DS3 System Services Consultation – Qualification Process

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 our 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 Tuesday, 19 July 2016.

General Comments

IWEA welcome the progress to-date on the DS3 work streams by both the RAs and TSOs, including their work on System Services. We have previously highlighted concerns regarding the timely delivery of the increases in the SNSP limit. The DS3 Program is crucial in increasing the System Non-Synchronous (SNSP) limit, which is essential to ensuring that rising levels of the curtailment of wind generation are minimised to facilitate the investment needed to successfully meet the 2020 target of 40% renewables.

IWEA would like to reiterate that facilitating renewable access to the network and minimising curtailment is also required to ensure compliance with the RES Directive which states that "*appropriate grid and market-related operational measures are taken in order to minimise the curtailment of electricity produced from renewable energy sources*" and that "*if curtailment of renewable energy sources is required to ensure security of supply, systems operators must propose corrective measures to prevent inappropriate curtailments*".

IWEA welcomes the introduction of the DS3 System Services Qualification Trial Process. EirGrid have outlined concerns in relation to some of the system services that they have not yet been proven by particular technologies and that there needs to be a suitable measurements process in place to ensure that the performance can be assessed. Prior to addressing some of the questions included in the consultation paper, IWEA has a number of questions and clarifications that we would like to highlight at this time:

We note that for the trial there will be a limited number of service providers. Clarification is requested that further trials will be facilitated on a regular basis, and in particular in the following circumstances:

- When new technology becomes available
- When the incentives to participate in DS3 change
- Following Grid Code changes
- If/When ancilliary service technical requirements are changed to reflect the potential contribution of wind and other renewables.

Given the delay to the implementation of the Enduring Arrangements for System Services, IWEA notes that the technologies which have been proven under these trails should have the ability to provide these services from October 2017. There should not be a delay to the provision of the remaining three services beyond what was originally expecting (providing the trial results are positive).

IWEA also notes that the DSO will be performing a trial at the Cauteen node for the provision of System Services. If the DSO is satisfied with the results of this trial that these wind farms can provide services, will the TSO also be satisified, or will further testing be required at this stage? IWEA notes the importance of wind farms being able to deliver system services as we move to higher levels of wind penetration, and it is essential that work continues in ensuring that more of the wind farms throughout the distribution system can contribute to the provision of system services. A detailed programme of work needs to be put in place to ensure this is progressed.

Ireland, with a SNSP limit of 75%, will be at the forefront of the global market integration of wind. It is essential that innovation in ancillary service provision from wind generation is encouraged and that grid code definitions and requirements do not preclude intermittent generation from providing services that are valuable to the grid.

Partipaction of wind in the provision of system services is also contingent on a number of other factors, including the interaction of REFIT and system service revenues. There is a lot of uncertainty in relation to the new market design, the interaction of existing support schemes and the treatment of projects out of support which will all impact the ability and willingness of wind to participate in the provision of system services. It is important to ensure that the appropriate framework is in place to enable participation of wind. IWEA seeks confirmation from EirGrid if they are going to constrain a wind farm, and compensate for loss of revenue, to trial reserve and ramping products. If the wind farm is expected to take this financial pain, as well as make software changes etc, it is unlikely many parties are going to step forward.

It should also be noted that upgrades to software or hardware can result in the need for additional grid code testing. Given the current process for testing, the risk of a windfarm being placed in controllability category (i) following any changes may be too great. We would urge that for wind generators that wish to participate in the Qualification Trials, and indeed that wish to invest in providing additional System Services, the requirement for repeating the operational readiness process would be removed and the Grid Code testing requirements be limited. Under current circumstances the risk of being declared Category (i) (uncontrollable) is likely to preclude many wind generators from providing additional System Services.

IWEA remains at your disposal should you wish to discuss any of the aspects of this response, or indeed any other aspects of the DS3 programme, in more detail.

Question	*Response*
Consultation on Qualification Process	
Question 1: Do you agree that the Qualification Process should focus on both "Provenability" and "Measurability"?	IWEA supports the proposals that the qualification process should focus on both provenability and measurability. Given the significant levels of testing which EirGrid and developers will be carrying out in the coming years it is important to limit this testing wherever possible. Monitoring of performance can provide significant levels of data which will help prove a given technology and can help to reduce the amount of testing required, and therefore reduce the need for testing resources to be available.
Question 2: Do you agree that the Provenability Trials should focus on proving only two System Services, as representative of all System Services in those categories of System Services?	IWEA welcomes the approach to trial a reduced number of services which are representative of all system services, as this appears to be a prudent approach which will not require the same level of resources as trialling all services. There should be flexibility in the services to be provided for technologies which might not be capable of providing all services, and would therefore be excluded based on selecting on POR and RM3 as the representative services, acknowledging that this may not cover the entire range and may therefore qualify the technology for a limited range of service provision. We believe that wind has an important role to play for future grid stability and ancillary service provision at times of high wind penetration. However, investment in technology and software to allow this type of innovative development is restricted by current grid code requirements for ancilliary services which have been written and designed for conventional generator capabilities. IWEA requests that the TSO accepts successful trials of system services on other systems as evidence of provenability. If any Providing Unit from the same technology class ("Conventional, Wind, Demand Side,

	Other technologies") has an Ancillary Service contract for a System Service Product, or from any of the 5 different categories, does this mean that the System Service is proven and can be relied on by all System Service Providers with Providing Units in the same technology class? IWEA requests that EirGrid publish, for each technology class, all the system services which are currently contracted under an Ancillary Service Agreement. The DS3 Interim Arrangements require Providing Units connected to the Distribution System to have formal notification that Operational Protocols will be in place by the relevant DSO/DNO. However there are already Providing Units connected to the Distribution System which are contracted for System Services. IWEA requests that EirGrid publish a document summarising what operational protocols which are currently in place and which technology classes these cover. Can Eirgrid confirm if there will be difference made between existing Service Providers and new Service Providers in terms of eligibility to contract being dependent on published operational distribution procedures?
Question 3: Do you agree that the Provenability Trials should focus on the Reserve and Ramping categories of System Services?	IWEA supports the proposal for these trials to focus on the reserve and ramping categories of system services. However we also believe that the fast acting services should be included. Given the emphasis which ahs been placed on RoCoF it is the fast acting services which should be the ones which facilitate a greater level of SNSP as they ensure deterioriation in the system is arrested as quickly as possible. We would note that as the penetration of non synchronous generation increases, there may be a need for the system operators to look at the provision of synthetic inertia and other system services that could be provided by the renewable fleet. The SOs should continue to assess the need for system services from renewables and carry out additional trials when required.

	The DS3 Interim Arrangements precluded Providing Units connected to the Distribution Network from being eligible for SSRP. We believe, in particular, that Providing Units which are connected to the distribution network when there is no demand connected on the distribution network on this side of the distribution/transmission substation should not have been precluded from the DS3 Interim Arrangements. We believe that this pre-qualification requirement should be removed and SSRP should be included in the Provenability testing for all other distribution connected Providing Units.
Question 4: Do you agree that the technology classes targeted in the Provenability Trials should be wind, demand side and 'other technologies'?	IWEA supports the proposed technology classes. It is essential that wind generation is a targeted technology class as wind generation forms a significant part of our generation fleet. IWEA also acknowledges the important role for demand side participation. The provision of a category for "other technologies" enables flexibility for new technologies to come forward and demonstrate their capability.

Question 5: Do you agree that the Measurability Trials should be technology neutral?	IWEA supports the approach that the Measurability Trials should be technology neutral as the measurability of a service is not linked to technology type.
Question 6: Do you agree with the proposed service provision volumes and proposed number of Service Providers to be included in the Provenability and Measurability Trials respectively?	The proposals in relation to the volumes and number of providers seems reasonable, in particular in relation to the provenability trials. For the measurability trials it is important to ensure there is some level of contingeny in the event that one of the providers withdraws from the trial or is unable to provide the service for some reason. There needs to be sufficient data for the SOs to be confident of the results and the low number of providers may impacts this. In the Provenability Qualification Trials the total volume should be split between different sub categories of the technology class if EirGrid are proposing to differentiate between different designs, for example different designs of wind turbines or battery types. If this differentiation is going to be made potentially larger volumes should be trialled.

Question 7: Do you agree with the minimum sizes of Providing Unit proposed for the Provenability trials?	IWEA supports the minimum sizes proposed for the Provenability trials.
Question 8: Do you agree with the proposed evaluation criteria for the selection of participants to take part in the Provenability	Given that there have been 8-10 system events per year it would appear that there may not be 5 events in the 6 month period of the trial, making the objective impossible to achieve. It may be necessary to either reduce the number of events or extend the period of the trial. IWEA's preference is that the trial length remains the same and the rate of success against the actual

Trials?	events that occurred in that timeframe is measured, rather than requiring a specific number of events. Technology specific considerations also need to be addressed, for example if these system events occur at times of low wind, then it is less likely that wind will provide the service at this time, however this does not preclude the provision of the service at times of higher wind when the service is more likely to be required. The proposal for monitoring System Services would need approval from the TSO. IWEA resuests that there be an allowance of a period of time for engagement to ensure that participants aren't ruled out because the proposal does not satisfy the TSO. There may be a need for additional information on methodologies that would not be acceptable, while maintaining flexibility for new approached which may be less onerous. IWEA questions whether capping the payment for the trial at that of the interim tariffs is appropriate given the higher costs that are likely to be associated with it along with the caps for participation. This may reduce the likelihood of projects coming forward to participate. For some of the technology classes they are likely to be operating at their maximum potential output during the trial period (for example wind). Clarification is required as to whether the TSO will constrain down, with full compensation, this type of service provider to demonstrate the capability to provide reserve and ramping products.
Question 9: Do you agree with the proposed evaluation criteria for the selection of participants to take part in the Measurability Trials?	As noted above, IWEA believes that there should be some contingency built into the measurability trials so that non performance of one participant does not impact the whole trial. The results should be independent of jurisdiction and therefore a successful trial in one jurisdiction should provide proof of measurability in both jurisdictions. The consultation paper notes a once-off payment for "successful delivery of the trial". Clarification is required that the one off payment applies to successful participation in the trial rather than successful delivery of the system service. The purpose of a trial is to assess whether the desired outcome can be achieved however it is not guaranteed at thr outset. There is no evidence that any analysis has been carried out to ensure the level of the remuneration is appropriate. It is important to ensure that the remuneration is sufficient to

	ensure successful participation in the trial. Given the level of detail required for the scope of work, it is important to ensure that the benefits are visible to participants.
Question 10: Given the stated aims of the Qualification Process, are there different criteria that would better achieve those outcomes than what is proposed here? If so, what are they and how will they work?	IWEA is generally supportive of the proposals contained in this consultation document has outlined some of our considerations throughout this consultation response and in the general comments at the start of this document.