

Offshore Wind Grid Development Consultation
Energy Division
Department of Communications, Climate Action and Environment
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22nd July 2020

RE: June 2020 Consultation to Inform a Grid Development Policy for Offshore Wind in Ireland

Dear Sir, Madam,

Bord Gáis Energy ("BGE") welcomes this opportunity to submit comments to the DCCAE's Offshore Grid Delivery Model Option Consultation ("the Consultation").

1. An integrated offshore and onshore grid connection policy for efficient investment locations

In general, BGE is supportive of a policy that ensures that those projects that are best able to meet Ireland's 2030 renewables targets at lowest cost to consumers are enabled. Those projects that should be enabled by the policy to 2030 would include the designated "Relevant Projects" at a minimum. Otherwise, considering that the initial 3.5GW target for offshore renewables outlined in the government's Climate Action Plan has been increased to 5GW under the recent Programme for Government, the 2030 targets would be put at risk. Simultaneously however, there are a considerable number of onshore connections required to be made over the course of the next decade to accommodate onshore generation and demand as well as interconnector connections. With large onshore generators closing in the coming years and Ireland's capacity margin becoming very narrow in 2024/ 2025, these onshore connections are required to meet 2030 targets and also to mitigate the risk to security of supply before the mid-2020s. These onshore connections span a range of projects including renewables, demand connections or projects that complement the roll-out of renewables, e.g. storage, flexible and interconnector projects. Given the limited nature of onshore grid and the potential impact of offshore connections on the onshore grid, BGE believes that an integrated policy and regulatory approach to grid connections for both onshore and offshore projects is required. An integrated policy and regulatory approach should ensure onshore and offshore projects can materialise in a timely manner and in locations that are most feasible in terms of the ability of the grid to facilitate them at least cost to the consumer.

Such an integrated approach to onshore and offshore grid connection policy and regulation includes a need to consider the role of locational signals. BGE has ongoing considerable concerns about the lack of effectiveness of what are considered the main existing locational signals – Transmission Loss Adjustment Factors ("TLAFs") and Use of System charges ("TUoS"). In the case of TLAFs for example, Irish investors have experienced negative commercial impacts because pre-investment TLAF indicators have drastically, unpredictably and in a volatile manner, deteriorated such that the initial "locational indicator" provided by the TLAF is no longer valid. Those that have invested and continue to receive the locational signals cannot alter their behaviour to change the outcome – other than to shut down production. It is not efficient and therefore not in the interests of consumers for plant that have already been built to receive the locational signal as they are not driving the change and cannot control it. The current arrangements are not a sustainable long-term approach to ensuring **efficiency of investment location**, whether onshore or offshore. BGE therefore suggests that the existing approach to locational signals is revised and incorporated within the new Offshore Grid Delivery Model as well as being adopted into onshore policy and regulatory models.¹ The incorporated grid policy and regulatory framework in our view also needs to be cognisant of our market processes that strive for competitive outcomes, keeping costs down for consumers.

Against the above context, BGE's vision for the appropriate policy and regulatory model for grid connections both onshore and offshore includes the need to:

- i. Optimise the existing grid and develop the future grid in a way that facilitates policy while minimising cost to the customer;

¹ We note in this regard that the grid connection process for onshore projects has been set to 2022 but that an enduring grid connection policy onshore has yet to be designed

- ii. Include generation, storage and demand so that there is consistency of signals to enable co-location and minimise grid development requirements and costs;
- iii. Work alongside and complement the markets we have recently designed (e.g. the RESS auctions, DS3 revenue streams and the capacity market) to deliver competitive outcomes – as opposed to creating a sub-market for grid capacity, and;
- iv. Provide locational signals for generation, storage and demand connecting to the system so that investors are given a signal at a time that they can influence and control their decisions to the benefit of the grid.

The current situation in Ireland is that demand is concentrated mainly in the East which in practice results in large flows of generation moving from the West and North coasts to meet demand on the East. There needs to be better coordination between connecting parties (onshore and offshore generation, storage and demand) and the development of the grid to minimise the cost of grid reinforcement/ development. One way of doing so is to provide clear locational signals for connecting parties at the point of connection. To provide clear locational signals, the System Operators (“the SOs”) could pre-determine a €/MW cost for the connection of any MW in a given area of the network and set it for a period of time (this could be at minimum annual or set for up to 5 years / however long the SOs are comfortable that the costs are representative). The Euro/MW connection cost could be done on a zonal basis (including for the expected offshore zones) up to the point that the SOs can disaggregate various parts of the grid. The cost of connecting in each ‘zone’ would reflect the impact a connection (demand and/or generation, storage) would have on system flows, system reinforcement requirements, available spare capacity and timelines to secure firm capacity in that area.

In setting the costs, the SOs would consider the locational differences for parties connecting to the grid, bearing in mind constraints and grid reinforcements needed. Parties could then enter RESS, Capacity and DS3 auctions as well as Power Purchase Agreements (PPAs) of any sort, knowing this cost and compete accordingly. A party successful in a market auction would be entitled to receive a grid connection offer at the predetermined cost. If the actual cost of connection, when wider system development needs indicate a different connection is required, is different to the cost charged to the connecting party consideration could be given to those being socialised in the interests of the whole system.

Taking the planned RESS auctions for example, ideally the competitive process would include a mechanism whereby a project could factor in its grid connection costs into its auction bids. To incorporate grid costs into the auction process, the grid connection cost including the locational signal element (the pre-determined €/MW approach outlined above) should be known in advance of the RESS (or any DS3 or capacity) auction and be allowed to be considered by the relevant bidder in their bids. In this way, the market outcomes are reflective of the system limitations and costs and should result in competitive outcomes in the level of grid costs that the end consumer pays for. There are ways too of managing the administration of connections across all markets, be they onshore or offshore projects, through for example the timing of the various auctions.

While the consultation focuses on a spectrum of options that range from a developer-led approach to a more centralised SO plan-led approach, we believe that our proposed €/MW locational investment signal would be compatible with any option and should be implemented whatever option is chosen. The investors in the projects themselves could consider to what extent the costs of the grid connection are reflected in bids for RESS auctions and indeed any other market (e.g. capacity, DS3) the investor chooses to bid into.

The above is our key consideration for this Consultation. An integrated policy and regulatory approach to onshore and offshore grid connection policy, particularly the use of efficient locational signals, is needed if investments are to materialise in locations and in a manner that ensure that market auctions work to minimise costs for consumers.

2. Other considerations

BGE's other considerations for the Consultation stem from the perspective of minimising consumer costs while optimising use of the grid in a manner that best facilitates investments in projects and grid connections.

To ensure best outcomes for consumers and investors in terms of cost and timing of connections, we believe that connection nodes onshore must be optimised insofar as possible. A view by the SOs as to the available capacity at onshore nodes should be prioritised. We understand that a SO assessment of existing onshore node capacity is part of the SOs' plan in determining the firm access quantities available at different locations between 2020-2021. We believe that the outcome of this process could have a positive role to play in adopting BGE's suggested approach to determining a €/MW zonal grid connection cost for projects onshore and offshore. Our view on the need for optimisation of connection nodes to minimise consumer costs also applies

to any nodes that might materialise offshore given that, as we understand it, there are not many routes to shore for projects.

From a consumer perspective, consideration in our view also needs to be given to long-term ownership or at least access to offshore connections/ nodes / hubs if their use is to be optimised to minimise infrastructure needs and keep overall costs down for not only developers but consumers. In this context the more connections there are offshore, the more challenging onshore reinforcements are likely to be. One of the common set of assumptions underpinning all four options includes that EirGrid can seek to transfer grid connection ownership to the Transmission Asset Owner (“TAO”) in any option where the developer builds the asset. This assumption of ability to transfer grid ownership to the TAO is important as it can result in maximising the use of the asset in the long term, attract investors, minimise the risk of stranded assets or indeed additional onshore grid investments with an overall cost minimisation benefit for consumers.

3. Requests for further insights

BGE also requests a view in the decision on this Consultation on the following issues:

- i. The Consultation notes that the current onshore transmission grid could potentially integrate ~1.5 GW of offshore wind capacity on the Irish East Coast without any significant transmission capacity expansion. We request more insight on the load-flow studies that this opinion is based on with a view to understanding constraint impacts (positive or negative) as well as impacts to existing investors' projects onshore;
- ii. We support the element of the options put forward where the TSO takes a pro-active rather than reactive approach to planning and communicating the timeline for onshore grid reinforcements early in the offshore project's development process. We request that the planned reinforcements (and timelines for such) are communicated early and publicly to inform existing as well as future investors;
- iii. We request further insight on when the EirGrid results of the onshore network reinforcements required to facilitate grid connection applications from Relevant Projects will be published.

4. Conclusion

In conclusion, BGE believes that the electricity markets (RESS, capacity and DS3) are in danger of giving signals to projects who cannot get connected and the connection policy in Ireland is in danger of giving signals to projects that destabilise the grid or at least lead to grid reinforcements/ developments that are not optimised or do not deliver best value for consumers. Given the likely impact of offshore developments on onshore grid and existing projects and the fact that onshore and offshore investors participate in all of these markets, we urge the government to give serious consideration to ensuring that these markets and all grid connections work in harmony, before finalising the decision on the Consultation.

As a matter of policy and customer interest, if we fail to provide the right signals and fail to levy costs equitably across connected parties, we believe that there is a risk the energy transition will fail to deliver a cost competitive market environment for customers in Ireland. Given the extent of expenditure in infrastructure required to meet 2030 targets and to decarbonise Ireland's energy system, we need to ensure that efficiency of investment location is central to our energy policy so that parties make an efficient trade off in the location of their investments – or pay the cost accordingly if they choose not to. Our proposed incorporation of the €/MW locational costs of grid connections into market (e.g. RESS, capacity and DS3) auctions provides in our view the best prospect of delivering competitive cost outcomes for consumers while optimising the use of both onshore and offshore grid assets and providing a level of certainty to SOs of where projects might locate and of the cost of grid connection for investors.

I hope you find the above comments and suggestions helpful but please do not hesitate to contact me should you wish to discuss, or require further details on, any aspect.

Yours faithfully,


Bord Gáis Energy

{By email}