



SEM-13-060
DS3 SYSTEM SERVICES

**SSE RESPONSE TO SEM COMMITTEE'S
CONSULTATION PAPER**

OCTOBER 2013

INTRODUCTION

SSE welcomes the opportunity to respond to the SEM Committee's consultation paper. We are and remain, very supportive of the efforts of the TSO and the RAs in progressing the DS3 programme. DS3 implementation, of which System Services form a key part, is central to Ireland achieving ambitious RES-E targets.

Our responses to DS3 consultation papers have drawn from a broad range of businesses within the SSE Group, including operational, planning and R&D functions that support a diverse portfolio of generation and demand side technologies. As the consultation paper issued by the SEM Committee focuses on the technical aspects of the TSO's recommendation paper, this response is limited to commentary on the products defined, and the process for delivering the System Services Review.

We understand the reason that the SEM Committee has decided to conduct a detailed Cost Benefit Analysis for the System Services Review. However, the decision to review the economic rationale and commercial arrangements necessarily represents a departure from the DS3 System Services Workstream Plan for 2013 issued by the TSOs. On-time delivery of a full suite of system services is a prerequisite for Ireland achieving 2020 RES-E targets, and the investment decisions to provide those services should be taking place soon.

We would therefore request that a clear, updated Workstream Plan is agreed and made available by the SEM Committee so that investors and developers have a clear indication of expected timelines up to implementation.

If you have any questions regarding our response or require clarity on any of the points raised, please contact Connor Powell at connor.powell@sserenewables.com.

TECHNICAL CHARACTERISTICS OF SERVICES

SSE agrees with the SEM Committee and TSO that an enhanced suite of system services will be required in order to operate the system in 2020.

Some of the definitions for these products may need to change over time, depending on how system requirements change. For example the definition of FFR, in figure 3 of the paper, requires that the energy absorbed (green shaded) should be less than the energy injected (blue shaded). In our discussions, some OEMs have suggested this will not always be feasible, and have requested clear justifications for the requirement.

We have provided some commentary on the technical characteristics of those products to the TSOs, some of which are reiterated below.

Synchronous Inertial Response (SIR) – There is a clear requirement for this product, and SSE would agree with the proposed service definitions, including the additional variant of SIR. SSE would have concerns regarding the upper and lower limits of 15 and 45 seconds. It would seem if the service can be provided it should be remunerated and not limited to within this range.

Fast Frequency Response (FFR) – We agree with the concept of the proposed service definition. As the service overlaps with the Primary Operating Reserve (POR) from 5 seconds to 8 seconds, we assume that providers will be able to offer (and be paid for) both system services.

SSE is running a DS3 demonstration project with EirGrid to demonstrate Fast Frequency Response on a large operational wind farm in Ireland using GE wind turbines. UCD has, as part of this project produced a study assessing the impact that a grid wide role out of this technology would have on the Irish system.

Secondly the study has examined various parameter settings to determine a parameter set which would be most beneficial for the grid. This piece of work has shown that the ‘tuning’ of parameters of the technology is important. SSE feel that some of the parameters of the FFR should be left open or tuneable (within reason) and could be negotiated with the TSO closer to the time of signing the System Service contract.

SSE therefore believes that it could be premature to define parameters now. Leaving the parameters slightly more open (with room for bilateral negotiation) could provide a better system service.

Dynamic Reactive Response (DRR) – We agree with the proposed service definition, but would require further clarity on the monitoring arrangements – who would procure and install the high quality phasor measurement units required?

Steady-state Reactive Power (SRP) – We agree with the proposed service definition, and would also reiterate our view that reactive power provided by DSO connected generators should be included¹. We note that in relation to windfarms the requirement will now go as far as 12% Registered Capacity. It should be noted that not all existing windfarms will be able to achieve this new level as the Grid Code has

¹ We acknowledge that this would potentially be simpler if the contract was with the DSO.

only recently (Q1 2013) changed to this requirement. SSE would not agree that if the site cannot comply with the 12% or lower that it is exempt from payments. Technology which can provide Reactive Power should be remunerated for what it can provide regardless of whether it can meet the minimum requirements of the 2013 Grid Code ver 5.

COST BENEFIT ANALYSIS

While we recognise the SEM Committee's desire to collect further information to inform decisions on the economic and commercial arrangements for System Services, we would stress two points:

- I. Value, not cost:** SSE believes that the commercial arrangements must reflect the value of services to the system. A detailed Cost Benefit Analysis (CBA) will provide a high level evaluation of the economic rationale behind the System Services Review, but we would hope that the CBA will not shift the focus of the SEM Committee's analysis from value to cost (as calculated now). The commercial arrangements for System Services must provide room for innovation, as opposed to just technical efficiency.

- II. Transparency:** We believe that the Terms of Reference for the CBA should be subject to (brief²) consultation, and that the final CBA once submitted to the SEM Committee should be published.

TIMELINES AND PHASED IMPLEMENTATION

Timelines

As previously stated, the decision to review the economic rationale and commercial arrangements necessarily represents a departure from the DS3 System Services Workstream Plan for 2013 as issued by the TSOs. The original Workstream Plan is shown below for reference:

² Bearing in mind the critical importance of timely progression of the DS3 programme.

HIGH-LEVEL PLAN

| TASK NO. | TASK | RESPONSIBILITY | ORIGINAL DUE DATE | DUE DATE |
|----------------|---|----------------|-------------------|------------|
| Phase 1 | | | | |
| SS.1.01 | Project Establishment | TSOs | 31/10/2011 | Complete |
| SS.1.02 | Publish International Review of System Services | TSOs | 20/01/2012 | Complete |
| SS.1.03 | Studies and Analysis | TSOs | 15/08/2012 | Complete |
| SS.1.04 | Preliminary Consultation | TSOs | 31/01/2012 | Complete |
| SS.1.05 | Bilateral Meetings (2 weeks) | TSOs | 29/02/2012 | Complete |
| SS.1.06 | Industry Workshop | TSOs | 15/03/2012 | Complete |
| SS.1.07 | Review of Harmonised Ancillary Services and Generator Performance Incentives since introduction | TSOs | 29/02/2012 | Complete |
| SS.1.08 | Development of Product Options | TSOs | 15/05/2012 | Complete |
| SS.1.09 | Second Consultation | TSOs | 31/05/2012 | Complete |
| SS.1.10 | Development of financial proposals | TSOs | 31/08/2012 | Complete |
| SS.1.11 | Third Consultation | TSOs | 15/11/2012 | Complete |
| SS.1.11.1 | Industry consultation period (8 weeks) | Industry | New Task | 13/02/2013 |
| SS.1.11.2 | Bilateral Meetings | TSOs | New Task | Complete |
| SS.1.12 | Final TSO Recommendations to RAs | TSOs | 30/11/2012 | 31/03/2013 |
| SS.1.13 | SEMC issue Proposed Decision paper | SEMC Committee | New Task | 03/06/2013 |
| SS.1.14 | Phase 2 Implementation Project Plan published | TSOs/RAs | New Task | 30/06/2013 |
| SS.1.15 | Industry consultation period (6 weeks) | Industry | New Task | 15/07/2013 |
| SS.1.16 | Decision by SEM committee | SEMC Committee | New Task | 26/09/2013 |
| SS.1.17 | Detailed preliminary Phase 2 Plan prepared | TSOs | New Task | 10/07/2013 |
| SS.1.18 | Implementation Project initial preparatory work | TSOs | New Task | 30/09/2013 |

These timelines must be updated, and we would request that a clear, updated Workstream Plan is agreed and made available by the SEM Committee and TSO. Investors need to be able to consider when and how the DS3 System Services Review timelines will interact with their own investment decision timelines.

Industry requires a clear sequence of steps to include:

- Review of TOR for CBA
- TOR issued for CBA
- Completion of CBA
- SEMC evaluation of CBA
- SEMC definition of commercial terms of System Services market
- System Services market live

Industry requires target dates set for these steps now. This should be carried out in a similar way to how DS3 mapped out deliverables in its work streams

The SEM Committee's decision paper on ***Treatment of Curtailment in Tie-break situations (SEM-13-010)*** made multiple references to the importance of DS3 and stated that:

“Electricity which is not utilisable by consumers is a waste of resources and so it is of collective benefit to both generators and consumers to reduce the volume of curtailment as much as possible. For this reason the SEM Committee re-affirms its intention to ensure that the TSO’s DS3 programme delivers upon its objectives of continued system security and reliability as levels of non-synchronous generation.”

SSE welcome the SEM Committees involvement and are in favour of the committee taking a more central role in the delivery of the commercial arrangements for the System Services Review. A clear Workstream Plan will give investors comfort that the DS3 programme will retain the momentum necessary for Ireland to achieve its 2020 RES-E targets.

Phased Implementation

The consultation states that:

“The SEM Committee will take into consideration the information provided by the TSOs, and will aim to make clear and timely decisions on each part of the system service review. If necessary, the SEM Committee will consider phased implementation of services.”

One of the advantages of the System Services Review is that a transparent structure for the procurement of all of the enhanced system services required is available for investors and developers. SSE would caution against a move away from that approach.

Piecemeal implementation won’t match how investment decisions for new projects are made. A business case for an investment cannot place any value on uncertain future revenue streams for products that may or may not be procured by the TSO.