# Gaelectric Holdings Plc.

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Response Paper to:

## EirGrid/SONI Consultation on Volume Calculations Methodology and Portfolio Scenarios

### Gaelectric Holdings Plc. Response

25/11/2015

**Public**

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## Document Details

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# 1 INTRODUCTION

Gaelectric Holdings Plc. ("Gaelectric") welcomes the opportunity to respond to the TSO's consultation paper on DS3 Volume Calculation Methodology and Portfolio Scenarios. We support the endeavours of the TSOs to establish the volumes of services required from each DS3 system service. Gaelectric have previously requested that this analysis achieve a balance which recognises the need on the system for new entrants without being overly prescriptive on the portfolio. In this regard we welcome that the methodology is considering new entrants and indeed storage on the island. The early information informing the volumes required is an integral step in clarifying the investment signal for new entrants on the island.

As presented, Gaelectric are comfortable with the calculation methodology as presented in the documents, specifically the use of the greater volume requirement from the analysis of both scenarios. There are however certain assumptions over which we are concerned.

We do not support the approach which assumes equal requirement of services in the 2 years post 2020. The supporting evidence provided in the paper is that there remains uncertainty regarding targets beyond 2020. Notwithstanding this, there are ongoing programmes being consulted on at department level which aim to incentivise continued development of renewables beyond 2020 across a diverse range of technologies. The volume calculations should therefore consider some continued development of renewables. According to the 2015 EirGrid Generation Capacity Statement, approximately 500MW of partially/non-dispatchable generation will be installed on the island between and 2020-2022[1] with a new renewable energy subsidy scheme currently under consultation by DCENR to incentivise construction of such infrastructure past 2020[2].

As a developer of renewables on the island, we are concerned that the benefits of increases in SNSP which will have been achieved by 2020 under the DS3 programme may be eroded by further renewable development in absence of an evolving DS3 strategy to maintain the same renewable integration metrics.

Relating to this point, we believe there is a need for appropriate forward planning for the provision of services. It is important for service providers to understand the market for services in the medium term. This is particularly important in cases where new entrants would be required to provide these extra system services. There is a substantial upfront cost and lead time in the development of new entrants to prepare for an auction, and these potential service providers therefore require surety in terms of the volumes to be auctioned. We therefore call on the SEM Committee to reassess the assumptions made for the 2 years post 2020.

Furthermore, beyond 2022 we request clarity on when the SEM Committee plan to release the volumes to be auctioned. As outlined above, new entrants have a lead time to preparation for a competition and therefore it is our view that the volumes must be published on a yearly rolling basis beginning next year for 2023. There is a requirement to see a signal in the market for these projects to invest, of which the level of procured volumes is an integral part.

[1] http://www.eirgridgroup.com/site-files/library/EirGrid/Eirgrid_Generation_Capacity_Statement_2015.-2024.pdf

[2] http://www.dcenr.gov.ie/energy/Lists/Consultations%20Documents/Renewable%20Energy/Renewable%20Electricity%20Support%20Scheme%20-%20Technology%20Review%20consultation%20-%20final.pdf

The volume of services procured will have impact on the level of competition in the qualification process when the level of services available are outlined by potential services providers. The decision at this point will be whether to continue with competition or revert to regulated tariffs for each services. Notwithstanding our concern with the complexity of the competition design, we have previously indicated our preference to avoid regulated tariffs which we do not believe provide an investible signal for new entrants; nor do we believe they will stimulate competition in subsequent years. Rather it is Gaelectric's preference for ring-fencing of substantial DS3 system service volumes for new entrants to support new entry signals. This proposal is considered by the SEM Committee in the recent DS3 Qualification Process and Contract Design consultation where it is proposed that a reserve share would be kept aside for new entrants into the market. We welcome further engagement with the SEM Committee on this matter.

In regard to a wider point of consideration, the DS3 system services are designed to incentivise low output from service providers whilst maintaining a high degree of service to support system security up to an SNSP of 75%. The reliability options (RO) design however incentivises capacity providers to ensure peak output during on peak hours, and this is backed by the planned introduction of administered scarcity pricing. There is therefore 2 contradictory principles within each work stream. We urge the SEM Committee to give further consideration to how these programmes will operate in parallel, and to work with industry on this.

It is clear that both the RO and DS3 are both required to support the business case for new entrants on the island, and the interaction between both is therefore integral. This interaction extends to the parallel procurement processes of both services. At present the auction designs are beginning to speak to one another however the auction timelines are not aligned (RO auction proposed for June 17 and DS3 proposed for Q1 2017). There are numerous issues with this not least the cost for both the customer and potential service provider of auctions that are not aligned.

We note in the Qualification and Contract principles consultation paper (footnote 7) that a new entrants project would have 5 years to commission less the time between the 1st and 2nd auction. This creates significant uncertainty for new entrants and should be immediately revised. New entrants will require site of both revenue streams before investing capital into a project. The timeline for new entrants must therefore be 5 years from the date of the latter auction clearing.

On a final note, in the Consultation document the TSO's suggest that they are open to procuring additional system services where conditions require it. We would request that the TSO's clarify what conditions they are referring to and how would participants be remunerated in such circumstances.

A summary of our view is as follows

- While we acknowledge that it is difficult to project system service requirements past 2020, given the uncertainty surrounding potential renewable energy targets, we would request that the authorities remain cognisant of potential for the requirement of greater volumes of system services post 2020.
- Gaelectric seek greater clarification on the interaction between the system service volumes and the degree's on competition within each market. The competition metrics paper alluded to the potential for substituting system service volumes depending on costs of procurement.
- Gaelectric question the assertion that the system service volumes decided should have no effect on the procurement method. In a case where a significant volume may be required in an uncompetitive market, new entrants will be required. These must be given greater

investment certainty than the current one year regulated tariff proposed. This could be done through ring-fencing of volumes to be procured.

- According to the consultation document, to comply with the statutory and licence obligations, the TSO's will be required to procure the system service necessary *"to securely operate the power system and may need to procure additional services where conditions require it."* Gaelectric request further clarification on conditions that would require the procurement of additional service and how would this be remunerated.
- Will the possibility that DS3 capacity volumes that may be unavailable due to CRM requirements be factored into the scenario calculations?
- Gaelectric agree with the TSO that it is prudent to procure the greater volume of either scenario and welcome the TSO's view in this regard.

## 2 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. The DS3 programme acts as an enabler for a number of initiatives under development by Gaelectric.

To date Gaelectric holds 150MW of generating assets across 6 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.

In addition to our renewable portfolio, Gaelectric are developing Project CAES NI, which has an agreed connection offer in place with SONI. 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.

Project CAES NI will provide 330MW generating capacity with 250MW synchronous demand. Compressed Air Energy Storage is a commercially proven technology which has been in operation since 1978 in Huntorf, Germany and since 1991 in Alabama, United States. CAES has a strong technical ability and Gaelectric have shown that it is capable of providing substantial performance within the DS3 system services.

Outlined below is a brief summary of the technical performance of CAES;

- Generation: From off to full output within 10 minutes
- Demand: From off to full demand within 5 minutes
- Generation Min Gen: 10%
- Heat rate at min gen at min gen is only 15% higher than at maximum output

PMCA Consulting has carried out an independent economic impact assessment of the likely economic and socio-economic benefits in respect of the implementation of Project CAES in Larne, Co. Antrim.

The analysis found that system production cost savings from Project CAES to the SEM would range between £32m - £52m per annum, depending on the rate of progress regarding the adoption of renewable energies on the island of Ireland[3].

Further to our development of Project CAES Gaelectric and Tesla have announced the purchase and planned deployment of Tesla Energy's first battery power utility-scale project in Ireland[4], and we expect to develop a 1 MW demonstration project in 2016.

## 3 CONSULTATION QUESTIONS

***Do you agree with our proposed approach to determining the Capability Volume Requirements for the System Services? If not, please specify what alternative method you believe to be more appropriate.***

Gaelectric are concerned that the calculation years are for years 1 & 3, with an interpolation of year 2 and further with a view to retaining the results for year 3 in the subsequent years 4 and 5.

We strongly believe an analysis should be made for year 5 with an interpolation taking place between years 3 to 5 for year 4. Despite renewable target not being in place beyond 2020, there are assumptions on the anticipated development of renewables post 2020 these installations should be used as a proxy to develop the analysis further.

Furthermore, for years 6 onward, we request clarification on when it is anticipated that this analysis will take place. We remind both the TSOs and SEM Committee that for new entrant projects entering into a 2018/ 2019 competition, the early stage development to achieve qualification standards begins considerably in advance of the auction date, and indeed these projects will require certainty inside the next year to understand if there is a business case for their development. We therefore believe that further analysis on future delivery years should be developed and published in 2016 to support forward business planning for all potential service providers, particularly new entrants.

We believe the analysis should extend to a ring-fencing or reserving of services for new entrants in order to provide an appropriate investment signal. This will also serve to increase competition for the provision of this service.

DS3 contracts may require market participants to keep capacity in reserve while Reliability Options may mandate participants to dispatch their capacity during periods of scarcity. These diverging requirements may reduce potential DS3 system service availability. While the Real-Time Volume requirements may not be significantly affected, greater capacity volume requirements may need to be modelled when taking Reliability Option requirements into account.

[3] http://www.gaelectric.ie/wpx/wp-content/uploads/2015/09/107715-Galectric-FTI-Booklet.pdf
[4] http://www.gaelectric.ie/tesla-and-gaelectric-to-introduce-tesla-battery-storage-to-ireland/

***Do you agree with the 2017/18 and 2019/20 plant portfolio scenarios and underlying assumptions presented as the starting point for carrying out the analysis of System Services Capability Volume Requirements? If not, please specify what alternative scenarios you believe to be more appropriate, and why.***

Gaelectric support the assessment of dual scenarios in 2019/20 which will procure the greater volume required by either the *Enhanced Portfolio* and *New Service Providers* portfolio. Specifically, we are encouraged that there has been a recognition that the scaled development of Energy Storage is viewed as being credible in regard to DS3 service provision.

It is not possible to comment on the data within table 4 given it is not clear which technologies have been modelled.

In respect of the 2017/18 scenario, we believe the storage capability to be on the low side given there are already plans for a greater volume of storage to be in-situ by this point. This assumption should be re-examined upwards in the region of 5-10MW.

We reiterate our concern that the portfolio for the 2020/21 and 2021/22 have not been appropriately examined with a view to determining the volumes to be procured in these years. It is clear that there will be a continued development of renewables post 2020, and given the use of the 2015-2024 Generation Capacity Statement for assumptions in other years, we recommend that 2021/22 is examined using the renewable assumptions EirGrid have used for the capacity statement.

## 4 CONCLUSION

Gaelectric support the development of the volume calculation methodology and portfolio scenarios, and we view this as an important step to confirming the volume requirement to be procured in competition under the DS3 programme. This feeds directly into the business model for new entrants.

We are pleased to see that the new scenarios portfolio contains the capability of a substantial volume of storage which we believe will be crucial to the safe and secure operation on the electricity system against the challenges of continued renewable development.

As outlined in our response, we are of the view that there are still some issues that need to be addressed in calculating the system service volumes. Specifically we request that modelling of system service volumes for year 4 & 5 be undertaken using the best available data to ensure any progress made in increasing SNSP and reducing curtailment is maintained.

We welcome the decision to procure the greater volume of system services required under the enhanced capability and new entrant scenarios in 2020/21. Gaelectric anticipate there will be a greater number of new entrants with greater heterogeneity of technologies therefore the TSO's should consider this to ensure that all potential scenarios are covered.

Regardless of which scenario evolves into the future, we would emphasise our view that ***new flexible infrastructure will be required*** to achieve the SNSP levels and minimise curtailment. Gaelectric believe that ring-fencing of auctioned volumes for new entrants would provide a degree of investment certainty and level the playing field for new entrants given the increased risks involved for these projects.

Gaelectric have raised queries within our response which we request clarification on within the decision paper. We look forward to receiving these responses and to engaging with the SEM Committee on the DS3 programme over the coming months.