

Annual Audit of the Scheduling and Dispatch Process

2024 and 2025 Terms of Reference

30th August 2024



Disclaimer

EirGrid as the Transmission System Operator (TSO) for Ireland, and SONI as the TSO for Northern Ireland make no warranties or representations of any kind with respect to the information contained in this document. We accept no liability for any loss or damage arising from the use of this document or any reliance on the information it contains. The use of information contained within this consultation paper for any form of decision making is done so at the user's sole risk.

COPYRIGHT © EirGrid SONI

All rights reserved. No part of this work may be modified or reproduced or copied in any form or by means - graphic, electronic or mechanical, including photocopying, recording, taping or information and retrieval system, or used for any purpose other than its designated purpose, without the written permission of EirGrid and SONI.

Contents

1. Introduction to Consultation	4
2. Consultation Report	5
3. Proposed Scope of the 2024 and 2025 Audits	5
4. Scope Exclusions	9
5. Reporting Requirements	10

1. Introduction to Consultation

In compliance with Paragraph 9 of [Condition 10A](#) and [Condition 22A](#) of the respective Transmission System Operator Licenses, EirGrid plc and SONI Limited ('the Transmission System Operators') are required to undertake a periodic audit of the operation and implementation of the scheduling and dispatch (S&D) process. The Scheduling process involves determining the optimal combination of committed generation units to be scheduled to meet the forecasted demand over the next 30 hours. This process ensures that the subsequent dispatch of the committed units during this 30-hour period maintains a secure and reliable operation of the transmission system. The Long-Term Schedules provide generators with an initial 30-hour dispatch schedule, detailing the committed units and their expected dispatch levels for the upcoming 30-hour period. This enables the TSO to optimally schedule and dispatch the available generation resources to match the anticipated demand while adhering to system security constraints and operational requirements. Dispatch is the process of balancing supply and demand in real-time while meeting all the security constraints and maximizing the output from priority units.

The license conditions state that -

'The Licensee shall arrange for the carrying out of a periodic audit of the scheduling and dispatch process, its operation and implementation in accordance with directions given to it from time to time ... in respect of such matters as ... (the Commission for Regulation of Utilities and the Utility Regulator (collectively referred to as 'the Regulatory Authorities')) ... considers appropriate, including...

(A) the frequency, audit period, process and timetable for the audit.

(B) the selection, appointment and tenure of a person or firm to carry out the audit.

(C) the terms of reference for the audit.

(D) the publication of the audit report and of any other relevant materials;'

The 2024 audit period will be from 01 January 2024 to 31 December 2024 inclusive ("2024 audit"). The 2025 audit period will be from 01 January 2025 to 31 December 2025 inclusive ("2025 audit").

This document sets out the Terms of Reference ("ToR") for both the 2024 and 2025 audits of the scheduling and dispatch process including the proposed scope. The Transmission System Operators welcome the views of interested parties on the scope proposed in Section 3.

The previous Scheduling and Dispatch audit ToR document was for the two-year period covering calendar years 2022 and 2023; similarly, this document is for a two-year period covering calendar years 2024 and 2025 and is largely unchanged with the exception of the following.

- The articles under the CZA (Cross-zonal Actions) pillar have been excluded from the scope and are highlighted under a different reporting mechanism which is in place for those articles.

2. Consultation Report

The Transmission System Operators did not receive any submissions during the consultation period which closed on 29th July 2024.

3. Proposed Scope of the 2024 and 2025 Audits

The audit of the scheduling and dispatch process is separate to the SEM Trading & Settlement Code Market Audit and the SEM Capacity Market Code Market Audit. The obligations for those audits are set out in the Trading and Settlement Code and the Capacity Market Code. The Transmission System Operators intend that the scope of those audits remains separate to the audit of the scheduling and dispatch process.

The Transmission System Operators intend that the scope of the scheduling and dispatch process audit will consist of an assessment in respect of our compliance with regulatory requirements (collectively called 'The Requirements') as they relate to specified elements of the scheduling and dispatch process for the periods 01 January 2024 to 31 December 2024 and 01 January 2025 to 31 December 2025.

It is the responsibility of the Auditor, to assess on a sample basis, the compliance of the Transmission System Operators with The Requirements in respect of the specified elements of the scheduling and dispatch process as noted below.

Matters which will be considered within the scope of the Assurance Report

The Requirements outlined below as they relate to specified elements of the scheduling and dispatch process are proposed for inclusion within scope for the 2024 Audit and subsequent 2025 Audit.

#	In Scope Items	Criteria EirGrid ¹	Criteria SONI ¹
1	Priority Dispatch	<p>EirGrid TSO License Condition 10A - Para. 4(a)/(b) & 5(f), (i)</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> • Resource balancing table • Curtailment Events • Constraint Events • Wind logs <p>Other requirements: SEM-11-062 Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code SEM Committee Decision Paper</p>	<p>SONI TSO License Condition 22A - Para. 4(a)/(b) & 5(f), (i) Condition 9A</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> • Resource balancing table • Curtailment Events • Constraint Events • Wind logs <p>Other requirements: SEM-11-062 Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code SEM Committee Decision Paper</p>
2	Cross Zonal Actions	<p>The criteria and principles for the Cross Zonal Action process are outlined in Articles 3:15 and 3:16 of the Interim Cross Zonal TSO Arrangements for GB-ISEM go live, suitable for an ISAE 3000 engagement. These principles are currently under discussion among the Regulatory Authorities, TSOs and Auditor. The transparent reporting mechanism will be established annually through agreements between the RA, TSOs and Auditors following each year’s audit. ²</p>	<p>The criteria and principles for the Cross Zonal Action process are outlined in Articles 3:15 and 3:16 of the Interim Cross Zonal TSO Arrangements for GB-ISEM go live, suitable for an ISAE 3000 engagement. These principles are currently under discussion among the Regulatory Authorities, TSOs and Auditor. The transparent reporting mechanism will be established annually through agreements between the RA, TSOs and Auditors following each year’s audit. ²</p>

¹ Links to current versions of licenses and codes provided for clarity. If any new versions to these specific licenses and codes are published after the date of this consultation, the cited paragraphs in each of the licenses and codes will remain in scope provided that there are no material changes to the substance of the paragraph. In the case of material changes to the substance of the paragraphs, the scope will need to be reconsidered by the TSO. The final scope of licenses and codes for 2024 and 2025 Audits will be published in the respective Assurance Reports.

² Subject to change based on ongoing legislative and regulatory developments in the area. Counter trading within Cross Zonal Actions is being audited under Priority Dispatch pillar (Pillar 1).

3	Dispatch Instructions	<p>EirGrid TSO License Condition 10A - Para. 2, 4 and 5</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> • Frequency (Condition 10A Para 2, EirGrid Grid Code CC. 8.2.1) • Physical Notifications (Condition 10A Para 2(a)(i), 4 and 5(b)) • Generators declaring unavailable (Condition 10A Para 2(a)(ii)) • Generation units not subject to central dispatch (Condition 10A Para 2(a)(iv)) • Transmission System Outage (Condition 10A Para 2(b)) • Daily forecast demand (Condition 10A Para 4 and 5(a)) • Scheduling and Dispatch Policy Parameters (Condition 10A Para 4 and 5(c)) • Generators Technical Offer data (Condition 10A Para 4 and 5(e)) • Interconnector Reference Programs (“ICRPs”) (Condition 10A Para 4 and 5(f)) <p>Other requirements:</p> <p>For 2024 Audit Period: SEM-23-052 Trading and Settlement Code Scheduling & Dispatch Parameters 2024 Decision Paper</p> <p>2025 Scheduling and Dispatch Parameters consultation has not yet taken place.</p> <p>EirGrid Grid Code CC. 8.2.1</p>	<p>SONI TSO License Condition 22A - Para. 2, 4 and 5</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> • Frequency (Condition 22A Para 2, SONI Grid Code CC. 5.3.1) • Physical Notifications (Condition 22A Para 2(a)(i), 4 and 5(b)) • Generators declaring unavailable (Condition 22A Para 2(a)(ii)) • Generation units not subject to central dispatch (Condition 22A Para 2(a)(iv)) • Transmission System Outage (Condition 10A Para 2(b)) • Daily forecast demand (Condition 10A Para 4 and 5(a)) • Scheduling and Dispatch Policy Parameters (Condition 22A Para 4 and 5(c)) • Generators Technical Offer data (Condition 22A Para 4 and 5(e)) • Interconnector Reference Programs (“ICRPs”) (Condition 22A Para 4 and 5(f)) <p>Other requirements:</p> <p>For 2024 Audit Period: SEM-23-052 Trading and Settlement Code Scheduling & Dispatch Parameters 2024 Decision Paper</p> <p>2025 Scheduling and Dispatch Parameters consultation has not yet taken place.</p> <p>SONI Grid Code CC 5.3.1</p>
4	Merit Orders	<p>EirGrid TSO License Condition 10A - Para. 3</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> • Online Merit Orders 	<p>SONI TSO License Condition 22A - Para. 3</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> • Online Merit Orders

		<ul style="list-style-type: none"> Offline Merit Orders <p>Other requirements:</p> <p>EirGrid Grid Code SDC 1.4.7.3 / SDC1.4.7.4 and SDC2.4.2.14</p>	<ul style="list-style-type: none"> Offline Merit Orders <p>Other requirements:</p> <p>SONI Grid Code SDC 1.4.8.3 / SDC1.4.8.4 and SDC2.4.2.14</p>
5	Operational Constraints	<p>EirGrid TSO License Condition 10A - Para. 4(a)(b) & 5(d)</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> System reserves Inertia Operating limits Tie Line Values 	<p>SONI TSO License Condition 22A - Para. 4(a)(b) & 5(d)</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> System reserves Inertia Operating limits Tie Line Values
6	Constraint Flagging	<p>Trading and Settlement Code - Part B Flagging of Accepted Bids and Offers E.3.3.1</p> <p>Trading and Settlement Code Part B Appendices, APPENDIX N: Flagging and Tagging, System Operator and Non-Marginal Flagging Paragraph 1-5</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> System Operator flags (Methodology for Determining System Operator and Non-Marginal Flags (2.1,2.2)) Non-Marginal flags (Methodology for Determining System Operator and Non-Marginal Flags (2.3)) <p>Methodology reference: Methodology for determining system operator and non-marginal flags.</p>	<p>Trading and Settlement Code - Part B Flagging of Accepted Bids and Offers E.3.3.1</p> <p>Trading and Settlement Code Part B Appendices, APPENDIX N: Flagging and Tagging, System Operator and Non-Marginal Flagging Paragraph 1-5</p> <p>The areas included, but not limited to:</p> <ul style="list-style-type: none"> System Operator flags (Methodology for Determining System Operator and Non-Marginal Flags (2.1,2.2)) Non-Marginal flags (Methodology for Determining System Operator and Non-Marginal Flags (2.3)) <p>Methodology reference: Methodology for determining system operator and non-marginal flags.</p>

7	IT General Controls required to support the areas noted in items 1-6 above	While not specifically discussed in the regulations, the TSO's maintenance of IT General Controls over key systems supporting items 1-6 above is key to the overall testing approach. The testing focused on the following areas, where applicable, in respect of controls owned and operated by the Transmission System Operators over the in-scope systems - being; Market Management System ("MMS"), Electronic Dispatch Instruction Logger ("EDIL"), Wind Dispatch Tool ("WDT") and Interconnector Management Platform ("ICMP").
---	--	--

4. Scope Exclusions

The following is specifically excluded from the Assurance Engagements:

- The algorithms associated with the optimization engines, which produce the Long-Term Scheduling ("LTS"), Real Time Commitment ("RTC") and Real-Time Dispatch ("RTD") schedules, used in the scheduling and dispatch process;
- The Imbalance Pricing process which takes place after the scheduling and dispatch process has ended;
- Validation of data submitted to the Transmission System Operators by participants.
- Inputs such as forecasts which are provided by third parties.
- Inputs such as transmission and generator outage plans.
- The derivation of operational constraints;
- Actions taken with market participants by the Transmission System Operators to resolve performance issues during the scheduling and dispatch process;
- An assessment of the compliance of the Transmission System Operators in relation to any regulations other than those specifically referenced in the table above.
- Any regulations which are cross referenced within the regulations listed as the criteria but not specifically identified as criteria themselves, other than those specifically referenced in the table above.
- Validation that data published in relation to the specified elements of the scheduling and dispatch process on the EirGrid (www.eirgridgroup.com), SONI (www.soni.ltd.uk), and SEMO (www.sem-o.com) websites is complete and accurate unless specifically included in testing procedures, for example, Operational Constraint Updates;

- An assessment of the compliance of the company in relation to the Regulation on Wholesale Energy Markets Integrity and Transparency (“REMIT”); pending the implementation of a full solution, at which time it will be considered for inclusion.
- An assessment of the real-time operating decisions that The Transmission System Operators make when actioning internal operating procedures relevant to the specified elements of the scheduling and dispatch process.
- Validation that system security has been maintained at all times; and
- Any actions associated with Interim Cross Zonal TSO Arrangements for GB-ISEM go-live (“ICZA”) that are not System Operator actions or are long term System Operator actions that take place ahead of scheduling and dispatch outside of the S&D timeframe, such as long-term capacity calculations and capacity auctions.

5. Reporting Requirements

The outcome of the 2024 audit and the 2025 audit, which will be undertaken by an independent external Auditor, will be an Assurance Report for each audit period covering the full calendar year of January to December, which includes an opinion over the Transmission System Operators’ compliance with specific regulatory requirements as they relate to specified elements of the scheduling and dispatch process for the audit periods.

The engagement will be a Reasonable Assurance engagement in line with the International Standard on Assurance Engagements 3000 (Revised), - ‘Assurance engagements other than audits or reviews of historical financial information’ issued by the International Auditing and Assurance Standards Board.

The Assurance Report will consist of an Opinion which refers to an Approach Document which may include detailed information on the terms of the engagement, the applicable criteria that were used, findings identified in relation to particular aspects of the engagement, details of qualifications identified, details of the experience of the practitioner and the individuals involved in the engagement, disclosure of materiality levels, and any recommendations of note.

The Auditor, in undertaking their assessment, will assess the risk of a material non-compliance in relation to the licenses and codes which are within the scope of the Assurance Report. In areas where they identify specific risks, or where weaknesses are identified in the operation of specific internal controls, further substantive tests will be executed. The Auditor will present this assessment of applicable risks and responses in the 2024 Audit and 2025 Audit Assurance Reports. The intention is that the Audit Assurance Report and Approach document will be issued to the Regulatory Authorities within six months of the end of each audit period. However, the lead time will be dependent on the extent and publication date of the scope. Furthermore, the audit report for the years 2024 and 2025 will subsequently be published by the Transmission System Operators in 2025 and 2026 respectively. The Transmission System Operators will inform the Regulatory Authorities in a timely manner should a resultant delay be expected.