



Design and Implementation of Integrated Single Electricity Market (I-SEM)

Agreed Approach Document

Project Organisation and Working Arrangements

9 January 2015



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1 Document Control Details

1.1 Version History

Version	Date	Author	Comment
V0.1	16/09/14	Fiona Hanaphy	This version represents updates in text and also a change in format. The previous AAD is now superseded and is replaced with this NEW document to allow for improved formatting. This version is to be circulated between the TSO's and RAs for the Joint PB Meeting 19 th Sept 14
V0.2	22/09/14	Fiona Hanaphy/Nigel Thomson	Updates following JPB Meeting 19/09/14 and F2F meeting 22/09/14 at EirGrid. This version is not yet approved by the TSO
V0.3	02/10/14	Fiona Hanaphy	Updates from September SEMC meeting on 25/09/14, Steering Group meeting on 25/09/14 and edits received from Simon Grimes on 24/09/14
V0.4	14/10/14	FH/EG/AE	Update following joint project Board Meeting 14/10/14
V0.5	19/11/14	LG	Update following October SEMC meeting and Joint Project Board of 14/11/14. Most significant amendments made to Annex 2 (Expenditure Recovery Framework). This version of the AAD is consistent with the content of the RAs' PID.
V0.6	02/12/14	LG	Update following Joint Project Board on 1 December 2014 where clarification was given and consensus was reached on the wording of Appendix 2. Updates also provided by the TSOs to complete Milestone table in section 5.
V0.7	08/12/14	LG	Update following second Steering Group meeting of 8 December 2014. Consensus reached on content, subject to minor editorial changes.

1.2 Approval History

Version	Sign-off Date	Signed-off By	Comment
V0.7	6/1/15 and 7/1/15	JP/ GB/ FS	I-SEM Steering Group approval received from Jenny Pyper (UR), Garrett Blaney (CER) and Fintan Slye (EirGrid)

2 Executive Summary

In Ireland and Northern Ireland, the Department of Communications, Energy and Natural Resources (DCENR) and the Department of Enterprise Trade and Investment (DETI) respectively have, following review of the HLD decision paper, charged the SEM Committee (SEMC) with responsibility for developing a new set of wholesale electricity market arrangements.

The Integrated Single Electricity Market (I-SEM) project, being led by the SEMC, has now completed a major milestone, namely the publication on 17 September 2014 of the High Level Design (HLD) for a new wholesale electricity market on the island of Ireland (SEM/14/085a). This follows extensive public consultation and engagement with industry. The Regulatory Authorities (RAs) and Transmission System Operators (TSOs) in both Northern Ireland and Ireland have now commenced work on the next and final major phase of the project, referred to as Phase 3. This phase includes the RAs developing a detailed wholesale market design to align with the chosen HLD, and its implementation by the TSOs, targeting October 2017 for the go-live of I-SEM.

Phase 3 impacts on the activities of four licences. These are the EirGrid and SONI TSO and Market Operator (MO) licences. Although the RAs will hold overall responsibility for delivery of key workstreams, the ultimate authority for the I-SEM project lies with the SEMC. It is recognised that a collaborative approach will be required between the RAs and TSOs/MO, especially in relation to the interface between the detailed design and its implementation.

The purpose of this 'Agreed Approach Document' (AAD) is to outline the governance structures and working arrangements to apply between all parties during phase 3. It has been prepared by the Commission for Energy Regulation (CER) and the Utility Regulator (UR) in their capacity as RAs for Ireland and Northern Ireland respectively and by EirGrid and SONI in their capacity as licensed TSO and Market Operator (MO) in Ireland and Northern Ireland respectively. The parties have signed up to and agreed its contents. In particular:

- The parties reaffirm their commitment to the delivery of the new I-SEM arrangements by October 2017;
- The parties agree to work together collaboratively under the governance arrangements as set out in this document;
- The parties recognise and respect each other's roles and responsibilities as set out in statute and in licence. A set of roles and responsibilities relating to the delivery of I-SEM consistent with these are set out in this document;
- The TSOs/MO agree to seek to ensure that the costs of implementation of the new arrangements are efficiently incurred, demonstrably necessary for

progression of the I-SEM, incremental to price controls and capable of being robustly validated, both in the use of their own resources and through the competitive procurement of services from third parties; and

- The RAs agree to provide for the recovery of the costs expended by the TSOs/MO in implementing the new I-SEM arrangements which are efficiently incurred, demonstrably necessary for progression of the I-SEM, incremental to existing price controls and capable of being robustly validated and in accordance with the approach and principles as set out in this document and in line with the agreed expenditure recovery framework (See Appendix 2).

The RAs and TSOs/MO acknowledge that this paper is a living document and will be subject to review and change; however, all changes to this document are under common governance by the parties in accordance with the governance procedures as set out therein. The Steering Group can, if appropriate, delegate approvals for change to the Joint Project Board. The arrangements described in this paper will become active arrangements on the basis of joint approvals from the I-SEM Steering Group.

Approvals



Date: 7 January 2015

Garrett Blaney
Chairperson
Commission for Energy Regulation



Date: 6 January 2015

Jenny Pyper
Chief Executive Officer
Northern Ireland Authority for Energy Regulation



Date: 6 January 2015

Fintan Slye
Chief Executive Officer
EirGrid

3 Project Implementation for Phase 3 of I-SEM

3.1 High Level Objectives

The scope of the I-SEM Detailed Design and Implementation phase (phase 3) is defined in the SEMC final Decision paper on the I-SEM High Level Design (HLD) (SEM-14-085a) published on 17 September 2014. At a high level, this involves the following objectives which are decomposed into various workstreams:

- Development of a Detailed Market Design and “Spec-ready Rules” for Central Systems Development;
- Development of Legal Rules to align with the detailed market design;
- Establishment of governance arrangements and implementation of licence changes for I-SEM, including the designation of at least one NEMO;
- Legislation development as necessary by the respective Government Departments in conjunction with the RAs;
- Balancing Market & Imbalance Settlement Systems Delivery by the TSOs/MO;
- NEMO Systems Delivery;
- TSO Systems Delivery;
- TSO & NEMO Readiness; and
- Market Participant Readiness.

3.2 High Level Scope of the Objectives

With reference to the above High Level Objectives, the following section provides an overview of the scope involved in each of these Objectives. These Objectives are incorporated into the various work streams (see section 4) associated with the Detailed Design and Implementation phase.

3.2.1 Development of a Detailed Market Design and “Spec-ready Rules” for Central Systems Development

The key objective of the detailed market design phase is for the RAs to deliver a set of clear rules containing a sufficient level of functional detail from which the TSOs/MO can develop the necessary specifications to procure the central systems required to run the I-SEM. There will be a staged approval process within the I-SEM Project Governance whereby key deliverables, for example the final spec ready rules (as defined in appendix 1), will be broken down to an appropriate level of detail to effectively support their delivery.

3.2.2 Development of Legal Rules to align with the detailed market design

This phase of work involves the legal codification of the Detailed Market Design rules, responsibility of which lies with the RAs. In the current SEM the vast majority of market rules are set out in the Trading and Settlement Code (T&SC), however, given the additional

marketplaces for trade that will exist within the new I-SEM arrangements, it is likely that the necessary legal rules will be set out in more than one place.

3.2.3 Institutional Arrangements: Governance and Licensing

The I-SEM and the European Regulations that underpin it (i.e. the CACM Guideline) will require the establishment of a number of new roles and responsibilities as well as changes in the responsibilities of a number of existing licence holders in the SEM including the TSOs, interconnector owners and market participants.

A key deliverable of this workstream will be the designation of a Nominated Electricity Market Operator (NEMO) and licence changes required to the current legal framework as a result of this designation. The role of a/the NEMO(s) will be to act as market operator for the day ahead and intra-day markets in national or regional bidding zones, in this case the I-SEM.

3.2.4 Legislation

Implementation of the I-SEM may require changes to the legislative framework in Ireland and Northern Ireland that underpins the SEM. While it is expected that the I-SEM will operate under the overall aegis of the 2007 SEM Legislation and the EU Directives and Regulations of the Third Electricity Package, changes may be required to existing statutory provisions to ensure efficient and timely implementation of the new market. This phase of work will include a legislative impact assessment of the I-SEM decision, and closely working with both Departments to establish the I-SEM legislative requirements and a plan to deliver these.

3.2.5 TSO Balancing Market & Imbalance Settlement Systems Delivery

It is expected that new TSO/MO systems will be required for the I-SEM balancing market and imbalance settlement procedures. This phase involves central systems solution design, systems specification development, procurement of systems, delivery of the systems and testing (of individual systems, systems integration, user acceptance and European integration).

3.2.6 TSO Systems Delivery

The TSOs systems will need to be updated and additional IT systems required to manage changes under the I-SEM. These are related to processes for determination of the day-ahead schedule, as well as economic dispatch tools to revise schedules on receipt of intraday market results and other tools required by the TSOs to enable it to efficiently adapt to schedule changes arriving up to one hour before delivery.

3.2.7 NEMO Systems Delivery

New systems will be required in order for a/the NEMO(s) to perform its new functions in I-SEM and as required under the CACM Guideline. The core NEMO functions are testing receiving orders from market participants, having overall responsibility for matching and allocating orders in accordance with the single day-ahead coupling and single intraday coupling results, publishing prices and settling and clearing the contracts resulting from the trades according to relevant participant agreements and regulations.

This systems delivery for a/the NEMO(s) functions in the day ahead and intra day market will consist of a central systems solution design, systems specification development, procurement of systems, delivery of the systems and/or provisions of same by third party service provider.

3.2.8 TSO & MO Readiness

TSO & MO Readiness involves delivering the changes necessary within the TSO/MO businesses to achieve market go-live by October 2017. These changes will encompass people, processes and technology (excluding central systems).

3.2.9 Market Participant Readiness

The key objective of this is to ensure all market participants are ready for I-SEM go-live. Activities will include coordinating and tracking Participant readiness, delivering training, hosting workshops, running market trials and organising public stakeholder fora.

4 Detailed Design & Implementation Workstreams

Phase 3 is characterised by a number of workstreams allocated amongst the RAs and TSOs. These workstreams will deliver on the high level objectives outlined in section 3.1. The table below identifies key staff who are responsible for the deliverables in each workstream.

	Work Stream Name	Team	Comments
Regulatory Authorities	Energy Trading Arrangements	Clive Bowers (CER) – lead	<ul style="list-style-type: none"> • Consultations <ul style="list-style-type: none"> ○ Building Blocks ○ Markets ○ Aggregator of Last Resort (AoLR)
	Capacity Remuneration Mechanism	Colin Broomfield (UR) – lead	<ul style="list-style-type: none"> • Consultations <ul style="list-style-type: none"> ○ Policy consultation 1 ○ Policy consultation 2 ○ Auction rules
	Market Power	Andrew Ebrill (CER) – lead	<ul style="list-style-type: none"> • Consultations <ul style="list-style-type: none"> ○ Ex-Ante measures ○ Ex-Post measures ○ Broad Principles ○ Form of RA Role ○ Market participant Readiness
	Forwards & Liquidity	Jean Pierre Miura (UR) – lead	<ul style="list-style-type: none"> • Consultations <ul style="list-style-type: none"> ○ Transmission Rights ○ Forwards CfDs ○ Liquidity promotion ○ Market Participant Readiness
	Governance & Licensing	Philip Newsome (CER) – lead	<ul style="list-style-type: none"> • I-SEM Institutional Arrangements • Designation of a/the NEMO(s) • Licensing Changes • Modification of Codes
	Legislative	Avril Mullins (CER)/ Elaine Cassidy (UR)	<ul style="list-style-type: none"> • Gap Analysis (functions, duties and powers that may be needed for various I-SEM work streams) • Drafting Legislation • Implementation Legislation
	Procurement	Breda Coss (CER)/ Ian Campbell (UR)	<ul style="list-style-type: none"> • Project Management RFT • Framework Agreement <ul style="list-style-type: none"> ○ Expert Consultants • Development of joint Procurement Strategy
	Project Office	Tbd – Project Manager	<ul style="list-style-type: none"> • Project manager support • Scheduling and Coordination of meetings • Submission of required documents • Liaison with staff
TSO	Central Arrangements	Simon Grimes – lead	<ul style="list-style-type: none"> • EirGrid Project Office Manager (Interim) • Input to Detailed Design • Rules development • Agreed Procedures • Network Code Methodologies • Other Arrangements • Licence Changes • NEMO Establishment
	Central Systems & Service	Morris Lyness – lead	<ul style="list-style-type: none"> • Solution Architecture <ul style="list-style-type: none"> ○ Sourcing Strategy ○ Existing System Impact Assessment • Procurement <ul style="list-style-type: none"> ○ Client Side Advisers ○ Systems and Services ○ Integrator • Service/System Provider Oversight

		<ul style="list-style-type: none"> ○ Functional Design ○ Build ○ Factory/Site Testing ○ Integration Testing ○ User Acceptance Testing
Operational Capability	Michael Kelly – lead	<ul style="list-style-type: none"> ● Organisational Change <ul style="list-style-type: none"> ○ Organisational Design ● User Requirements Specification ● Process Design ● Operational Readiness <ul style="list-style-type: none"> ○ Operational Transition planning ○ Operational Readiness Monitoring ○ Funding ○ Facilities ○ Market Trial Participation ○ Commercial Arrangements
Participant Engagement & Market Readiness	David Stevens – lead	<ul style="list-style-type: none"> ● External/ Internal Stakeholder Communications ● Training <ul style="list-style-type: none"> ○ External ○ Internal (TSO/MO) ● Market Readiness Monitoring ● Query Management/Helpdesk ● Market Trial <ul style="list-style-type: none"> ○ Planning and Agreements ● Preparation & Management

Both parties will share the staffing arrangements with each other on an ongoing basis throughout the life-cycle of the project.

5 Implementation Schedule for I-SEM

5.1 Milestones

The following table highlights the key milestones on a monthly basis for each workstream detailed in Section 4. It should be noted, however, that not all milestone dates have been confirmed and may be subject to change as some workstreams are still undergoing detailed scoping. Discussions amongst the RA and TSO project teams are ongoing and any changes to the dates in the table below will be presented to the Steering Group.

Month	Key Milestone RAs	Key Milestones TSOs
2014		
Sept	<ul style="list-style-type: none"> • HLD Final Decision Published • Framework Agreement RFT Issued • ETA work stream commences • CRM work stream commences • F&L work stream commences 	<ul style="list-style-type: none"> • Solution Architecture commences • Sourcing Strategy commences • Systems & Services PQQ development commences
Oct		
Nov		
Dec	<ul style="list-style-type: none"> • AoLR Consultation Issued • Market Power Mitigation work stream commences 	
2015		
Jan		<ul style="list-style-type: none"> • Systems & Services • Euphemia Conceptual Testing started
Feb	<ul style="list-style-type: none"> • ETA Building Block Consultation Issued 	
Mar		<ul style="list-style-type: none"> • Systems & Services PQQ responses received • Euphemia Conceptual Testing finishes
Apr	<ul style="list-style-type: none"> • ETA AoLR Consultation 2 issued • F&L Financial Transmission Rights Consultation issued • 	<ul style="list-style-type: none"> • Euphemia Commercial Testing Preparation commences
May	<ul style="list-style-type: none"> • ETA Markets Consultation issued • CRM Consultation 1 issued • Broad Principles of Market Power Mitigation Consultation issued • Public Workshop 1 – Market Power 	<ul style="list-style-type: none"> • “Ready to issue” RFT completed
Jun		
Jul	<ul style="list-style-type: none"> • Publication on Options of CfDs (F&L) 	<ul style="list-style-type: none"> • Existing IT: Design commences • Operational Change commences • Solution Architecture & PQQ finishes • RFT Development commences • Euphemia Commercial Testing commences • Business & Technical Liaison Group
Aug	<ul style="list-style-type: none"> • ETA AoLR Decision 	<ul style="list-style-type: none"> • Legal Rules Development commences

	<ul style="list-style-type: none"> • ETA Markets Decision • F&L Transmission Rights Decision 	
Sept	<ul style="list-style-type: none"> • Broad Principles of Market Power Mitigation Decision issued • Consultation on Specific Market Power Mitigation measures issued • Public Workshop 2 – Market Power 	<ul style="list-style-type: none"> • Euphemia Commercial Testing completes (possibility for continuation if required)
Oct	<ul style="list-style-type: none"> • CRM Consultation 1 Decisions • Workshop 2 (CRM) 	<ul style="list-style-type: none"> • Agreed Procedures started
Nov	<ul style="list-style-type: none"> • CRM Consultation 2 issued • Implementation of FTRs Consultation issued • Forward Liquidity Decision 	<ul style="list-style-type: none"> • Systems & Services RFT issued • Existing IT: Build Commences
Dec	<ul style="list-style-type: none"> • Proposed Decision on Specific Market Power Mitigation measures issued • Public Workshop 3 – Market Power 	
2016		
Jan		<ul style="list-style-type: none"> • Systems & Services RFT Responses received
Feb	<ul style="list-style-type: none"> • Implementation of FTRs Decision 	<ul style="list-style-type: none"> • Market Trial Planning Commences
Mar	<ul style="list-style-type: none"> • CRM Consultation 2 Decision • DG Competition notification commences • Consultation on Implementation on Forwards & Liquidity issued 	<ul style="list-style-type: none"> • Existing IT: Design completes • Central Systems/ Services Contract Awarded
Apr	<ul style="list-style-type: none"> • CRM Auction Rules Consultation issued • Decision on Specific Market Power Mitigation measures issued – implementation of any resulting licence or other changes commences 	
May	<ul style="list-style-type: none"> • Options on Forwards & Liquidity Decision 	<ul style="list-style-type: none"> • Software Environment setup commences
Jun		<ul style="list-style-type: none"> • New Systems/ Services vendor mobilized for design, build and factory testing • Operational Transitional Planning commences
July		<ul style="list-style-type: none"> • Interface Specifications for Market Participants delivered • Operational Training commences
Aug		
Sept	<ul style="list-style-type: none"> • CRM Auction Rules Decision 	<ul style="list-style-type: none"> • Operational Transitional Planning completes • Market Trial Planning finishes

		<ul style="list-style-type: none"> Operational Readiness Preparation starts Solution Integration & UAT commences
Oct	<ul style="list-style-type: none"> CRM State Aid Notification Closes 	<ul style="list-style-type: none"> Market Trial Preparation commences Existing IT: Test commences Agreed Procedures complete
Nov		
Dec		
2017		
Jan	<ul style="list-style-type: none"> CRM Auction 	<ul style="list-style-type: none"> Existing IT: Build finishes New System/Service vendor Build, Deliver & Factory test finishes
Feb		<ul style="list-style-type: none"> Operational Change completes Integration Test commences Participant Training & Interface Testing commences
Mar		<ul style="list-style-type: none"> Integration Test complete
Apr		<ul style="list-style-type: none"> User Acceptance Test commences
May		
Jun		<ul style="list-style-type: none"> User Acceptance Testing complete Existing IT: Test complete Operational Readiness Preparation finishes Market Trial preparation finishes Operational training complete Market Trial begins
Jul		
August		<ul style="list-style-type: none"> Extended Participant Interface testing complete
Sept		<ul style="list-style-type: none"> Market Trial finishes Cutover to I-SEM
Oct		<ul style="list-style-type: none"> Go Live
Nov		<ul style="list-style-type: none"> Project Close Out
Dec		

5.2 Assumptions applied to Milestone Achievability

5.2.1 Assumptions

- The TSOs, MOs, DCENR, DETI, CER and the UR are committed to delivering I-SEM by the target date of October 2017;
- The Departments will update the legislative framework should that be required;
- There will be no ongoing expansion of project scope by SEM Committee and Departments;
- There will be comprehensive engagement from SEM Committee and timely decision making on key issues;
- There will be a fully resourced Project Office;
- Both Regulatory Authorities and the TSOs and MOs will be staffed sufficiently for the project;

- The Regulatory Authorities will work efficiently with all market stakeholders and in particular the TSOs and MO to ensure delivery of the I-SEM project;
- The RAs will work with the TSOs to establish a specific approach to treatment of I-SEM Project Costs. As part of this the TSOs will make a revenue submission to the RAs around the start of Phase 3. The RAs will consider all TSO/ MO submissions relating to reasonable and efficient costs which are incremental to ongoing price control approvals and are only strictly necessary for the TSOs/MOs to implement I-SEM;
- EirGrid will continue to be the licensed Transmission System Operator for Ireland;
- SONI will continue to be the licensed Transmission System Operator for Northern Ireland;
- For the purpose of project development, SEMO should assume they will hold the role of a/the NEMO for the purposes of procurement and system development (dependent on EirGrid receiving suitable assurance that its engagement did not prejudice it from any future competitive process which may/ may not be necessary), however the ongoing designation of (an) enduring NEMO(s) will align with the guidelines narrated in the final publication of CACM;
- A form of competitive process may or may not be required to appoint a/the NEMO role(s);
- The RAs will consult on roles and responsibilities in the I-SEM in Q1 of 2015;
- The RAs intend to hold a separate consultation on any appropriate separation of functions required within the EirGrid group, however, it should be noted that no decision on this issue has yet been taken;
- ESB Networks Ltd will continue to be the Distribution System Operator for Ireland;
- Northern Ireland Electricity will continue to be the Distribution System Operator for Northern Ireland;
- The SEM Committee, assisted by the TSOs will carry out a review of zones of I-SEM before implementation in 2016. The I-SEM will be designed to operate with one zone or multiple zones;
- There will be no major change of direction from the European Commission, ACER, ENTSO-E on key policy areas relating to the Internal Energy Market;
- The I-SEM and DS3 projects will be implemented in tandem and both project teams will communicate regularly with each other.

6 Roles & Responsibilities

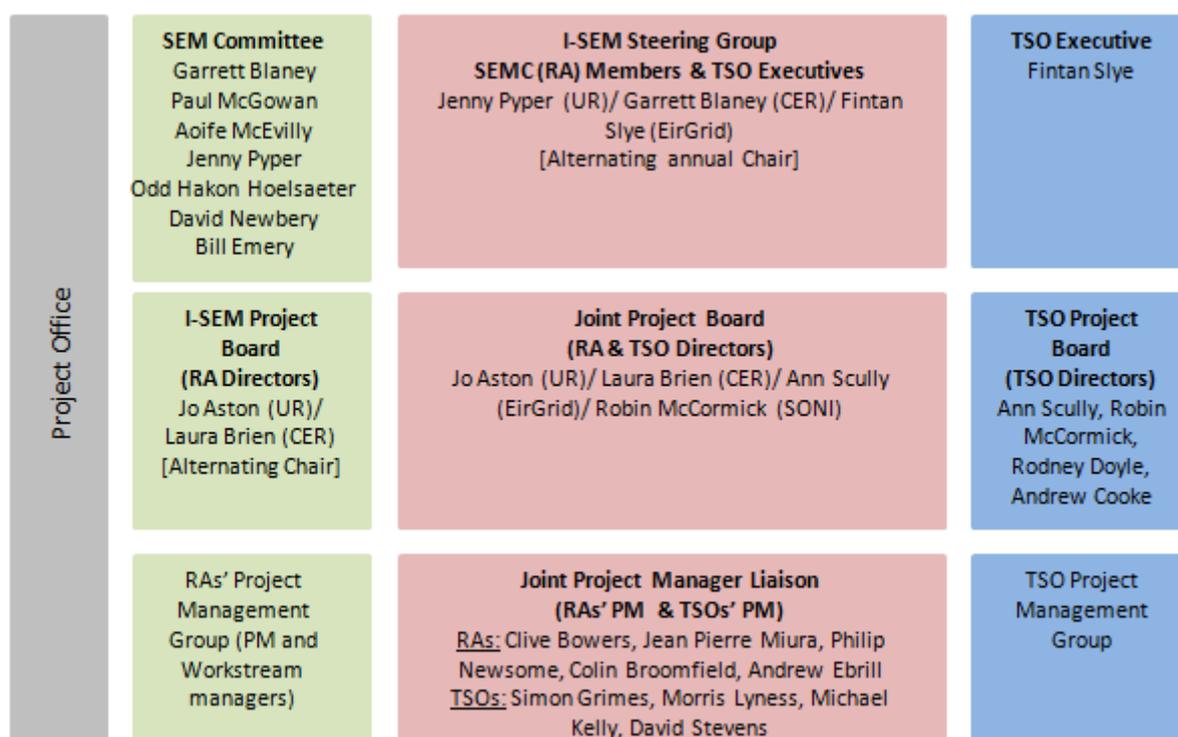
The RAs/TSOs/MO roles and responsibilities under each of the key areas of work identified in Section 4 are as follows:

- **Legislation**
 - The Departments are responsible for ensuring that an appropriate legislative framework is in place for the I-SEM; assistance and support from the RAs will be provided.
- **Development of a Detailed Market Design and “Spec-ready Rules” for Central Systems Development**
 - The RAs are responsible for the Detailed Design, including its compliance with the Target Model requirements. Refer to section 3.2.1
 - Assistance and support will be provided by the TSOs/MO.
 - There will be joint working groups between the RAs/TSOs/MO in the development of the detailed design spec-ready rules.
- **Development of Legal Rules to align with the detailed market design**
 - The TSOs and the MOs are responsible for the drafting of the detailed Market design legal rules for ETA and CRM.
 - Assistance and support will be provided by the RAs.
 - The RAs are responsible for the approval of the detailed market design legal rules.
 - There will be joint working groups between the RAs/TSOs/MO in the development of the legal rules.
- **TSO/MO Balancing Market and Imbalance Settlement Systems Delivery**
 - The TSOs/MO are responsible for the central systems, including their compliance with the RA’s final High Level Design and Detailed Market Design decisions.
 - There will be a joint working group between the RAs/TSOs/MOs which will support/ oversee the central systems development and procurement.
- **NEMO Systems Delivery**
 - New systems will be required in order for a/the NEMO(s) to perform its new functions in I-SEM and as required under the CACM Guideline. The appointed NEMO(s) will be responsible for NEMO Systems Delivery.
- **TSO Systems Delivery**
 - The TSOs are responsible for TSO systems delivery.
- **TSO & MO Readiness**
 - The TSOs are responsible for TSO Readiness.
 - There will be a joint working group between the RAs and TSOs which will support/ oversee TSO Readiness.
 - The MOs are responsible for MO Readiness.
 - There will be a joint working group between the RAs and MOs which will support/ oversee MO Readiness.
- **Market Participant Readiness**
 - The RAs and TSOs are both responsible for Participant Readiness, with the TSOs managing systems readiness and the RAs managing market readiness
 - There will be joint working groups between the RAs/TSOs/MOs which will support/ oversee Participant Readiness.

7 Governance and Control Framework

7.1 Overview

Given the scope of the Detailed Design and Implementation phase of the I-SEM project, the RAs and TSOs have put in place a dedicated governance structure and set of working arrangements. A number of symposiums will be held until project conclusion and the intention of these is to combine the knowledge and expertise of both the RAs and TSOs/MOs.



7.2 Main Groups

There are a number of groups that form part of the Governance Framework. These groups are identified and detailed below, and a description is given of membership, roles and responsibilities towards the successful delivery of the I-SEM.

7.2.1 I-SEM Steering Group

An I-SEM Steering Group will be created for discussion concerning significant decision making. Membership of the I-SEM Steering Group will be:

- Jenny Pyper and Garrett Blaney representing the RAs;
- Fintan Slye representing EirGrid and SONI

Project directors from the RAs and TSOs/MOs will have a standing invitation to Steering Group meetings and others attendance will be by way of invitation only. The Steering Group Chairperson will alternate on an annual basis (from October to September) between the members and will ordinarily meet quarterly, or as otherwise requested in advance of key

project milestones. The Chairpersons can convene extraordinary meetings of the I-SEM Steering Group as needed.

The I-SEM Steering Group will have responsibility to:

- Provide overall direction and guidance to the project within the policy and strategic framework established by the SEMC on a joint basis;
- Endorse significant decision making relating to the deliverables of the project in advance of SEMC submissions;
- Overall senior level project oversight and a channel of communication between the parties to ensure timely and effective delivery of the programme, ensuring that the project meets agreed standards of quality, time and cost and that all risks are mitigated insofar as possible;
- Resolve project issues which the Joint Project Board cannot achieve timely agreement on;
- Agree and provide approval to proceed with significant aspects of the project;
- Address and agree an approach to any significant variance or over-run relative to project timeline/plan or forecast project expenditure (once initial forecast agreed);
- The governance and amendment where necessary to this Agreed Approach Document;
- Review Risk Register and associated mitigation strategies; and
- Make recommendation to SEMC on the final Market Go Live date.

The outcome of I-SEM Steering Group meetings will be shared with the SEM Committee and if consensus is not reached on decisions by the Steering Group, the Steering Group will brief the SEMC. The organisation, taking of minutes, collation of reports etc. for this meeting will be the responsibility of the RAs.

7.2.2 Joint Project Board (JPB)

A Joint Project Board (JPB) will be established. The Joint project Board will meet at least monthly, and more frequently during the early stages of Phase 3 and during the more critical stages of the project. Membership of the Joint Project Board will be:

- Jo Aston and Laura Brien representing the RAs
- Ann Scully and Robin McCormick representing the TSOs/MO
- Alternative representatives may be nominated in exceptional circumstances

The Joint Project Board will be chaired alternatively by an RA director and will be responsible for:

- Apprising the I-SEM Steering Group as required in accordance with the functions and powers reserved to the I-SEM Steering Group;
- Providing project oversight and a channel of communication between the parties (including an escalation and issue resolution channel) to ensure timely and effective delivery to programme;
- Provide for change control approval process to the programme subject to any delegated responsibility to do so accorded to responsible RA and TSO/MO Managers;
- Agreeing actions to address any unforeseen events or project slippage;
- Agreeing and providing approval to proceed with relevant aspects of the project;

- Promptly resolving, or escalating as appropriate to the I-SEM Steering Group, any issues brought to it for consideration;
- Reviewing risks and mitigation strategies for the project;
- Overseeing the project expenditure envelope agreed by the I-SEM Steering Group and monitoring actual expenditure and variance against same;
- The Joint Project Board will be accorded a level of delegated responsibility by the I-SEM Steering Group to manage the approach to recovery of contingency expenditure to pre-defined levels.

The organisation, taking of minutes, collation of reports etc. for this meeting will be the responsibility of the RAs.

A Risk Register is a requirement for all meetings and should be provided by the Project Management Team from the RAs and TSOs/MOs and available for discussion at the Joint Project Board.

7.2.3 Joint Project Manager Liaison

Both the RAs and the TSOs/MOs will identify an overall project manager for their respective organisations. The project managers shall meet regularly (preferably once a week) with a view to ensuring:

- Regular communication between the parties;
- Appropriate communications externally;
- Monitoring of the overall programme (timelines, issues, risks, expenditure etc);
- Project managers appointed to each work stream will be responsible for delivery to the agreed programme and reporting/ monitoring of expenditure to the overall project manager;
- Sharing reports prior to their submission to the Joint project Board.

Project Office staff will support the project managers. The organisation, taking of minutes, collation of reports etc. for this meeting will be the responsibility of the RAs, unless otherwise agreed between the respective project managers.

7.2.4 Workstream Groups

In addition to the formal governance arrangements as outlined above, the I-SEM Project Teams set up by the RAs and TSOs/MOs will continue to apply a collaborative approach to day-to-day working arrangements. An organisational structure aligning to the key milestones in the project timeline has been set up. This involves workstream managers and analysts from both the RAs and TSOs as relevant (forming workstream groups) in all organisations. There will be ongoing and more frequent communication amongst workstream team members especially during critical stages of the project. This will provide a forum for expressing ideas, views and concerns relating to:

- Timelines and work plans;
- Current issues and emerging risks;
- Reporting material;
- External engagement;

- Development of policy, rules etc.

Any structured workstream team meetings will be chaired alternatively by the RA and TSO/MO project managers.

8 Change Control

A formalised change control process will be adopted jointly by the RAs/TSOs/MOs to manage any changes to the Implementation Phase scope of work, timelines, governance arrangements, key project documentation etc.

The following key principles will underpin this change control process:

- The change control process shall be approved by the I-SEM Steering Group, with any subsequent changes to the process also subject to the I-SEM Steering Group's approval unless delegated to the Joint Project Board;
- The types of changes covered by the process shall be in line with best practice project management standards;
- Change authority shall be delegated to the Joint Project Board but this will be bounded by reasonable tolerances;
- Change authority may be delegated to a responsible Manager(s) but this will also be bounded by reasonable tolerances;
- Where any changes are outside the responsible Manager's tolerances then the change shall be dealt with by the Joint Project Board; and
- Where any changes are outside the Joint Project Board tolerances then the change shall be dealt with by the I-SEM Steering Group.

9 Appendices

9.1 Appendix 1

Definition of “Spec Ready Rules”

The 2017 I-SEM plan does not expect that detailed and legally proofed market rules would be defined in time for vendor procurement. However, the market design should be set out to a level of detail that is sufficient to allow for the parallel development of legal rules and system implementation off a single blueprint document. For the development of the SEM in 2005, this blueprint document was referred to as the ‘Spec-Ready Rules’.

The ‘Spec-Ready Rules’ provides a plain-English version of the Market Rules containing a sufficient level of functional detail from which the EirGrid project team, and independent system suppliers for market participants, can develop system specifications for market systems.

As the spec ready rules are being developed, the TSOs/MOs will, in accordance with a staged approval process developed and agreed between the RAs and the TSOs/MOs, explicitly state whether they have received sufficient level of detail for system/ services development/ procurement purposes.

For the Market Rules to be considered ‘Spec-Ready’, they must be:

- Complete in all operational aspects; e.g. they should define rules for scheduling, settlement, credit management, information publication, etc;
- Internally consistent; and
- Clear and concise.

The Spec-Ready Rules fall under three separate categories:

- The Energy Trading Arrangements;
- The Capacity Remuneration Mechanism; and
- Financial Transmission Rights.

Energy Trading Arrangements

Areas that should be addressed explicitly in the Spec-Ready Rules under the Energy Trading Arrangements category are:

- 1) The interactions and data flows between market entities, including market participants, transmission system operators, the market operator, network owners and interconnector owners.
- 2) Key processes, events and timelines for all major operational capabilities necessary for TSO systemization, including:
 - a) Participant Registration;
 - b) Bid/offer capture and bid/offer forms/types;

- c) Gate Opening/Closure Timings (and conditions for re-bidding or re-declaration of availability);
- d) Physical Transmission Access;
- e) Treatment of Transmission Losses;
- f) Treatment of Constraints;
- g) Treatment of Curtailment;
- h) Treatment of Priority Dispatch;
- i) Unit Commitment and Scheduling (both day-ahead and intraday);
- j) Participant Nomination Process and Timings;
- k) Testing of units (including Interconnectors under test);
- l) System Dispatch (including management of Interconnectors);
- m) Reserves;
- n) Pricing;
- o) The Trading and Settlement Period Duration;
- p) Imbalance Settlement;
- q) Metering;
- r) Global Aggregation;
- s) Instruction Profiling;
- t) Tagging and Flagging (including classes of non-energy actions);
- u) Clearing and Settlement;
- v) Shipping;
- w) Billing and Funds Transfer;
- x) Credit Risk Management;
- y) Treatment of Currency;
- z) Market Information Publication; and
- aa) Details of Fallback Procedures in the event of technical failures.

Capacity Remuneration Mechanism

Areas that should be addressed explicitly in the Spec-Ready Rules under the Capacity Remuneration Mechanism (CRM) category are:

1. The interactions and data flows between market entities (market participants and central settlement systems), necessary for systemization.
2. Key processes, events and timelines for capacity payment and charges necessary for TSO systemization with respect to:
 - a) The product for delivery including penalty arrangements if any;
 - b) Eligibility rules;
 - c) Clearing and settlement including: generator payments, supplier charges and treatment of special units (such as out of zone generation, DSUs, Variable Generation, Pumped Storage);

- d) The rules applicable to Secondary Trading;
- e) Collateral Arrangements (Credit Cover); and
- f) Detail on the expiry of existing CPM.

Other Issues

There may be other areas that should be addressed explicitly in the Spec-Ready Rules depending on RA decisions on roles and responsibilities potentially relating to:

- Settlement of Financial Transmission Rights
- Delivery Body for Capacity Auctions
- Aggregator of Last Resort

9.2 Appendix 2

Expenditure Recovery Framework and Governance for EirGrid/SONI/SEMO

Framework

The SEMC is aware that significant costs will be incurred in association with the design and implementation of the new I-SEM which were not foreseen in the current price control structures for EirGrid, SONI, and SEMO and must therefore be separately provided for. The SEMC is also aware that some costs have already been incurred prior to September 2014. The SEMC commits that only expenditure that can be demonstrated to meet the following three criteria will be included in the respective price controls for EirGrid, SONI, and SEMO. The three criteria are:

1. Expenditure must be efficiently incurred;
2. Expenditure must be demonstrably necessary for progression of the I-SEM;
3. Expenditure must be incremental to existing price controls and capable of being robustly validated by the RAs.

The arrangements for recovery of I-SEM design and implementation costs under each of the respective EirGrid, SONI and SEMO revenue/price controls affected, whether for SO or MO services, are different. It is agreed that adjustments for I-SEM design and implementation costs associated with I-SEM will be recouped through the relevant price controls in line with the principles reflected within the prevailing price controls. This framework will apply, *inter alia*, to:

- Specific allocation of costs to the RAB and to Opex;
- The timeframe for the return of principal on assets as are appropriate to the specific asset type, with a rate of return to be applied to capitalised monies for each licensee as appropriate;
- The timing of recovery of monies under licensee revenue/price controls provision shall however be made on the basis that the recovery shall be on an NPV neutral basis by reference to the relevant regulated WACC pertaining; and
- The allocation between the EirGrid and SONI licensees shall be on a 75:25 basis consistent with the Specified Proportions as set out in the Market Operator Agreement (MOA). Any exception to this shall be agreed at the Joint Project Board.

It was agreed that all costs once approved by the RAs would be subject to the principles of the relevant price controls, as set out above and then treated as pass through, subject to recovery on an NPV neutral basis by reference to the relevant regulated WACC pertaining. It was also agreed that when more detail crystallized on expenditure to implement systems (expected Oct –Dec 2015) that consideration would be given to the merits of adopting an incentivized regulatory approach.

Governance

In line with this framework, the governance arrangements for TSO/MO expenditure review by the RAs, which all parties have committed to is outlined below, further detail on the approach, will be developed by the parties as needed through I-SEM Phase 3. The premise for their application is one of needing to continually progress I-SEM Phase 3 workstreams, in acknowledgement of the criticality of delivery within the overall constrained programme. The governance arrangements implemented and agreed to date among the parties, and which will form the basis for any further agreed changes, is as follows:

1. All expenditure must meet the three criteria of:
 - i. Being efficiently incurred;
 - ii. Being demonstratively necessary for progression of the I-SEM;
 - iii. Being incremental to existing price controls and capable of being robustly validated by the RAs.
2. The TSOs/MO are to develop a template which will evidence compliance with the above criteria, recording costs on the I-SEM project for submission to the RAs on a monthly basis from September 2014. The format of the template is to be approved by the RAs and the monthly submission verified by EirGrid audit prior to receipt by the RAs.
3. Expenditure incurred prior to September 2014: The I-SEM Steering Group, have agreed in principle, that costs incurred that meet the three criteria stated above will be approved in the respective price controls. Demonstration of meeting those three

- criteria for costs incurred prior to September 2014 should be provided via reports in the same format as the monthly cost submissions for ongoing expenditure, and verified by EirGrid internal audit function. The submission for costs prior to September 2014, will be reviewed by the RAs, against the three criteria set out in point 1 above. Given the retrospective nature of some of the costs, there must be detailed evidence that these have contributed to the I-SEM project. A decision on payment of part or all of these costs will be taken by the two SEMC members of the I-SEM sub committee.
4. The RAs have already received a submission with regard to a consultancy contract for client side advisors, and following a review of the data provided, the RAs have determined that this expenditure meets the three criteria, and have therefore approved payment for inclusion in the retrospective price controls.
 5. Expenditure post September 2014 can be divided into two categories:
 - I. Costs incurred by internal TSO/MO resources and externally procured consultancy support; and
 - II. Procurement of IT/Software/Support systems to support implementation of new market design.
 6. A high level estimate of these costs has been submitted by the TSOs/MOs to the RAs. With regard to components under both Category I and Category II it is recognised by all parties that the estimates/submissions for the post September 2014 costs is high level and actual expenditure is likely to deviate from this initial high level estimate. In this context it is agreed that:
 - a. the RAs should understand and satisfy themselves that the basis for the high level estimate is reasonable and thereby approve this initial envelope;
 - b. the RAs will engage consultancy support to assist them in reviewing and subsequently approving the high level submission of costs for implementation of phase 3 of the I-SEM;
 - c. to support the RAs in assessing and subsequently approving costs, particularly consultancy spend, consultancy support engaged to verify the initial high level estimate will be used on an ongoing basis.
 7. The TSOs/MO should advise the RAs of any significant/ material variance, particularly above the overall approved envelope of expenditure identified during the course of the project. In as far as possible, such variance should be highlighted and explained in advance, or as soon as reasonably possible, to the RAs and to the Joint Project Board.
 8. The Joint Project Board and/ or RAs will clearly indicate as soon as reasonably possible, if work should be stalled for any reason, recognising that committed costs may be unavoidably incurred subsequent to such a direction. The TSOs/MOs will make best endeavours to minimise the extent of committed and unavoidable costs.
 9. As referred to above in point 2, to enable the RAs to assess whether the costs in Category I above meet the three criteria, monthly reporting of expenditure by the TSOs/MOs (one month in arrears), as verified by the TSOs/MOs internal audit function, will be submitted to the RAs for their review, informed by point 6 above and from a programme perspective.

10. Quarterly reporting of budget and forward cost projections will also be provided by the TSOs/MOs to the Joint Project Board for review – the format of such submission should be agreed by the Joint Project Board.

All monies sought by the TSOs/MOs on the I-SEM design and implementation, submitted by the TSOs/MOs, in accordance with the governance framework as outlined in steps 1-10 above shall be recoverable under each of the respective EirGrid, SONI and SEMO price controls, subject to no finding of demonstrable inefficiency or wastefulness in their incurrence.

The TSO/MO licensees undertake to engage in ongoing governance with the RAs in relation to the scale, scope and quantum of works (including costs) with a view to providing appropriate oversight of their recovery. Such ongoing governance arrangements are to be proportionate and designed to operate in a manner which provides for the timely and cost effective delivery of the overall project.

9.3 Appendix 3

Criteria for Decision on Go/ No Go

In order for the New Market to be accepted (ie. the Go-Live Decision can be formally issued), it must be supported by signed approvals from the various owners that certify to:

- the acceptance of the Central systems in terms of technical capability and operational capability
- the acceptance that the required Regulatory Framework is in place
- the acceptance that the required legislation is in place

Example

Required Approval	TSO/MO Signature	RA Signature
Technical Acceptance		
Operational Acceptance		
Regulatory Acceptance		
Legislation Acceptance		
Market Participant Acceptance		

~End of Document~