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**

The closing date for responses is Wednesday, 25th November 2015.

Question	*Response*
Determination of Capability Volume Requirements	
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.	IWEA welcomes the opportunity to respond to this consultation on Volume Calculation Methodology and Portfolio Scenarios. IWEA's overriding objective with the DS3 arrangements is that they must deliver the necessary system services, and any required investment for services, to facilitate the achievement of the 2020 renewable targets and minimise curtailment. It is important that new service providers can be incentivised through the system services arrangements. IWEA has a number of comments in relation to the approach for determining the Capability Volume Requirements for the System Services. **Timing of certainty of revenue streams** As outlined in our response to the previous consultation on Competition Metrics IWEA believes that wind farms can play an important role in the provision of system services, however the timelines for certainty in relation to revenues is critical. There will be significant build out of wind farms in the next 2 years in order to be compliant with the REFIT 2 construction deadline. If these wind farms are to invest in enhanced provision of system services it is essential that there is clarity in relation to the revenues that will be available to ensure the investment case is there. There also needs to be clarity that the REFIT calculation does not take these revenues into account as this would erode the value of the investment. For wind farms connecting to the system in the next 2 years, many are currently signing contracts and approaching financial close for their projects. If there is no certainty into the likely DS3 revenues at this time these projects may not be able to deliver the required services as the investment case cannot be made. This is particularly relevant for the provision of DynamiC Reactive Response and Fast Post Fault Active Power Recovery. <u>Steady State Reactive Power</u> As outlined in the consultation, the issues surrounding reactive power/voltage support are very local in nature. The proposed methodology is clear and logical, however, one concern would be in relation to the use of Statcoms in the modelling. A Statcom in a particular location on the

	network can provide a certain amount of reactive power to solve a problem. However, a much higher level of reactive power may be required from other sources to solve the same problem due to their different location(s). **2016/17 Volume Requirements** It is not clear from the consultation paper how or when the volume requirements for system services for 2016 will be evaluated. This is an important area to be decided in a timely manner as the procurement of these services needs to take place early in 2016. We would urge that immediate attention is paid to this aspect. Given the issues to date and the current position of the North South Project, the assumption that it will be built and operational before 2020 would seem optimistic. A sensitivity check should be carried out to assess the impact of a later operational date. **2020/21 and 2021/22 Volume Requirements** The consultation paper outlines that there is no certainty in relation to renewable energy targets beyond 2020 at this time, and therefore proposes that the volume requirements after 2020 will be the same as for 2019/20. While IWEA welcomes that there is certainty provided in relation to the minimum requirements for these years, there should be flexibility to increase the volume of services to be provided if policy determines that higher levels of renewables are required. Consideration should be given to continued extrapolation out to 2022. IWEA welcomes the proposal to set the volume requirements for each service to the maximum value from the portfolio scenarios studied to ensure that prudent columes of system services are procured. **Minimisation of Curtailment** The objective if minimising curtailment is referred to a number of times throughout the consultation paper. IWEA raised the question at the forum in Dundalk as to what is meant by

	this. The response indicated a possible figure of 5% curtailment might be acceptable. IWEA has serious concerns with this figure and requests that scenarios outlining 0% curtailment are modelled. • When the level of support required under the REFIT and REFIT 2 support schemes was calculated, no consideration was given to such high levels of curtailement. Given that support is only paid to electricity generated and not availability, any curtailment has serious impacts on projected revenues. • Constraint Reports were issued to all projects to supplement the Grid Connection Offers. In particular early investments in projects would have been based on lower levels of curtailment than the 5% outlined. • The RES-E Directive outlines that curtailment of renewable generations should be minimised and, in cases where curtailment is required, actions should be identified to **prevent** inappropriate curtailments: *"Member States shall ensure that appropriate grid and market-related operational measures are taken in order to **minimise the curtailment of electricity produced from renewable energy sources**. If significant measures are taken to curtail the renewable energy sources in order to guarantee the security of the national electricity system and security of energy supply, Members States shall ensure that the responsible system operators report to the competent regulatory authority on those measures and indicate which corrective measures they intend to take **in order to prevent inappropriate curtailments**."* IWEA believes that the target curtailment level should be 0% based on the RES Directive. **System Requirements** It would be useful to have a view of what the real time system requirements are and whether this varies depending on the portfolio scenario used.
Plant Portfolio Scenarios	

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.	**Plant Portfolio Scenarios** At the forum in Dundalk, concern was raised in relation to the appropriateness of the plant portfolio assumptions and the lack of reference to new plant. Care should be taken to ensure that the portfolios used in the analysis can reflect the range of possible outcomes. **Wind ranging from 0 MW to 4600MW** – IWEA believes consideration should be given to the wind levels being higher than this on an All-Island basis. It is possible that higher levels of wind may be required to cater for increased levels of demand and to cater for a shortfall in targets in the area of heating and transport. IWEA has recently published a study carried out by Poyry which outlines a number of different wind scenarios out to 2020, focussed on ROI. The highest scenario outlines 5281MW installed wind in ROI to cater for the shortfall in heat and transport, and increased data centre load. The portfolio for 2017/2018 outlines that 3800MW of windfarms will have connected to the system. There is currently 3030MW connected to the All Island system, with a significant number of projects to connect in the next 2 years before the REFIT 2 construction deadline. IWEA expects that there could be in excess of 1000MW, and possibly even up to 1800MW, connecting in the next 2 years and this needs to be taken into consideration. The Enhanced Capacility Portfolio for 2019/20 outlines that approximately 3000MW of the entire wind portfolio of 4905MW will provide FPFAPR and DRR. As outlined above, there is already over 3000MW connected to the system with limited capacility. Much of the remaining fleet is approaching financial close and would need the investment signals within the coming months in order to ensure enhanced capacibility at turbine procurement stage. **Demand ranging from 2000MW to 7000MW** – IWEA questions whether this demand level is appropriate and whether it caters for increased demand arising from the connection of data centres.

	Full import to full export on interconnectors – IWEA supports this assumption however cautions that this capability may not always be available, and notes that steps should be taken to ensure that the ramping capability is improved to the greatest extent possible. **Transmission infrastructure build out and outages** – in the assumptions used for this analysis it is essential that the expectation of build out is realistic. We have seen significant delays to the build out of infrastructure in recent years and the impact of this needs to be taken into account. It is also essential that steps are taken to ensure that infrastructure build can be expedited where possible. Consideration also needs to be given to other technologies which will enable better use of the existing infrastrucure such as Dynamic Line Rating and HTLS technologies. There may be other technologies which should also be investigated and this is to be promoted where possible. **Generation Capacity Statement 2015-2024 –** IWEA notes that work is currently underway on the Generation Capacity Statement 2016-2025. This will be taking additional demand from data centres into account. IWEA suggests that this updated information be used in the Volume Calculation. **TSO vs DSO Connections** – Also, across all scenarios there is no differentiation between TSO and DSO connected service providers. Clarification is required as to whether it is correct to assume no technical and/or regulatory differences between TSO and DSO connected service providers.