsewhere within the process, reducing the benefits of the HND and impacting GB's ability to achieve the lowest cost transition.

The introduction of the Holistic Network Design<sup>8</sup> represents a transition from market led decisions to a plan led system, whereby the regulator and Electricity System Operator (ESO) have placed new and

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<sup>7</sup> [Energy UK Explains: Potential implications from Allocation Round 5 - Energy UK \(energy-uk.org.uk\)](https://www.energy-uk.org.uk/news/2022/04/20/energy-uk-explains-potential-implications-from-allocation-round-5)

<sup>8</sup> [Offshore transmission network review: decision on asset classification for Holistic Network Design Follow Up Exercise | Ofgem](https://www.ofgem.gov.uk/consult/condocs/hnd/hnd-2022-001/hnd-2022-001-exercise)

unforeseen risk upon market participants. Considering this, the way regulation is developed must be altered, becoming flexible and reflective of the new risks that are being placed upon developers. At this time, it does not appear that Ofgem have considered the above risks, or the implications that this may have upon climate ambitions and consumer cost.

### **ESB GT's proposed alternatives for developer led non-radial build**

ESB GT believes that there would be significant benefit in reconsidering the 2023 decision<sup>9</sup> on the developer build model for non-radial offshore transmission assets. As outlined above, the proposed framework carries substantial risk upon developers. By altering this, it has the potential to retain many of the benefits of the current developer build approach for radial assets, whilst successfully delivering the HND. Thus, allowing consumers to continue to benefit from the experience and quality that has been derived from the developer build model to-date. The key areas which require further consideration, and future consultation, are outlined below.

#### **Financing of Anticipatory Investment (AI) – ESO financing AI share**

There is a need to consider how financial risk could be reduced for developers who undertake AI on the offshore transmission network. Under current proposals, Ofgem are requiring developers to gain financing for an asset that is potentially double/triple the size of radial designs, without considering the introduction of any regulatory interventions to reduce the risk upon that developer. For onshore network investment, AI will be recovered through the RIIO Price Control framework (as represented by the Accelerated Strategic Transmission Investment<sup>10</sup> programme). This represents a low risk mechanism to enable a plan led approach towards network investment. In comparison, Ofgem have not considered the complexity, or wider cost implications, to developers in gaining the equivalent financing.

It would be beneficial to consider how the ESO, in its transition to the Future System Operator (FSO)/National Electricity System Operator (NESO), could share the risk placed upon developers when constructing AI transmission assets. As the non-radial infrastructure is the result of the ESO's design, it could be reasonable to consider the ESO as being responsible for financing the share of network investment that is AI e.g. the developer gains access to financing for the construction costs for a transmission line capable of exporting 500MW, and the remaining 1.5GW that is classed as AI, is funded by the ESO. At the point when construction is finalised, the asset is transferred to the OFTO as per today's practice, with AI costs recovered through the OFTO Tender Revenue Stream. This would result in developers facing similar risk profiles to regulated entities (i.e. TO's), increasing the likelihood

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<sup>9</sup> [Decision on Pathway to 2030 | Ofgem](#)

<sup>10</sup> [Decision on accelerating onshore electricity transmission investment | Ofgem](#)

of market participants continuing to deliver key network infrastructure that is needed for security of supply and climate targets, at lowest cost, and at pace.

#### AI Cost Gap – Not upfront but rather over the contract term

Developers who are not responsible for constructing non-radial assets, and who may connect a number of years after construction is finalised, are expected to pay the OFTO for use of the transmission system that they have not utilised<sup>11</sup>. These developers have not been able to contribute to the design of the HND and may be clustered with other projects which are at a further stage of development, creating a risk which sits outside of their control. For example, this decision places developers who do not construct the non-radial asset at an inherent economic disadvantage, facing substantial upfront fees for infrastructure that they have not utilised. Rather than introducing an upfront cost, this cost should be recovered over the 25 years that the developer benefits from the use of the non-radial asset. The same costs would be recovered but with reduced risk upon developers. This approach is used in other markets, for example, within Northern Ireland's onshore cluster process<sup>12</sup>. Currently, it appears that Ofgem are proposing to penalise developers for being included within a network plan that does not consider project readiness.

#### Lifetime of the transmission asset – increase to 40 years

In alignment to the detrimental economic impacts of the AI Cost Gap, it does not appear that Ofgem have considered the lifetime of the non-radial asset and duration of OFTO contracts. For example, if the second windfarm connected 5 years after the non-radial asset was constructed 1) the generator may receive reduced availability, and therefore reduced revenue, as the assets health is degraded, resulting in increased number of outages, or decommissioning prior to the end of life of the windfarm and 2) the developer is connecting into an asset which only has 20 years remaining on the OFTO contract, reducing certainty of quality of maintenance at an earlier point in comparison to the developer who constructed the asset. In this scenario, the developer faces high levels of uncertainty and increased risk, due to no fault of its own. To reduce this risk, it would be beneficial to:

1. Review standards for transmission build, ensuring that any non-radial asset constructed is capable of exporting energy for at least 40 years; and
2. Develop a regulatory regime for the operation and maintenance of offshore transmission assets after the 25 year OFTO contract.

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<sup>11</sup> [CUSC accept decision letter template \(ofgem.gov.uk\)](#)

<sup>12</sup> [Small large generation | Northern Ireland Electricity Networks \(nienetworks.co.uk\)](#)

However, further consideration is needed on the potential impacts of reduced revenue (due to outages) emerging from connecting to non-radial assets years after they are constructed, and potential wider consumer impacts which may emerge from these proposals. If connecting to these aged assets, and if the issues outlined above are not resolved, developers may seek to hedge these risks within CfD bid prices, resulting in higher costs elsewhere within the process. It does not appear that Ofgem have considered this within their assessment, or factored this within their proposed economic savings that will emerge through moving to a non-radial design. To prevent this, further consideration is required on means to compensate developers for any lost revenue. This is vital as developers would not face an equivalent risk under a radial transmission design.

#### Interactions with the CfD process – proposed SIR process

There is a need for a greater degree of joint working and collaboration with DESNZ in the development of any approach to non-radial offshore transmission build. Within the CfD process, developers are required to develop and deliver Supply Chain Plans<sup>13</sup>, and from AR6 onwards, will be required to participate in the Sustainable Industry Rewards<sup>14</sup> (SIR) process. In order to meet the requirements within these processes, developers often rely upon the construction of offshore transmission assets. If the developer was no longer responsible for this construction, there may be wider implications such as non-compliance with key requirements of the CfD scheme. This requires further consideration to prevent unintended negative consequences, such as nonfulfillment of SIR minimum standards, resulting in economic penalties. Thus, in order to ensure continued investor confidence within the GB energy market, it is vital that a holistic approach is taken to any CfD or offshore transmission reform.

In conclusion, ESB GT supports the introduction of the HND and the aligned socio-economic and environmental benefits which will emerge from a more coordinated design of the transmission system. In order to achieve these outcomes, there is a need to develop a regulatory framework which enables the continuation of the developer build model which has shown to be successful in delivering high-quality offshore transmission at efficient costs and at pace. Changes are required to ensure that this process can continue to be a deliverable model within GB, protecting consumers against the potential detrimental impacts that may arise from a transition to OFTO build.

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<sup>13</sup> [Contracts for Difference \(CfD\) Allocation Round 5: Supply Chain Plan questionnaire and guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/contracts-for-difference-cfd-allocation-round-5-supply-chain-plan-questionnaire-and-guidance)

<sup>14</sup> [Introducing a Contracts for Difference \(CfD\) Sustainable Industry Reward - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/introducing-a-contracts-for-difference-cfd-sustainable-industry-reward)

## 2.2 OFTO build model for non-radial offshore transmission infrastructure

ESB GT does not support the development of an OFTO build model for non-radial offshore transmission infrastructure, representing a regulatory intervention that may never be utilised. This is represented by the existing radial build model, whereby no OFTO has expressed interest in constructing the offshore transmission infrastructure, preferring to take ownership after the developer has built the asset. At a high-level, Ofgem's preferred approaches appear to be placing large degrees of risk upon developers, rather than developing a model which encourages and incentivises engagement. For example, requiring developers to undertake costly and resource intensive procurement, without compensation, and subsequently proposing to penalise developers for OFTO led cost overruns. Thereby, creating a model which appears to insulate OFTO's risk to a greater extent in comparison to developers. There is a substantial risk that Ofgem develop two frameworks for non-radial build which developers cannot support, leaving the HND undeliverable. Considering this, ESB GT has set out its assessment to the proposals within this consultation in the sections below.

### **Tender process**

Of the options presented, ESB GT believes that triggering the OFTO tender process at the point of the developer submitting consents for the Development Consent Order or Section 36 Application is the most beneficial option, reducing the risk of any potential additional delays to the process. This aligns to Ofgem's assessment within the consultation whereby it is stated that, if waiting for consent approval, it may add an additional 12 months to the process. However, if Ofgem have concerns surrounding the risk of stranded assets or underutilised assets arising from speculative windfarm applications, it may be beneficial to consider if there is an interim milestone (between Option 1 and Option 2) of the Development Consent Order or Section 36 Application process which shows progression, without final approval being required. Thus, providing greater confidence to Ofgem that any transmission developments are likely to be required, whilst preventing the delays that may emerge from waiting until full consents are secured.

### **Procurement – OFTO does all procurement**

Under a non-radial design, ESB GT believes that the OFTO should be responsible for undertaking procurement. While developers have long-term experience in procurement, there would be substantial complexity in requiring two or more developers to agree a design and procurement process for the asset. Moreover, this places substantial risk upon the OFTO whereby they could be provided with inefficient contracts, resulting in cost overruns which sit outside of their control, detrimentally impacting their financing abilities. This has the potential to introduce unnecessary complication to the process



and it is not clear why it is being considered as this is not a requirement within onshore Late Competition<sup>15</sup>.

To compensate for OFTO's lack of experience in constructing offshore transmission assets, and to reduce developer risk, it would be useful to introduce a pre-qualification standard for technical abilities within the OFTO auction. For example, requiring proof of experience of constructing two 220kv lines in other markets. This pre-qualification process is utilised in other auctions, such as the first Offshore Renewable Energy Support Scheme<sup>16</sup> (ORESS 1) in Ireland for offshore wind generators, aiding to ensure developers are appropriately skilled and have the ability to deliver, protecting consumers. Additionally it is important that Ofgem consider the risk that if OFTOs are responsible for procurement, they may agree contracts through the lens of cost reduction and delivery, choosing suboptimal materials in order to align to existing incentives. To prevent this, there would be benefit in developing and consulting upon new incentives for OFTOs for high quality procurement and construction.

### **Timely delivery – reduction of Tender Revenue Stream**

ESB GT believes that could be benefit in utilising a phased progressive reduction of the OFTO's Tender Revenue Stream (TRS), which is payable to the OFTO by the developer, relative to the length of the delay. As proposed in the consultation, this reduction would be taken off the total offshore Transmission Network Use of System (TNUoS) costs once the offshore transmission network is delivered and the generator is exporting power. Within this, the reduction in offshore TNUoS could be set at, for example, £X/MWh for the first six months, increasing by £Y for each six month period of additional delays, until all transmission infrastructure has been delivered. The £/MWh reduction values would need to be reflective of the potential costs that may be incurred due to the OFTO delay. This option has the potential to bring a range of benefits including 1) reducing risk as the developer retains its 15 year contract, while also accessing compensation for any delays faced, 2) consumers benefits from lower CfD bid prices as risk is reduced, whilst also retaining access to fifteen years of CfD protected energy prices and 3) it creates a longer-term incentive on the OFTO for efficient and timely delivery due to the increasing penalties faced over time. An example of how this may work in practice is set out below, using illustrative figures.

1. Developer wins a CfD auction with a bid of £90/MWh;
2. The OFTO Tender Revenue Stream to recoup offshore TNUoS costs is set at £5/MWh;

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<sup>15</sup> [ECIT November 2016 Decision \(ofgem.gov.uk\)](#)

<sup>16</sup> [Technical-Capability-Assessment-for-a-MAC-for-Schedule-10-applications.docx \(live.com\)](#)

3. The OFTO is late by 6 months, equating to £0.5/MWh reduction to offshore TNUoS. Developer is paid £90/MWh via the CfD subsidy mechanism but pays the OFTO £4.5/MWh;
4. The OFTO is late by 12 months, resulting in an additional £0.5/MWh reduction to offshore TNUoS. Developer is paid £90/MWh but pays the OFTO £4.0/MWh.

This potential solution provides both the developer and OFTO an incentive for timely delivery, whilst reducing the potential impacts to consumers. Thus, supporting a more sustainable low cost transition to Net Zero for GB. However, it is crucial that Ofgem work with DESNZ in order to ensure that the CfD contract is not eroded due to OFTO delays, with milestones moved in alignment to the period of delays incurred (i.e. Milestone Delivery Date and Longstop Date), ensuring developers are not unfairly penalised due to third party actions.

ESB GT does not support proposals for consumers to cover the cost of OFTO delays. In the transition to Net Zero, it is vital that consumers are not penalised for the construction of any new low carbon generation. This is key in order to ensure continued public support for the large-scale change and investment required in order to obtain GB's climate ambitions. By requiring consumers to cover the cost of a commercial bodies suboptimal or uneconomic decisions, there is a serious risk that Ofgem inadvertently remove the public support that is required for a timely Net Zero transition. Instead, OFTOs should be developing robust delivery plans, aligned with effective incentives developed by Ofgem, which ensure timely delivery. This increased consumer risk emerges from the lack of a workable model for a developer build approach to non-radial assets. However, if this was altered, as per the recommendation ESB GT has set out within Section 2.1, the economic risk to consumers would be reduced. This is due to, for example, 1) the inherent economic incentive to begin generating as soon as practicable and 2) compliance with the Generator Commissioning Clause<sup>17</sup>.

### **Cost increases during construction**

ESB GT has set out its assessment of each option to recover increased costs below:

1. Post construction cost assessment: This proposal seems beneficial to aid in ensuring only economic and justifiable costs are recovered, whilst also enabling greater ease of implementation if Ofgem utilised the existing re-opener mechanisms within the RIIO price controls. By using the widely known and trusted re-opener mechanism, it could support in providing greater confidence that fair decisions are being made, in a transparent manner, supporting a lower cost transition.

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<sup>17</sup> [Decision on implementation of the Generator Commissioning Clause in the Energy Act 2013 | Ofgem](#)

2. Post construction cost assessment with materiality threshold (ESB GT's preferred position): Building upon Option 1, ESB GT believes that the addition of a materiality threshold can bring substantial benefit in reducing cost and delays. By introducing a threshold, it aligns to the Developer Build model whereby there is a 10% cost overrun allowance<sup>18</sup>, and may result in a reduced administrative burden on Ofgem as the economic assessment would not take place until there is material additional cost added to the project.
3. Uncapped 'pain-gain' share mechanism: ESB GT does not support this proposal. If developers are not responsible for procurement (ESB GT's preferred position), it is not clear why, under any scenario, they should be required to pay for uneconomic decisions made by the OFTO. By implementing this approach, there is a real and substantial risk that no generator engages with this process, resulting in the development of a framework which is never used.
4. Capped 'pain-gain' share mechanism: As above, ESB GT does not support this option and do not believe that consumers should be penalised for commercial bodies decisions. In achieving Net Zero, consumers will face a range of increased costs and it is vital that they are brought along on the journey, and protected, not used as a mechanism to safeguard unexperienced parties from risk due to a state led plan that is being imposed upon market participants.

In conclusion, ESB GT believes that the best option would be a RIIO re-opener mechanism with a 10% cap prior to Ofgem assessment.

### **OFTO of last resort**

The OFTO of last resort process is untested and therefore the successes and challenges (i.e. timelines to find an alternative OFTO to finalise construction) cannot be fully assessed. Considering this, there would be benefit in first offering the finalisation of construction to the impacted developers, and if they choose to not progress, go through the OFTO of last resort process. This has the potential to reduce risk and delays to the process, whilst providing greater flexibility to the developers who are impacted.

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<sup>18</sup> [Decision on the Early-Stage Assessment for Anticipatory Investment | Ofgem](#)