Electric Ireland Response:

DS3 System Services

Volume Calculation Methodology and Portfolio Scenarios Consultation Paper

3rd December, 2015

DS3 System Services Consultation – Volume Calculation Methodology and Portfolio Scenarios

This questionnaire has been prepared to facilitate responses to the consultation. Respondents are not restricted to this template and can provide supplementary material if desired.

Please send responses in electronic format to DS3@eirgrid.com or DS3@soni.ltd.uk

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Note: It is the TSOs' intention to publish all responses. If your response is confidential, please indicate this by marking the following box with an "x". Please note that, in any event, all responses will be shared with the Regulatory Authorities.

Response ☐ **confidential**

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1. GENERAL COMMENTS

Electric Ireland welcomes the opportunity to respond to this DS3 Volume Calculation Methodology & Portfolio Scenarios Consultation. Electric Ireland generally views each of the DS3 consultations from the perspective of a DSU operator. We are keen to ensure that the system service framework being developed enables and promotes full and effective participation from the demand side. We believe that, given the significant volumes of intermittent generation expected in the I-SEM, there is a significant role for the demand side to play in order to deliver system services to maintain the security of the system. This may be focused initially on the I&C segment of the market but will increasingly include provision from residential and SME market segments and there are important interactions which will contribute to achieving the benefits of the National Smart Metering Program.

From a consumer perspective we appreciate that an appropriate level of system services provision (in combination with the Capacity Remuneration Mechanism) is essential to ensure a resilient and secure system in order to maintain the loss of load expectation (LOLE) at the intended level and avoid the costs of loss of supply to I&C and mass-market customers.

In our response we focus on those areas that particularly impact the scope for DSU participation.

We are broadly supportive of the Volume Calculation Methodology proposed which considers different scenarios for meeting future system services requirements and takes the higher level of each service to form the basis for volume calculations. We have made some further comments in the next section.

Potentially, the Portfolio Scenarios proposed may underestimate the potential provision of system services from the demand side both in terms of scale and type. We provide additional comments in the next section.

2. RESPONSE TO QUESTIONS

2.1 Section 2 – Volume Calculation Methodology

We are broadly supportive of the Volume Calculation Methodology proposed which considers different scenarios for meeting future system services requirements and takes the higher level of each service to form the basis for volume calculations.

The proposal to set initial levels for the last two years equal to the third year, given uncertainties about new wind build beyond 2020, appears reasonable but we understand that this will be kept under review on an annual basis to reflect any changes in (intermittent generation) assumptions.

The process for determining the inter-relationships between real-time volume requirements and capability volume requirements is only very briefly described and would benefit from the establishment of the principles (rather than the specific constraints) to be employed in this process.

Although the process for determining the volume of Steady State Reactive Power requirements appears logical (starting with the refined portfolio and carrying out an n-1 contingency analysis by region), it may be sub-optimal. Relying on the investment in e.g. numerous static compensation devices might be more expensive than further altering the refined portfolio to deliver more reactive power provision from conventional generation and/or demand side providers. This may result in underprocurement of steady state reactive power provision.

This proposed methodology likely results from the difficulty of co-optimising economic dispatch and voltage stability analyses in a full network model over an annual period but potentially a further 'refined portfolio' with enhanced steady state reactive power provision might be considered within the proposed process against an assessment of the cost of additional network devices.

The very simplified approach for determining levels of Dynamic Reactive Response and Fast Post Fault Active Power Recovery might be appropriate if it is now a requirement that all new non-conventional generation have such capabilities.

2.2 Section 3 – Portfolio Scenarios

The scenarios include an additional 140MW of demand side management for 2017/18 and a further 140MW of demand side capacity for 2019/2020 but with the ability to provide reserve differing between the enhanced capability and new service provider scenarios.

The latest Generation Capacity Statement talks very little about demand side resources and is perhaps pessimistic about the prospects for increased demand side participation. Neither did the recent DNV report considering alternative technology solutions for the RoCoF issue see much scope for demand side participation in this context. However, given the direction of travel on imbalance pricing and, in particular, administered scarcity pricing there could be greater demand side capacity developed for the I-SEM than has been assumed.

However, the system services capability of demand side provision is arguably more important than the absolute capacity for this exercise. The portfolio scenarios appear to concentrate on reserve services (although this is not clear from the tables, DSM being grouped together with interconnectors and storage). It is feasible that DSM could provide many, if not all, of the 14 services defined but most likely concentrating on the following services:

- frequency response (FFR & FPFAPR) – e.g. through interruption of refrigeration, heating or charging processes;
- all classes of operating reserve (POR,SOR, TOR1 & TOR2, Replacement Reserve); and
- ramping reserve 1 but also ramping reserve 3 and 8 where the definition of demand response includes on-site generation.

We hope that you find these comments constructive and look forward to contributing to the subsequent DS3 Consultations.