



DS3: System Services Workstream

BACKGROUND

The nature of the power system is changing to meet the Governments' policies with respect to renewable energy. This has significant implications for the needs of the power system, particularly in respect of system services. The recent report "Ensuring a Secure, Reliable and Efficient Power System in a Changing Environment" (DS3 report) has indicated that there will be different system services needed, both in magnitude and design in order to securely and efficiently operate the power system of Ireland and Northern Ireland with up to 40% of the electricity consumption coming from renewable sources, in particular (non-synchronous) wind generation. In addition, the power system is changing from other external policy drivers, including increasing interconnection, SEM intra-day trading, future market coupling and the impact of increasing demand side management and SmartGrid initiatives.

EirGrid and SONI have licence and/or statutory obligations to ensure sufficient services are available to be able to operate an efficient, reliable and secure power system. EirGrid, under paragraph 8 (1) (b) of SI 445/2000 and licence condition 3, will ensure sufficient system services are available at all times. Similarly, under licence condition 29, SONI is obliged to contract for sufficient services as may be required to meet the operational and network standards applicable at the time.

System Services are those services, aside from energy, that are necessary for the secure operation of the power system. These services are also referred to as Ancillary Services and System Support Services.

The All Island Energy Market Development Framework (Nov 2004) included, as a goal, the harmonisation of ancillary services (AS) arrangements. The Harmonised AS (HAS) project, which began in January 2008, culminated in the successful implementation of harmonised arrangements in February 2010. The primary focus of the project was to align the arrangements in both jurisdictions, but without including a fundamental review of the services. These arrangements, together with the introduction of generator performance incentives (GPIs) and the enhancement of performance monitoring, have brought about a number of benefits, including parity of treatment in both jurisdictions, greater transparency and a greater focus (from generators) on performance capability and Grid Code compliance. The Harmonised AS arrangements and GPIs provide a platform for a comprehensive review to be undertaken of the types and amounts of system services required.

In light of the impending changes to the power system, this System Services Review should:

- clarify system needs – now and projected for the future,
- review effectiveness of existing services and payment structures,
- develop new services, determine appropriate valuations of these services and develop new/revised payment structures that foster a continued focus on performance and where appropriate drive investment,
- develop and implement an appropriate timetable for the implementation of any new arrangements in order to provide early signals to investors.

It should be noted that the annual tariff review for the Harmonised AS arrangements will continue in parallel to this work and is not part of the scope of this review.

APPROACH

The proposed high-level approach to this review has two phases: the Consultation phase (phase 1) and the Implementation phase (phase 2).

- Phase 1 will have three elements: 1) engagement with the industry to determine the scope of the project and to formally consult on the proposals for System Services, 2) carry out studies and analysis of the operational and commercial impacts of System

Services, 3) bring a recommendation to the SEM Committee. It is expected that phase 1 will take one year. Phase 1 culminates in final proposals and a “go/no go” decision.

- Phase 2 will involve implementation of the new System Services arrangements, including: contractual changes, settlement system changes and testing, rate determination and tariff setting, training, transition planning and go-live. The timescale for phase 2 will depend on the outcome of phase 1. If significant changes to the existing arrangements are proposed, a staged rollout of the new arrangements may be required.

This scope only considers issues in phase 1 as the outcome of this will significantly impact the scope of phase 2. A high level plan with milestones and indicative timelines for phase 1 is described in this project plan and is contained in Appendix 1. During the course of phase 1, a detailed plan for phase 2 will be developed.

SCOPE

The proposed high level scope of the review has been broken into a number of work areas, as described below. Following the first, high-level industry consultation, the scope of Phase 1 will be reviewed and more tightly defined¹. The second stage of consultation is a key milestone and will require agreement between the TSOs and RAs.

PHASE 1 SCOPE:

High Level Approach

Agree the scope of the project including consultation with industry and timelines for the project milestones.

Industry Consultation

A multi-stage consultation process with industry is planned. The first consultation (end 2011) will be high level and will seek views on the structures for System Services, the scope of the review, the contractual arrangements and the degree of interaction with the other components of the wholesale market. The second more detailed consultation stage will incorporate proposals on contractual arrangements, payment and recovery mechanisms, and product options.

Studies and analysis

Building on the work done to date, further analysis will be carried out to determine the required levels of services, identify areas of scarcity and to develop proposals for potential System Services products; this will include financial analysis as required. The technical studies will be divided into two broad areas: dispatch studies (producing future dispatch profiles using a tool such as Plexos) and system studies (e.g. using the TSAT tool to determine minimum inertia requirements).

In addition, the TSOs have commissioned consultants to carry out an international review of the Ancillary Services arrangements in a number of other markets, including an assessment of the HAS arrangements in Ireland and Northern Ireland.

Proposals for System Services products

The development of proposals for System Services products (including potential new services) will be based on a review of the existing products, the results of the analysis

¹ Before the second stage of consultation begins, there will be agreement between the TSOs and RAs on the approach to be taken.

and studies carried out and the outcome of the initial high-level consultation. Early engagement with industry will be important – this will be achieved via the two-phase consultation process described above, which will incorporate industry forums and bilateral meetings. This is further described in the Stakeholder engagement section below.

Performance Monitoring

Performance monitoring processes exist in both EirGrid and SONI that are integral to system operation and managing the System Services arrangements. A review of these processes will be carried out and areas for expansion will be examined. The details of this are contained in a separate, parallel DS3 work plan. Improved quality of performance monitoring may be a requirement for new System Services products.

PHASE 2 SCOPE:

Settlement system design and implementation

The products developed in phase 1 will be high-level in nature. In phase 2, the details will be developed and transformed into business rules and functional specifications, which will be implemented in the settlement system. Further consultation during the implementation phase of the project is likely to be required.

PROJECT PLAN PHASE 1

The System Services Review Phase 1 project plan will consist of three major parts, an initial industry consultation, detailed technical and financial analysis and a second stage of consultation leading to a recommendation to the SEM Committee. Timelines for the project plan are detailed in Appendix 1.

Part 1:

This initial consultation will:

- explain the changing characteristics of the power system and the need for a review,
- provide a roadmap for the review,
- request opinions from industry on the scope of the review, and
- seek views on contractual mechanisms for procuring System Services.

The results of this initial phase of consultation will be reviewed to inform the second stage of the consultation.

Part 2:

Detailed technical and financial analysis is required to inform the development of appropriate products and the level of remuneration required, if any. The purpose of the technical studies will quantify the required system performance to maintain adequate system security with a changing portfolio. The financial analysis will evaluate the need and efficacy of System Services in achieving this. The financial and technical outputs will inform the second stage of consultation with industry.

Part 3:

The second stage of consultation will provide proposals in terms of the nature of products being offered, the mechanism for monitoring the performance of these services and the level of remuneration for, and the contractual nature of the services. This second stage may consist of multiple consultations. It is envisaged that at the end of this second stage, a recommendation will be made to the SEM Committee for approval.

STAKEHOLDER ENGAGEMENT

The System Services review is relevant to future investment in the Ireland and Northern Ireland power system. To this end, the TSOs will engage systematically with industry through the following processes:

- After the first consultation, the TSOs, with RA participation, will set aside two weeks where all participants are invited to meet bilaterally and discuss issues that they believe are relevant for consideration in the System Services review. These meetings will be scheduled for Dublin or Belfast as appropriate. The meetings will be kept confidential but the list of participants afforded a meeting will be published.
- The DS3 industry advisory council will be used as a forum to discuss the approach to the System Services review plan.
- A number of forums open to all participants will be held to update the industry on progress and to present details of the product options prior to the publication of the second consultation.
- The consultations themselves will offer a formal avenue for participants to engage with the TSO on the System Services Review. It is the intention of the TSO to publish all responses received.

APPENDIX 1 – HIGH-LEVEL PROJECT PLAN

