



DS3 System Services Project Plan

Detailed Design and Implementation Phase

Dated: 20/5/2015

Executive Summary

The System Services work stream within the DS3 Programme relates to the procurement of services from generators, other market participants and other connected entities to support the realisation of 75% System Non-Synchronous Penetration (SNSP) on the island of Ireland by 2020. It is a significant component of the broader Programme and comprises a number of complexities and inter-related issues, and important policy interactions with the I-SEM Programme being concurrently undertaken.

In December 2014, the SEM Committee published a decision paper on the high-level design for the procurement of DS3 System Services (SEM-14-108) (“the Decision Paper”). The Decision Paper also set out the SEM Committee’s emerging thinking on many aspects of the detailed design and implementation of the new arrangements.

Following on from the decision, the Regulatory Authorities (CER and UR) and the TSOs (EirGrid and SONI) have worked together to develop a project plan for the detailed design and implementation phase. A draft version of this plan is included in Appendix A. The draft is intended to be finalised by September 2015, following a more detailed review of some of the design aspects (outlined below) with the assistance of consultants currently being procured.

The following are key points to note:

- The starting point used to develop the project plan was the set of milestones established in the Decision Paper, in particular the dates for the following key deliverables:
 - 1st Oct 2016: Interim Tariff
 - Q1 2017: First Auction Run
 - Q4 2017: Go-live of first competitively procured services
- The SEM Committee proposed that work to deliver the DS3 System Services arrangements be undertaken across six workstreams, as follows:
 - WS1 - Regulated Tariffs
 - WS2 - System Services Volumes
 - WS3 - Qualification Process Design
 - WS4 - Auction Design
 - WS5 - Contract Design
 - WS6 - Product Design and I-SEM
- The TSOs have also identified additional tasks and deliverables that will need to be completed but which do not naturally fall under the original SEM Committee-proposed workstreams. These relate to settlement, control centre tools, and codes amongst other items. The TSOs are currently working to develop plans to deliver these various additional deliverables that are essential to ensure operational readiness.
- The timelines set out in the Decision Paper are challenging. Therefore it is noted that the plan as set out here will be reviewed as the project develops. However, the

Regulatory Authorities and the TSOs are committed to meeting the milestones set out in SEM-14-108.

- The following are some particular areas which require further assessment by the Regulatory Authorities and TSOs in finalising the Project Plan:
 - Procurement
 - Qualification Process
 - Other procurement exercises
 - IT systems
 - Auction platform
 - Settlement system
 - Operational tools
 - Performance monitoring infrastructure
 - Complexity of aspects of the design
 - Other TSO readiness activities
 - I-SEM interactions and alignment of incentives

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1. Introduction

In December 2014, the SEM Committee published a decision paper on the high-level design for the procurement of DS3 System Services (SEM-14-108) (“the Decision Paper”). The Decision Paper also sets out the SEM Committee’s emerging thinking on many aspects of the detailed design and implementation of the new arrangements.

The TSOs have a legal obligation to procure the system services necessary for the safe operation of the system. It is an objective of the implementation of the DS3 System Services Procurement Design that, while fulfilling this obligation, the aims of the DS3 Programme are met in terms of facilitating increased penetration of renewables in a manner that will benefit the consumer by creating appropriate incentives on generators to facilitate the optimal trade-off between efficient production of energy, supporting system security and capacity reliability.

Following on from the decision, the Regulatory Authorities (CER and UR) and the TSOs (EirGrid and SONI) have been working together to develop a project plan for the detailed design and implementation phase. This document provides a high-level overview of the project plan as agreed by the Regulatory Authorities and the TSOs. The approach being taken by the Regulatory Authorities and the TSOs in delivering the arrangements, as well as the roles and responsibilities of the relevant organisations are also described.

The detailed project plan can be viewed in Appendix A.

2. High-level overview

The detailed design and implementation of the DS3 System Services arrangements will be subject to joint project oversight by the Regulatory Authorities and the TSOs.

The plan has been developed to deliver the arrangements in line with the key milestones set out in the SEM Committee’s decision paper. These milestones and the associated expected delivery dates are shown in Table 1.

Date	Milestone
Q1 2015	TSO Procurement Strategy
Q4 2016	Interim Tariffs in place
Q1 2017	First Auction run
Q4 2017	Go-Live of first competitively procured services

Table 1: Key milestones

The SEM Committee proposed that work to deliver the DS3 System Services arrangements be undertaken across six workstreams. These workstreams are as follows:

- WS1 - Regulated Tariffs
- WS2 - System Services Volumes
- WS3 - Qualification Process Design
- WS4 - Auction Design

- WS5 - Contract Design
- WS6 - Product Design and I-SEM

The TSOs have proposed that an additional workstream should be included to capture other tasks that the TSOs will need to complete but which do not naturally fall under the SEM Committee-proposed workstreams:

- WS7 – Operational Readiness

3. Governance

This project will be incorporated into the existing broader DS3 governance arrangements. This will ensure consistency between System Services and the other DS3 workstreams.

The Regulatory Authorities and the TSOs will work together to deliver the arrangements as set out in the Decision Paper and in accordance with guidance from the SEM Committee on important items such as the framework for auction design¹. This will complement approvals sought from the SEM Committee at all key junctures in the project, as set out in the Project Plan. Consultation papers drafted by the TSOs will be agreed with the Regulatory Authorities prior to publication.

The Regulatory Authorities and the TSOs are cognisant of the need to manage the interactions between System Services and I-SEM. The Regulatory Authority and TSO teams responsible for System Services and for I-SEM will engage frequently and will hold quarterly meetings to ensure alignment between the approaches being taken in each project.

Stakeholder engagement will be an important part of the process. In addition to the established DS3 stakeholder engagement, such as the Advisory Council, the Regulatory Authorities and/or the TSOs will hold public workshops around key issues.

4. Project Approach

The starting point used in developing the project plan was the set of SEM Committee milestones shown in Table 1, but in particular the delivery dates for the following key deliverables:

- 1st Oct 2016: Interim Tariff
- Q1 2017: First Auction Run
- Q4 2017: Go-live of first competitively procured services

¹ The SEM committee has introduced a scheme of delegation which establishes a Regulatory Authorities' Project Board for the DS3 System Services Project. The Regulatory Authorities' Project Board is authorised to make decisions on behalf of the SEM Committee in relation to this project. The Regulatory Authorities' Project Board requires a quorum of one Director from CER and one Director from the Utility Regulator.

The scheduling of the various tasks under each workstream is to facilitate meeting the above timelines. This has involved significantly compressing the time durations allocated for some tasks and, in so far as possible, scheduling tasks to be completed in parallel.

In the following subsections, the approach to public consultations is presented and the assumptions on the roles and responsibilities of the various parties involved in the delivery of the DS3 System Services arrangements are described.

4.1 Consultations and industry interaction

The Regulatory Authorities and the TSOs will engage with stakeholders throughout the DS3 System Services Detailed Design and Implementation Project and provide opportunities to stakeholders to input at numerous points.

Public consultations will be held on a range of important components of the detailed design for DS3 System Services procurement. It is envisaged that 12 separate consultations will be held by the TSOs or SEM Committee across the six workstreams proposed by the SEM Committee. It may be possible to amalgamate some of these consultations. The consultations that could potentially be combined, and the pros and cons of doing so, are discussed in Section 5. There may also be additional consultations held on aspects of the work being undertaken by the TSOs as part of the operational readiness activities.

In developing the plan, the Regulatory Authorities and the TSOs have endeavoured to avoid overlapping consultations in so far as possible. However, given the challenging timelines and dependencies in the plan, it has been necessary to schedule overlapping consultations in some instances.

Every effort will be made to provide sufficient time for stakeholders to consider the consultation material and to provide responses. However, there is a need to balance the duration of the consultation periods with the overall delivery timelines. The Regulatory Authorities and the TSOs plan to consult on substantial matters pertaining to each workstream for 6 weeks. The rationale for any deviation from this 6 weeks period will be explained and take into consideration the importance or complexity of the issues being consulted on. The TSOs expect in most cases to host a workshop at the opening of the consultation period to facilitate explanation and discussion of the issues. The Regulatory Authorities and TSOs will engage with stakeholders on the approach to consultation. SEM Committee feedback and approval will be sought by the TSOs following each significant step in the process.

Aside from public consultations and workshops/forums, the TSOs will continue to communicate with stakeholders on implementation progress and other matters via the DS3 website and email.

4.2 Steps in consultations

The Regulatory Authorities and TSOs are committed to being open and transparent in implementing the DS3 System Services workstreams and in consulting with stakeholders. In

that context, the following outlines the process that should be employed for each proposed TSO-led consultation²:

1. The consultation paper is published on the EirGrid, SONI, and SEM Committee websites outlining the proposed approach to the issue(s) being consulted on.
2. Stakeholders have 6 weeks (or whatever period of time is allocated) to submit a response to the TSOs.
3. The TSOs review the submissions from stakeholders and the TSOs prepare a recommendations paper that takes due consideration of the views of stakeholders. These submissions will also be made available to the Regulatory Authorities for their review.
4. The TSOs submit the recommendations paper to the Regulatory Authorities' Project Board for feedback or approval, depending on the context.
5. The SEM Committee will approve or provide feedback (where appropriate) on the TSOs' recommendations papers. All recommendations papers will be published on the EirGrid, SONI, and SEM Committee websites.
6. When making a formal decision, the SEM Committee considers the TSOs' recommendations paper, as well as all responses received from stakeholders, and issues a decision paper.

Given the challenging delivery dates for DS3 System Services implementation, careful consideration needs to be given to this process to ensure that stakeholders are provided with sufficient opportunity to express their views and have them considered, while simultaneously ensuring that the timelines associated with the process are such that the TSOs and SEM Committee are able to deliver the arrangements in a timely manner.

4.3 Assumptions on roles and responsibilities

The detailed project plan in Appendix A outlines the assumptions on the responsible party for each task/deliverable on the plan. At a high level, in developing the project plan, the assumption on the respective roles of the Regulatory Authorities and the TSOs in the detailed design and implementation phase is based on the Decision Paper and can be summarised as follows:

- **TSOs:** It is assumed that the bulk of the work on the detailed design and implementation phase will be led and conducted by the TSOs, including *inter alia*:
 - Development of the Regulated Tariff methodology, establishment of the BNE model (or similarly structured methodology) and calculation of tariffs;
 - Development of the methodology and scenarios for forecasting DS3 System Services volumes and calculation of volumes;
 - Development and running of the Qualification Process and subsequent recommendation to the SEM Committee on which services to procure competitively;
 - Detailed design of the auction, specification and procurement of the IT auction platform, and subsequent running of the auction;

² Where the TSOs have limited involvement in the development of the proposals being consulted on, the consultation will follow the established regulatory process.

- Establishment of the detailed contractual arrangements;
- Development of the scalar methodology and enduring process for revising scalars, and implementation of the scalars;
- On-going interaction/co-ordination with the TSOs' I-SEM Detailed Design Project team;
- Completion of various internal TSO operational readiness activities;
- Conducting public consultations on the following:
 - Regulated tariff calculation methodology;
 - BNE model (or similar) and resulting interim tariff for each service;
 - Scenarios for forecasting DS3 System Services volumes;
 - Methodology for forecasting DS3 System Services volumes;
 - Indicative volumes to be used in the auction;
 - Template DS3 System Services contract;
 - Scalar / performance monitoring methodology and enduring process;
 - Enduring Process: BNE model (or similar), volumes and resulting regulated tariff for each service.
- **SEM Committee:** Based on the Decision Paper, the role of the SEM Committee and Regulatory Authorities during the detailed design and implementation phase will encompass, amongst other items, the following activities and responsibilities:
 - Conducting public consultations on the following:
 - Qualification Process (criteria and other requirements);
 - Competition metrics for assessing the level of competitive tension for each service;
 - Contractual principles;
 - Detailed auction design.
 - Providing guidance to the TSOs on the following:
 - Criteria for use in the Qualification Process;
 - Competition metrics for assessing the level of competitive tension for each service;
 - DS3 System Services contractual arrangements.
 - Making decisions on / approving TSO proposals (some of which will have resulted from TSO-led consultations), including *inter alia*:
 - All tariff levels and DS3 System Services volumes as well as the methodologies and scenarios underpinning their calculation;
 - Procurement mechanism for each service i.e. tariff or auction, in light of the application of the competition metrics;
 - Final DS3 System Services contract design;
 - Scalar / performance monitoring methodology and enduring process.

The TSOs' project team will work closely with the Regulatory Authorities to ensure that the work being delivered is aligned with the SEM Committee's vision for DS3 System Services and also that the arrangements are developed in a manner that is mindful of and consistent with the parallel work being conducted on the I-SEM detailed design. The TSOs will provide

regular progress reports to the Regulatory Authorities and SEM Committee in accordance with the project's governance set out in section 3.

5. Workstreams

In this section, a brief overview of each of the seven workstreams is presented. The key tasks / deliverables are discussed and the envisaged public consultations are listed.

5.1 WS1 – Regulated Tariffs

In this workstream, the TSOs will develop the methodology for calculation of the regulated tariff and, following consultation, proceed to develop the BNE model (or similar structured methodology) and calculate the interim regulated tariffs for each service. This is a stepped approach with feedback and/or approval from the SEM Committee sought after each stage of the process. Table 2 shows the planned consultations for this workstream.

No.	Consultation	Responsible Party	Date
C.1	Methodology for Regulated Tariffs	TSOs	Q3/Q4 2015
C.2	BNE Model and Interim Regulated Tariffs	TSOs	Q1/Q2 2016
C.3	BNE Model, Volumes and Regulated Tariffs	TSOs	Q2 2017

Table 2: WS1 consultations

It is envisaged that, following approval by the SEM Committee, the interim tariffs will be published in Q3 2016 ahead of the go-live in October 2016. Figure 1 shows the key milestones for Workstream 1.

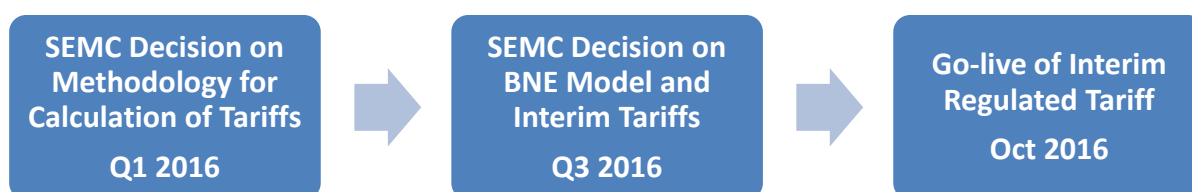


Figure 1: WS1 key milestones

5.2 WS2 – System Services Volumes

This workstream is focused on calculation of forecast DS3 System Services volumes. In Q2 2015, the TSOs plan to develop the scenarios to be used for volume calculation and the methodology to be employed for the delivery of the target 75% SNSP outcome. The TSOs propose that separate consultations will be held on the scenarios and methodology in Q3 2015. These have of necessity been scheduled to run in parallel to condense the overall timeline for this workstream.

These consultations could be combined into a single consultation. While this would have the benefit of consolidating responses from stakeholders and streamlining decision-making, if issues arise on one of the topics that results in a need for longer consideration then a decision on the other topic could be delayed also.

Following approval of the scenarios and methodology by the SEM Committee, the initial

volume analysis will be conducted with the results planned to be consulted on in Q1 2016 and published in Q2 2016. Table 3 shows the three planned consultations for this workstream.

No.	Consultation	Responsible Party	Date
C.4	Scenarios for Volume Calculation	TSOs	Q3 2015
C.5	Volume Calculation Methodology	TSOs	Q3 2015
C.6	Volume Analysis Results	TSOs	Q1 2016

Table 3: WS2 consultations

The initial forecast volumes will be re-evaluated following analysis of the successful submissions in the Qualification Process. The proposed final volumes will be submitted to the SEM Committee for approval in Q4 2016 ahead of the planned auction in Q1 2017. Figure 2 shows the key milestones for Workstream 2.



Figure 2: WS2 key milestones

5.3 WS3 – Qualification Process Design

This workstream is focused on designing and running the Qualification Process³, which will select the projects eligible to compete for DS3 System Services contracts and which will allow an assessment of the competitive conditions for each of the 14 services.

The Regulatory Authorities will develop the qualification criteria (and other requirements) and the “competition metrics” to be used. The TSOs will engage with the Regulatory Authorities during this development process to ensure that the resulting criteria/metrics are consistent with procurement regulations.

Following consultation, the Regulatory Authorities will provide guidance to the TSOs on these aspects of the process. Table 4 shows the planned consultations for this workstream. As for Workstream 1, it is possible to have a single consultation rather than two separate consultations with similar pros and cons associated with each option.

No.	Consultation	Responsible Party	Date
C.7	Qualification Criteria and Other Requirements	SEMC	Q3/Q4 2015
C.8	“Competition Metrics”	SEMC	Q3/Q4 2015

Table 4: WS3 consultations

³ Please note that the term “Qualification Process” is used in this document as a working title to refer to the “Pre-Qualification Process” as defined in the SEM-14-108 decision paper. The title has been changed as the term “Pre-Qualification” has a very particular meaning in procurement regulations.

The TSOs will develop the scope and approach to the Qualification Process in the context of the procurement regulations that apply to the TSOs. The Qualification Process will open to industry in Q2 2016. Following analysis of the submissions, the TSOs and Regulatory Authorities will publish the aggregated results and the TSOs will make a recommendation to the SEM Committee on the procurement mechanism for each service with a SEM Committee decision on same in Q4 2016. Figure 3 shows the key milestones for Workstream 3.

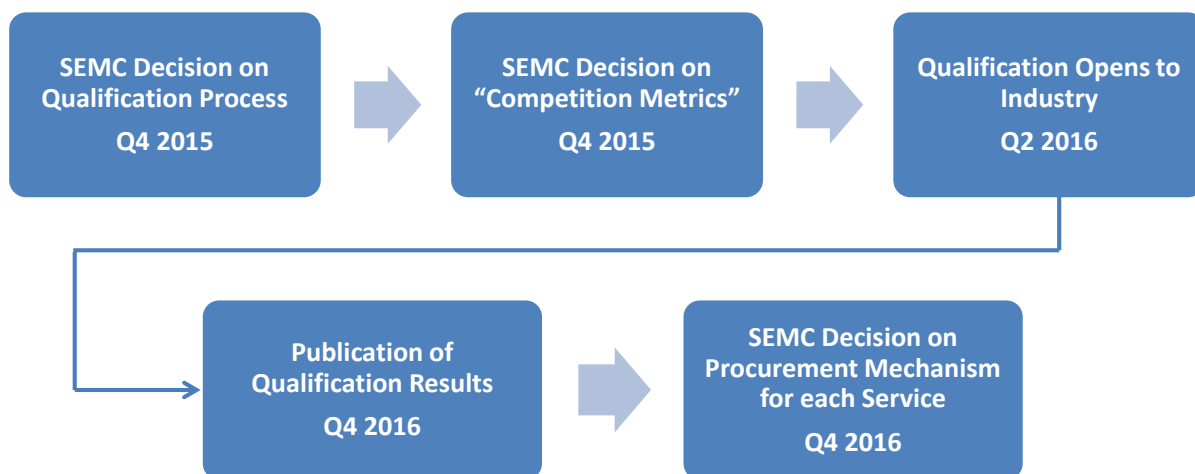


Figure 3: WS3 key milestones

5.4 WS4 – Auction Design

The Decision Paper provides the high-level design framework for the auction. This workstream focuses on developing the detailed design for the auction, procurement and development of the auction platform, and the subsequent first running of the auction.

The Regulatory Authorities will retain final responsibility for detailed design decisions. Due to the challenging timelines, a single consultation on the detailed design is planned for this workstream with a SEM Committee decision expected in Q4 2015 - see Table 5. The TSOs will develop the detailed design of the auction liaising as appropriate with the Regulatory Authorities during this process.

No.	Consultation	Responsible Party	Date
C.9	Detailed Design of Auction	SEMC	Q3/Q4 2015

Table 5: WS4 consultations

Figure 4 shows the key milestones for Workstream 4. Following the SEM Committee decision on the detailed auction design, procurement of the auction platform will commence with completion of the procurement process expected in Q2 2016. The IT design and build of the auction platform is planned for completion in Q4 2016 to allow time for testing in advance of running the first auction in March 2017. The Regulatory Authorities and the TSOs are

examining the feasibility of running the auction earlier in Q1 2017 in the context of the interaction with and timing of the Capacity Remuneration Mechanism (CRM) auction.

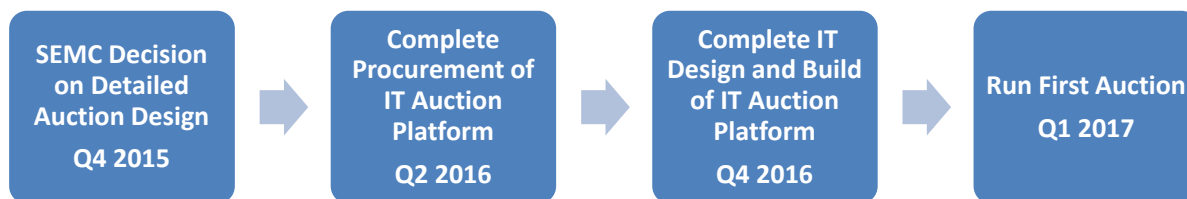


Figure 4: WS4 key milestones

5.5 WS5 – Contract Design

In this workstream, the contractual arrangements and terms and conditions associated with DS3 System Services contracts will be developed. The transition from the Harmonised Ancillary Services (HAS) arrangements to the new DS3 System Services contracts will be managed through this workstream.

The Regulatory Authorities will develop a contractual principles paper for consultation. The purpose of this consultation is to gather the views of stakeholders on these principles to feed into the development of the detailed template contract. The proposed template contract will be consulted on in Q1 2016 with a SEM Committee decision anticipated in Q2 2016. Table 6 details the planned consultations for this workstream while Figure 5 shows the key milestones.

The transition between HAS and DS3 System Services will need to be managed carefully. As can be seen in Figure 5, it is anticipated that termination of the HAS contracts and processing of the new DS3 System Services contracts for the Interim Tariff arrangements will be completed by Q3 2016. Further processing of contracts arising from the auction results will be completed in Q3 2017 in advance of the go-live for the first competitively-procured DS3 System Services in October 2017.

No.	Consultation	Responsible Party	Date
C.10	Contractual Principles	SEMC	Q3/Q4 2015
C.11	Proposed Template Contract	TSOs	Q1 2016

Table 6: WS5 consultations

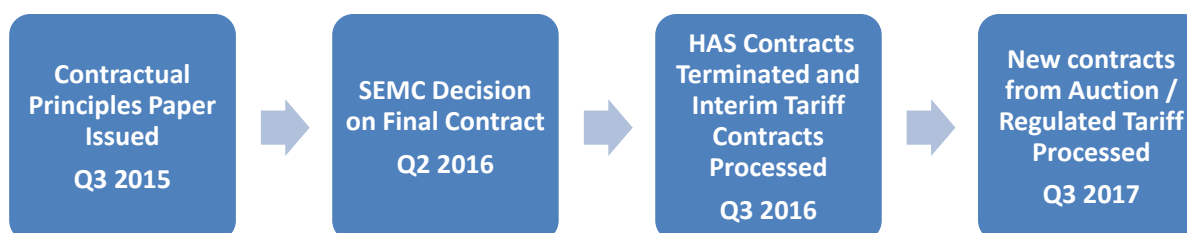


Figure 5: WS5 key milestones

5.6 WS6 – Product Design and I-SEM

The focus of this workstream is on the following activities:

- Development of the methodology for each of the four proposed scalars;
- Development of the enduring process for revising scalars;
- Development and implementation of the performance monitoring arrangements;
- Management of interactions with the I-SEM arrangements.

The TSOs will develop the scalar methodology and arrangements by Q3 2015 before going to consultation on it (as shown in Table 7). It is anticipated that a SEM Committee decision on the scalar arrangements will be made in Q1 2016 to allow for implementation of the arrangements during the remainder of 2016.

It is planned to have the Volume, Product and Scarcity scalars implemented by Go-Live of the Interim Tariff arrangements (October 2016). However, go-live of the Performance Scalar is planned for Q1 2017. The approach to be taken to performance monitoring in the period from October 2016 through to go-live of the Performance Scalar has not been decided and will need to be carefully considered. Figure 6 shows the key milestones for Workstream 6.

No.	Consultation	Responsible Party	Date
C.12	Scalar / Performance Monitoring Methodology and Enduring Process	TSOs	Q3/Q4 2015

Table 7: WS6 consultations

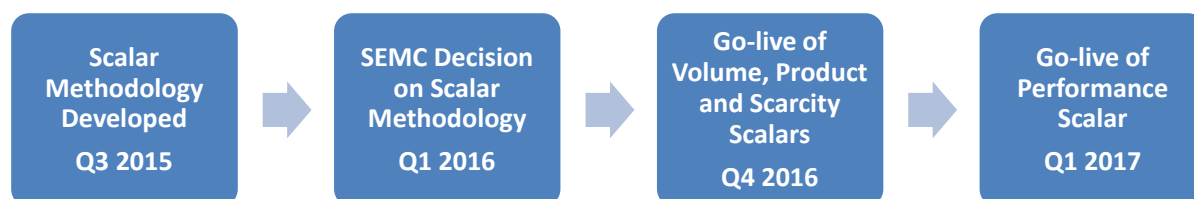


Figure 6: WS6 key milestones

5.7 WS7 – TSO Operational Readiness

The TSOs have identified additional tasks and deliverables that will need to be completed but which do not naturally fall under the SEM Committee-proposed workstreams. These relate to settlement, control centre tools, and codes amongst other items – see Figure 7 for the high-level subject areas for which deliverables have been identified.

The TSOs are currently working to develop plans to deliver these various additional identified operational readiness deliverables.



Figure 7: WS7 focus areas

6. Next steps

The timelines proposed by SEM Committee for delivery of the DS3 System Services arrangements are challenging. The Regulatory Authorities and the TSOs have identified key delivery dates set out in the Decision Paper and scheduled the various tasks under each workstream to facilitate meeting the deadlines. This has involved significantly compressing the time durations allocated for some tasks and, in so far as possible, scheduling tasks to be completed in parallel.

The Regulatory Authorities and the TSOs will continue to work to assess and refine the Plan during the implementation of the project. The following are some particular areas, which are being assessed further by the TSOs:

1. Procurement:

- **Qualification Process:** The Qualification Process and subsequent awarding of contracts (via tariff and/or auction) will need to be conducted as part of an established approved procurement procedure⁴. All of the work involved in developing the DS3 System Services volumes and regulated tariffs as well as the qualification criteria, data requirements, and “competition metrics” (and the associated SEM Committee decisions on all of these matters) will also likely need to be completed in advance of the commencement of this element of the procurement process. In developing the plan, a number of assumptions have been made on how this procurement process will work but the detail (including dependencies and timelines) is being developed further by the Regulatory Authorities and the TSOs.
- **Other procurement exercises:** In developing the plan, a number of assumptions on the likely timelines for each envisaged procurement exercise have been made. The Regulatory Authorities and the TSOs are continuing to

⁴ Both the Regulatory Authorities and the TSOs operate under EU and national public procurement rules requiring that a competitive process be carried out in an open, objective and transparent manner in order to achieve best value for money. Depending on the expected value of a tender exercise, there can be lengthy timelines involved in advertising a tender, pre-qualifying tenderers, calling for proposals and evaluating submissions.

assess the feasibility of completing the procurement exercises in the timelines included in the plan.

2. **IT Systems:** Successful delivery of the DS3 System Services arrangements will involve the establishment of new IT systems as well as changes to existing IT systems. Some of the IT-related deliverables currently being worked through in greater detail by the TSOs are as follows:
 - **Auction platform:** The TSOs have made high-level assumptions on the timelines associated with the detailed design, procurement, design, build, and test of an IT auction platform. The TSOs are working to develop a deeper understanding of the likely timelines. Given the challenging delivery dates for the DS3 System Services arrangements and the bespoke nature of the proposed auction design, there is a strong possibility that a simplified in-house developed auction platform will need to be used for the first auction run in Q1 2017;
 - **Settlement system:** Significant changes to the EirGrid and SONI settlement systems will be required to accommodate the introduction of new DS3 System Service products (as well as modifications to some existing products) and new scalars. The feasibility of specifying and implementing the changes in the TSOs' settlement systems in the required timelines is being assessed.
 - **Operational tools:** These are required irrespective of the procurement design and have been included in both TSO price submissions.
3. **Performance monitoring infrastructure:** The scope of the existing TSOs' Enhanced Performance Monitoring project does not cover DS3 System Services. The feasibility of designing and rolling-out the IT and communications infrastructure needed to deliver performance monitoring for both the new services and new providers in the timelines required needs to be assessed further.
4. **Complexity of aspects of the design:** There is considerable complexity associated with some aspects of the procurement design (e.g. BNE tariff calculation methodology (or similarly structured methodology), multiple bid auction methodology). Further investigation of the more complex aspects of the arrangements is required to confirm their feasibility and the timelines currently allocated to their development in the plan. The TSOs intend to engage consultants to assist with these complex aspects of the detailed design and implementation. It is assumed that consultants with the required expertise will be available and can be appointed in the timelines included in the plan.
5. **Other TSO readiness activities:** The TSOs are working to develop plans for other TSO readiness activities such as possible changes to codes and control centre tools.
6. **I-SEM interactions:** Further consideration is required on the interaction between DS3 System Services both on a design level (e.g. balancing arrangements) and a delivery level (e.g. timing of DS3 System Services and CRM auctions). More broadly the project team will work to ensure an alignment of incentives is delivered across energy production, system services and capacity reliability. This will maximise the

benefits to consumers on the island of Ireland in both the short term and the long term.

