



Trading and Settlement Code

Terms of Reference for the Market Audit 2022

Decision Paper

30 June 2023

SEM-23-048

1 EXECUTIVE SUMMARY

The Trading and Settlement Code (“TSC” or “the Code”) forms part of the legal and regulatory framework that governs the Single Electricity Market (“SEM”). This Code governs the trading and settlement arrangements for the Balancing Market and the settlement arrangements for the Capacity Market. The Single Electricity Market Operator (“SEMO”) is responsible for the administration and operation of the Code.

Under Section B.16 of the TSC Part B, the Regulatory Authorities (“RAs”) shall appoint a person or firm as Market Auditor. 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 at least once a Year. The RAs shall specify annually the precise terms of reference (“ToR”) for the audit following a consultation process.

This decision paper sets out the ToR that the SEM Committee has determined for the Market Audit 2022. This is following the publication of the Trading and Settlement Code Terms of Reference for the Market Audit 2022 Consultation Paper ([SEM-23-033](#)) and subsequent review of responses received.

During the consultation period, two responses were received by the RAs. Having reviewed the responses, the SEM Committee has decided to implement the following scope and approach for the Market Audit 2022:

Period of audit	01 January 2022 – 31 December 2022
Scope of audit	Core SEMO Audit without expansion, covering the following areas: <ul style="list-style-type: none">• 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
Reporting approach	ISAE 3000 Assurance Opinion
Materiality level	0.5% of the estimated annual market value of electricity traded in the SEM, as governed by the TSC. A lower threshold of 10% of the materiality value is set for reporting significant issues.

Following publication of this decision paper, the RAs will engage with the Market Auditor on the audit. Subject to approval by the SEM Committee, the final audit report will be presented to the industry at the SEM TSC Modifications Committee and published on the SEMO website.

2 BACKGROUND

Paragraph B.16.1.3 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 operations, trading arrangements, procedures, and processes under the Code at least once a Year.

Paragraph B.16.1.5 of the Code requires the Regulatory Authorities (“RAs”) to consult with the parties to the Code on the terms of reference (“ToR”) for the audit. Paragraph B.16.1.6 requires the RAs to specify annually the precise terms of reference for the audit following this consultation process.

The purpose of this paper is to set out the ToR for the Market Audit 2022 together with reporting arrangements.

A Market Audit has been historically conducted on an annual basis. Over the years, the scope has extended and changed to account for specific developments in the market and requests from market participants, on the basis of a core audit on activities of the Single Electricity Market Operator (“SEMO”).

The [final report for the Market Audit 2021](#) was published on the SEMO website on 21 April 2023. The Market Audit 2021 was a Core SEMO Audit with limited expansion to include calculation, application and reporting of the Market Operator charges (Fixed and Variable) and Imperfection charges within the TSC. The Market Audit 2021 was reported under the ISAE 3000 Assurance Opinion¹. Based on reasonable assurance engagement, SEMO was found, in all material respects, compliant with the TSC and relevant Agreed Procedures (“APs”) as set out in the Terms of Reference for the Market Audit 2021 for the period of 01 January 2021 – 31 December 2021.

3 PROPOSED 2022 AUDIT SCOPE

On 24 April 2023, the SEM Committee published a consultation paper on the proposed ToR for the Market Audit 2022 ([SEM-23-033](#)). The key proposals are outlined below.

3.1 Period of Audit

The RAs proposed that the Market Audit 2022 covers the 12-month period from 01 January 2022 to 31 December 2022.

Paragraph B.16.1.4 of the TSC specifies that the annual period covered by the audit shall be 01 January to 31 December unless the terms of reference specify a different period. The Market Audit 2018/19, which was the first audit following the go-live of the revised SEM arrangements, covered the period of 15 months from 1 October 2018 to 31 December 2019. Subsequent audits

¹ International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information.

in 2020 and 2021 covered 12 months of each calendar year. For the Market Audit 2022, the RAs consider it appropriate to cover the full calendar year of 2022.

3.2 Scope of Audit

The RAs proposed that the Market Audit 2022 is a Core SEMO Audit, focusing on activities of SEMO under the TSC and its APs and covering the systems and processes within the control of SEMO.

The proposed scope excludes activities undertaken by the System Operators, Meter Data Providers and other participants as set out in the TSC and its APs.

The Core SEMO Audit 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

The Core SEMO Audit will provide reasonable assurance, within a reasonable timeframe, 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 APs.

3.3 Reporting Approach

The RAs proposed that the Market Audit 2022 is to be reported under the ISAE 3000 Assurance Opinion.

Following the go-live of the revised SEM arrangements in October 2018, the RAs considered the ongoing 'stabilisation' phase of the market and used the ISRS 4400 Agreed Upon Procedures reporting approach for the Market Audit 2018/19. For the subsequent audits in 2020 and 2021, the RAs were of the view that the market was in a sufficiently stable condition and decided to use the ISAE 3000 Assurance Opinion reporting approach. This approach was also used for the audits prior to the go-live of the revised SEM arrangements. The RAs consider this reporting approach as providing the greatest value to both the RAs and Market Participants upon SEMO's compliance with the TSC.

3.4 Materiality Level

Materiality is generally used by the Market Auditor in two ways:

- a. to plan and perform the assurance engagement, and
- b. to evaluate whether the subject matter is free from material non-compliance.

Based on the ISAE 3000 (Revised), *“Misstatement, including omissions, are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence relevant decisions of intended users taken on the basis of the subject matter information.”*

As stated in the terms of reference for the first market audit ([AIP/SEM/07/502](#)), the determination of materiality *“is a matter of judgement and reflects cost benefit considerations as well as an assessment of risk and susceptibility to error.”*

The RAs proposed two options for the materiality level, outlined below.

Option 1: 0.25%

Option 1 is to set 0.25% of the estimated annual market value of electricity traded in the SEM, as governed by the TSC, as the materiality level.

A lower threshold of 10% of the materiality value, i.e., 0.025% of the estimated annual market value, is set for reporting significant issues. It should be noted that there may be qualitative aspects in determining the significance of any issue. That means, the Market Auditor shall report on issues that come to its attention which exceed the quantitative threshold or which it believes to be significant for other reasons.

The percentages are consistent with those in previous audits.

Option 2: 0.5%

Option 2 is to increase the materiality level to 0.5% of the estimated annual market value of electricity traded in the SEM, as governed by the TSC. The quantitative threshold for reporting significant issues remains unchanged, i.e., 10% of the materiality value, which is 0.05% of the estimated annual market value.

The existing threshold, 0.25%, was initially determined in the context of the original SEM, where the annual market value was calculated based on the gross mandatory pool model. That means, the threshold was based on the total annual gross value of payments to generators.

Whereas in the context of the revised SEM arrangements, only the trading and settlement arrangements for the Balancing Market and the settlement arrangements for the Capacity Market are governed by the TSC. The Day-Ahead Market and Intraday Market, where the majority of electricity is traded, are not governed by the TSC² and, hence, not covered by this audit. That means, the total annual market value related to this audit is lower than that in the original SEM. This change may warrant an increase to the materiality level in terms of percentage.

² These are governed by SEMOpx Rules: <https://www.semopx.com/rules-and-monitoring/market-rules/>

For information, the 0.25% materiality value for each audit period since 2015 is provided in the table below.

Audit period	2021	2020	2018/19	2017/18	2016	2015
Value	€2.4m	€2.2m	N/A ³	€6.4m ⁴	€3.6m	€4.44m

4 RESPONSES RECEIVED

Two responses were received from:

- (1) ESB Generation and Trading (“ESB GT”)
- (2) SEMO

The responses have focused on two topics: the scope of audit and the materiality level.

4.1 Scope of audit

On the scope of audit, SEMO acknowledged the RAs’ proposal and had no further comments.

ESB GT pointed out that in the proposed ToR for the Market Audit 2022, it was unclear whether the limited expansion, as covered by the Market Audit 2021 ([SEM-21-082](#)), would continue to apply going forward. More specifically, ESB GT sought clarity as to whether the calculation, application and reporting of the Market Operator charges (Fixed and Variable) and Imperfection charges would be included in the 2022 and future Market Audits.

ESB GT supported the inclusion of the same limited expansion in the Market Audit 2022 and future audits.

4.2 Materiality level

On the materiality level, ESB GT preferred 0.25% of the estimated annual market value as the materiality threshold while SEMO supported 0.5%.

ESB GT preferred 0.25% based on the following considerations.

- ESB GT acknowledged that the relevant annual market values had dropped by 45% from 2015 to 2021. This decrease had been mainly driven by the differences between the SEM pre and post 1 October 2018. ESB GT did not consider that a change in the materiality threshold would be necessary and might reflect a regime shift.
- ESB GT also emphasised that the materiality level had remained at 0.25% since 2018. In the Market Audit 2021, two significant issues were reported using the 0.25% threshold.

³ The 2018/19 audit was based on Agreed Upon Procedures.

⁴ Note this was for a 21-month period, which equates to €3.6m over 12 months.

This showed that the 0.25% threshold would continue to be effective as it could capture important events which would otherwise have been omitted.

SEMO stated that the 0.25% materiality threshold is currently set too low, and that the threshold should be increased to at least 0.5%.

- SEMO firstly highlighted market changes. It stated that the threshold of 0.25% was initially determined for the SEM arrangements where the market was a gross mandatory pool for all electricity generated/imported on the island of Ireland. The total market volumes then were significantly greater than in the current market arrangement as governed by the TSC, as the latter only covers the Balancing Market and Capacity Market, which make up typically less than 30% of total market volume. This means that, in monetary terms, the materiality level of 0.25% in the current SEM arrangement is significantly lower than in the previous market arrangements and warrants an increase at least to 0.5%.
- SEMO further explained market conditions. It explained that as the market matures, SEMO continues to address a number of queries, rules changes, system and settlement defects, and numerous modifications. In these circumstances, SEMO anticipates that resettlement of amounts in excess of 0.25% may continue to arise.
- For comparison, SEMO pointed out that in Great Britain, the materiality threshold for the Balancing and Settlement Code Audit is approximately 0.5% of the total annual electricity supplied across Great Britain in the preceding calendar year,⁵ which is typically an order of magnitude greater than in SEM.
- SEMO emphasised that an increase of the materiality level to at least 0.5% would provide a more accurate threshold against which to benchmark, would avoid potential breaches of threshold which is too low that could damage confidence in the market and divert resources away from areas of higher impact, and would not affect the value and transparency of reporting in the Market Audit.

5 DECISION AND RATIONALE

Having reviewed the responses, the SEM Committee has made the following decisions.

5.1 Period of audit

The SEM Committee has decided that the Market Audit 2022 covers the 12-month period from 01 January 2022 to 31 December 2022.

⁵ <https://www.elexon.co.uk/reference/performance-assurance/performance-assurance-techniques/bsc-audit-performance-assurance-framework/bsc-audit-reports/>

5.2 Scope of audit

The SEM Committee notes the comment provided by ESB GT. The Market Audit 2021 covered the calculation, application and reporting of the Market Operator charges and Imperfection charges. Following assurance engagements, the Market Auditor did not identify any material findings, significant issues, or other matters in this area.

The inclusion of any expansion of the scope would require extra time for the Market Auditor to conduct the audit. Given that the Market Audit 2022 has been delayed, including the proposed expansion will result in further delay with the Market Audit 2023 subsequently postponed. This will increase the risk that potential issues cannot be identified in a timely manner and that the interests of the Parties to the TSC may be jeopardised.

Therefore, for the Market Audit 2022, the SEM Committee is of the opinion that it is appropriate to focus on core areas without any expansion. The RAs will consider potential expansions for recommendation to the SEMC where appropriate for future audits.

Based on the above, the SEM Committee has decided that the Market Audit 2022 is a Core SEMO Audit without expansion. This audit 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

The audit will focus on activities of SEMO under the TSC and its APs and cover the systems and processes within the control of SEMO. The audit will not include activities undertaken by the System Operators, Meter Data Providers and other participants as set out in the TSC and its APs.

5.3 Reporting approach

The SEM Committee has decided that the Market Audit 2022 is to be reported under the ISAE 3000 Assurance Opinion.

5.4 Materiality level

The SEM Committee notes ESB GT's concern that increasing the quantitative threshold may result in a less effective audit as important events may be omitted. The [Market Audit 2021](#) applied 0.25% threshold and yielded the identification of two significant issues. However, it should be noted that the Market Auditor's Report covers all issues identified by the auditors. The quantitative

thresholds will not impact on the transparency of the report, as they are used by the auditors to categorise issues (material, significant, or other) in the report. As in previous years, the final report will be communicated to the Parties to the TSC and will also be published on the SEMO website.

The SEM Committee notes ESB GT's comment stating that the decrease in the relevant annual market value has been mainly driven by the differences between the old and revised SEM arrangements. Under the current market arrangements, the majority of electricity is traded in the Day-Ahead and Intraday Market that are not governed by the TSC. As a result, the Market Audit only covers a small proportion of the SEM. SEMO has provided quantitative data in this regard in its comment. It is reasonable to take the change of market arrangements into account when considering resource allocation and areas of focus.

As cited in the consultation paper ([SEM-23-033](#)) and originally stated in the ToR for the first market audit ([AIP-SEM-07-502](#)), the determination of materiality *"is a matter of judgement and reflects cost benefit considerations as well as an assessment of risk and susceptibility to error."*

Based on the above, the SEM Committee has decided that it is appropriate to increase the quantitative threshold for reporting material issues from 0.25% to 0.5% of the estimated annual market value as governed by the TSC.

A lower quantitative threshold of 10% of the materiality value, i.e., 0.05% of the estimated annual market value as governed by the TSC, is set for reporting significant issues. It should be noted that there may be qualitative aspects in determining the significance of any issue. That means, the Market Auditor shall report on issues that come to its attention which exceed the quantitative threshold or which it believes to be significant for other reasons.

6 NEXT STEPS

Following publication of this decision paper, the RAs will engage with the Market Auditor on the audit.

Subject to approval by the SEM Committee, the final Market Auditor's Report will be presented to the industry at the SEM TSC Modifications Committee and published on the SEMO website.