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Consultation on the Market Arrangements for Multi-Purpose Interconnectors

We refer to the Consultation on the Market Arrangements for Multi-Purpose Interconnectors issued on 2nd June 2023 and welcome the opportunity to respond.

Equinor is a global broad energy company, employing over 650 people in the UK. It is the UK's largest supplier of crude oil and the largest supplier of natural gas, meeting more than 25% of UK demand. It operates three offshore wind farms including Hywind Scotland, the world's first floating wind farm. Equinor and partners are building Dogger Bank, the world's largest offshore wind farm. Equinor and partners are developing the Sheringham Shoal and Dudgeon Extension Projects.

Given the high ambitions for offshore wind in the UK and in other countries around the North Sea, Equinor shares the view that offshore hybrid assets will be important to realise this development. Hence, we welcome the initiative by Ofgem to develop the regulatory framework including the market arrangements for such assets. We have assessed the questions with the view of establishing a suitable regulatory framework and market arrangements for future offshore hybrid assets beyond the OHA Pilots.

Our main comments to the Consultation are:

- We support that the regulatory framework should cater for both Multi-Purpose Interconnectors (where the offshore wind farm is located in UK waters) and Non-Standard Interconnectors (where the offshore wind farm is located outside UK waters). Both projects could be beneficial to the UK.
- Given that offshore hybrid assets would be developed based on agreements between the UK and the connecting country to realise a common objective and based on sharing cost and benefits of such projects, the regulatory framework should be sufficiently flexible to allow for different models. It is important that the regulatory framework developed in the UK can be aligned with the regulatory framework for such projects in the EU and Norway.
- It could also be beneficial that offshore wind farms in Non-Standard Interconnectors could be supported under UK support mechanisms if development of such project is beneficial to the UK and UK consumers. Furthermore, any support mechanism should be flexible to allow for cost sharing between the UK and the connected country depending on the agreed split of costs and benefits.

- The market arrangements should in our view be based on implicit trading. We acknowledge the advantages of Offshore Bidding Zones on efficiency, however, this model will lead to lower revenues and increased risk of economic curtailment of the offshore wind farm compared to a Home Market solution. This must be compensated through a support mechanism, sharing of congestion income or through FTRs should a model based on OBZ be chosen.
- Implicit trading arrangements underpin the efficient use of electricity interconnectors, and the development of Multi-Purpose Interconnectors. However, from 1st January 2021, following EU Exit, the UK has been decoupled from the EU market coupling regime, with interconnector capacity allocated via a patchwork of different regimes – Channel interconnectors for example, have reverted to explicit capacity allocation. The UK-EU Trade and Cooperation Agreement (TCA) sets out the basis for new implicit trading arrangements. With the implementation process stalled, it is important, following on from the momentum at the recent North Sea Summit, that these implicit capacity allocation arrangements move forward with urgency to strengthen confidence in workable market arrangements for Multi-Purpose Interconnectors.
- We believe it is important that offshore windfarms should have the flexibility to utilise other, potentially physical, routes to market alongside the NSI or MPI connection. By providing offtake route flexibility, generation risk can be reduced minimising potential subsidy structures that would likely be needed in the offshore bidding zone and home market models to realise the projects.
- The energy transition is likely to drive investment in power dense off takers in coastal regions (for example Hydrogen production and CCS), due consideration should be given under this consultation for MPI / NSI to be able to connect directly to these assets and not only into the UK Grid system.
- Alignment with the European Emissions for Carbon Intensity standards along with the ability to track Guarantees of origin is critical to ensure that renewable generation assets within an Offshore Bidding Zone can access markets competitively. Alongside this other system charges need to be considered, for example, we assume that generators would not pay any wider transmission charges (TNUoS etc) as there would be no priority access to the grid.

We have included our detailed response to the relevant questions in the appendix. We also refer to our separate response to the consultation on the regulatory framework for offshore hybrid assets.

We would welcome the opportunity to present our response to the Consultation in more detail.

Yours sincerely,



Øyvind Bergvoll
Equinor ASA

Appendix: Detailed response

Q3. Which of the four options is preferred, and why?

Our preferred options are for solutions with implicit trading. We see the benefits of OBZ solutions, however it would be necessary to establish a support mechanism that compensates for the lower revenue and higher volume risk under this solution compared to a Home Market solution. The Home Market solution would offer preferential access to the grid which the OBZ solution would not. We believe it is important to allow generating assets to have alternative routes to market over and above the Home Market or OBZ solutions (for example changing energy type to Hydrogen or storage), this potentially reduces the consumer burden on realising the asset infrastructure.

The chosen market solution needs to be sufficiently flexible to enable a phased build out of the MPI, “interconnector first” and “offshore transmission first”, to ensure the complex sequence of assets required to realise the UK governments targets have secured revenue streams in the appropriate timeline (for both the MPI and the OWF).

Q13. Do you agree that OWFs should be compensated for a loss of revenue in OBZ compared to HM? Where should this come from? Should it come from the congestion revenue from the MPI cable derived from cross-border trade?

In order to secure a viable business case for the offshore wind farm it is necessary to compensate it for the loss of revenue in OBZ compared to HM. In our view this could come in two ways:

- By offering the offshore wind farm its proportional share of congestion income. This would then be an arrangement between the offshore wind farm and the offshore hybrid asset without the need for offering specified support from the consumers.
- By compensating through a support mechanism such as the UK CfD mechanism. This may also require consideration of the length of the CfD or other mechanisms which would guarantee access to capacity/volume on the OHA post CfD period. This could be solved by priority access for low carbon electrons as a potential alternative mechanism to achieve this.
- Allowing Offshore wind farms to create other physical routes to market (for example direct connection to hydrogen production or storage).

Q14. How could the existing CfD scheme be changed to support OWFs connected to MPIs, especially considering OBZ market model? How would you envisage this scheme to work?

The reference price needs to be reflective of the price in the OBZ. The scheme also needs to consider compensation for economic curtailment which will be higher in a OBZ model. The scheme also needs to consider the charging regime for the offshore wind farm as well how the offshore converter station is compensated.

Q16. How do charging arrangements relate to the considerations on support schemes for MPIs, especially under the OBZ scenario?

If the charging arrangements for an offshore wind farm connected to a MPI differs from regular offshore wind farms, for example if it does not pay any grid costs or TNUoS, it may not be correct that these offshore

wind farms compete for support directly with regular offshore wind farms as it will not be a level playing field. Hence this needs to be considered when structuring the budget pots and award of such CfDs.

Q17. Does the chapter on operability capture the key topics that should be included when considering the impact of market arrangement models on system operability? Are there other important implications that need to be considered?

In addition to the key topics listed by Ofgem, we would add that the cooperation with the system operator, who also can be the MPI/NSI/Interconnector-owner, in the connected jurisdiction(s) may add additional complexity and limit the options available to the GB system operator. An MPI with an OWF can provide valuable services (inertia, fast frequency response amongst others) to a power system. However, these services will be valuable to both sides but may not be available to both sides simultaneously.

Q18. Do you have any views on how curtailment and compensation might work under both HM and OBZ configurations?

OWFs in GB are currently compensated through the balancing market if they are curtailed by the system operator (except for reduced capacity and outages in the OFTO system). We would expect similar compensation through the balancing market if the system operator curtails the OWF due to system security needs.

If an MPI connected OWF is curtailed due to "merit order" this revenue loss needs to be compensated as well. Please see our response to Q3 and Q13.

Q20. What are your views on contractual agreements that will need to be established between the system operator, MPI operator and an OWF? Do they differ depending on HM or OBZ configuration?

It is important a contractual relationship is established between the MPI connected OWF and the system operator in addition to the contract between the MPI and the system operator. This is required to ensure competitiveness, transparency to the generator as well as the system operator ensuring well-functioning markets. Providing balancing services or ancillary services through a third-party intermediate (MPI) is not acceptable and would be regarded as value destruction.