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EirGrid response to the Ofgem Consultation on the Market Arrangements for Multi-Purpose Interconnectors

Dear Sir,

We write in response to the Office for Gas and Electricity Markets (Ofgem) public consultation on the Market Arrangements for Multi-Purpose Interconnectors. As Transmission System Operator (TSO), EirGrid develops, manages, and operates the electricity transmission system in Ireland. More recently, as per the Policy Statement on the Framework for Ireland's Offshore Electricity Transmission System, EirGrid has been designated as the system operator and asset owner of Ireland's offshore electricity transmission system.

EirGrid TSO is pleased to respond to Ofgem's consultation and welcomes the opportunity to engage on policymaking for Multi-Purpose Interconnectors (MPI). We are keen to see the summary feedback from the consultation and work together with Ofgem on future policy consultations in this area.

Please see below for EirGrid's responses to the questions listed in the consultation document.

Q1. Do you agree with the ranking of options (OBZ-implicit, HM-implicit, HM-explicit, OBZ-explicit) presented in the table?

Our preferred ranking is:

1. Offshore Bidding Zone (OBZ)-implicit
2. OBZ-explicit
3. Home Market (HM)-implicit
4. HM-explicit

Q2. Do you believe that some of the permutations are not workable and should be ruled out? Why?

EirGrid believes that, although HM arrangements are workable for Offshore Wind Farms (OWFs) connected to a single bidding zone, both HM options (implicit and explicit) should be ruled out for an OWF connected to two onshore bidding zones via an MPI due to the increased need for constraint management. Using an OBZ is preferable whether the trading arrangements are implicit or explicit. Trading arrangements should be agreed with the relevant onshore TSOs and ENTSO-E.

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

OBZ implicit is the preferred bidding zone configuration for EirGrid, assuming that implicit market coupling between the Single Electricity Market (SEM) and Great Britain (GB) is maintained in mutually acceptable enduring implicit trading arrangements. Maintaining pan-network competition and minimising curtailment of OWFs and costly remedial actions are high priorities for EirGrid as a TSO.

Q4. Under implicit trading (loose volume coupling), which bidding zone configuration (HM or OBZ) best supports:

- a) market efficiency?**
- b) consumer benefits?**
- c) integration of renewables?**

Market efficiency:

The OBZ option best supports market efficiency, since capacity is utilised with least risk of over- or under-utilisation, and the need for costly remedial actions is minimised. The use of an OBZ removes the need for priority dispatch for the attached OWF, preventing any potential deviation from the efficient market equilibrium.

Consumer benefits:

The OBZ option best supports consumer benefits. Since there is no reserved OWF capacity, the cable capacity is maximised for cross-border trade which will provide a strong drive to lower prices in the more expensive market and increase overall economic welfare across both markets.

Integration of renewables:

The OBZ option best supports integration of renewables. Although the connected OWF will earn lower average revenues due to being paid the lower of the two onshore Bidding Zone (BZ) prices, the OWF's actual renewable generation is less likely to be curtailed than in the HM arrangement. The OWF's marginal cost of generation is zero when the wind is available, so it still has an incentive to generate even for a low price. This dynamic will maximise the share of renewable generation in the overall system and improve the integration of

renewables. Maximising cross-border trade will also provide a means to avoid curtailment of other renewable generators in the onshore bidding zones. In addition, if there is a fault with one portion of the cable leading to an onshore bidding zone, the OWF could instead export its power to the other onshore bidding zone, so automatically has an N-1 contingency built in, unlike a radially connected OWF. This should go some way to compensating for the lower revenue.

Q5. Under explicit trading, which bidding zone configuration (HM or OBZ) best supports:

- a) market efficiency?**
- b) consumer benefits?**
- c) integration of renewables?**

Market efficiency:

The OBZ option best supports market efficiency. In the case of HM, the reliance on wind forecasts and the weather will mean that the inevitable capacity allocation errors will arise and lead to constraints on either the cable or the OWF. The necessary remedial actions will be paid for at the usually higher imbalance prices in each market. The reliance of the explicit capacity auctions on these same forecasts could lead to under-utilisation of the MPI under HM.

Consumer benefits:

The OBZ option best supports consumer benefits. For similar reasons to the market efficiency above, the curtailment and remedial actions will pass higher costs onto consumers.

Integration of renewables:

The OBZ option best supports integration of renewables due to the increased overall flow of renewables on the MPI. If the OWF over-forecasted its wind output, then some of the reserved capacity would be unutilised, unnecessarily restricting interconnector flows which are often driven by renewable generation in the onshore bidding zones. Without that capacity, that renewable generation would see less demand for cross-border trade.

Q6. Do you think that a transition from HM to OBZ is possible and/or desirable?

EirGrid believes that a transition from HM to OBZ may be possible but will not be desirable due to the significant cost and systems changes needed for each relevant TSO and OWF. Significant time and coordination would be required to complete the necessary testing and implement the system changes.

Q7. What conditions must be met so that a transition from explicit-HM to implicit OBZ configuration would be viable for developers?

The possible transition from one bidding zone / trading arrangement to another introduces uncertainty to the forecasted revenue developers will earn. Therefore, clear timelines regarding the transition and advanced planning for the future arrangements are necessary to provide developers with confidence.

The uncertainty caused by the transition from explicit-HM to implicit-OBZ would impact other stakeholders as well. The change of the trading arrangements will require the MPIs to be capable of both explicit auctions and implicit allocation. This change of revenue source introduces an additional element of variance for the developer, particularly if timelines are not agreed in advance. These changes would have to be agreed with the TSO in the connecting bidding zone and with ENTSO-E.

The increased uncertainty a transition of trading zone and trading arrangements will cause makes this a costly and undesirable outcome.

Q8. How does this relate to other areas such as regime design or charging arrangements?

No comment

Q9. How do you envisage long-term, day-ahead and intraday trading arrangements working for MPIs under both HM-explicit and OBZ-implicit scenarios? Can explicit capacity allocation work with OBZ configuration, if yes how?

HM-explicit:

EirGrid does not feel that the trading arrangements necessary for a HM-explicit model arrangement would function effectively in the case of an OWF connected to an MPI.

OBZ-implicit:

The current arrangements for the interconnectors on the SEM-GB border involve implicit coupling in the IDA1 and IDA2 intraday auction markets. This determines how interconnector flows are assigned given the intraday prices within the two regions. If these arrangements are to remain on the SEM-GB border, then the MPI and OWF would offer their capacity in the intraday auctions only.

EirGrid welcomes Ofgem's focus on developing and implementing future cross-border market arrangements with the EU. EirGrid's preference in any revision to the current arrangements is for implicit market coupling on the appropriate timeframes. Transitioning to day-ahead implicit coupling would give the respective TSOs greater foresight of interconnector flows and system security.

Long-term trading arrangements:

EirGrid believes that it would be difficult for an OWF connected to an MPI to participate in long-term trading arrangements. Wind generation is difficult to accurately forecast over longer timeframes, meaning the capacity level an OWF could bid would be at risk of not being delivered.

Q10. What are your views on using either PTRs or FTRs in the long-term timeframe? Will OWFs have an active role in long-term capacity allocation?

EirGrid's preference is for the use of Financial Transmission Rights (FTRs) instead of Physical Transmission Rights (PTRs) in the long-term timeframe. This would rely on the SEM-GB markets remaining coupled in whichever trading arrangements are in place.

If the volume of PTRs issued for a trading period exceeds the actual available transmission capacity, the TSOs will be forced to curtail them and will be exposed to paying compensation to the PTR owners.

FTRs provide more price certainty than PTRs to market participants and provide efficient hedging against price spread volatility.

Q11. Which timeframe is the most vital/relevant for MPIs and why?

Under current SEM-GB market arrangements intraday markets would be the most relevant.

As mentioned previously, EirGrid welcomes transitioning to day-ahead coupling for trading arrangements due to the benefits to each TSO of having greater foresight of interconnector flows. Once revised trading arrangements have been developed and implemented the emphasis would move to the day-ahead timeframe.

Q12. Are there any improvements to commonly understood trading models (explicit trading or implicit price or volume coupling) that can be made to better facilitate efficient market arrangements for MPIs?

No comment.

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?

EirGrid does not agree that it is necessary to compensate OWFs for loss of revenue through congestion revenue. While this may increase investor security for OWFs it does directly the inverse for MPIs. Such arrangements are not proposed for onshore wind farms sharing infrastructure, particularly those in close proximity to bidding zone borders such as between

Scotland and Northern Ireland. Depending on the ownership model, this may be a moot point (e.g., OWF and MPI owned/operated by same party).

OWFs also benefit from no network charges as previously mentioned and cost savings from not having to develop an onshore grid connection. OWFs also benefit from effectively having a looped or dual connection, with redundancy (N-1), to potentially feed directly to one market during outages of one link in the MPI from the OWF connection point to the other market.

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?

No comment.

Q15. Are there any other alternative approaches that we have not considered that would better incentivise an OWF to connect to an MPI?

Whilst it is critical that developers continue to be able to invest in OWFs, we also note that depending on policy approach in the relevant jurisdiction, opportunities to develop an OWF may be limited. Competition to build an OWF could, therefore, be significant - including for an opportunity to build an MPI-connected OWF.

For example, in Ireland Government policy has outlined a 'plan-led' future approach to offshore development. Whilst the first offshore wind renewable electricity support scheme (ORESS1, held earlier this year) awarded Contracts for Difference (CfD) to 'developer-led' projects (i.e., sites and locations fully chosen by developers), future auctions will award contracts to projects in specific areas, identified by the State.

Provided that projects within such sites are investable (via CfD or otherwise), there could be significant competition to build OWFs. In the future such sites could also include OWFs connected to MPIs.

It is possible, therefore, that in the future OWFs would not be considering developing a project connected to an MPI versus a radial connection, but instead, would be competing to build an MPI-connected project. The limited number of development opportunities itself, may be an incentive to build an MPI-connected OWF.

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

EirGrid believes that charging arrangements must be agreed with both connected TSOs, taking account of each party's regulatory frameworks.

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?

One important aspect of system development is that the typically 3-terminal MPIs under consideration today may evolve into more complex meshed arrangements in the future, as technology advances. Therefore, it may be important not to bundle OWF obligations with the MPI, where possible, as independent operations would better allow for different configurations in the future.

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

No comment.

Q19. Do you have any comments on how balancing might work under both HM and OBZ models?

No comment.

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?

No comment.

Conclusion

In general, EirGrid would propose that any arrangements for MPIs should not conflict with those implemented for any enduring EU-GB trading arrangements. In addition, we feel that all concerned EU TSOs should be consulted via ENTSO-E for the final Ofgem proposals and decisions. EirGrid welcomes discussion on any points raised in this consultation if it would be helpful to Ofgem in finalising its work programme. EirGrid looks forward to engaging with Ofgem in its implementation.

Should you have any further comments in regard of this submission please contact the undersigned.

Yours faithfully,

Doireann Barry
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(Sent electronically)