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Electricity Exchange

Electricity Exchange Ltd,
Unit 62,
Eastlink Business Park,
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Limerick

21 July 2016

Re. Consultation on DS3 System Services Qualification Trial Process

Dear Sir/Madam,

Electricity Exchange is a demand response technology and service provider operating a Demand Side Unit in the Single Electricity Market. We are very supportive of the TSO's determination to drive innovation in order to overcome the challenges posed by high SNSP. We welcome the opportunity to respond to this Consultation on the DS3 System Services Qualification Trial Process.

Please see our responses to the questions set out in the consultation paper overleaf. This response is not confidential and may be published at the TSO's discretion.

Kind Regards,



Dr. Paddy Finn
Managing Director
Electricity Exchange

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Question 1: Do you agree that the Qualification Trial Process should focus on both "Provenability" and "Measurability"?

Yes, we agree that the Qualification Trial Process should focus on both Provenability and Measurability. Provenability is essential to ensuring that new technologies do not create an uncertainty that detract from their contribution to maintaining system security. The enhanced performance requirements associated with the DS3 System Services products will require considerable advancements in the deployed metrology and communications systems in order to enable the validation of the services provided. We believe that this will entail an extensive exploratory exercise in order to ensure a scalable enduring solution that enables provision of service validation. As such, it is imperative that Measurability trials are conducted in parallel with Provenability trials in order to maximise the likelihood of a suitable solution being in place in advance of the 2017/2018 System Services year.

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?

We agree that focusing on one System Services from each of the categories of Reserve and Ramping will provide sufficient evidence of a given technology's ability to provide services in those categories. However, in respect of the Reserve products, the challenge to be accomplished by the three technology classes is speed-of-response. The parties chosen to participate in this trial are naturally incentivised to demonstrate the maximum speed-of-response possible in order to qualify for the provision of faster System Services as part of the interim and enduring arrangements once qualified. As such, we believe that TOR1 should be the requirement for the provision of Reserve. This would enable those participating in the qualification process to demonstrate varying capabilities to deliver TOR1, SOR, POR, and FFR. If POR is the base requirement, then only POR and potentially FFR can be demonstrated. We believe that the qualification process should require the provision of TOR1 but favour participants that are likely to provide the greatest number of Reserve Services.

Similarly, given the nature of the three technology classes, energy limitations are likely to be the most significant challenge faced as part of the provision of Ramping services. As such, the duration of the trialled product will be key so we believe that RM1 should be the requirement for the provision of Reserve with the ability to offer a greater number of Ramping services being preferred.

Question 3: Do you agree that the Provenability Trials should focus on the Reserve and Ramping categories of System Services?

We agree that Inertia is an inherent characteristic of a Providing Unit and does not require qualification trials. However, currently unutilised sources of SSRP may exist within the three technology classes. As such, we believe there may be value to extending the Provenability Trials to include the provision of SSRP.

Question 4: Do you agree that the technology classes targeted in the Provenability Trials should be wind, demand side and 'other technologies'?

We agree with the technology classes targeted in the Provenability Trials and view these as being representative of technologies not already proven as part of HAS, in proportion to their current levels of integration.

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Question 5: Do you agree that the Measurability Trials should be technology neutral?

Yes, we agree that the Measurability Trials should be technology neutral. We do, however, believe that the measurability trials should not be System Service neutral. An all-encompassing technology that is suitable for measuring DRR may not be relevant to a DSU wishing to provide FFR and, as such, may present a cost prohibitive solution and preclude potentially valuable capacity from participating. As such, measurability technologies should provide a cost effective solution for the services that they are required to monitor. We strongly recommend that there is a more than one provider chosen for each of the three technology classes.

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?

In relation to the Provenability trials, we agree with the total volumes to be procured for each of the technology classes and individually for Reserve and Ramping. However, we do not believe that equal proportioning of volumes for each jurisdiction provides equitable opportunity for SEM market participants seeking to participate as not all participants operate in both jurisdictions. We suggest that, while the total volumes should be maintained, they should be apportioned based on the registered capacity in each technology class for Trials 1 and 2 and based on jurisdictional energy market volumes for trial 3.

In relation to the Measurability trials, we strongly disagree with the proposal that there be one Service Provider per service. It does not seem reasonable that the future participation of a technology class would rest on the successful delivery of a measurability system by a Service Provider. Furthermore, said Service Provider would have been chosen based on a response to a tender process which may not be indicative of their future practical success. We believe that the Measurability Trials should act as an extensive technology exercise whereby multiple systems would be assessed in order to define a standard that capitalises on the most desirable characteristics from each trialled Service Provider. For example, it may be found that one Service Provider excels in the delivery of a metrology technology whereas another demonstrates a desirable communications methodology that would better support large scale deployment.

We recommend that there should be an upper limit of no less than 10 Services Providers per Technology Class with jurisdictional apportionment as we have previously recommended for the Provenability trials. We believe that the proposed Measurability Trial payment rates will result in Providers bring grossly underfunded and will require such Providers to subsidise their participation in the trial. Given the impact this trial will have on the future delivery of System Services, an increased trial budget is strongly advised in order to maximise the possibility of a positive outcome.

Question 7: Do you agree with the minimum sizes of Providing Unit proposed for the Provenability trials?

We agree with the minimum sizes of the Providing Unit proposed for the Provenability trials and believe that the rationale behind the reduced minimum size for the 'Other Technologies' trial is well founded. We recommend that prospective Providing Units should be asked to specify a lower and upper volume that they are willing to be procured for and an achievable step size for volumes between their lower and upper limit. For example, a Service Provider may propose to offer a minimum of 1 MW of capacity or any volume above this, in 500 kW increments, up to a maximum of 10 MW.

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We recommend that Service Provider selection should favour the procurement of higher numbers of Service Providers in order to avoid placing the fate of the future participation of a technology class in the hands of a small number of Service Providers.

Question 8: Do you agree with the proposed evaluation criteria for the selection of participants to take part in the Provenability Trials?

We largely agree with the evaluation criteria set out; however, we believe that a low weighting should be places in the requirement for a *Proposal on how the System Service(s) can be monitored* as this is the scope of the Measurability Trial, not the Provenability Trial. As such, measurability should not detract from the perceived ability for a technology to provide a System Service.

Question 9: Do you agree with the proposed evaluation criteria for the selection of participants to take part in the Measurability Trials?

We agree that there should be no minimum or maximum service provision size as this will be dictated by the volumes that have been procured from the new or existing Service Provider with whom the trial is carried out. We do not agree with the objective to provide evidence of performance in one event during the trial period as a single point sample set per Service Provider per Technology Class does not demonstrate reliability and limits the conclusions that can be drawn from the Measurability Trial. Furthermore, we believe that it would be wise for the TSO to work closely with the Service Provider as part of an iterative process in order to facilitate a small amount of adjustment of the systems to ensure the resulting solution is optimal for future in-production deployment.

We understand that in order to complete the Measurability Trial, leaving sufficient lead-in time prior to the 2017/2018 System Services year, it may not be possible to extend the trial beyond three months in order to capture more events. As such, we recommend that the trials be carried out, where possible, with Reserve and Ramping Service Providers that are more likely to see a higher number of events due to their frequency thresholds for example.

We agree with the proposed commercial terms and understand the budgetary constraints; however, we believe that this is will inevitably be a loss making exercise undertaken by Service Providers. We suggest that the requirement for a *Proposal on how the provision of the service can be independently verified* should be considered with a very low weighting as the TSO is the ultimate validator of this exercise and should have responsibility over the verification methodology without significant influence by Service Providers that stand to gain commercially from a successful outcome.

Again, as per our response to Question 6, we do not agree that the number of Service Providers participating in this trial should be limited to six as set out in the proposal.

Question 10: Given the stated aims of the Qualification Trial 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?

We do not have a conclusive response to this question at this point in time; however, we would be happy to engage in discussions with the TSO in relation to possible alternatives.

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