

EnBW and bp joint response to Ofgem “Revised Minded-to Decision and further consultation on delivery models in Pathway to 2030”

Executive summary

- We welcome interventions to speed up grid delivery and connection dates for offshore wind (OFW) projects.
- We believe that commercial arrangements resulting from the required grid works need to be suitably socialised so that OFW developers are not burdened with excessive costs.
- We support the introduction of a late competition OFTO build model for non-radial offshore transmission assets but have concerns on cost allocation and recovery and the ability of generators to finance both the generation asset and the shared transmission assets.
- We seek further detail on the late competition OFTO build model and how responsibilities and legal obligations are allocated between developers and OFTOs.
- We support the extension of AI policy to the projects within the scope of the PT2030 workstream.
- We recommend early and regular application of AI principles to protect developers from disallowed cost post construction.
- ESO and Ofgem should be part of the early-stage assessment / gateway assessment to endorse both AI and the project design when any part of the AI is attributable to bypassing onshore network constraints.
- More work is required on the proposed mechanics of charging to take account of coordinated infrastructure.
- We would encourage a more fundamental review of whether TNUoS remains fit-for-purpose.

Specific consultation questions – Chapter 4 – Revised Minded-to Decision on Delivery Models in PT2030

Do you support the introduction of a late competition OFTO build model for non-radial offshore transmission assets?

We support the introduction of the late competition OFTO build model for non-radial offshore connection. Considering the technical and financial complexity associated with the non-radial transmission solutions, we see this additional option as a good way of partially mitigating the inherent risks.

OFTO involvement

A key question is the level of interest that existing OFTOs may have in performing the delivery role, noting that this option already existed for radial connections but has not been used in the past.

It is also important to understand how OFTOs will be motivated to take this responsibility. More work will be required to have a clear view on OFTO interest and confidence in implementation of the late competition OFTO build model on the timelines required to align with the schedules of the earliest connecting offshore wind project(s).

The current radial regime has worked well and resulted in generators accepting the potential risk of loss (disallowed costs) when building direct radial connections to local POIs.

Cost exposure

The HND output presents a significant step change in cost exposure to generators, with significant additional costs associated with increased capacity to meet the needs of multiple users and greater lengths to bypass the onshore wider works. In the situation where disallowed costs are applied, it is unclear how generators, OFTOs or their lenders can be motivated to accept such substantial risk without clear view of fair returns and financeability. Moreover, the funding requirement for a generator to deliver both the generation asset and transmission asset will be highly challenging.

HND outputs have resulted in coordinated networks where coordinated offshore transmission is increasing the onshore transmission network capacity. Such onshore wider works would typically be delivered by a local TO under the RIIO regulations with clear guidance over fair returns and limited risk to the TO organisation. Both the generator-led very late model and OFTO late competition build model must have clarity of how the offshore delivery will be incentivized in a similar way to RIIO mechanisms in the transmission systems for the elements of cost which represent a delta beyond a local POI connection.

Requirement for further details of the late competition OFTO build model

It was recognised in the consultation document that Ofgem need to further develop the process for the late competition OFTO build model, including the tender process and associated tender guidance and cost assessment documents. It is very important for developers to understand the timing of further development by Ofgem of this option, and how developers can be part of

discussions as currently no details on the late OFTO competition build model are known, which makes that option less attractive for developers.

As currently defined, the generator would undertake preliminary works, consenting and high-level design of the transmission assets while the OFTO bids its approach to procurement, financing, construction, operation, maintenance and decommissioning of the transmission assets. It is important to understand the following details in the late competition OFTO build principles:

- OFTO responsibilities for construction and for financing and monitoring construction.
- Ensuring the transmission system is compliant with industry codes and standards.
- Generator responsibilities for initial design and preliminary works.
- The generator agreement relating to the tender option with Ofgem.
- Market communications prior to the start of the OFTO tender process.
- Responsibility for the risks during construction and how that risk will be managed.
- The process put in place to ensure OFTO construction activity should be undertaken economically and efficiently.
- Whether the cost will be fixed during the tender process, subject only to certain limited revenue adjustments for events beyond the OFTO's control.
- Whether the OFTO will be expected to bid a fixed price revenue stream.
- The duration over which the OFTO will receive the revenue stream when the offshore transmission assets are complete.
- Whether the OFTO's operation phase rights and obligations will be largely the same as under Generator build.
- Determination of the Cut-off Gate process, timeline, and scope to transfer to OFTO for construction.

Specific consultation questions – Chapter 5 – Minded-to Decision on Anticipatory Investment in PT2030

Do you support the extension of AI policy to the projects within the scope of the PT2030 workstream?

We support the extension of AI policy to the projects within the scope of the PT2030 workstream.

It is important to start now to provide more clarity of what can be done to support the funding aspect of the AI (e.g. guarantees provided or specific AI credit facilities) and provide comfort that disallowed costs and investment size can be acceptable for the developer of the transmission infrastructure. Specifically, we would want to understand how the cost benchmarks currently used by Ofgem are being adjusted considering current market pressure and inflation effects.

Use of Gateway Assessment to mitigate risk

We are recommending further extension of the gateway assessment / early assessment to address the cost uncertainty and allowance of the cost variation. In our response to the previous consultation on the Minded-To Decision and Pathway to 2030, we proposed a refinement and subdivision of the Gateway Assessment (GA) process for complex, coordinated offshore transmission systems into four consecutive stages. Under that proposal, each of the GA points would need to be signed off by Ofgem before moving to the next stage:

- GA1: design follow up with further optimization and additional developer input
- GA2: Agreement on system split of all network assets (delivery boundaries) and their classification
- GA3: Anticipatory Investment assessment
- GA4: DND and start of consenting for agreed scope

Early and regular application of AI principles to protect developers from disallowed cost

The costs of offshore transmission systems are increasingly significantly as developers are being asked to develop transmission systems which not only meet their own need for connection to the National Transmission System, but also to overcome the onshore network constraints and bottlenecks.

Historically radial offshore transmission assets would be cost evaluated at the auction stage with the potential for disallowed costs a significant factor to future project profitability. With offshore transmission systems now incorporating the wider works element of network reinforcements, it is essential that AI is applied to at an early assessment stage and throughout the transmission system development to ensure developers are protected from disallowed cost post construction for the elements of work attributed to AI. This could arguably be applied to all offshore generation and transmission activities in order to de-risk the scale-up of the network.

Engaging the right stakeholders at design stage to reduce bottlenecks

Given the importance of the offshore transmission system developments in bypassing onshore bottlenecks and forming key reinforcements to reduce or eliminate the need for significant onshore wider works, we suggest that the number of key stakeholders in the design of the offshore system must be re-evaluated.

EnBW and bp consider that ESO and Ofgem should be part of the early-stage assessment / gateway assessment to endorse both AI and the project design when any part of the Anticipatory Investment is attributable to bypassing onshore network constraints, such as with the Morven-to-Hawthorn Pit HVDC connection.

Sizing AI and non-AI costs

Where the transmission asset benefits more than one developer and also the wider grid, acting as a system bootstrap, the recommendation would be to use the Ofgem benchmark for a standard radial connection to the nearest onshore connection point as the non-AI defined value.

With this approach, the benchmark value would represent the non-AI element of the overall project cost, while the remaining project overrun cost would be assigned to AI for the benefit of the NTS / wider works. This should in principle be a value that can be accommodated by each developer in terms of asset expenditure (also valid for TRS/TNUoS calculation), with the rest of the project cost socialized on a similar process as the onshore substation.

Unless this cost is shared with consumers, who will also benefit from these new transmission lines as they work as a bootstrap for the wider system, it puts the developer's project economics at risk, and with it the viability of the windfarm and transmission asset.

Definition of local circuit and wider network elements

Further development is required for the categorization of the local circuit and wider network elements within the offshore coordinated regime. As a coordinated offshore network is utilized by the wider network users, the cost should also be socialized among the wider users and therefore in such situations clarity is requested to confirm these are designated as MITS node(s).

It is critical to have further clarity on asset classification and confirmation of MITS (Main Integrated Transmission System) node(s) within the offshore coordinated network to define the local circuit element for the individual developer. Further understanding of the TNUoS zone for any offshore MITS point is likewise critical to confirm the regime that will be applicable.

Do you agree with the proposed mechanics of charging (see Appendix 1) to take account of coordinated infrastructure?

The correct cost apportionment between developers is a sensitive matter. Some of the points raised are valid but still need refinement and careful thought. For the cases where the developer will take the AI on behalf of the later user but also the wider grid itself, a different mechanism needs to be found to make it economically viable for the project to perform such transmission investments.

We agree that further quantification analysis is required to consider the extension of the Main Integrated Transmission System to include the offshore coordinated network. Specifically, clarity is needed as to what will be designated (i) Local and Wider charges, as well as (ii) annual load factor and year-round shared usage of the coordinated offshore network.

The CUSC modification proposal relating to the charging regime may provide an answer to this last point by extending the charging zones offshore, but it is important to understand the economic impacts for the developers and to provide reassurance that the grid charges are still competitive for the project's viability.

We require further clarification on the changes being proposed in section 5 of Appendix 1 before we can comment on those.

Transmission Network Use of System (TNUoS) charges – holistic design considerations

We would also encourage a more fundamental review of whether TNUoS remains fit-for-purpose and the appropriate regime for achieving the UK Government's net zero goals. However, we note that this may sit outside of Ofgem's current remit.

TNUoS was established to provide locational signals for new generation assets when the predominant new assets were hydrocarbon-based (e.g. CCGTs) and prior to the strategic shift to focus on achieving net zero.

The growth in major infrastructure projects to enable the UK to accelerate towards net zero is increasingly geographically constrained (e.g. offshore wind where acreage is specified by The Crown Estate or Crown Estate Scotland, or nuclear where there are limited suitable locations).

As part of the REMA review that is looking at demand side signals, there is an opportunity to assess whether TNUoS remains appropriate so that any changes progressed are done so on a holistic basis consistent with achieving net zero.