



## **SEM Committee Paper**

### **Trading and Settlement Code**

### **Terms of Reference for the 2016 Market Audit**

### **Decision Paper**

**SEM-16-033**

## 1 INTRODUCTION

Paragraph 2.133 of the Trading and Settlement Code (“TSC” or “the Code”) requires the Market Auditor to conduct an audit of the Code, its operation and implementation of the operation, and trading arrangements, procedures and processes under the Code at least once a year.

Paragraph 2.135 of the Code requires to Regulatory Authorities (RAs) to consult with Parties on the Terms of Reference for the audit. Paragraph 2.136 requires the Regulatory Authorities to specify annually the precise Terms of Reference for the audit following this consultation process.

On 26 April 2016, the Regulatory Authorities published a consultation on the Terms of Reference for the 2016 Market Audit.

What follows is a brief description of the evolution of the Market Audit since the introduction of the SEM.

In 2007/08 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”), by the Interconnector Administrator with their requirements under the Code.

In 2009, the scope of the Market Audit was extended to include a review of the decision process and approvals for using the Mixed Integer Programming (MIP) solver, instead of the Lagrangian Relaxation (LR) solver, in the Market Scheduling and Pricing (MSP) software. As result of the findings, 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 on an Agreed upon Procedures (“AuPs”) basis, with factual findings and any exceptions being reported to the RAs and Parties separately.

The 2011 Market Audit included AuPs 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.

The 2013 Market Audit consisted of a Core SEMO Audit with limited expansion to cover key MDP Demand Side Data Feeds.

In 2014 the Market Audit consisted of a Core SEMO Audit with limited expansion to look at publication of information within requirement timescales, including communication in relation to changes to interconnector Available Transfer Capacity (ATC) and the determination of MIUNs. Further, the SEM Committee decided that the RAs would follow up and review the AuPs from previous audits.

The 2015 Market Audit consisted of a Core SEMO Audit plus limited expansion to cover dispatch instructions. It was the view of the SEM Committee that there was value in pursuing this approach on the basis that dispatch instructions will remain an enduring feature of the market and any insights that can be gained now can be carried forward into the design for I-SEM.

## 2 PROPOSED 2016 AUDIT SCOPE

In the Consultation Paper on the Terms of Reference for the Market Audit 2016 (SEM-16-018), three options were outlined for the 2016 Market Audit, as follows:

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### 2.1 Option 1 Core SEMO Audit

As in previous years, this audit will 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 will focus on the activities and processing performed by SEMO. This contained scope excludes activities undertaken by the TSOs, MDPs and other participants as set out in the TSC and Agreed Procedures.

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

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### 2.2 Option 2 Core SEMO Audit plus follow-up of all previous AuP findings

In addition to the Core SEMO Audit, this option would include a follow-up on AuP findings from previous years' audits.

As mentioned in the introduction, the 2010, 2011 and 2013 Market Audits included a review of certain activities of MDPs and SOs in relation to meter data for generation, interval and non-interval metering, and dispatch instructions on an Agreed upon Procedures (AuP) basis. These audits identified a number of findings and recommendations.

Although these were followed-up in subsequent years to some degree, given the commonality of processes across areas, in particular interval and non-interval metering, a possible option for this would see a formal follow-up and reporting on actions taken by MDPs and SOs in response to the previous audit findings.

This follow up could review the twenty areas set out by the RAs in the 2015 Market Audit Consultation in isolation, or could be on a sample basis depending on the level of work

involved. This approach could be considered broadly in line with feedback in previous years' consultation responses that there would be value in revisiting areas examined in the audits at three-to-five yearly intervals.

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### 2.3 Option 3 Core SEMO Audit plus limited expansion to non-interval aggregation processes

This option would include a core SEMO Audit, in addition to an examination of the activities of the MDPs in relation to index or non-half hour data settlement processing, including the application of loss and usage factor rates, user demand profiles and theft losses. It should be noted that there is an element of overlap between aspects of Option 2 and Option 3 where the previous Market Audit findings relate to MDP processes around aggregation and usage factors.

While the method of recovery of the system error will change from smearing across all non-interval meters to a supplier tariff, as with Option 2, the findings of such an extension of the scope of the Market Audit would be expected to broadly have continued relevance in the new market.

Due to the expansion of this option into MDP responsibilities, the details of such an extension would be agreed on an AuP basis between the Auditors and MDPs, and submitted to the RAs for approval in December 2016.

### 3 COMMENTS ON THE CONSULTATION PAPER

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

- Power NI;
- Power NI Energy Limited Power Procurement Business (PPB); and
- SSE.

The comments received are summarised below. The SEM Committee's final decision on the Terms of Reference for the 2016 Market Audit is set out in Section 4 of this paper.

- PPB are of the view that the Terms of Reference of the 2016 Market Audit should be expanded from the core SEMO Audit to cover a subsection of the activities of the Meter Data Providers (MDPs) and the System Operators (SOs) related to their obligations under the Code. This 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. Consequently, PPB are in favour of option 3.
- SSE are of the view that the most useful option is considering previous AuP findings (Option 2). SSE note that while Option 3 may deliver additional value to the Market, it is unlikely to do so until after I-SEM requirements for MDPs are finalised. Given that some of the audit findings may be better addressed by updating of obligations between participants, SSE are of the view that this makes Option 2 preferable to Option 3. SSE therefore recommended that Option 2 is chosen.
- Power NI believe that the expansion in the scope of the Market Audit over recent years has proved beneficial. The 2013 audit in particular, which expanded the scope to include the actions taken by the Meter Data Providers (MDPs) in respect to non-interval demand, was of particular importance to Suppliers. Power NI commented that the expansion provided additional insight, assessment and assurance regarding the processes in place. They note that processes in relation to dispatch and the general operation of SEMO will change as a result of the implementation of the I-SEM, the requirement for an MDP to collect, process and aggregate supplier volumes will remain. The inclusion of these processes in an audit therefore would be beneficial both in the short and long term. Power NI therefore recommends that the audit includes MDP aggregation processes. This would include elements of both Option 2 and Option 3.

The comments received from the three interested 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 2 in the Consultation Paper (Core SEMO Audit plus follow up of all previous AuP findings).

While there is obvious value in considering an expansion of the Audit to include non-interval aggregation processes on an AuP basis, the SEM Committee agrees with the comments from SSE that as these processes may change for I-SEM, it is appropriate to refrain from proceeding with such an expansion until the requirements for MDPs under I-SEM are finalised and implemented. The SEM Committee is cognisant that some of the benefits of Option 3 are also captured in part by Option 2.

Therefore, the 2016 Market Audit will be based on Option 2 - (Core SEMO Audit plus follow up of all previous AuP findings).

## 5 NEXT STEPS

The Market Audit Plan for the 2016 Market Audit will be developed in the coming months with the Market Auditors.

The Terms of Reference for the period 1 January 2016 to 31 December 2016 are set out in Appendix A of this paper.

### **Proposed Terms of Reference for the 2016 Audit Scope**

This section sets out the terms of reference for the 2016 Market Audit for the period January to December 2016, 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 2016 Market Audit for the period from 1 January to 31 December 2016 as set out below.

Based on the terms of reference, the Market Auditor will prepare a Market 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 2016, 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 2015 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 2016 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.

The Market Audit will include examination of the activities of the SOs in relation to the issuing of dispatch instructions. This will be carried out on an Agreed Upon Procedure (AUP) basis. The specifics of the AUP will be developed by the Auditors and the SOs and will be approved by the RAs.