



To: The Board of Directors of AEMO

## **Independent assurance report to the Board of Directors of the Australian Energy Market Operator Limited for the Wholesale Electricity Market**

### **Scope**

In accordance with the terms of our contract dated 14 January 2022 and subsequent variation dated 13 December 2024, we were engaged by the Australian Energy Market Operator (AEMO) to perform an independent limited assurance engagement for the year ended 30 June 2025, in respect of AEMO's internal control procedures to support compliance, in all material aspects, with the Wholesale Electricity Market (WEM) Rules version 22 May 2024 and the Electricity System and Market Rules version 4 June 2025 (together the 'Rules'), in the following areas:

- the compliance of AEMO's internal procedures and business processes with the Rules
- AEMO's compliance with the Rules and WEM Procedures
- AEMO's market software systems and processes for software management.

In designing our procedures in relation to AEMO's processes for software management, the criteria used to evaluate compliance was AEMO's IT Standards and Policies relating to Information Technology General Controls (ITGCs).

### **AEMO management's responsibilities**

AEMO management is responsible for:

- a) identification of the compliance requirements within the Rules
- b) designing and maintaining an effective internal control structure, including control procedures, to ensure compliance with the Rules
- c) identification, implementation and operation of controls which will mitigate those risks that prevent the compliance requirements being met and monitoring ongoing compliance
- d) maintaining information relevant to compliance with the Rules that is free from material misstatement.

### **Our Independence and quality management**

We have complied with the ethical requirements of the Accounting Professional and Ethical Standard Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* relevant to assurance engagements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies Australian Standard on Quality Management ASQM 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Reports and Other Financial Information, or Other Assurance or Related Services Engagements*, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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## **Our responsibilities**

Our responsibility is to express a limited assurance conclusion based on the procedures we have performed and the evidence we have obtained.

Our engagement has been conducted in accordance with the Australian Standard on Assurance Engagements (ASAE 3000) *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information*. That standard requires that we plan and perform this engagement to obtain limited assurance about whether anything has come to our attention to indicate that AEMO's internal control procedures, have not been, in all material respects, effectively designed and operated to comply with the Rules.

Where the effectiveness of key controls was used to assess compliance with the Rules, the identification of key controls was performed with reference to applicable AEMO policy or procedure documentation.

The procedures we performed were based on our professional judgement and included:

- inquiry and observation of staff and management to understand the operation of controls
- review of relevant AEMO policies and procedures
- undertaking procedures to evaluate the design effectiveness of key controls
- performing limited sample tests on the operating effectiveness of key controls.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, we do not express a reasonable assurance opinion on compliance with the Rules.

Our procedures did not include any assessment of compliance or controls by market participants other than AEMO. For example, our procedures did not consider whether data received by AEMO from external organisations was complete, accurate and valid beyond limited assurance tests of the procedures that AEMO perform over validating the reasonableness of this data.

In addition, ITGCs have been tested on a homogenous basis across AEMO's IT environment, as agreed with AEMO, and therefore it is noted that samples selected for testing may not have been directly selected from the WEM systems.

In designing our procedures in relation to AEMO's market software systems, our procedures were limited to testing of AEMO controls over obtaining third party certifications of the systems. Our scope did not include re-performing or validating the calculations, or certification, of WEM systems such as WEM Dispatch Engine (WEMDE), POMAX Settlements, POMAX Metering, RCM, RTDE, or other market systems.

We accept no responsibility for the adequacy or accuracy of work performed by AEMO or the independent certifiers in relation to system certification. We accept no liability to AEMO, or to any other person, for any part of our review statement that relies on or assumes the adequacy of system certification.



Our procedures focused on AEMO's internal control procedures in relation to compliance with the Rules. We have not performed procedures over the completeness or accuracy of all information published or provided by AEMO.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our qualified conclusion.

### **Use of report**

We prepared this report solely for AEMO's use and benefit in accordance with and for the purpose set out in our Master Supplies Agreement (MSA) between PricewaterhouseCoopers and AEMO dated 14 January 2022, and Description of Supplies for Market Audit Services dated 14 January 2022 (including subsequent variation dated 13 December 2024). In doing so, we acted exclusively for AEMO and considered no-one else's interests.

We disclaim any assumption of responsibility, duty or liability:

- to anyone other than AEMO in connection with this report
- to AEMO for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this report for anyone other than AEMO. If anyone other than AEMO chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute
- even if we consent to anyone other than AEMO receiving or using this report.

### **Inherent limitations**

Because of the inherent limitations of an assurance engagement, together with any internal control system, it is possible that fraud, error or non-compliance may occur and not be detected. Further, the internal compliance and control culture has not been reviewed and no view is expressed as to its effectiveness. A limited assurance engagement throughout the year ended 30 June 2025 does not provide assurance on whether compliance with the Rules will continue in the future.

A limited assurance engagement is not designed to detect all instances of non-compliance with the Rules, as it is limited primarily to making enquiries, with management and staff, and applying analytical procedures. The limited assurance conclusion expressed in this report has been formed on the above basis.

### **Other Information**

The information included in Appendix B is presented by AEMO management to provide risk rating details, root cause, recommendations, management responses and timelines for the observed exceptions. Such information has not been subject to the procedures applied by PwC in the



assessment of AEMO's internal control procedures in relation to compliance with the Rules and accordingly, we express no opinion on it.

**Basis for qualified conclusion**

Our procedures identified instances of non-compliance with AEMO's IT Standards for access management throughout the period 1 July 2024 to 30 June 2025. We therefore qualify our conclusion in this regard.

A summary of key exceptions and non-compliance with the applicable AEMO IT Standards is provided below:

Criteria	Finding Summary	Risk Rating	Compliance Rating
<p>AEMO's <i>Identity Access Control and Authentication Security Standard</i></p>	<p><b>Instances where AEMO's IT access management controls were not applied in line with AEMO's Identity Access Control and Authentication Security Standard.</b></p> <p>Our procedures have identified instances where AEMO's IT access management controls were performed inconsistently with respect to AEMO's IT Standards.</p> <p>The effect of non-compliance with IT policies is an increased risk of unauthorised or inappropriate access to systems and data, including reports, automated calculations and reconciliations, and interfaces, which form part of AEMO's internal controls relation to compliance with the Rules.</p>	<p>Medium</p>	<p>Level 1</p>

Refer to Appendix A for a summary of findings.



**Qualified conclusion**

Based on the procedures performed and evidence obtained, except for the matter noted in the *Basis for Qualified conclusion* paragraph, nothing has come to our attention that causes us to believe that the Australian Energy Market Operator did not maintain, in all material respects, internal control procedures in relation to compliance with the Rules for the year ended 30 June 2025.

*PricewaterhouseCoopers*

PricewaterhouseCoopers

*N. Burjorjee*

Nick Burjorjee  
Partner

Melbourne  
23 October 2025



## Appendix A – Summary of Findings

Findings identified through the limited assurance engagement are reported to AEMO management each year.

We have considered materiality when evaluating the effect of identified control weakness on our conclusion. When assessing materiality, we considered qualitative factors as well as quantitative factors, including:

- the purpose of the engagement and specific requirements of the engagement
- the importance of an identified control weakness in relation to the area of activities and the entities overall objectives
- the impact of a centralised function on other parts of the entity
- public perception and/or interest in the area of activity
- the cost of alternative controls relative to their likely benefit
- the length of time an identified control weakness was in existence
- the frequency and severity of control weaknesses identified in previous engagements.

The table below summarises new findings reported, and findings from prior periods which remained open throughout FY25. This includes findings reported by AEMO management or through our procedures. The items included in the table below comprise of 44 market-related observations, and 23 IT-related observations.

	<b>Critical</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
Level 1	0	0	13	39
Level 2	0	0	6	8
Level 3	0	0	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>48</b>

The table below summarises findings from prior periods which have been closed during FY25. These include 17 market-related observations and 7 IT-related observations.

	<b>Critical</b>	<b>High</b>	<b>Medium</b>	<b>Low</b>
Level 1	0	0	1	11
Level 2	0	0	4	6
Level 3	0	0	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>19</b>

All findings in the tables above have been agreed with management and formally reported to AEMO's Finance Risk and Audit Committee.



We have categorised control observations noted according to agreed risk and compliance ratings. The risk ratings applied for each finding are consistent with the likelihood and consequence matrix adopted by AEMO's Finance Risk and Audit Committee.

The ratings have been tailored to reflect the potential impact on the market as follows:

<b>Risk Rating</b>	<b>Definition</b>
Critical	Findings which may have a catastrophic impact on the market operations if they are not addressed immediately and require executive action with regular reporting at Board level.
High	Findings which may have a major impact on the market operations if they are not addressed as a matter of priority. These findings require senior management attention with regular monitoring and reporting at executive and Board meetings.
Medium	Findings which may have a moderate impact on the market operations if they are not addressed within a reasonable timeframe. These findings require management attention with regular ongoing monitoring.
Low	Findings which may have a minor impact on market operations if they are not addressed in the future. These findings are the responsibility of management with regular monitoring and reporting at staff meetings.

<b>Compliance Rating</b>	<b>Definition</b>
Level 1	Evidence of non-compliance with review criteria. These should be addressed as a matter of high priority. (Non-compliance)
Level 2	Issues which could possibly result in non-compliance with review criteria but where no evidence of actual non-compliance was found. However, there is considered to be insufficient formal evidence of controls in place or being actioned in relation to these issues. (Gaps in control design or operating effectiveness)
Level 3	Housekeeping matters and opportunities for improving internal controls and procedures relating to gas market procedures. (Control improvement opportunities)

## Appendix B – Summary of Observations & Management Comments

The following table provides a summary of issues against compliance with the Rules. It is presented by AEMO's management to the Economic Regulation Authority Western Australia (ERA). Comments provided by AEMO management in response to the observations are not included within the scope of PwC's report and have not been subjected to the procedures applied by PwC in the assessment of AEMO's compliance with the Rules.

The detailed findings in relation to the Wholesale Electricity Market (WEM) are shown below, split between findings from the current review period (PwC reported and Management reported) and a status update of findings reported during the prior year review.

### Appendix B.1 – Wholesale Electricity Market – Findings reported by PwC – 1 July 2024 to 30 June 2025

No	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments / Implementation Status
25 WEM 1	<b>Issue Type</b> Non-compliance reported by PwC <b>Obligation</b> ESM Rules 9.18.1	<b>AEMO published, and then rectified, incorrect settlement statements for one trading week</b>  In accordance with ESM Rule 9.18.1, AEMO must issue invoices to Rule Participants in accordance with the timelines specified under clauses 9.3.3 and 9.15.6.  Review noted that initial invoices related to the Trading Week beginning 1 December 2024, published on 2 January 2025, contained significant errors in settlement outcomes. Specifically, the invoices for 10 Rule Participants across 25 facilities were impacted by up to \$500k, due to the impact of missing Reserve Capacity Obligation Quantities (RCOQ) for four trading days.  The error was identified by the Prudentials and Settlements team on the same day as publication as part of invoicing post-publication verification.  Accordingly, AEMO withdrew the previously published invoices on 2 January 2025, and re-issued invoices on 3 January 2025 following the WA Capacity Investment & Assessment recalculating RCOQ for the missing periods, resulting in a non-compliance with the WEM Settlement Cycle Timeline by one business day.  Discussion indicated that while management were aware of this incident, at the time of fieldwork it had not followed AEMO's breach reporting process. Management indicated that they were in the process of determining the root cause of the RCOQ error and intended to complete their investigation in full prior to self-reporting the breach to the Risk and Compliance team.  <b>Implication</b>  It is acknowledged that in this instance, the issuance of a WEM Market Message to inform the market was made by AEMO in a timely manner. However, where invoices are published with material errors and are not identified in a timely manner, there is an increased risk of impacting a Rule Participants' cashflows, which may impact stakeholder confidence and AEMO's reputation.	<b>Compliance Rating:</b> Level 1 <b>Risk Rating:</b> Low (Likelihood: unlikely; Consequence: Minor)	Management should:  1. Review current settlement verification processes to identify the ability to detect errors in RCOQ prior to processing and publishing invoices.  2. Identify which teams across AEMO are responsible for settlement inputs. Once identified, the responsible team (with consultation with P&S) should identify detective controls (and other validating activities) to ensure inputs into the Settlement process are accurate and complete in nature.	<b>Management Response</b>  AEMO accepts this finding and recommendation.  <b>Implementation Date</b> 30 June 2026
25 WEM 2	<b>Issue Type</b> Non-compliance reported by PwC <b>Obligation</b> ESM Rules	<b>Constraints that were relaxed to achieve optimal dispatch outcomes were not published completely on the AEMO website</b>  In accordance with clause 7.2.7 of the ESM Rules, AEMO must as soon as practicable after the end of each quarter, publish on the WEM Website a report summarising the total number, frequency and	<b>Compliance Rating:</b> Level 1 <b>Risk Rating:</b> Low (Likelihood:	Management should:  1. Following completion of the August WEMDE Release (3.1.5), management should validate that the SolutionSlackVariables database table includes all	<b>Management Response</b>  AEMO accepts this finding and recommendation.  <b>Implementation Date</b> 31 December 2025

No	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments / Implementation Status
	7.2.7	<p>type of Constraints that were relaxed. AEMO may “relax” Constraints used in the Central Dispatch Process in order to resolve infeasible dispatch solutions.</p> <p>Review identified that AEMO has a process to automatically extract information on relaxed constraints from the Wholesale Electricity Market Dispatch Engine (WEMDE) into a database (SolutionSlackVariables). However, only 4 of 42 relaxed constraint types were published on the AEMO Website in FY25 at the time of fieldwork.</p> <p>The root cause of the above was due to a limitation in technology. Discussion with management indicated that a business decision was made to limit the number of constraints that are captured within this database due to the amount of storage required, and consequently the relaxed constraints published on the AEMO website are incomplete,</p> <p>Management have indicated that a change will be made in the upcoming August WEMDE Release (3.1.5) to address this issue.</p> <p><b>Implication</b></p> <p>Where AEMO do not publish all data required for relaxed constraints, rule participants and other users of the report will not obtain a complete view of all relaxed constraints within the respective quarter.</p>	Unlikely; Consequence: Minor)	relaxed constraints and are included in the quarterly Relaxed Constraints Report.	
25 WEM 3	<p><b>Issue Type</b> Non-compliance reported by PwC</p> <p><b>Obligation</b> ESM Rules 2.16.1, 2.16.2, 2.16.2B, and 2.16.3</p>	<p><b>The Market Surveillance Data Catalogue and supporting Data Dictionary are incomplete, and are under development to meet the requirements of the ESM Rules</b></p> <p>In accordance with ESM Rule 2.16.2, AEMO must develop and maintain the Market Surveillance Data Catalogue (MSDC), which details data to be compiled concerning the market. AEMO must provide access to all items within the MSDC to the Coordinator and the Economic Regulation Authority (ERA) (ESM Rule 2.16.2B) and develop a ‘data dictionary’ to explain the data captured in the MSDC (ESM Rule 2.16.3).</p> <p>Throughout FY25 AEMO has been in consultation with the ERA and Energy Policy WA (EPWA), who have informed AEMO of issues with the completeness and integrity of data included in the MSDC and data dictionary. This represents a non-compliance with ESM Rules which require that AEMO develop a MSDC and publish a data dictionary.</p> <p>AEMO has created the MSDC 2.0 Project Working Group to address the issues reported by the ERA and EPWA.</p> <p><b>Implication</b></p> <p>Where there is an incomplete MSDC and supporting data dictionary in place, there is increased difficulty for the Coordinator, ERA, Rule Participants and the public to locate and access specific market data that is contained in AEMO’s WEM Systems, which may be required to support operational and regulatory activities.</p>	<p><b>Compliance Rating:</b> Level 1</p> <p><b>Risk Rating:</b> Low</p> <p>(Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>Complete the MSDC 3.0 Project to support meeting the requirements of the ESM Rules and the expectations of ERA/EPWA</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>1 June 2026</p>
25 WEM 4	<p><b>Issue Type</b> Non-compliance reported by PwC</p> <p><b>Obligation</b> ESM Rule 7.11.6(e)</p>	<p><b>There were Market Advisories published by AEMO that did not include all information required of the ESM Rules</b></p> <p>AEMO must inform Rule Participants and the public of current or impending situations that could affect power system security or reliability, or the operation of market processes, which may be published in the format of a Market Advisory. These are typically published by Power System Operations or Real-Time Market Monitoring staff.</p> <p>In accordance with ESM Rule 7.11.6, AEMO must publish minimum information within a Market Advisory, including (specifically for 7.11.6(e)) the latest time at which AEMO would need to intervene</p>	<p><b>Compliance Rating:</b> Level 1</p> <p><b>Risk Rating:</b> Low</p> <p>(Likelihood: Rare; Consequence:</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>Review the Market Advisory template to validate it includes data fields to be populated in line with ESM Rule 7.11.6.</li> <li>If changes are made to the Market Advisory template, communicate any updates to the relevant staff across AEMO</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 November 2025</p>

No	Issue type & Finding and implication Obligation	Compliance & risk rating	Recommendation	Management Comments / Implementation Status
	<p>through an AEMO Intervention Event should the response from Market Participants not be such as to obviate the need for the AEMO Intervention Event.</p> <p>Sample testing was performed for sixteen (16) Market Advisories to check that information published met the requirements of ESM Rule 7.11.6. Sample testing identified two instances whereby a Market Advisory was issued, however, it did not include the required information as per 7.11.6(e). Each instance related to the Direction of a Rule Participant by AEMO.</p> <p><b>Implication</b></p> <p>Where Market Advisories do not include relevant information as per the ESM Rules, there is increased difficulty for Rule Participants and the public to understand the current or upcoming state of the Wholesale Electricity Market. This may limit their ability to make informed decisions in respect to their operational activities.</p>	Moderate)	that may publish a Market Advisory.	
25 WEM 5	<p><b>Issue Type</b> Non-compliance reported by PwC</p> <p><b>Obligation</b> ESM Rule 8.3.4</p> <p><b>AEMO did not provide the Metering Data Agent notification of acceptance of the Facility registration application</b></p> <p>As per ESM Rule 8.3.4, if AEMO accepts a Facility registration or Facility deregistration, it must notify the Metering Data Agent for the relevant Network.</p> <p>Through our sample testing of one Facility registration application, it was identified that AEMO successfully accepted the registration of a Scheduled Facility, in February 2025. Upon request from PwC, management was unable to provide evidence to demonstrate communication was made with the Metering Data Agent (Western Power), once the facility registration was accepted.</p> <p>Inspection performed by PwC confirmed that AEMO agreed the accuracy of Meter Registry information with Western Power prior to accepting the facility registration (as required per ESM Rule 8.3.2), limiting the risk of operational or financial impacts to the Wholesale Electricity Market through non-compliance with ESM Rule 8.3.4.</p> <p><b>Implication</b></p> <p>It is acknowledged that no operational or financial impacts have been noted in respect to the Facility within the audit period, and this issue represents a technical non-compliance with the ESM Rules.</p>	<p><b>Compliance Rating:</b> Level 1</p> <p><b>Risk Rating:</b> Low</p> <p>(Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>1. Develop a tracker to monitor and support the timeliness of all registration activities, from the point of application, through to acceptance/rejection by AEMO. This tracker should include who is responsible at each stage and include consideration to AEMO's Delegations.</li> <li>2. Explore opportunities to utilise systems to support the timeliness and completion of registration activities, as well as assisting in evidencing work performed and approvals obtained (e.g Jira, ServiceNow, etc)</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 June 2026</p>
25 WEM 6	<p><b>Issue Type</b> Control Operating issue reported by PwC</p> <p><b>Obligation</b> Multiple</p> <p><b>AEMO's key control activities to support compliance with the ESM Rules have not been fully defined and documented in line with AEMO's Control Standard</b></p> <p>AEMO's Controls Standard (December 2024) outlines the methodology and key control attributes for complying with regulatory obligations. The Controls Standard applies to all systems, processes and personnel engaged in the operation of energy markets. Section 8 of the Controls Standard requires that descriptions of controls:</p> <ul style="list-style-type: none"> <li>• Clearly define the attributes of the control activity such as who performs the control, what they perform, where is it performed, when it is performed, and why it is performed.</li> <li>• Define the level of automation of the control.</li> <li>• Identify whether the control is designed to prevent non-compliances or detect them.</li> <li>• Identify an owner accountable for the effective operation of the control.</li> </ul> <p>AEMO's obligation and control register for the ESM Rules contains a total of 995 obligations, comprising 75 'Major', 728 'Moderate', 165 'Minor', 3 'Immaterial' and 24 'TBC' rated obligations in-scope for the market audit. Of the 75 obligations assessed by management as 'Major', analysis of</p>	<p><b>Compliance Rating:</b> Level 2</p> <p><b>Risk Rating:</b> Medium</p> <p>(Likelihood: Rare; Consequence: Major)</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>3. Develop a plan (in consultation with Risk &amp; Compliance) to document and capture key controls in the new GRC system. A risk-based approach should be considered to ensure higher rated obligations and their respective controls are prioritised.</li> <li>4. Based on the plan above, review and update control documentation and undertake periodic monitoring and reporting over the implementation status (for</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 June 2026</p>

No	Issue type & Finding and implication Obligation	Compliance & risk rating	Recommendation	Management Comments / Implementation Status										
	<p>the obligation and controls register identified 54 unique controls documented to support compliance. Of these, the following was identified:</p> <table border="1" data-bbox="353 325 1267 612"> <thead> <tr> <th data-bbox="360 330 824 351">Controls Standard Requirement</th> <th data-bbox="835 330 1261 351">Comments</th> </tr> </thead> <tbody> <tr> <td data-bbox="360 384 824 432">Clearly define the details of the control activity (i.e. the why, what, where, who, when, how)</td> <td data-bbox="835 384 1261 432"> <ul style="list-style-type: none"> <li>24 instances (out of 54) where control attributes were not captured in full</li> </ul> </td> </tr> <tr> <td data-bbox="360 440 824 488">Define the level of automation of the control (e.g. automated or manual)</td> <td data-bbox="835 440 1261 488"> <ul style="list-style-type: none"> <li>In all 54 instances, the level of automation was not documented</li> </ul> </td> </tr> <tr> <td data-bbox="360 496 824 544">Identify whether the control is designed to prevent non-compliances or detect them</td> <td data-bbox="835 496 1261 544"> <ul style="list-style-type: none"> <li>In all 54 instances, the control type was not defined</li> </ul> </td> </tr> <tr> <td data-bbox="360 552 824 600">Identify an owner accountable for the effective operation of the control</td> <td data-bbox="835 552 1261 600"> <ul style="list-style-type: none"> <li>4 instances (out of 54) where an accountable owner had not been assigned</li> </ul> </td> </tr> </tbody> </table> <p>It is acknowledged that a Compliance Transformation Blueprint has been rolled out with a multi-year program, which is intended to ensure key controls and their supporting attributes are captured completely and accurately within AEMO's new GRC system.</p> <p>The Controls Standard was subsequently communicated by Risk &amp; Compliance in July 2025 as part of the GRC technology implementation. However, as at the time of reporting this is yet to be applied in practice, with controls informally documented during FY25.</p> <p><b>Implication</b></p> <p>Where key controls have not been adequately defined and documented, there is an increased risk that the control may not be effectively implemented (i.e. as they have not been subject to review or corresponding monitoring activities), leading to potential non-compliance. Further, it may be difficult for AEMO to demonstrate their activities to support compliance, in the event of an incident.</p>	Controls Standard Requirement	Comments	Clearly define the details of the control activity (i.e. the why, what, where, who, when, how)	<ul style="list-style-type: none"> <li>24 instances (out of 54) where control attributes were not captured in full</li> </ul>	Define the level of automation of the control (e.g. automated or manual)	<ul style="list-style-type: none"> <li>In all 54 instances, the level of automation was not documented</li> </ul>	Identify whether the control is designed to prevent non-compliances or detect them	<ul style="list-style-type: none"> <li>In all 54 instances, the control type was not defined</li> </ul>	Identify an owner accountable for the effective operation of the control	<ul style="list-style-type: none"> <li>4 instances (out of 54) where an accountable owner had not been assigned</li> </ul>		<p>example, to the Risk and Compliance team). Any delays to the Plan should be communicated in a timely manner with Risk &amp; Compliance.</p> <p>5. Assign ratings to the 24 'TBC' rated obligations</p>	
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Identify whether the control is designed to prevent non-compliances or detect them	<ul style="list-style-type: none"> <li>In all 54 instances, the control type was not defined</li> </ul>													
Identify an owner accountable for the effective operation of the control	<ul style="list-style-type: none"> <li>4 instances (out of 54) where an accountable owner had not been assigned</li> </ul>													
25 WEM 7	<p><b>Issue Type</b> Control design issue reported by PwC</p> <p><b>Obligation</b> Multiple</p> <p><b>There is limited evidence maintained to support the review performed for the PSO Controller progression assessment.</b></p> <p>As part of WEM Real-Time Operations (RTO), the Power System Operations Controller (PSOC) role requires individuals to demonstrate competency across key operational processes, including power system operation, generation, dispatch, security operations, and outage assessment. As per the PSOC progression framework, there are seven levels, from Level 1 (Initial Appointment) to Level 7 (Security and Generation Dispatch Consolidation).</p> <p>The skills and responsibilities to be demonstrated by a controller for progression to Level 7 (L7) are outlined in the 'WEM Consolidation &amp; Progression to PSOC L7 – Guideline'. In addition, the 'WEM RTO Skills Assessment Matrix' lists examples of evidence that may support the assessment (e.g. system event reports, peer feedback, and operational experience). The Guideline and Matrix do not require supporting evidence to be maintained to support the assessment of L7 PSOC skills.</p> <p>Throughout FY25, there were four successful progressions from L6 to L7. Testing of all progressions noted evidence of endorsement from the Progression Panel, however there was no documented reasoning in respect to the listed criteria within the Guideline.</p> <p><b>Implication</b></p> <p>Where there is an absence of documentation to support the assessment and decision-making process for controller progression, this limits traceability in the progression process which may</p>	<p><b>Compliance Rating:</b> Level 2</p> <p><b>Risk Rating:</b> Low</p> <p>(Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>Update the WEM Consolidation &amp; Progression to PSOC L7 - Guideline to include a requirement for the progression panel to document their assessment against defined criteria, and to retain records to support progression decisions.</li> <li>Explore opportunities to incorporate an automated approval flow for endorsement of progression.</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>31 December 2025</p>										

No	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments / Implementation Status
25 WEM 8	<b>Issue Type</b> Control design issue reported by PwC <b>Obligation</b> ESM Rules 5.3.1, 5.3.2	<p>restrict the ability to demonstrate that decisions are made consistently and in accordance with the defined competency criteria.</p> <p><b>The internal work instruction to support the calculation impact of Capacity Credits on Non-Co-optimised Essential System Services contracts should be updated to reflect current practices performed by management</b></p> <p>In accordance with WEM Rule 5.3.1:</p> <ul style="list-style-type: none"> <li>where a Market Participant that has entered into a Non-Co-optimised Essential System Services (NCESS) contract with AEMO in respect of a Facility, and is assigned Capacity Credits for the Facility in a Reserve Capacity Cycle that coincides with the period of the NCESS Contract, then AEMO must vary the payment terms of the NCESS Contract.</li> <li>The total payment under the NCESS Contract should be reduced by the value of the total amount of the expected Capacity Credit payments to be paid to the relevant Market Participant for that Reserve Capacity Cycle.</li> <li>Any revised payment terms are to be applied in the next Settlement Statement.</li> </ul> <p>To support this process, the '<i>NCESS New Contract and Process Creation</i>' work instruction defines the process to develop new NCESS contracts. In addition, a spreadsheet tool has been developed to calculate the impact of Capacity Credits on NCESS contracts, in which results are to be communicated and peer-reviewed via email. However, the work instruction does not include guidance to support the calculation, application, and review processes of the spreadsheet tool.</p> <p>Four NCESS contracts have become active in FY25, including one contract being assigned capacity credits in a Reserve Capacity Cycle that coincides with the period of the NCESS contract. In line with AEMO's process, a peer review was completed with evidence of review retained.</p> <p><b>Implication</b></p> <p>Where documented guidance for NCESS-related processes do not accurately reflect current activities performed by management, there is an increased risk of key person dependency and inconsistent processes being followed. This may lead to incorrect billing and settlement of the affected rule participant(s).</p>	<b>Compliance Rating:</b> Level 2 <b>Risk Rating:</b> Low (Likelihood: Rare; Consequence: Minor)	Management should: <ol style="list-style-type: none"> <li>Update the current internal work instruction to define the calculation, application and review processes for the Excel tool for calculating payment variations under NCESS contracts.</li> <li>This should include (at a minimum) clearly defined roles and responsibilities and outline documentation requirements to maintain evidence of calculations, peer reviews, and approvals to ensure traceability.</li> </ol>	<b>Management Response</b> AEMO accepts this finding and recommendation. <b>Implementation Date</b> 1 October 2025
25 WEM 9	<b>Issue Type</b> Control design issue reported by PwC <b>Obligation</b> WEM Rules 2.13.16 and 2.13.17	<p><b>AEMO's review of Tolerance Ranges is not supported by an internal work instruction</b></p> <p>In accordance with WEM Rules 2.13.16 and 2.13.17, on a frequency deemed necessary by AEMO, AEMO may determine a Tolerance Range for acceptable deviations by facilities for targeted electricity outputs within the South-West Interconnected System (SWIS).</p> <p>The most recent Tolerance Range review was conducted in December 2022 and included Facility Tolerance Ranges under the WEM Rules for 2022. Management attests that they are planning a</p>	<b>Compliance Rating:</b> Level 2 <b>Risk Rating:</b> Low (Likelihood: Rare; Consequence: Minor)	Management should: <ol style="list-style-type: none"> <li>Develop and formalise internal work instructions that align with the current Tolerance Range review process performed.</li> <li>The work instructions should, at a minimum:               <ul style="list-style-type: none"> <li>Outline steps to monitor the need to trigger a Tolerance Range review;</li> <li>Clearly define roles and responsibilities, including necessary review and approvals;</li> </ul> </li> </ol>	<b>Management Response</b> AEMO accepts this finding and recommendation. <b>Implementation Date</b> 31 December 2025

No	Issue type & Finding and implication Obligation	Compliance & risk rating	Recommendation	Management Comments / Implementation Status
	<p>Tolerance Range Review for late 2025, given the significant changes in the SWIS since the last Review was performed.</p> <p>Review noted that there are no internal work instructions in place to support the calculation, reassessment, and review of Tolerance Ranges. Work instructions could include:</p> <ul style="list-style-type: none"> <li>Processes to monitor the need for a Tolerance Range Review to be triggered by AEMO.</li> <li>Related obligations that AEMO are required to comply with.</li> <li>Roles and responsibilities throughout the Review process, including any reviews and approvals to be performed prior to publishing.</li> <li>Data/inputs required to be obtained, including any reconciliations/checks to perform to ensure completeness and accuracy of data used.</li> <li>Key timelines to be considered.</li> </ul> <p><b>Implication</b></p> <p>Where there is an absence of documented processes to support the monitoring, review and calculation of Tolerance Ranges, there is an increased risk of key person dependency, and miscalculation of Tolerance Ranges in line with AEMO's risk appetite. Incorrect or inappropriate calculation of Tolerance Ranges may lead to increased challenge in maintaining Power System Security.</p>		<ul style="list-style-type: none"> <li>Identify data inputs and criteria essential for the assessment;</li> <li>Set clear timelines for conducting and completing the review process</li> </ul>	
25 WEM 10	<p><b>Issue Type</b> Improvement opportunity reported by PwC</p> <p><b>Obligation</b> WEM Rules 9.20.6</p> <p><b>The process to calculate the default levy following a rule participant's payment default is manual and management should explore opportunities to automate the calculation.</b></p> <p>In accordance with ESM reference 9.20.6, if after five Business Days following a Payment Default, AEMO is yet to recover in full the overdue amount, then it must raise a Default Levy from all Market Participants (other than from Market Participants with unrecovered Payment Defaults) to cover the remaining shortfall (including interest calculated in accordance with clause 9.18.7).</p> <p>While there have been no instances identified where payments were not recovered from Rule Participants in FY25, there has been an increase in suspension events and subsequently cure notices being issued in the WEM, and this trend may increase if wholesale energy prices continue to rise, and more Rule Participants join the WEM.</p> <p>Review noted that the process to calculate the default levy for recovering overdue amounts after a participant's payment default is complex and manual, and includes calculation of interest charged using the Bank Bill Swap Rate (BBR) on the default levy amount. Management has not explored opportunities to automate the calculation, such as through dedicated software solutions or macro-enabled spreadsheets.</p> <p><b>Implication</b></p> <p>Where there is reliance on a manual process for calculating the default levy and associated interest, there is increased inefficiency and risk of human error in financial calculations. This could lead to the incorrect default levy amounts being charged to Rule Participants, resulting in reputational and financial consequences.</p>	<p><b>Compliance Rating:</b> Level 3</p> <p><b>Risk Rating:</b> Low</p> <p>(Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>Investigate automated (or partially automated) solutions to calculate the default levy calculation process and interest utilising real-time data inputs including Bank Bill Swap Rates.</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 June 2026</p>

## Appendix B.2 – Wholesale Electricity Market – Findings reported by Management – 1 July 2024 to 30 June 2025

AEMO's Risk & Compliance team is responsible for verifying the status of non-compliances reported by Management to ensure that remediation actions have been implemented and closed. All Management identified non-compliances are reported by Risk & Compliance to the FRAC on a quarterly basis. For Management reported findings, PwC have leveraged the information provided in the compliance breach forms and the status per Management representation.

The following table is a summary of Management identified non-compliances reported to the FRAC:

No.	Obligation	Finding	Compliance Rating	Rating as reported by Management	Breach form completed	Breach form reference	Status as reported by Management
25 WEM 11	ESM Rule 2.5.1	AEMO did not notify the Market Advisory Committee about the release of a Procedure Change Proposal.	Level 1	Low	Yes	987	Closed
25 WEM 12	ESM Rule 2.22A.7(b)	AEMO did not include the annual forecast statement of cash flows or a forecast statement of financial position for FY25.	Level 1	Low	Yes	988	Open
25 WEM 13	ESM Rules 4.20.5AA, 4.1.16A(b), 4.20.5A (b), 4.29.2A	AEMO did not publish multiple items in respect to Reserve Capacity by the last business day of September.	Level 1	Low	Yes	1001	Closed
25 WEM 14	ESM Rules 4.1.16A(d), 4.15.16	AEMO did not publish all RCM Constraint Equations used within the Network Access Quantity Model by 5pm on the last business day in September.	Level 1	Low	Yes	1007	Closed
25 WEM 15	ESM Rule 3.2.8(c)	The WEM Procedure for FCESS Accreditation has not been designed to consider droop settings for multiple FCESS providers.	Level 1	Low	Yes	1008	Open
25 WEM 16	ESM Rule 4.26.2CA	The Relevant Demand of a Demand Side Programme for a Trading Day was incorrectly calculated for a Rule Participant.	Level 1	Low	Yes	1014	Open
25 WEM 17	ESM Rule 4.4B.6	AEMO published confidential information in respect to the Reserve Capacity Mechanism Limit Advice.	Level 1	Low	Yes	1017	Closed
25 WEM 18	ESM Rule Appendix 5, Step 3	The Indicative Individual Reserve Capacity Requirement was calculated incorrectly for a Market Participant	Level 1	Low	Yes	CCS0002005	Open
25 WEM 19	ESM Rules 2.9.3(a)(iii) 7.8.9,	The Determination of Market Schedules WEM Procedure doesn't reflect current WEM Rule requirements.	Level 1	Low	Yes	CCS0002078	Closed
25 WEM 20	ESM Rules 2.9.3(a)(iii), 7.5.18	The Dispatch Algorithm Formulation WEM Procedure doesn't reflect current ESM Rule requirements	Level 1	Low	Yes	CCS0002079	Closed
25 WEM 21	ESM Rules 1.63.11, 4.10.1A(d)	AEMO published Flexible Capacity Minimum Eligibility Requirements late.	Level 1	Low	Yes	CCS0002080	Closed
25 WEM 22	ESM Rule 7.4.50	AEMO incorrectly calculated the Loss Factor Adjusted Price for embedded generators.	Level 1	Moderate	Yes	CCS0002083	Closed
25 WEM 23	ESM Rule 2.22A.8	AEMO's Annual Report does not adhere to ERA Guidelines	Level 1	Moderate	Yes	CCS0002089	Open
25 WEM 24	ESM Rule 2.36.1(d)	The coverage of a certification for a software system that perform calculations was incomplete.	Level 1	Low	Yes	CCS0002101	Closed
25 WEM 25	ESM Rule 7.7.8	AEMO did not invoke a constraint equation which was consistent with verbal direction	Level 1	Moderate	Yes	CCS0002102	Closed

No.	Obligation	Finding	Compliance Rating	Rating as reported by Management	Breach form completed	Breach form reference	Status as reported by Management
25 WEM 26	ESM Rule 9.9.10(b)	The Marginal Offer Price used only In-Service (not available) price quantity pairs	Level 1	Low	Yes	CCS002115	Closed
25 WEM 27	ESM Rules 7.17.1 & 7.17.2	Calculations for FCESS Uplift Payments incorrectly included bids	Level 1	Low	Yes	CCS002116	Closed
25 WEM 28	ESM Rule 10.2.2(b)	Confidential information of a Market Participant was released .	Level 1	Low	Yes	CCS0002122	Open
25 WEM 29	ESM Rule 7.11D.3(a).	AEMO resumed the market with less than 2 hours notice and did not recommence at the start of a Trading Interval	Level 1	Low	Yes	CCS0002133	Open
25 WEM 30	ESM Rule 6.3A.3	Incorrect loss factors were used in STEM	Level 1	Low	Yes	CCS0002135	Open
25 WEM 31	ESM Rule 9.9.10(b)	Zero and negative quantity tranches were incorrectly included in Marginal Offer Price calculations	Level 1	Low	Yes	CCS0002161	Open
25 WEM 32	ESM Rule 9.10.3E	The Facility Performance Factor was not applied to RTM Base Compensation	Level 1	Low	Yes	CCS0002165	Open
25 WEM 33	ESM Rules 7.8.5B, 7.8.6 7.8.6A	The same inputs were not used for multiple Availability Capacity Scenarios	Level 1	Low	Yes	CCS0002168	Open
25 WEM 34	ESM Rules 2.32.7BA(b) and (c)	A registration correction notice for the appointment of Administrators and Receivers for an insolvent rule participant was not published in a timely manner	Level 1	Low	Yes	CCS0002208	Open
25 WEM 35	ESM Rules 2.32.7BA (b) and (c)	A registration correction notice for a rule participant no longer in administration was not published in a timely manner	Level 1	Low	Yes	CCS0002209	Open
25 WEM 36	ESM Rule 9.8.3(d)	An incorrect input was used for a supplementary capacity payment calculation for a rule participant	Level 1	Low	Yes	CCS0002219	Open

## Appendix B.3 – Wholesale Electricity Market – Summary of prior year findings reported by PwC

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
24 WEM 1	<p><b>Issue Type</b></p> <p>Control design issue reported by PwC</p> <p><b>Obligation</b></p> <p>WEM Rules 2.36.1(d)</p>	<p><b>AEMO does not have a framework in place to determine when system certification is required.</b></p> <p>In accordance with clause 2.36.1(d) of the WEM Rules, where AEMO uses software systems to perform calculations of quantities, prices or amounts defined under these WEM Rules, AEMO must ensure that any versions of the software used by AEMO have been certified as being in compliance with the WEM Rules by an independent auditor.</p> <p>Whilst a number of systems across the WEM have been certified by an independent expert throughout FY24, including for WEM Reform, our review noted that there is no formal framework in place that provides guidance for system certification. Specifically, there is no guidance that details:</p> <ul style="list-style-type: none"> <li>• What scenarios may trigger a system certification, such as: <ul style="list-style-type: none"> <li>○ Changes in regulatory requirements</li> <li>○ System changes/upgrades that are material in nature</li> </ul> </li> <li>• Who should be involved in assessing whether a system certification is required</li> <li>• Determining the scope / coverage / frequency of certification</li> <li>• The implementation and monitoring of mitigating controls if suggested by the independent expert</li> <li>• Documentation requirements to support traceability of system certification determinations.</li> </ul> <p>Review noted that the Network Risk Calculation Module (which is part of the WEM Dispatch Engine) had not been certified. Management indicated that underlying calculations were certified as part of the WEM Dispatch Engine, however the Network Risk Calculation Module was not considered as part of the certification and is intended to be undertaken as part of the next round of certifications. However, this approach / schedule and rationale for exclusion was not formally documented.</p> <p><b>Implication</b></p> <p>Without a defined framework in place that defines the processes to be followed for system certification, there is increased risk that systems may not be certified appropriately when required, which may have an adverse impact on the operation of the power system and market. Furthermore, where documentation is not maintained to support an assessment for system certification requirements, there is limited traceability to support the reasoning for when a system certification is not obtained for a system change or upgrade.</p>	<p><b>Compliance Rating:</b></p> <p>Level 2</p> <p><b>Risk Rating:</b></p> <p>Medium</p> <p>(Likelihood: Unlikely; Consequence: Major)</p>	<p>Management should:</p> <ol style="list-style-type: none"> <li>1. Develop a framework to support system certification. This should include guidance on: <ul style="list-style-type: none"> <li>• Scenarios that may trigger a system certification</li> <li>• Roles and responsibilities</li> <li>• Scope and coverage of certifications (including frequency)</li> <li>• Outcomes of certification including responsibility for addressing actions</li> <li>• Documentation requirements.</li> </ul> </li> <li>2. Obtain certification for the Network Risk Calculation Module.</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 June 2025</p>	<p><b>Status: Closed</b></p> <p>Management have developed the System Certification Framework which details guidance for AEMO in obtaining certification and supporting processes such as record-keeping.</p>

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
24 WEM 2	<p><b>Issue Type</b></p> <p>Control design issue reported by PwC</p> <p><b>Obligation</b></p> <p>WEM Rules: Multiple</p>	<p><b>There are instances where AEMO's key control procedures to support compliance with market obligations have not been formally defined and documented in the compliance obligation register</b></p> <p>The WEM Rules detail the obligations and function of AEMO (amongst other bodies) for the operation of the market. There are approximately 954 'AEMO must' obligations which are considered as part of the Market Audit. Each respective business unit is responsible for maintaining their obligations within the central WEM register, which includes impact assessment of the obligations, responsible owners, and key control procedures to support compliance.</p> <p>Review of the obligation register as at June 2024 noted:</p> <ul style="list-style-type: none"> <li>574 (60%) obligations were mapped to a procedure document; however, the specific control activity was not clearly documented. This included 48 'major' impact and 304 'moderate' impact obligations. In addition, control frequency was not documented for 93 (10%) obligations.</li> </ul> <p>It is acknowledged that as a result of WEM Reform, a large program of work has been undertaken to update the compliance obligation register, and management recognise that this is a continuing work in progress to improve and uplift documentation captured within.</p> <p><b>Implication</b></p> <p>Where key control activities and their respective attributes to support obligations are not fully documented, there is reduced traceability to understand whether controls are adequately designed or performed in line with management objectives. This may impact AEMO's ability to monitor, assess and report on the compliance status of obligations and result in instances of non-compliance not being identified and reported in a timely manner. This may have a legal, reputational and financial impact to AEMO in the event of non-compliance.</p>	<p><b>Compliance Rating:</b></p> <p>Level 2</p> <p><b>Risk Rating:</b></p> <p>Medium</p> <p>(Likelihood: Unlikely; Consequence: Moderate)</p>	<p>It is recognised that management have a broader program of work across AEMO to uplift risk and compliance related information including the implementation of a new GRC system. As part of this program of work, management should:</p> <ol style="list-style-type: none"> <li>Review and update key control descriptions to ensure they adequately describe activities performed to support compliance with obligations.</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 June 2025</p>	<p><b>Status: Closed</b></p> <p>The Compliance Framework was reviewed by management to update compliance management requirements across AEMO. This included informing employees with an understanding of the revised compliance expectations and fostering a culture of accountability across Three Lines Model. Further, a Compliance Transformation Blueprint has been rolled out with a multi-year program to ensure all key control descriptions and their supporting attributes are captured completely and accurately within AEMO's new GRC system.</p>
24 WEM 3	<p><b>Issue Type</b></p> <p>Control design issue identified by PwC</p> <p><b>Obligation</b></p> <p>WEM Rules 2.34.1</p>	<p><b>AEMO should periodically review changes to Market Participant's standing data within WEMS to ensure that changes are valid and are processed in a complete and accurate manner</b></p> <p>In accordance with clause 2.34.1 of the WEM Rules, AEMO must maintain a record of Standing Data for Rule Participants. This data varies based on the type of Rule Participant (e.g. scheduled generator, non-dispatchable load, etc). Standing data includes information such as (but not limited to) the maximum Loss Factor adjusted quantity of energy that could be consumed during a Trading Interval; total nameplate capacity; and system size.</p> <p>All Standing Data is maintained in the WEMS application by AEMO, and any changes to Standing Data are required to be submitted by the Rule Participant via WEMS. The 'Standing Data' work instruction details the process to be performed following a Standing Data change request including who the Analyst must consult with for each type of Standing Data change request.</p> <p>Standing Data change requests are required to be reviewed by an Analyst to confirm all information complete and accurate. This may include consultation with other stakeholders (e.g. Reserve Capacity, Operational Planning &amp; Forecasting, Western Power) dependent on the type of change. Following determination that</p>	<p><b>Compliance Rating:</b></p> <p>Level 2</p> <p><b>Risk Rating:</b></p> <p>Medium</p> <p>(Likelihood: Unlikely; Consequence: Moderate)</p>	<ol style="list-style-type: none"> <li>Management should review the process in place for reviewing and approving standing data change requests made by market participants. This should include ensuring manager review is worthwhile and impactful, and there is no duplication of effort (with a specific focus on both the analyst's role and the manager's role). Once this review is performed, action 2 or action 3 should be followed.</li> <li>If it is determined by management to keep the manager review in place, re-</li> </ol>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 April 2025</p>	<p><b>Status: Closed</b></p> <p>Management performed a review over the existing process and determined that the existing process should be maintained. A periodic review of 12 months has been implemented by management, and the supporting internal work instruction has been updated.</p>

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
		<p>the change is appropriate, the change request is required to be approved by the Manager, WA Energy Market Management, before being processed in WEMS.</p> <p>Review noted:</p> <ul style="list-style-type: none"> <li>• There is no system control to prevent Standing Data requests being processed within WEMS. Reliance is placed upon the Analyst to ensure email approval has been obtained prior to the change being processed.</li> <li>• While Manager approval is required prior to a change being processed, there is no periodic review of Standing Data changes to ensure that all standing data changes are valid and have been processed in a complete and accurate manner.</li> </ul> <p>This observation was previously raised in FY22 (22 WEM 3). While a monthly review of Standing Data changes processed within WEMS was implemented, management indicated this is no longer being performed due to a change in personnel following structural changes post WEM Reform.</p> <p><b>Implication</b></p> <p>Without a formal process to periodically review changes to Standing Data, there is increased risk of Standing Data being accepted without appropriate review, leading to incorrect standing data in WEMS. This could result in an adverse operational and/or financial impact to market participants.</p>		<p>instate the periodic (e.g. monthly) independent review of Standing Data changes made to ensure changes are valid and have been processed in a complete and accurate manner. Evidence of this periodic review should be maintained.</p> <p>3. If it is determined by management to remove the manager review step, ensure that there is sufficient approval and oversight (as needed) to accepting or rejecting Market Participant standing data change requests. The procedure should be updated to reflect any changes to the process.</p>		
24 WEM 4	<p><b>Issue Type</b></p> <p>Non-compliance reported by PwC</p> <p><b>Obligation</b></p> <p>WEM Rules 2.16.3(a)</p>	<p><b>AEMO do not have a formalised data dictionary in place to support the Market Surveillance Data Catalogue</b></p> <p>In accordance with clause 2.16.2 of the WEM Rules, AEMO must develop a Market Surveillance Data Catalogue, which identifies data to be compiled concerning the market. AEMO are required to collect and provide access to this data to the Coordinator and Economic Regulatory Authority (ERA). Further, clause 2.16.3 of the WEM Rules requires AEMO to develop, maintain, and provide access to a data dictionary for the data items in the Market Surveillance Data Catalogue contained in AEMO's WEM systems. The data dictionary must:</p> <ul style="list-style-type: none"> <li>• Contain sufficient information to enable a reasonable person to understand and locate the data items contained in AEMO's WEM systems;</li> <li>• Define all data items, including a cross reference to the relevant WEM Rules under which the data is produced or exchanged;</li> <li>• Where applicable, provide details of any preprocessing or analysis applied to data items; and</li> <li>• Where applicable, provide a means of identifying any revisions of data items and the timing of any such revisions;</li> </ul> <p>Review noted that AEMO do not currently have a finalised data dictionary in place. Management confirmed that there is ongoing consultation with the Coordinator and ERA to refine the draft data dictionary in a suitable format, however at the time of fieldwork, these discussions were still underway.</p> <p><b>Implication</b></p> <p>Where there is no data dictionary in place, there is increased difficulty for both the Coordinator and ERA to locate specific market data that is contained in AEMO's</p>	<p><b>Compliance Rating:</b></p> <p>Level 1</p> <p><b>Risk Rating:</b></p> <p>Low</p> <p>(Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management have developed a draft data dictionary and have commenced consultation with the Coordinator and the ERA to finalise the draft.</p> <p>Management should continue to progress and finalise the data dictionary.</p>	<p><b>Management Response</b></p> <p>AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b></p> <p>30 November 2024</p>	<p><b>Status: Closed</b></p> <p>The Market Surveillance Data Catalogue was finalised and provided to the ERA and EPWA.</p>

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
		WEM Systems, which may be required to support investigations and other regulatory activities performed.				
24 WEM 5	<p><b>Issue Type</b> Non-compliance reported by PwC</p> <p><b>Obligation</b> WEM Rule 4.2.7</p>	<p><b>The peer review of changes to the syntax used to generate the Expression of Interest Summary Report and independent recalculation was not completed in a timely manner</b></p> <p>The Reserve Capacity Expression of Interest (EOI) is established for a market participant to notify AEMO of the amount of new Energy Producing System and Demand Side Programme capacity they intend to make available in the Capacity Year to which the EOI relates. It is noted that this process is not mandatory for Market Participants to submit EOIs to AEMO.</p> <p>In accordance with clause 4.2.7 of the WEM Rules, AEMO must publish an EOI summary report, which provides a summary of the EOI received for the respective Capacity Year. The EOI summary report is prepared based on a information contained in a series of spreadsheets submitted by market participants. This was published in FY24 in accordance with the timelines required by the WEM Rules.</p> <p>A set of Python Instructions (i.e. syntax) was developed by the Reserve Capacity team in FY24 to extract key information from spreadsheets submitted by Market Participants and to generate the figures that are presented within the EOI Summary Report.</p> <p>Prior to generating the report, a peer review is performed to validate that any changes to the syntax were appropriate in nature, as well as to independently recalculate / validate the figures presented.</p> <p>Review noted that whilst evidence of these activities were maintained within emails, immaterial discrepancies were still being investigated (and ultimately identified) one business day after the report was published. Management indicated that the correct figures were communicated to Western Power.</p> <p>It is acknowledged that prior to the EOI Summary Report being published on the AEMO website, the Manager Capacity Market Investment and Legal (if needed) will approve the report.</p> <p><b>Implication</b></p> <p>Without a timely peer review process to validate that information contained in the EOI summary report is complete and accurate, there are risks of errors in market publications.</p>	<p><b>Compliance Rating:</b> Level 1</p> <p><b>Risk Rating:</b> Low (Likelihood: Unlikely; Consequence: Minor)</p>	Management should review internal timelines to ensure sufficient time is allocated to peer review and approvals to be obtained.	<p><b>Management Response</b> AEMO accepts the finding and recommendation.</p> <p><b>Implementation Date</b> 30 January 2025</p>	<p><b>Status: Closed</b> The 3.2.1 <i>Calling and Processing EOIs for New Capacity and IFC_V9_Approved</i> Internal Work Instruction was updated to include a step on peer review any updates made to Python scripts for the Expression of Interest Summary Report.</p>
24 WEM 6	<p><b>Issue Type</b> Non-compliance reported by PwC</p> <p><b>Obligation</b> WEM Rules 3.17.1, 3.17.4,</p>	<p><b>The Low Reserve Condition Declaration Procedure has not yet been updated, requiring the Pre-WEM Lack of Reserve framework to be used in practice to declare instances of insufficient capacity to meet demand</b></p> <p>In accordance with WEM Rule 3.17.1, AEMO may declare a Low Reserve Condition in accordance with the Low Reserve Condition Declaration Procedure (LRCD Procedure), when there is a risk of:</p> <ul style="list-style-type: none"> <li>Insufficient capacity to meet expected energy demand;</li> <li>Load shedding in order to maintain Power System Security; or</li> </ul>	<p><b>Compliance Rating:</b> Level 1</p> <p><b>Risk Rating:</b> Low (Likelihood: Unlikely; Consequence: Minor)</p>	Management should: <ol style="list-style-type: none"> <li>Formalise the LRCD Procedure.</li> </ol> <p>Ensure any processes to manage supply and demand imbalances are reviewed and updated (where required) to meet the requirements of the LRCD Procedure.</p>	<p><b>Management Response</b> AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b> 30 June 2025</p>	<p><b>Status: Open - Deferred</b> Management have indicated that the LRCD Procedure is currently with AEMO Legal (as of June 2025) and will be tabled at the AEMO Procedure Change Working Group (APCWG) on 3 July 2025 for consultation. Once approved by the APCWG,</p>

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
	3.17.6	<ul style="list-style-type: none"> <li>An Essential System Service shortfall that compromises AEMO's ability to maintain Power System Security or Power System Reliability.</li> </ul> <p>As identified and reported by management (Ref 891), AEMO had not developed the LRCD Procedure by 1 October 2023, as it relies on the completion of upstream WEM-Reform projects including ST/MT PASA, and Reliability Standard Implementation.</p> <p>Consequently, AEMO have applied the principles and requirements from the Lack of Reserve Framework (i.e. the pre-WEM Reform framework) to guide the declaration and remediation actions in the instance of supply and demand imbalances.</p> <p>Throughout the WEM Reform period (1 October 2023 to 30 June 2024), there have been 33 instances of a Lack of Reserve being declared by AEMO, however none have resulted in load shedding (or other significant market events).</p> <p><b>Implication</b></p> <p>While management has adopted the previous Lack of Reserve Framework to address Low Reserve Conditions, the failure to implement the processes as per the LRCD Procedure represents a technical non-compliance with the Rule requirements. It is acknowledged that no Lack of Reserve conditions have resulted in load shedding scenarios for the period under review.</p>				the Procedure will be formalised.
24 WEM 7	<b>Issue Type</b> Control design issue reported by PwC <b>Obligation</b> WEM Rule 1.41.7	<p><b>There is no peer review or approval performed prior to approving a Generator Monitoring Plan</b></p> <p>A Market Participant that is responsible for a Transmission Connected Generating System must develop a Generator Monitoring Plan (GMP) in accordance with the GMP Requirements and submit the proposed GMP to AEMO for approval.</p> <p>GMPs submitted to AEMO are reviewed by the System Engineering team, who will validate that the GMP Template has been populated in line with the GMP Requirements which are detailed in the WEM Procedure: GPS Compliance Tests and Generator Monitoring Plans. However, no peer review or approval is performed to validate the decision to approve or reject the Plan. A total 22 GMPs were submitted in the FY24 period.</p> <p>Management has indicated that where a junior engineer will review the GMP submission, this will be peer reviewed by a senior engineer, however this review is not documented.</p> <p><b>Implication</b></p> <p>Without a formal peer review or approval process to validate decisions made for Generator Monitoring Plans, there is an increased risk of a GMP outcome being approved or rejected in error. This may result in an adverse reputational and/or operational impact in the event incorrect GMP outcomes are made.</p>	<b>Compliance Rating:</b> Level 2 <b>Risk Rating:</b> Low (Likelihood: Unlikely; Consequence: Minor)	<p>Management should incorporate a risk-based approach to peer reviewing or approving prior to a GMP outcome being communicated to a market participant. This should include consideration to (but not limited to):</p> <ul style="list-style-type: none"> <li>Complex areas within the GMP that require secondary review/approval</li> <li>Specific systems that are deemed higher risk</li> <li>Individuals that undertake the GMP assessment (e.g. junior engineers)</li> </ul> <p>Evidence of this step should be maintained to support traceability. This process should be reflected and documented in the applicable work instruction.</p>	<b>Management Response</b> AEMO accepts this finding and recommendation. <b>Implementation Date</b> 30 September 2024	<b>Status: Closed</b> Two steps have been introduced by AEMO for reviewing Generator Monitoring Plans (GMP) to support peer review and approval of GMPs. Where a Junior Engineer of the team has performed review of the GMP, it requires peer review from a Senior Engineer prior to approval from a Manager. All GMPs are to be approved by the Manager. Further, the GMP Tracking List which is utilised to track progress of GMPs, has been updated to include a section to support evidence of peer review (where required) and manager approval once performed.

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
24 WEM 8	<b>Issue Type</b> Control design issue reported by PwC <b>Obligation</b> WEM Rules 2.34A.4	<p><b>The Manager approval of FCESS Accreditation applications is not formally documented</b></p> <p>A Participant may apply to AEMO for accreditation of a Facility to provide one or more Frequency Co-optimised Essential System Services (FCESS). The Participant must lodge an application in the format detailed in the Accreditation Form on the WEM Website, which will be reviewed by AEMO to evaluate the Facility's proposed FCESS accreditation parameters and any available evidence of its ability to meet its Performance Requirements.</p> <p>Where AEMO determines that a Facility is capable of meeting the relevant Performance Requirements for a relevant FCESS, AEMO accepts that application and notifies the Participant of the results of its determination, including all accreditation parameters for which the Facility may be accredited.</p> <p>FCESS Accreditation applications are required to be reviewed by an engineer within the Systems Planning team, before being approved by the Manager, Systems Engineering. The determination is made via a Python tool, and results are reviewed by the manager prior to communicating the outcome to the Market Participant, however, evidence of this approval is not formally documented / maintained. Management indicated this is due to Manager review typically being performed in real-time (i.e. in a call or in-person), and will also be discussed as part of a weekly standing ESS Accreditation meeting. A total 10 FCESS Accreditation applications were submitted in the FY24 period.</p> <p><b>Implication</b></p> <p>Without formal evidence of review, there is reduced ability to demonstrate how FCESS Accreditation determination has been made. This may be important in the instance where a regulator (or other third party) requires AEMO provide the reasoning for determinations made in respect to FCESS Accreditations.</p>	<p><b>Compliance Rating:</b> Level 2</p> <p><b>Risk Rating:</b> Low (Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management should incorporate a risk-based approach to peer reviewing or approving prior to a FCESS accreditation outcome being communicated to a market participant. This should include consideration to (but not limited to):</p> <ul style="list-style-type: none"> <li>Complex areas within the Accreditation that require secondary review/approval</li> <li>Specific facilities that are deemed higher risk</li> <li>Individuals that undertake the Accreditation assessment (e.g. junior engineers)</li> </ul> <p>Evidence of this step should be maintained to support traceability. This process should be reflected and documented in the applicable work instruction.</p>	<p><b>Management Response</b> AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b> 30 September 2024</p>	<p><b>Status: Closed</b></p> <p>The ESS Accreditation Tracker, which is utilised to track progress of ESS Accreditations, has been updated to include a section to support evidence of manager approval once performed.</p>
24 WEM 9	<b>Issue Type</b> Control Improvement Opportunity identified by PwC <b>Obligation</b> WEM Rules Multiple	<p><b>AEMO's shift handover procedures could be improved to include a requirement to confirm that the Control Room Log has been reviewed for completeness</b></p> <p>The WEMDE Control Room Log is used to maintain a register of key events that occur within the control room. This includes a combination of automated entries (such as alarms and outages) from other systems, but also requires updates from control room operators where certain activities are undertaken manually.</p> <p>Entries within the Control Room Log may be used and/or reviewed to support monitoring and reporting of market events and trends, and help to support investigations of incidents that occur, which may be requested by external parties, and help to support continuous improvement of control room operators (i.e. training, processes, etc).</p> <p>Walkthrough and discussion with management noted that as part of the shift handover procedures, there is currently no process for operators to confirm that the WEM Control Room Log has been updated to all known events. This process is of heightened importance in scenarios where manual responses by the control</p>	<p><b>Compliance Rating:</b> Level 3</p> <p><b>Risk Rating:</b> Low (Likelihood: Unlikely; Consequence: Minor)</p>	<p>Management should introduce a process within the shift handover procedures to ensure all items captured within the WEM Control Room Log are accurate and complete in nature.</p>	<p><b>Management Response</b> AEMO accepts this finding and recommendation.</p> <p><b>Implementation Date</b> 30 November 2024</p>	<p><b>Status: Closed</b></p> <p>The Guideline for PSOC Shift Handover has been updated to include a step for reviewing the operator log for completeness. This step is included for both Outage and System Security and Dispatch Operators respectively.</p>

No.	Issue type & Obligation	Finding and implication	Compliance & risk rating	Recommendation	Management Comments/ Implementation Status	FY25 Status
		<p>room are required to be logged in real time.</p> <p><b>Implication</b></p> <p>Where the WEM Control Room Log is not reviewed to support completeness, there is increased risk that monitoring, reporting and investigating of market events and control room actions may be undertaken based on inaccurate and incomplete data. This may have an adverse impact on internal and external parties that rely on this information, as well as limiting continuous improvement within the control room.</p>				

## Appendix B.4 – Wholesale Electricity Market - Summary of prior period findings reported by Management

No.	Obligation	Finding	Compliance Rating	Rating as reported by Management	Breach form completed	Breach form reference	Status as reported by Management
24 WEM 11	WEM Rule 2.22A.8	AEMO's published annual report for FY23 did not adhere to the new ERA Guidelines.	Level 1	Low	Yes	871	Open - Overdue
24 WEM 13	WEM Rule 3.7.30	AEMO did not develop, maintain and publish a standard form contract for the provision of a System Restart Service, including undertaking stakeholder consultation prior.	Level 1	Low	Yes	879	Open
24 WEM 15	WEM Rule 7.11C.2	AEMO did not meet timing requirements under WEM Rule 7.11C.2 for Trading Day 01/10/2023.	Level 1	Low	Yes	882	Closed
24 WEM 19	WEM Rule 3.16.8	MT PASA report was not published on time.	Level 1	Low	Yes	886	Open - Overdue
24 WEM 22	Multiple	AEMO failed to develop multiple WEM Procedures by 1 October 2023.	Level 1	Low	Yes	890	Open - Overdue
24 WEM 27	WEM Rule Appendix 2A Clause 5.1(a)	AEMO calculated the Largest Network Risk differently to the wording in the rules, to maintain the intent of the Appendix.	Level 1	Low	Yes	909	Closed
24 WEM 28	WEM Rule Chapter 11	AEMO incorrectly considered facility generation when calculating Network Risk.	Level 1	Low	Yes	910	Closed
24 WEM 29	WEM Rule 7.11.5(i)	AEMO did not issue a Market Advisory for a direction issued.	Level 1	Low	Yes	913	Closed
24 WEM 30	WEM Rule 2.36.1	AEMO calculated prices prior to obtaining the latest certification of WEMDE.	Level 1	Low	Yes	914	Closed
24 WEM 39	WEM Rule 7.11.5(j)	AEMO did not issue a Market Advisory for the SWIS deviating from the Normal Operating Frequency Band.	Level 1	Low	Yes	937	Closed
24 WEM 46	WEM Rule 7.14	WEMDE was incorrectly including discretionary constraints to calculate Congestion Rental.	Level 1	Low	Yes	946	Closed
24 WEM 52	WEM Rule 4.25.1(c), 4.25.2(b)(iii)	AEMO did not subject a facility to a formal Reserve Capacity Test, given the facility had already demonstrated its capability multiple times during the summer testing period.	Level 1	Low	Yes	957	Closed
24 WEM 57	WEM Rule 3.17.2	No Low Reserve Condition Report was published in accordance with clause 3.17.3.	Level 1	Low	Yes	977	Open - Overdue
23 WEM 37	2.22A.7(b)	AEMO issued the FY24 Budget which did not include information required by the Regulatory Reporting Guidelines (an annual forecast statement of cashflows and a forecast statement of financial position).	Level 1	Low	Yes	858	Open - Overdue

## **Appendix B.5 – Information Technology – Summary of findings**

There were 11 new findings, comprising 6 Medium and 5 Low rated Information Technology findings reported by PwC in FY25. In addition, 12 findings raised in prior periods remained open, comprising of 8 Medium and 4 Low rated findings. These findings have the potential to impact a range of markets and systems across AEMO, including the WEM and GSI.

The new findings related to logical access (1 Medium), physical access (1 Medium), and IT operations (5 Medium, 4 Low). No findings were identified regarding change management and program development.

Eight (8) prior year observations were closed in FY25.