Gaelectric Holdings Plc.

Response Paper to:

SEM Committee Consultation on Capacity De-Rating

Gaelectric Holdings Plc. Response

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Public

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1 GAELECTRIC BACKGROUND

Gaelectric is an independent wind, energy storage, solar and biomass developer operating within the Republic of Ireland, Northern Ireland, United Kingdom and North America. To date Gaelectric holds approximately 200MW of generating assets across 9 projects in Northern Ireland and the Republic of Ireland, and a further 40MW of 'shovel ready' projects with grid connections and full planning approvals in place. Gaelectric's near term pipeline on the island of Ireland is circa 320MW with the expectation that the company will have 400MW of wind projects generating power by the end of 2017.

Through developing our portfolio of wind assets through early stage planning into construction and operation phases, we have become one of the largest independent developers and operators of wind energy on the island. Gaelectric are further involved in the development of bioenergy and solar projects in Ireland and the UK. Planning applications for 20MW of solar have been lodged in Northern Ireland, and the company has submitted over 20 applications to ESB Networks for solar grid capacity in Ireland.

In addition to our renewable portfolio, Gaelectric are developing Project CAES NI. This project has an agreed connection offer in place with SONI and its planning application has been submitted Planning NI. Project CAES NI is designated as a Project of Common Interest (PCI) by the European Commission and has been recommended for grant funding of up to €6.5million under the Connecting Europe Facility. Gaelectric and Tesla have also announced the purchase and planned deployment of Tesla Energy's first battery power utility-scale project in Ireland, and we expect to develop a 1 MW demonstration project in 2016.

2 EXECUTIVE SUMMARY

Gaelectric holdings plc ("Gaelectric") welcome this opportunity to respond the SEM Committee's consultation on de-rating of technology types. De-rating of participants will have a significant impact on the both the number of participants that clear the auction and the revenues received by those participants. There may also be profound implications for system security. As seen in GB, generators that do not clear the capacity auctions often take this as a market exit signal which can have serious implications for security of supply should the requirement be underestimated. This is particularly important given the potential construction of data centres and associated increase in demand that may occur in the near term.

For these reasons, Gaelectic believe a prudent approach should be adopted when deciding on both the capacity requirement and de-rating of participants. This is particular significance when considering interconnectors. Interconnector flows will be primarily driven by EUPHEMIA and subsequent SO-SO trades. Given the uncertainty around price formation in I-SEM, Gaelectric believe that caution should be exercised when de-rating interconnectors. Should they be given too large a portion of the capacity requirement, this could compromise systems security should a stress event occur and they are exporting.

3 CAPACITY REQUIREMENT AND DE-RATING FACTORS

Before providing feedback on the specific points raised in this paper, it is important to address underlying necessity for a capacity mechanism. The CRM is in place to ensure security of supply. This is done by allowing existing generators to recover costs not already recovered through inframarginal rent and ancillary services. Through providing generators with this revenue the auction should, where necessary, provide market entry and exit signals. For this reason, the capacity auction should be designed to accommodate all potential technologies that may seek to partake, within reason. It should not just accommodate those that are already built. This is important as many of these new projects will look to a capacity contract to finance themselves. It is in this context that we will address the points below.

Q1.The SEM Committee welcomes views on all aspects of the methodology proposed and the historic and forecasts inputs used including:

I. The determination of Capacity Requirement;

Gaelectric have consistently expressed our view that the 3 hour LOLE should be used rather than an 8 hour LOLE when calculating the capacity requirement. Gaelectric would also like to highlight the

treatment of wind energy in the capacity requirement. The calculation of the capacity requirement takes into account withheld capacity, albeit at its de-rated level. Therefore wind farms that chose not to participate in the capacity auction are still considered to provide the service. Given the similarities between interconnectors, in that neither has complete control over it's contribution to the grid, we believe that wind should be treated the same as interconnectors. It should only be mandated to pay out when technical unavailable as opposed to when the market price exceeds the strike price.

II. The treatment of operational reserves in the determination of Capacity Requirement;

The system cannot be run without adequate reserves therefore Gaelectric agree that it is prudent to include operational reserves in the calculation of the capacity requirement. While using 75% of the largest single in-feed has been the typical method for calculating reserves in the past, we support alignment with the ENTSOE-E guidelines and for reserve to cover the entire largest single in-feed. Gaelectric would also welcome transparency on system conditions that may cause the TSO's to keep a level of reserves on the system greater than the largest single infeed.

III. The technology groupings;

There are a number of issues Gaelectric have with the technology groupings as proposed for de-rating. Initially, there is no de-rating for solar. It is debatable as to how attractive a proposition the RO auction is for Solar given the fact that it is an intermittent renewable. Despite this, it should be provided a de-rated capacity. Leaving it with the system de-rating would, most likely, overestimate its contribution. This could compromise system security and leave solar with a prohibitively high risk to enter the auction.

Gaelectric also have reservations about applying the de-rating of pumped storage to all storage assets. The different operational characteristics of Compressed Air, Batteries and Pumped Storage are too broad to simply apply a single de-rating factor to all of them. When generating, compressed air has identical operational characteristics to an OCGT. This would result in outage rates different to pumped hydro outage rates. Similarly, the amount of time a storage unit can run for depends on the size of its reservoir and the number of hours it can generate, therefore a 30miute battery would have a different number of run hours when compared to a large pumped storage unit. The result of applying a potentially inappropriate de-rating factor to a storage unit could reduce the potential revenue they could receive by reducing their eligible capacity for the auction. It could also overestimate the storage units capabilities and therefore increase that participants risk and/or compromise system security.

To facilitate the fair participation of both batteries and compressed air units in the T-4 capacity auctions, we call on the regulators and TSO's to undertake a more in depth analysis of the de-rating of different storage technologies. If not, then adequate scope must be given for participants to engage with and demonstrate to the TSO's that their unit deserves to be de-rated differently to their perceived technology classification.

AGU's are given a de-rating of between 73-54.4% however recent iterations of the Capacity Market Code/Trading and Settlement Code have suggested aggregated units would have a de-rating factor equal to the sum of the units composing the aggregated unit. There are discrepancies on the de-rating of Aggregated Generator Units and Capacity Aggregation Units and therefore Gaelectric seek clarification on the treatment of these units.

D. Determination of the marginal de-rating curves;

Given that the methodology used is what is advocated by ENTSOE-E and the current process for established marginal de-rating curves in the GCS, Gaelectric are comfortable with its use for this paper. Gaelectric believe the de-rating factors attributed to wind are unfairly low. When establishing the marginal de-rating factor for wind, it should be treated the same as other units with units of different size included in the analysis rather than all of the wind included in larger blocks.

IV. The determination of Effective Interconnector Capacity;

Gaelectric agree that given the uncertainty surrounding price formation in I-SEM, depending on price curves to forecast interconnector flows may be an imprudent methodology. Gaelectric believe that the indicative results given for each interconnector are too high, particularly given the reciprocal analysis that was undertaken by DECC when de-rating the Irish Interconnectors for the GB capacity auction.

Their Derating bands were 26-56%[1]. A simple reciprocal calculation would suggest that a de-rating band between 44-74% for importing into Ireland during a stress event. While the proposed de-rating methodology would give values that broadly fall within this range, they are at the upper end of the range.

Overestimating interconnector contributions can lead to an increase in the hole in the hedge faced by suppliers as interconnectors are only required to make difference payments during technical outages as opposed to not importing during a stress event. This can lead to an additional cost on

[1] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/404260/Inteconnector_de-rating_methdology_final_final.pdf

the customer should supplier be required to meet this additional expense through increasing customer prices.

V. ***The use of the TSO De-Rating Model in conjunction with the RA-determined values of Effective Interconnector Capacity and the outage rates for the interconnector Technology Class to determine the marginal de-rating factors to be applied to the interconnectors.***

Gaelectric disagree with the treatment of interconnector outages in the interconnector de-rating methodology. While the extent of the forced outage may somewhat distort the forced and scheduled outage rates, given the recent outage on EWIC until next February we believe that this distortion is not a significant as suggested in the consultation. It should be considered when calculating the interconnector de-rating factors. Consideration of these interconnector de0-rating factors may bring them more into line with the DECC calculations for the Irish interconnectors.

4 TOLERANCE BANDS

Q2 . Do respondents agree with the minded to decision to set the tolerance bands to zero?

The de-rating factors applied by the TSO's are inadequate for storage and this problem is compounded by the lack of tolerance band afforded to technologies contained within this category. Limiting the storage de-rating to pumped storage could potentially prevent a storage project from receiving an appropriate contract. This is of upmost importance as there will be storage projects other than pumped storage that will enter the T-4 CRM auctions and look to these contracts to finance themselves. Gaelectric therefore believe that tolerance bands are one such avenue to alleviating the potential discrepancies with grouping generators by technology rather than de-rating each unit individually.

We also believe that there is an inconsistency between the decision on tolerance bands and bid types. According to CRM Decision 3, participants bidding into the CRM auction will be able to specify flexible and inflexible PQ pairs in their bid submission. This in affect acts as a tolerance band below their de-rated level detailing volumes which a generator may be allowed to forgo. Setting the tolerance band to zero prevents generators receiving additional contract volumes when they are capable of providing this service. It should also be remembered that any positive tolerance is an additional risk taken on by generators should their option be called. For this reason, coupled with our previous comments regarding de-rating of storage, we believe that the tolerance bands should be greater than zero to account for plant differences within the same technology type.

5 CONCLUSION

Gaelectric would like to thank the regulators for engaging with industry on this issue. De-rating will have direct implications on the volume of RO contract received by participants and, subsequently, their revenue streams. For this reason we believe it is of the upmost importance that these de-rating factors accurately reflect participant's operational characteristics while maintaining security of supply. If there are any further questions on any of the points raised above please do not hesitate to contact us.