



Trading and Settlement Code

Terms of Reference for the Market Audit 2019

Decision Paper

17 September 2019

SEM-19-051

1 EXECUTIVE SUMMARY

The Trading and Settlement Code (“TSC” or “the Code”) provides the rules by which the market and its participants may operate, setting out the detailed rules and procedures concerning the sale and purchase of wholesale electricity in the market. The Single Electricity Operator (SEMO) is responsible for the administration and operation of the TSC.

Under Section B.16 of the Code the Regulatory Authorities (RAs) are required to appoint a person or firm to be the Market Auditor and ‘conduct an audit of the Code, its operation and implementation and the operations, trading arrangements, procedures and processes under the Code at least once a year’. The RAs, ‘shall specify annual the precise terms of reference for the audit following the consultation process under paragraph B.16.1.5 and in sufficient time to enable the Market Auditor to complete the work in a timely manner and shall publish the terms of reference before the commencement of the audit activities’.

This paper sets out the Terms of Reference (TOR) that the SEM Committee has set for the 2019 Market Audit, following the publication of the Consultation Paper on the proposed terms of reference for the 2019 Trading and Settlement Code Market Audit ([SEM-19-032](#)), and subsequent review of responses received.

The Consultation paper received six responses. Based upon these responses the SEM Committee decided to implement the following structure and approach for the 2019 Market Audit:

1. Core SEMO Audit:

The SEM Committee has decided to implement a Core SEMO audit. Due to the decided reporting approach, a detailed list of the ‘Agreed Upon Procedures’ that will make up the Core SEMO audit will be published following publication of this paper.

The SEM Committee has decided that the audit will be conducted in a different manner to previous audits to account for the number of known issues already identified. The detailed approach to the treatment of known issues will form part of the development of the Agreed Upon Procedures to be applied for the current audit period.

2. SEM Settlement Cutover:

The SEM Committee has decided to include a separate audit (reported upon in a subsection of the report) on the Cutover period of SEM Settlement (Legacy SEM Resettlement and Transitional Arrangements, Part A and Part C respectively of the TSC). The SEM Committee would like to note that this is a separate audit focusing on SEM Settlement Cutover (Part A and C of the TSC). In tandem Part B of the TSC (core SEMO activities) will be audited over the whole audit period and make up the main part of the report.

3. Reporting:

The SEM Committee has decided to use the ISRS4400 Agreed Upon Procedures reporting approach for the audit. This is to account for the ongoing 'stabilisation' phase that this audit will cover. Reporting under ISRS4400 Agreed Upon Procedures will require the development of a specific list of Agreed Upon Procedures to audit. The SEM Committee will work with the Market Operator over the next month to develop the list of Agreed Upon Procedures to audit.

4. Audit Period:

Due to the go-live of I-SEM in October 2018, the SEM Committee has decided to audit the period of 1st October 2018 to 31st December 2019. The SEM Committee has decided that there will be no 'bedding-in' period, so the Core Audit will cover the whole period of the Audit (1st October 2018 to 31st December 2019).

Following publication of this paper the SEM Committee will publish the list of Agreed Upon Procedures. This document will provide greater detail upon how each specific procedure will be audited and the form that the final report will take. Upon publication of this the Auditor will begin work on an interim audit to report to the RAs in Q4 2019. The results of this audit will be reported to the RAs but not published. However, if any major issues arise, they will be articulated to market participants. The full results of this audit will be included in the main Report due to be published in Q2 2020.

2 BACKGROUND

Paragraph B.16.1.3 of the TSC requires the Market Auditor to conduct an audit of the Code, its operation and implementation of the operations, trading arrangements, procedures and processes under the Code at least once a Year.

Paragraph B.16.1.5 of the Code requires to RAs to consult with Parties on the terms of reference for the audit. Paragraph B.16.1.6 requires the Regulatory Authorities to specify annually the precise terms of reference for the audit following this consultation process.

The purpose of this paper is to outline the terms of reference for the scope of the 2019 audit.

A Market Audit has been conducted on an annual basis since 2007. Over the years the scope has extended and changed to account for specific developments in the market and requests from market participants.

The 2017 Market Audit was the last Market Audit. It was expanded to cover the first nine months of 2018 until the go-live of I-SEM (1st October 2018). It consisted of a Core SEMO Audit.

The 2019 Market Audit will be the first TSC Market Audit of the new SEM. The Go-Live of I-SEM occurred on 1st October 2018, consequently the 2019 Audit will run over a period of fifteen months from October 2018 – December 2019.

Accounting for the new SEM market and the identification of a number of known issues, a different approach to the Market Audit (than has been employed in previous audits) has been decided. It is considered this is necessary to provide the greatest benefit to the RAs and Market Participants upon SEMOs compliance with the TSC.

This audit will support the SEMO Key Performance Indicators (KPIs)¹. The KPIs are used as a mechanism to incentivise improvements in performance. However, they do not account for the system issues that have arisen to date which SEMO are also incentivised to address to progress normal market operations. This Market Audit reviews in detail system issues that occurred over the audit period.

¹ Outlined in SEMO Key Performance Indicators Decision Paper ([SEM-19-033](#))

3 PROPOSED 2019 AUDIT SCOPE

On 3 July 2019, the SEM Committee published a Consultation Paper on the proposed terms of reference for the 2019 Trading and Settlement Code Market Audit ([SEM-19-032](#)).

This will be the first TSC Market Audit for the new SEM. As such the RAs propose a number of additional assessments be carried out in the audit of SEMO as required under the TSC, in the new market. Additionally, a number of issues have been identified within the settlement systems and associated calculations and a known-issues report is published each week by SEMO. It is likely that at least some of these items inherently represent non-compliance by the Market Operator with the TSC. These issues also create some practical implications for the approach to conducting the Market Audit. Therefore, the RAs proposed a different approach to this Market Audit (than had been employed previously).

The RAs proposed structure and approach for the 2019 Audit is outlined below.

2.1 Core SEMO Audit

The RAs proposed a core audit. This will be an audit of SEMOs compliance with relevant aspects of the Code and Agreed Procedures. It will cover, inter alia, the following areas:

- Accession & Registration
- Imbalance Settlement Price calculation and recalculation
- Settlement Production and Reruns (to include all of the Market Operator Charges)
- Currency and balancing charges
- Invoices, payments and credit cover
- Queries and disputes
- Code development
- Information publication
- Communication channels, systems and operation

As participants will be aware since I-SEM go-live a number of issues have been identified within the settlement systems and associated calculations and a known-issues report is published each week by SEMO. It is likely that at least some of these items inherently represent non-compliance by the Market Operator with the TSC. These issues also create some practical implications for the approach to conducting the Market Audit – notably that in testing settlement calculations during the impacted periods it is expected a much higher level of exceptions than normal would be identified and it would be necessary to distinguish which of these were due to known issues and which represented additional audit findings. The impact of both known and “new” issues would require to be quantified and considered by the Market Auditor in forming any overall opinion. Whilst known issues have been identified there is no process in place within the Market Operator to determine on a daily basis the

individual and compound impact of each known issue. This could therefore result in expending significant audit effort even though it is already known that there are non-compliances present in the specific calculation.

The Market Operator has and continues to deploy fixes to the settlement systems to resolve the issues identified and will run resettlement of periods affected by known issues prior to the end of the audit period. It is therefore expected that the Market Auditor will need to vary their approach to testing – for example by focusing testing on calculations performed at resettlement after fixes have been deployed in order to isolate any additional audit findings and using the details of the movement between initial settlement and resettlement as an approximation of the impact of the corrected known issues.

2.2 SEM Settlement Cutover

The resettlement of the old SEM will continue in parallel with the operation of I-SEM for a period of 13 months to complete settlement of all relevant periods prior to I-SEM go-live. The TSC Part C defines the Cutover Time and stipulates that Part A provisions apply to Trading Periods before go-live and Part B applies thereafter.

The RAs proposed that the methods and controls SEMO operated over this Cutover period in the resettlement of legacy SEM should be audited and included in a separate section in the Report. Moving between markets is a rare event, nevertheless the RAs believe there is value in carrying out an audit of the cutover on behalf of the RAs and market participants, so that when SEMO must carry out major changes, they can transition in an appropriate and controlled manner with the correct data items.

2.3 Reporting

Historically the Market Audit has reported in the form of an ISAE3000 Reasonable Assurance Opinion – reporting on whether the Market Operator has complied, in all material respects, with the requirements of the TSC. In the context of the known issues as outlined above there are two potential options for reporting that could be considered:

- 1) ISAE3000 Reasonable Assurance Opinion – the Market Auditor could continue to report on this basis, consistent with prior years. However, given the known issues and the fact that the Market Operator is currently in a ‘stabilisation’ phase the extent and coverage of testing would need to be significantly increased to reflect the extent of known issues and the potential for additional issues to be identified affecting the audit period. This would have significant time and cost implications for both the Market Auditor and Market Operator. Given that the Market Auditor will require to revisit the settlement calculations following the remediation of all issues as well as evaluating the compliance of the Market Operator with the Code during the audit period the increase in effort required may not be cost beneficial to participants.
- 2) ISRS4400 Agreed Upon Procedures – under this reporting approach, which has been utilised in prior years for testing at MDPs and SOs, a specific scope of testing procedures would be agreed by the RAs with the Market Auditor. The Market Auditor would report on the factual results of these procedures, including any issues identified, but would not provide an overall

opinion or conclusion in respect of the Market Operators compliance with the TSC. For example, this approach would allow the RAs to specifically direct the Market Auditor's testing to areas of particular concern or exclude testing where there would be no benefit from further examination of specific known issues at the present time.

2.4 Audit Period

The audit will cover the period from 1st October 2018 to 31st December 2019. The Auditor is expected to provide an Interim Report to the RA's in Q3 2019. The results of this audit will be reported to the RAs but not published. However, if any major issues arise they will be articulated to market participants. The full results of this audit will be included in the main Report. The main Auditors Report is expected to be published in Q2 2020.

The RAs did not have a strong preference for an approach during the consultation, but welcomed views on those proposed, as well as any alternative approaches for the 2019 Market Audit.

4 RESPONSES RECEIVED

Six responses were received:

- Electricity Association of Ireland (EAI)
- ESB Generation and Trading (ESB GT)
- Power NI
- Power NI Energy Limited Power Procurement Business (PBB)
- Single Electricity Market Operator (SEMO)
- SSE

3.1 Core Audit

SEMO stated its support for carrying out a core audit, with no expansion. In terms of the contents of the Core Audit, SSE was broadly in favour of the key topics identified but would like greater details on the specific headings. In terms of specific features to be included in the core audit respondents noted the following:

- ESB GT would like the treatment of REMIT data (C.7.8 of the Code) to be included in the core scope;
- PBB would like the Core Audit to focus on incidents involving invoicing and payments of monies;
- SSE would like confirmation that repricing will be considered under the core audit scope;
- SEE would like the suitability of the IT system to be included in the audit, to account for the volume of system defects and continued bugs following code releases.

In terms of the approach to conducting the Market Audit, PBB noted that the audit is complicated by the significant number of issues that have been identified within the settlement systems and associated calculations. There was consensus from EAI, ESB GT and SSE that all known issues (including any remedial actions) should be reported upon even if they are not quantified. SSE suggested that a risk-based approach should be taken in the audit, focusing upon completeness and accuracy involving the investigation of both known issues and other possible concerns. Power NI

further supported the inclusion of auditing known issues, as they believe there could be ‘known issues’ that SEMC may not be fully aware of, so without this audit they could remain unsighted. In addition, ESB GT stated that the audit should recognise new known issues that may have developed from the release of a ‘fix’. There are a number of releases to be applied and ESB GT feel it would be appropriate for the Market Auditor to recommend how more issues can be prevented from occurring for future releases.

In the reporting of known issues EAI would like the auditor to detail the known issues, note the forecasted date of resolution, and report upon whether the timelines have been achieved (during the audit period). They suggested that performance of ‘known issues’ can be assessed in subsequent audits. A further point on the reporting of known issues was made by SSE who consider that the volume of known issues should be considered in the report in terms of assessing SEMOs compliance. SSE further stated they believe the audit should consider whether the system is fit for purpose against the TSC and certification would be one aspect of validating this

3.2 SEM Settlement Cutover

Power NI, PBB and SSE are in support of auditing SEMOs operation in the Cutover period of the resettlement of legacy SEM (the TSC Code Part C) as a separate part of the audit. Power NI stated,

‘it would provide an effective ‘lessons learnt’ opportunity for both SEMO and SEMC’.

SSE looked for clarity upon how this would affect the overall view of compliance by SEMO with the TSC. SSE also considered it would be merited to investigate whether the management of legacy SEM settlement has a resource impact in the delivery of new systems ahead of go-live.

SEMO considered that the inclusion of the SEM Settlement Cutover is inappropriate in the audit and would generate significant work which would distract resources from core market activities. SEMO believed the benefit of the Cutover inclusion is far outweighed by the impact of its inclusion in scope, stating that the transition between markets is a rare event.

3.3 Reporting

PBB, SEMO and SSE are in favour of reporting under ISRS4400 Agreed Upon Procedures. ESB GT could not select a preferred reporting option due to lack of clarity upon the ‘specific scope of testing procedures’ covered under ISRS4400 Agreed Upon Procedures but acknowledged the concerns with applying the ISAE3000 Reasonable Assurance Reporting structure. EAI, further stated that in a business as usual scenario ISAE3000 Reasonable Assurance would be their preferred position, however, due to the ongoing ‘stabilisation’ phase that this audit will cover, the EAI accepts that reporting under ISRS4400 Agreed Upon Procedures could be pragmatic for this audit.

SSE stated that if ISRS4400 Agreed Upon Procedures was the chosen reporting form, it would not result in a conclusion regarding compliance from the Market Auditor. In the absence of this they would expect the RAs to consider providing a conclusion on compliance and improvements in their decision.

3.4 Audit Period

SEMO is of the opinion that the first 6 months of the new SEM operation should not be audited, stating that the market was in a period of stabilisation over this period. They believe the benefit of auditing this period (which they state is an unusual and rare period) would be of little value to

stakeholders, whilst generating additional work which could distract resources from the core objective of market stabilisation.

3.5 Other Points

PBB and Power NI, whilst supporting just carrying out a core audit this year, believe that the TOR for future market audits should be expanded from the core SEMO audit to cover a subsection of the activities of the Meter Data Providers and System Operators with their obligation under the Code. They state this subsection could be rotated each year in order that the all the obligations of the Meter Data Providers and System Operators could be covered and revisited every 3-5 years.

EAI asked for the RAs to hold SEMO to account for both the performance of the market to date and to ensure that the current stabilisation phase will contribute to a sustainable market going forward.

ESB GT acknowledged that market trials may be out of scope of the audit, however, they stated that it could be a benefit to the consumer to include a review of the decision to Go-Live in the audit to identify any learnings that may be applied for future projects.

5 DECISION

Based on the responses received, the SEM Committee has decided to implement the following structure and approach for the 2019 Market Audit:

1. Core SEMO Audit:

The SEM Committee has decided to implement a Core SEMO audit. Due to the decided reporting approach, a detailed list of the 'Agreed Upon Procedures' that will make up the Core SEMO audit will be published by the SEM Committee following this publication of this paper.

The SEM Committee has decided that the audit will be conducted in a different manner to previous audits to account for the number of known issues already identified. The detailed approach to the treatment of known issues will form part of the development of the Agreed Upon Procedures to be applied for the current audit period. However, the broad principle of the approach for calculations impacted by known issues and where fixes have been applied during the year will be that the Auditor will be directed to focus testing on calculations performed after application of the fix. This will include resettlement/correction of periods affected by the known issues as well as settlement of later periods. Focusing testing on calculations performed at resettlement after fixes have been deployed will facilitate identification of any additional audit findings (over and above existing known issues) and reduce the risk of expanding significant effort testing periods with existing known non-compliances present. The detail of the movement between initial settlement and resettlement can also be used as an approximation of the impact of the corrected known issues.

The SEM Committee notes that it will take into consideration the number of issues that have been identified by the Auditor as well as the scale and significance of any individual beaches that may be identified. The volume of issues (even if not material in their own right) form an aggregation risk, so may be considered material if large enough in volume.

2. SEM Settlement Cutover:

The SEM Committee has decided to include a separate audit (reported upon in a subsection of the report) on Legacy SEM Resettlement and Transitional Arrangements of the TSC (cutover period of SEM settlement). The SEM Committee would like to note that this is a separate audit focusing on Part C and A of the TSC. In tandem Part B of the TSC (core SEMO activities) will be audited over the whole audit period and make up the main part of the report. The SEM Committee notes that the SEM Settlement Cutover is a rare event and the auditing of it will create additional work. However, the scale of work required to audit the Cutover is relatively low so will not impede upon the Core SEMO Audit. Additionally, the SEM Committee is of the view that there is merit in the audit of the Cutover to ascertain if SEMO can transition in an appropriate and controlled manner with the correct data items, when an occasion arises for them to carry out major changes.

3. Reporting:

The SEM Committee has decided to use the ISRS4400 Agreed Upon Procedures reporting approach for the audit. This is to account for the ongoing 'stabilisation' phase that this audit will cover. Note that future audits are likely to return to the ISAE3000 Reasonable Assurance Opinion reporting approach once the new SEM Market is established.

Reporting under ISRS4400 Agreed Upon Procedures will require the development of a specific list of Agreed Upon Procedures to audit. The SEM Committee will work with the Market Operator over the next month to develop the list of Agreed Upon Procedures to audit. The SEM Committee will publish its proposed list of Agreed Upon Procedures following the publication of this paper. This document will provide greater detail upon how each specific procedure will be audited and the form that the final report will take on matters such as conclusions.

4. Audit Period:

Due to the go-live of I-SEM in October 2018, the SEM Committee has decided to audit the period of 1st October 2018 to 31st December 2019. The SEM Committee has decided that there will be no 'bedding-in' period, so the Core Audit will cover the whole period of the Audit (1st October 2018 to 31st December 2019). The reason for this is twofold:

- If the audit was subdivided into two separate periods (Bedding-in and Core) then it would result in two separate audits being carried out to cover both. This is not favourable for the SEM Committee due to the additional costs and time it would impose on the audit.

- If a period was excluded from the Core Audit (the Bedding-in period), then it would result in a gap of time in which no Market Audit had been conducted. This would contravene the requirements set out in the Trading and Settlement Code requiring an Audit of compliance with *‘the Code, its operation and implementation and the operations, trading arrangements and procedures under the Code at least once a year’*.

5. Other Points

The SEM Committee will recommend an expansion of the Core SEMO Audit in subsequent years. Participants should note that this will occur once the market has stabilised.

The SEM Committee would like to note that there were several points in the consultation responses that are deemed outside of the Market Audit. The Committee acknowledge they are valid points on the overall market and has taken note of them. They included:

- The suitability of the systems employed by SEMO should be assessed: The SEM Committee notes that the TSC does not explicitly prescribe specific systems, rather it prescribes specific arrangements for the trading and settlement of the market. Therefore, the audit is concerned with SEMO achieving these arrangements rather than the process that was used to achieve them. The suitability of the systems employed in terms of value for money and efficiency is covered in SEMOs Price review;
- Adequacy of the current stabilisation phase in terms of contributing to a sustainable market going forward: The SEM Committee notes that this is forward looking when, an audit is a historical review of compliance. However, the stabilisation phase will have finished by the time the audit report is published, therefore the audit results should indicate the adequacy of the stabilisation phase carried out by SEMO.
- Audit of Market Trials: The SEM Committee notes that market trials are out of scope of this audit. However, if the SEM Committee feels there is value to audit these or other aspects, they can request an audit to be carried out. The SEM Committee will only instruct additional audits to be carried out if they feel it is of value to the market when considered against the time and costs it will entail.
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6 NEXT STEPS

The SEM Committee has begun work with the Market Operator to develop a list of Agreed Upon Procedures that will be audited. This list will be published following publication of this paper. This document will provide greater detail upon how each specific procedure will be audited and the form that the final report will take. Upon publication of this the Auditor will begin work on an interim audit to report to the RAs in Q4 2019. The results of this audit will be reported to the RAs but not published. However, if any major issues arise, they will be articulated to market participants. The full results of this audit will be included in the main Report due to be published in Q2 2020.