

# **SEM Committee Paper**

## **Trading and Settlement Code**

### **Terms of Reference for the 2014 Market Audit**

#### **Decision Paper**

**7 August 2014**

**SEM-14-068**

## 1. Introduction

The Trading and Settlement Code (“TSC” or the “Code”), requires an audit of the Code, its operation and implementation, and the operations, trading arrangements, procedures and processes under the Code to be performed on an annual basis. The Code also requires the Regulatory Authorities (“RAs”) to consult with Parties on the terms of reference for the audit and to specify annually the precise terms of reference.

In 2007/08 and 2009 the Market Audit represented an audit of compliance by the Single Electricity Market Operator (“SEMO”) and, in so far as it related to the calculation of Modified Interconnector Unit Nominations (“MIUNs”), the Interconnector Administrator with their requirements under the Code. The scope of these Market Audits excluded discrete components of the MSP Pricing Engine (unit commitment, economic dispatch and the calculation of Shadow Prices) as it was considered that the benefits of performing audit work over these components were outweighed by the costs and disruption in the initial period of market operation.

For the second Market Audit relating to year 2009, the scope was extended to include a review of the decision process and approvals for using the Mixed Integer Programming (“MIP”) solver instead of Lagrangian Relaxation (“LR”) in MSP. The RAs took the view that the resulting opinion provided the Market with a report that was both comprehensive and of value to Participants, given the constraints of what is practically feasible at a reasonable cost and without undermining the ongoing operation of the Market. Subsequently, the Market Operator raised a Modification Proposal on the Solver Policy (Mod\_27\_11) which was approved by the SEM Committee on 7 March 2012.

In both these Market Audits, the scope excluded activities undertaken by the System Operators (“SOs”), Meter Data Providers (“MDPs”) and other Participants as set out in the Code and Agreed Procedures.

However, for the 2010 Market Audit, options were put forward setting out potential extensions that would involve the Market Auditor assessing compliance of the MDPs and SOs with their obligations under the Code or conducting a limited examination of the accuracy of source data provided by the MDPs and SOs. Following consultation, the scope for the 2010 Market Audit was extended to include a limited examination of certain activities of the MDPs and SOs including generation metering and dispatch instructions performed through an Agreed-upon-Procedures basis, with factual findings and any exceptions being reported to the RAs and Parties separately. The 2011 Market Audit included Agreed-upon-Procedures which examined key interval meter demand side feeds.

In 2012 the Market Audit consisted of a Core SEMO Audit with an early examination of Intra-Day Trading. 2013 saw a Core SEMO Audit with limited expansion to cover key MDP Demand Side Data Feeds.

The RAs took the view that the resulting opinion provided the Market with a comprehensive report that was of value to participants, given the constraints of what is practically feasible at a reasonable cost and without undermining the ongoing operation of the Market.

## **2. Proposed 2014 Audit Scope**

In the consultation paper on the Terms of Reference for the Market Audit 2014 (SEM-14-031), three options were outlined for the 2014 Market Audit, as follows:

### **Option 1 Core SEMO Audit**

As in previous years, this audit would provide a reasonable level of assurance to the RAs and Market Participants that market pricing and settlement activities are being carried out by SEMO in accordance with the TSC and its Agreed Procedures. The audit work would focus on the activities and processing performed by SEMO. This scope excluded activities undertaken by the TSOs, Meter Data Providers and other participants as set out in the TSC and Agreed Procedures.

As with previous Market Audits, it was intended to exclude the operation of certain components of the MSP Pricing Engine from the scope of the Market Audit. The excluded components are the operation of Unit Commitment, Economic Dispatch and calculation of Shadow Prices.

### **Option 2 Core SEMO Audit plus follow-up of all previous Agreed-upon-Procedures (AuP) findings**

The 2010, 2011 and 2013 Market Audits included examination of certain activities of MDPs and SOs in relation to provision of dispatch instructions and meter data for generation, interval and non-interval metering on an Agreed-upon-Procedures basis. This work identified a number of findings and recommendations. Although these were followed-up in subsequent years to some degree given the commonality of processes across in particular interval and non-interval metering, this option would see a formal follow-up and reporting on actions taken by MDPs and SOs in responses to the previous audit findings. Where appropriate this would include testing on a sample basis of any new processes and controls to assess their operating effectiveness. It might also be appropriate to include some focused testing over specific process areas across all MDPs/SOs in areas of common findings to provide a new 'baseline'. This work would be performed on an Agreed-upon-Procedures basis.

### **Option 3 Core SEMO Audit plus limited expansion to cover Dispatch Instructions**

In addition to the core SEMO Audit, this would include examination of the activities of the SOs in relation to the issuing of dispatch instructions. This would be different to the scope in 2010 (which focused on the capture and completeness of Dispatch Instructions provided to SEMO) and would focus on the processes in relation to making dispatch decisions including deviating from the market schedule, priority dispatch, managing short term issues such as unit trip etc. This additional scope would be undertaken on an Agreed-upon-Procedures basis.

## **3. Comments on the Consultation Paper**

The SEM Committee received comments from six interested parties on the Consultation Paper. The respondents were:

- Bord Gáis Energy
- Energia
- Irish Wind Energy Association (IWEA)
- Power NI
- Power NI Energy Limited Power Procurement Business (PBB)), and
- SSE

The comments received are summarised below. The SEM Committee's final decision on the terms of reference for the 2013 Market Audit is set out in Section 3 of the paper.

- Bord Gais Energy (BGE) favoured Option 3 (Core SEMO Audit plus limited expansion to cover Dispatch Instructions). BGE was of the view that a Core SEMO Audit would provide a reasonable level of assurance to the RAs and Market Participants that market pricing and settlement activities are being carried out by SEMO in accordance with the Code and its Agreed Procedures. However, it noted that extending the Core SEMO Audit to reviewing the processes in relation to the issuing of dispatch instructions / making dispatch decision would provide an additional and beneficial insight into dispatch decision not only from the perspective of the current SEM but for the I-SEM project also. BGE acknowledged that Option 2 held some merit to follow up on the findings of previous Market Audits but stated that in the first instance MDPs, SEMO and SOs could report what changes/ processes have been implemented on foot of the auditors' previous recommendations and the practical/ operational impact of those changes. BGE concluded by stating that it did not accept the RAs view that a

Core SEMO Audit would be the most appropriate as there is too short a timeframe to implement any changes before the new market on 1 December 2016.

- Energia favoured Option 2 stating that the actions of MDPs and SOs are critically important to the correct function of the market and that a follow up on previous audit findings was advisable. It concluded by stating that the primary purpose of the audit is not to identify required changes to the market rules and agreed procedures but to ensure that existing rules and procedures are being followed. It also emphasized that should Option 1 be progressed it would be important to provide assurances on the performance and operation effectiveness of MDP and SO activities through other processes.
- IWEA stated that it recommended that Option 3 be pursued i.e. that a Core SEMO Audit plus limited expansion to cover Dispatch Instructions be carried out. It noted that although the timelines for implementation of any recommendations coming out of the audit may be limited, but it may be useful input to the design phase of the new market arrangements.
- Power NI welcomed the scope of the market audit to include the activities of the MDPs specifically in relation to index or non-half hour data processing. It stated that accurate meter readings and aggregation processes are critical to the efficient and effective operation of the market. And that while processes in relation to dispatch and the general operation of SEMO will change as a result of the 2016 market changes the requirement for the MDP to collect, process and aggregate supplier volumes will remain regardless of the design of the wholesale market. Power NI accordingly supported Option 2.
- PPB recommended expanding the scope of the Core SEMO Audit to cover a subsection of the activities of the Meter Data Providers (MDPs) and the System Operators (“SOs”) with their obligations under the Code. It stated that such a subsection should be rotated each year in order that all the obligations of the MDPs and SOs are eventually covered and subsequently revisited in 3 – 5 year cycles. It further stated that although it is anticipated that there will be significant changes to the Market in 2016, dispatch decision have a major impact on participants’ revenues and this is unlikely to change 2016. PPB therefore favoured Option 3.
- SSE supported a Core SEMO Audit and proposed expanding the scope of the Audit to look at delays in the publication of revised MIUNs by SEMO. With reference to a number of occasions where there have been delays in the publication of revised MIUNs by SEMO, following forced outages on the East-West Interconnector. It states that there is no arrangement that ensures Market Participants are reliably advised of their revised position, when the automated feed of revised MIUNs to the Auction Management Platform (“AMP”) fails.

The comments received from all six parties are published together with this decision paper.

## **4. Decision**

Having considered the responses received, the SEM Committee is of the view that there is merit in proceeding with Option 1 with limited expansion to look at publication of information within requirement timescales, including communication in relation to changes to interconnector ATC and the determination of MIUNs.

Given the likelihood of significant changes to the market in 2016 and the short timeframe to implement any required changes before then, the SEM Committee intends that Option 1 is pursued for 2014, namely a Core SEMO Market Audit.

The SEM Committee acknowledges that in the months of January – May 2014 there have been a significant number of MIUN revisions. Although release R2.5.0 of the Central Market Systems has been submitted to resolve any issues which might have arisen, the Committee is of the view that this issue merits further consideration. The SEM Committee therefore determines that the Terms of Reference for the 2014 Market Audit should be expanded to include a review of the MIUN revision processes.

The SEM Committee acknowledges that there is merit in the follow up on AUPs in Option 2 and accordingly proposes that this work stream can be progressed in house by the RAs in the first instance.

The SEM Committee is of the view that although there may be merit in pursuing Option 3, that a review of the MIUN revision processes may be of greater benefit to Market Participants at this juncture and therefore the SEM Committee proposes not to pursue this option at this time.

The Market Audit Plan for the 2014 Market Audit will be developed in the coming months with the Market Auditors.

The Terms of Reference for the period 1 January 2014 to 31 December 2014 are set out in Appendix A of this paper.

## **5. Market Audit 2014**

The SEM Committee has decided to pursue Option 1, a Core SEMO Audit with limited expansion to look at publication of information within requirement timescales, including communication in relation to changes to interconnector ATC and the determination of MIUNs. The SEM Committee has also decided to pursue Option 2, a follow up on AUPs to be progressed by the RAs.

## **Appendix A:**

### **Proposed Terms of Reference for the 2013 Audit Scope**

This section sets out an proposed terms of reference for the 2013 Market Audit for the period January to December 2013, based on the matters discussed above.

### **Contractual and Governance Arrangements**

In accordance with paragraph 2.136 of the SEM Trading and Settlement Code (TSC), the RAs hereby specify the terms of reference for the 2014 Market Audit for the period from 1 January to 31 December 2014 as set out below.

Based on the terms of reference, the Market Auditor will prepare an Audit Plan setting out the detailed audit approach which will be presented to and agreed with the RAs. In preparing the Market Audit Plan, the Market Auditor may consult with the RAs, Market Operator and other participants as required.

A tri-party engagement letter is in place between the RAs, SEMO and the Market Auditor acknowledging the terms of engagement of the Market Auditor and their respective responsibilities. The Market Auditor will also enter into a letter of release with Parties to the TSC who receive a copy of its report.

### **Period of Audit Report**

The Market Audit will cover the 12 month period from 1 January to 31 December 2014, including Resettlement of previous Settlement Dates performed within this period.

In a similar manner to the previous Market Audits, it is intended that the Market Auditor should perform interim audit procedures to cover the first six months of the audit period. This would involve approximately 50% of the audit work that would be required for a full year. The Market Auditor will flag to the RAs any issues identified from its audit procedures which it considers may have a material impact on the audit opinion for the year, although a formal Interim Review Report and Report of Significant Issues would not be required.

### **Materiality**

As with the 2013 Market Audit, the materiality for the audit shall be set at 0.25% of estimated annual market value.

A lower threshold, 10% of materiality, will be adopted for the reporting of significant issues identified during the course of the Market Audit, although it is recognised there may be qualitative aspects in determining the significance of any issue. That is, the Market Auditor shall report on issues which come to its attention which exceed this significant issues threshold or which it believes to be significant for other reasons.



## **Reporting**

In the preparation of the Market Audit Report, the Market Auditor will discuss individual draft issues with SEMO and other Parties insofar as they relate to them in order to confirm factual accuracy of the issues and their estimated quantification, and that all pertinent information and clarifications have reasonably been included.

The Market Auditor will subsequently discuss a full draft of the Market Audit Report with the RAs who may, at their discretion, invite or include named participants in the discussion of the draft report. The RAs believe that it may be necessary for them to discuss with SEMO and the Market Auditor any relevant Significant Issues included in the draft report.

The final version of the Market Audit Report will be addressed to the RAs. The final version of the Market Audit Report will be provided to Parties to the TSC most likely at a meeting of the Modifications Committee, in line with the provisions of the TSC, and subject to any confidentiality provisions required by the Market Auditor.

## **Boundary of Audit**

The Trading and Settlement Code Section 2.133 sets out that “the Market Auditor shall conduct an audit of the Code, its operation and implementation and the operations, trading arrangements, procedures and processes under the Code”. The remit of this proposed scope for the market audit period has been set on the basis of this, and the RAs consider that the systems, activities and processes under the aegis of SEMO (and other parties where stipulated) fulfill the requirements of the Market Audit provisions in the Code.

The scope of the Market Audit for 2014 will focus on the activities of SEMO under the TSC and Agreed Procedures and cover the systems and processes within the control of SEMO.

This contained scope excludes activities undertaken by the TSOs, Meter Data Providers and other participants as set out in the TSC and Agreed Procedures.

The relevant Market Operator activities, to the extent covered by specific requirements in the TSC, Rules and Agreed Procedures, will include:

- Accession and Registration
- Settlement production, including operation of the MSP Software (subject to the limitation set out in the paragraph below), Instruction Profiling, calculation of Energy Payments and Charges, and calculation of Capacity Payments and Charges, etc.
- Market Operator, Currency, Balancing and other Charges
- Invoicing and Payment
- Credit Cover management, including Settlement Reallocation
- Disputes

- Code development
- Publication of information within requirement timescales, including communication in relation to changes to interconnector ATC and the determination of MIUNs

As with previous Market Audits, it is intended to exclude the operation of certain components of the MSP Pricing Engine from the scope of the Market Audit. The excluded components are the operation of Unit Commitment, Economic Dispatch and calculation of Shadow Prices. The reduced scope for the MSP Pricing Engine would therefore include:

- Performing testing over change control, IS operations and access security to verify that only thoroughly tested and properly authorised changes are made to the MSP Pricing Engine;
- Performing a set of test procedures limited to the application of Uplift to Shadow Prices to determine System Marginal Prices and areas of manual intervention and controls exercised by SEMO over the operation of the MSP software, including controls over receipt and upload of data inputs, including system static data, Generator Unit standing data and Offer Data; controls over the modification of data provided to SEMO, e.g. conflicting input data, replacement of zero single ramp up/down rates; and adherence to timetables for gate closure and settlement runs; and
- Performing audit procedures on the processes and approvals under which SEMO re-run the MSP Software using the Mixed Integer Programming solver.