



SEM Committee Paper

Trading and Settlement Code

Terms of Reference for the 2015 Market Audit

Decision Paper

14 August 2015

SEM-15-052

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.

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. 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. 2013 saw 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 ATC and the determination of MIUNs. Further, the SEM Committee had decided that the RAs would follow up and review the AUPs from previous audits.

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 2015 AUDIT SCOPE

In the Consultation Paper on the Terms of Reference for the Market Audit 2015 (SEM-15-029), three options were outlined for the 2015 Market Audit, as follows:

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, Meter Data Providers 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 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.

2.2 Option 2 Core SEMO Audit plus follow-up of all previous 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 which the RAs subsequently reviewed and have outlined in the SEM-15-029 consultation paper. 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, this option 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 would be carried out for the twenty areas identified by the RAs in this paper. Those entities to which the exception applies would formally give their response to these issues including the corrective actions taken, as appropriate, on foot of the auditors' previous recommendations and the impact that these changes may have on the market.

2.3 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
- ESB GWM

The comments received are summarised below. The SEM Committee's final decision on the terms of reference for the 2015 Market Audit is set out in Section 4 of the paper.

- Bord Gáis Energy (BGE) favoured Option 3. BGE stated that the 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. However, BGE noted that extending the Core SEMO Audit to reviewing the processes in relation to the issuing of dispatch instructions including causes for deviation from the market schedule would provide insight that would add significant value to the current SEM and the I-SEM project also. Specifically, BGE stated that this review would give insight to local import constrained zones and the costs of plants located in these areas which would be helpful for the purposes of identifying plant with local market power. BGE also believe that a 'light touch' of Option 2 should also be pursued in parallel and that Option 2 is something that should happen as a matter of course whereby actions taken in response to previous market audit findings should be published to ascertain whether effective resolution of the issue has been applied.
- Energia favoured Option 3 stating that given the more limited scope of last years' audit there is a need to expand the parameters of the 2015 audit. Energia stated that a broader more comprehensive assessment that includes dispatch instructions will provide confidence to stakeholders that the SEM is functioning properly which may also have the added benefit of contributing to the design of the I-SEM.
- IWEA favoured Option 3 stating there would be benefit in looking at the processes in relation to making dispatch decisions including deviating from the market schedule, priority dispatch and managing short term issues. IWEA also believe that this option could provide information which will be useful for the design of I-SEM.

- 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 as this function is critical to the efficient and effective operation of the market. Power NI further acknowledged that the annual audit incurs a cost and burden on those parties subject to the review. In this context and given that an audit of meter read processing will have an enduring effect, Power NI favoured Option 2.
- PPB favoured Option 3 on the basis that, in line with previous Market Audit Terms of Reference responses, the Core SEMO Audit should cover a subsection of the activities of the Meter Data Providers (MDPs) and the System Operators (“SOs”) with their obligations under the Code. PPB 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. Consequently, as dispatch decisions have a major impact on participants’ revenues and have not been covered in previous Market Audits, Option 3 is preferred.
- ESB GWM stated their preferred option would be Option 3 on the basis that it would help prepare for the New Market Designs.

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 3 in the Consultation Paper (Core SEMO Audit plus limited expansion to cover Dispatch Instructions).

In particular, this option was favoured by a number of respondents on the basis that it has the potential to provide an increased level of confidence to market participants. In addition, that there is 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 in I-SEM.

The RAs note the comments in relation to the pursuit of Option 2 in the Consultation Paper both as a dedicated option and the light touch approach. The RAs do not favour pursuing two significant AUP options in the one year and in this instance notes the potential benefit of and level of support for Option 2. The RAs will consult on the Terms of Reference for the 2016 Market Audit in 2016 and can consider Option 2 again then.

The specifics of the Agreed Upon Procedure (AUP) will be developed by the Auditors and the SOs and will be approved by the RAs.

The Market Audit Plan for the 2015 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.

Market Audit 2015

The SEM Committee has decided to pursue Option 3, (Core SEMO Audit plus limited expansion to cover Dispatch Instructions) as the approach for the 2015 Market Audit.

APPENDIX A

Proposed Terms of Reference for the 2015 Audit Scope

This section sets out the terms of reference for the 2015 Market Audit for the period January to December 2015, 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 2015 Market Audit for the period from 1 January to 31 December 2015 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 2015, 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 2014 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 2015 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.