



To: Dylan Ashe  
Commission for Regulation of Utilities  
The Grain House, The Exchange  
Belgard Square North  
Tallaght  
Dublin  
D24 PXW0

Bronagh McKeown  
Utility Regulator for Northern Ireland  
Queens House, 14 Queen St  
Belfast  
BT1 6ED

2<sup>nd</sup> October 2020

### **Response to System Services Future Arrangements Scoping Paper (SEM-20-044)**

Powerhouse Generation (PHG) welcomes the opportunity to respond to the System Services Future Arrangements scoping paper and trust that you will consider it in your deliberations.

#### **Overview**

The electric power systems of Ireland and Northern Ireland are undergoing an unprecedented transformation. The generation mix is increasingly integrating non-synchronous, variable renewable energy sources (VREs), which inherently deliver a less predictable, reliable and controllable power system than do conventional generation. In addition, it is moving away from a linear 'one-way' flow of electricity from centralised, large generators to passive consumers, towards a 'two-way' system where generation and storage is increasingly distributed and embedded deep into the network. As the system transforms, flexibility across the grid will need to dramatically improve in order to continue to deliver a safe and reliable service to all consumers. Fundamentally, activation of flexibility on the demand side will become ever more imperative to delivery of the 2030 70% renewable energy share in electricity (RES-E) target.

Demand response services, such as those provided by Powerhouse Generation (PHG), provide a low-cost quick-to-deploy solution that can deliver a substantial portion of the required flexibility. For this reason, demand-side flexibility has the potential to play an increasingly important role in the transition towards a low carbon economy across Europe.

Within the SEM Powerhouse Generation and other participants are facilitating the integration of the high levels of renewable generation envisaged in both Ireland's and Northern Ireland's energy policy, at fair cost and without the need for large up-front investment, long planning



times and additional grid network changes. We believe that the network operators should be required to activate the full suite of grid flexibility across the curve, starting from the most-cost efficient forms. Specifically, the DSOs should have access to the resources and be incentivised to use flexibility to defer or avoid investments, support cheaper and more timely connections, or to better manage issues on their networks.

### Benefits of Demand Side Flexibility

Some key benefits of demand-side flexibility include-

- Delivery of reserve from No-Load state
- Load following availability of resources
- High confidence of delivery of declared availability
- Retention of value in the economy
- Reduced life-cycle emissions

However, since the genesis of the DSU unit type in the SEM in 2007, the utilisation of some of their most beneficial characteristics have continued to be constrained by the lack of progress made by the TSO to appropriately account for their operational characteristics in the system scheduling tools. Continued efforts to force these unit types to conform to operational characteristics defined by conventional generation plant mean that the system only benefits from the limited subset of their capabilities that align with those of conventional generation plant, and results in unfair appraisal of their value to the power system.

### **Response**

PHG supports, in general, the proposed objective of the project: *to deliver a competitive framework for the procurement of System Services, that ensures secure operation of the electricity system with higher levels of non-synchronous generation.*

We also would promote the following underlying principles-

- Moving to market competitive procurement of services, once the systems (market, scheduling, availability declaration processes, system frequency standards, etc.) can be demonstrated to be sufficiently understood and mature to manage the scheduling of the system in a secure manner;
- In the interim, the existing regime of regulated tariffs should continue. New procurement regimes should not be developed if the intent is to move those services ultimately to market-based procurement;
- Long-term contracts for system services may be required as part of the mix, where the TSO has identified a projected shortfall in same, and market signals are not driving adequate investment;



- The market-based procurement of system services should be co-optimised with energy closer to real time to allow the efficient participation of DSF and variable renewable sources. This will require integration within Real-Time Commitment timeframes within the TSOs processes. and
- A review of the System Services product design should be undertaken, including inclusion of upwards and downwards Balancing Capacity and, once the procurement methodology is understood, an appropriate commitment model can then be developed.

**1) Are there additional requirements in EU legislation or national policy that should be considered as key guidance for the project?**

There is a requirement to be non-discriminating when organising markets and care should be taken when attempting to spread services across various markets (day ahead, balancing, etc) as that could limit or exclude those who do not participate in all markets. Such participation, or lack of, could be a reflection of the technical limitations of the providers, but not a reflection of their ability to provide ancillary services.

**2) What should the role of DSOs be in development of the new arrangements?**

PHG supports both DNO/DSOs having the adequate resources to monitor, dynamically manage, and reinforce where necessary their respective distribution networks so as to minimise the restrictions on distribution connected aggregated providers providing services to the wholesale market in general. Instruction sets for distribution-connected generation (the times or a description of the system conditions where a distributed resource is restricted in delivering response to the wholesale market) are a barrier to the provision of system services, for example, and should be minimised or resolved where possible. The TSO and DSO should not be allowed to set the requirements for, and subsequently deliver into, their own System Services or Flexibility markets, irrespective of the potential initial headline savings which the Regulatory Authorities may perceive.

**3) Should any further assessment criteria be included in this workstream?**

PHG advocates that where possible the selection of assessment criteria should be based on evidence, such as the learnings from other jurisdictions where applicable and relevant. There should be significant emphasis on non-discrimination, as mentioned earlier.

**4) Is the general approach to the Project appropriate and complete?**

PHG also notes that in markets where a non-discriminatory approach to procurement is adopted, a broader base of technologies participate, which assists in mitigating market power concerns. Competitive tendering for co-optimised energy and Balancing Services has as much to do with the experiences of the ISEM Trading & Settlement Code implementation, as it does with the nature of



the products themselves, i.e. System Services. For example, compressed testing of Balancing Market systems prior to the implementation of those systems being complete led to participants being unable to use much of the testing time that was made available, and as evidenced by the Imbalance Settlement Price resettlement project, allowed issues to progress into live market operation.

**5) For which products is a market based approach appropriate? What sort of market based approach is most appropriate?**

PHG are in favour of an approach that from the outset aims to transition all market services towards a market based approach. We do however also acknowledge that during the course of the programme development, as the specific requirements of the system services unfold, it may become apparent that a market based procurement may not be appropriate for all services. Key to the transition to a market based procurement is the “maturity” of the overall system. A set of conditions precedent should therefore be developed to trigger commencement of market-based procurement of services.

**6) For which products is a market based approach not appropriate? Why is a market based approach not appropriate for these products? Will an alternative approach be more economically efficient? What sort of alternative approach should be considered?**

As stated in the response to the previous question, PHG are therefore in favour of an approach that from the outset aims to transition all market services towards a market based approach. We do however also acknowledge that during the course of the programme development, as the specific requirements of the system services unfold, it may become apparent that a market based procurement may not be appropriate for all services.

**7) Do stakeholders believe the current qualification process, is the most efficient approach? Do stakeholders have any alternative proposals?**

As a basic principle PHG are in favour of access to market-based System Services procurement being made available to providers on the basis of achieving sufficient accreditation, rather than access based on procurement rounds. This is similar to the approach adopted for access to the Balancing Market, where a generator can only act as a Balance Service Provider under the Trading & Settlement Code when it has achieved its Operational Readiness Confirmation. If these same principles are applied to market-based System Services procurement, a provider would need to prove its reserve capability under business-as-usual Grid Code testing before accreditation and the market registration processes can be completed.

In the case of entirely new technologies we believe it is appropriate for them to continue to be brought to market through the Qualification Trial Process.



**8) What are stakeholder views on the overall current governance arrangements including the contractual principles, the Protocol Document and the market ruleset? Should these be modified into an overall protocol document which captures all of the rules for providing and procuring System Services with increased regulatory oversight?**

The purpose of the Protocol Document within the current programme is to allow the TSO to adjust the definition of system services as needs arise without the full requirement for Regulatory Authority approval each time. However, in the case where procurement of System Services transitions to a market-based model, possible co-optimised with energy or impacting on energy bidding behaviour, we consider that this type of unilateral flexibility is no longer appropriate. PHG are in favour of a rules-based committee, in line with the T&SC Modifications Committee, where there is a formal process for modifications to be raised, assessed, and adjudicated by the Regulatory Authorities, is appropriate. We suggest that this committee should be separate to the T&SC Modifications Committee, as it will deal with technical issues of Grid Code compliance and products which are outside the scope of the activation of Balancing Services. It should be accessible to representative organisations and indeed new innovative technology providers who might not yet be System Service providers.

**9) Should System Services continue to be funded through network tariffs? Are there views on any alternative arrangements?**

As a general principle PHG supports the continued recovery of ancillary services charges via a levy on demand customers. However, we are not in favour of levying such costs on generation market participants as this will either result in a non-recoverable straight-line unexpected cost for certain participants, e.g. subsidised renewables, or result in higher energy, capacity and system services offers in order to recover the fixed costs from other System Services providers. The latter is likely to raise clearing marginal prices of energy, capacity or System Services for consumers.

**10) Should all services be procured through a single daily auction framework or should bespoke arrangements be developed for the separate products?**

All services that are capable of market-based procurement once the market has become sufficiently mature should be procured through a single market framework. In designing the auction, we encourage consideration of the unique characteristics of variable renewable generation and demand side flexibility, which determine their ability to participate in the market. As the ability of these providers to accurately declare their full availability improves the closer the procurement timeframes move towards real-time.

**11) What are stakeholders' views on the timing of auctions?**

PHG support transition to market-based procurement of system services, co-optimised with energy closer to real time to allow the efficient participation of DSF and variable renewable sources. It is



essential that the alignment of market takes place and the scheduling of plant can be efficient and effective.

**12) Do stakeholders have further views or proposals in relation to auction design?**

Auctions should be aligned with the Real-Time Commitment scheduling process within the TSO, co-optimising energy and demand. This will require coordination with energy offers in the Balancing Market arrangements around Gate Closure, and coordination of the equivalent Gate Closure of System Services offers.

**13) Do stakeholders have any proposals on how best to ensure commitment obligations are met?**

It is premature to discuss the nature of commitment obligation before the auction timeframes (frequency, gate closure) for the procurement of the services have been agreed, and also the definition of those services.

**14) What are the significant interactions within potential System Services product markets and between Systems Services markets and the energy and capacity markets? How should issues arising be addressed?**

The interaction of System Services market with the energy market and capacity market is critically important. The design of a new market-based System Services model is also likely to necessitate a review of certain aspects of both the energy and capacity markets. In our view the scheduling and dispatch process are likely to be impacted. We request that specific attention be given to the potential for higher-priced energy bids to trigger reliability option events (in the absence of genuine capacity shortages). PHG believes that the System Services development should therefore not be constrained by the existing energy and capacity designs, and that changes/improvements to these markets should also be considered as part of the overall design process.

**15) Do stakeholders believe there would be benefit in maintaining the Fixed Contract Arrangements for future procurement runs?**

PHG has a high degree of confidence that the transition to short-term procurement of System Services will lead to an adequate supply of these services. However, we also recognise that within Ireland, we do not have experience of market-based System Services procurement, and therefore no indigenous evidence that this model will encourage adequate investment. We therefore suggest that it would be prudent for the TSOs to develop adequate forecasts of the required System



Services, as this will assist in the identification of potential shortfalls/services that may require long-term contract arrangements to encourage investment.

**16) Do stakeholders have views on the list of additional considerations above? Are there any further issues to consider?**

Further consideration should be given to –

- Investment certainty
- Smoothing transition

**17) What are stakeholders' views on the potential existence of, and options for mitigation of, market power?**

In our view, it is premature to comment in detail on the assessment of market power before we have a more comprehensive understanding of system services definitions and the procurement mechanisms.

On behalf of PHG I hope that you find our response helpful and constructive, and we look forward to hearing from you in due course.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'B. Mongan', enclosed within a thin black rectangular border.

Brian Mongan

Director of Commercial and Operations  
Powerhouse Generation