

Anna Collyer  
Chair  
Australian Energy Market Commission  
Level 15, 60 Castlereagh Street,  
Sydney NSW 2000  
Lodged via <https://www.aemc.gov.au/contact-us/lodge-submission>

Melbourne. 19. June 2025

Dear Ms. Collyer,

**Re: ERC0394: Improving the NEM access standards – Package 2**

Vestas welcomes the opportunity to provide our feedback on AEMC's Consultation Paper released on 8 May 2025 with the aim to improve the access standards for the National Electricity Market (NEM) – Package 2.

Vestas' vision is to become the global leader in sustainable energy solutions, and everything we do revolves around the development and deployment of these solutions.

Vestas acknowledges the importance of the proposed rule changes, particularly in enhancing the clarity and suitability of protection system requirements within the National Electricity Rules (NER). However, we would recommend AEMC to conduct a technical workshop with Original Equipment Manufacturers (OEMs) to ensure the proposed definitions are fit for purpose.

It's worth mentioning that the current definition of credible contingencies appears open-ended and lacks clear boundaries, leading to different interpretations and understandings among stakeholders. On the other hand, Vestas is concerned that a fixed list of contingency events set in the Rules would become outdated shortly as the grid evolves, limiting the use of newer technologies and creating unnecessary design challenges for OEMs.

As an alternative, Vestas suggests that AEMO should develop a guideline and keep that list flexible and regularly updated, including practical examples for clarity, after consultation with key stakeholders.

Vestas agrees that the current 12-month requirement for AEMO to complete the access standard review could hinder comprehensive analysis and meaningful consultation. Nevertheless, while Vestas supports the principle of publishing extension notices, there must be a clear, timely, and detailed communication process, along with formal guidelines and engagement plans, to ensure transparency and maintain trust throughout the review process.

Please refer to the appendix for our feedback on the consultation questions. Should you wish to discuss any aspect of our comments, please contact Marco Aurelio Lenzi Castro via [mlzto@vestas.com](mailto:mlzto@vestas.com) or 0488 152 925, or the undersigned.

Yours sincerely

**Vestas - Australian Wind Technology Pty. Ltd.**



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## Appendix

Consultation questions	Vestas' response
<b>New definitions for protection systems</b>	
Do stakeholders agree that the requirements for generator protection systems are currently unclear? If so, what are the impacts of this lack of clarity?	<p>Yes, Vestas agrees that the requirements for generator protection systems are currently unclear in the NER, and the lack of definitions for 'primary' or 'back-up' protection systems and 'sufficient redundancy' could lead to confusion, inconsistency, and misinterpretation.</p> <p>The risks are but not limited to as follows:</p> <ul style="list-style-type: none"> <li>• Misaligned expectations among generators, TNSPs/DNSPs, and AEMO Delay meeting connection process milestones</li> <li>• Compliance and audit uncertainty</li> <li>• Inconsistent application of standards across projects in the NEM</li> <li>• Impacts on protection coordination strategies for IBRs.</li> </ul>
Similarly, do stakeholders consider the requirements for loads' and HVDC links' protection systems are currently unclear?	Vestas agrees that the requirements for loads and HVDC links are unclear and supports having more accurate definitions in the rules.
Do stakeholders support the proposal to update and add new NER definitions for types of protection systems?	Yes, Vestas supports the introduction of more granular and technically accurate definitions, including main protection systems.
Do stakeholders have feedback on the proposed new definitions themselves?	<p>The new definition of '<i>independent alternative main protection system</i>' should be aligned with AS 2067 and established industry practice. It should operate using different protection principles and design platforms to mitigate the risk of a common-mode failure resulting from a single design methodology.</p> <p>In addition, a clarification on this definition is needed regarding the shared communication paths or power supplies.</p>
Do stakeholders have any concerns or suggestions in relation to this element of Rod Hughes Consulting's proposed rule? If so, please describe your concerns and any related suggestions and reasoning.	<p>Vestas raised some concerns regarding the proposed rule change, as follows:</p> <ul style="list-style-type: none"> <li>• Clarification of protection system requirements</li> <li>• Alignment with AEMO's technical requirements review</li> <li>• Support for rule change consolidation</li> </ul> <p>In addition, Vestas suggests AEMC to conduct a technical consultation with OEMs to ensure the proposed definitions are fit for purpose.</p>
<b>Conditions for generator protection systems</b>	
Do stakeholders agree that paragraph (b) of clause S5.2.5.9 is redundant and/or misleading, or do stakeholders have a different interpretation?	Yes, it is mostly the same.
Do stakeholders support Rod Hughes Consulting's proposal to remove paragraph (b) of clause S5.2.5.9?	Vestas supports the removal of paragraph (b) of clause S5.2.5.9 to reduce ambiguity and promote uniformity in the application of protection system requirements under the NER.
Do stakeholders agree that the minimum access standard may create risks to power system security because it does not require	Yes, Vestas is concerned that the current Minimum Access Standard (MAS) in clause S5.2.5.5 may pose risks to power system security due to its lack of explicit requirements for redundancy in protection systems.

additional redundancy in protection systems?	
<p>Do stakeholders support Rod Hughes Consulting's proposal to give AEMO and the NSP discretion to increase redundancy requirements in the minimum access standard if required to prevent adverse impacts on power system security?</p> <p>Do stakeholders have any concerns or suggestions in relation to this element of Rod Hughes Consulting's proposed rule? If so, please describe your concerns and any related suggestions and reasoning.</p>	<p>Vestas generally supports Rod Hughes Consulting's proposal to grant AEMO and Network Service Providers (NSPs) discretion to increase redundancy requirements in the Minimum Access Standard (MAS) if necessary to prevent adverse impacts on power system security.</p> <p>This would make redundancy a requirement, allowing the additional costs to be considered earlier in the project planning.</p>
<b>Clarification of credible contingency definition for disturbance ride-through</b>	
Do stakeholders agree that the current definition for the types of credible contingencies in relation to disturbance ride-through requirements for schedule 5.2 plant is unbounded/implied to be unbounded and that this presents an issue?	<p>Vestas acknowledges that the current definition of credible contingencies appears open-ended and lacks clear boundaries. While this may not directly impact the fundamental turbine hardware - since our designs typically accommodate a broad range of grid disturbances - it does influence how we configure control strategies, apply settings, and prepare compliance documentation.</p> <p>These aspects are significantly shaped by how credible contingencies are interpreted across different projects and regions.</p> <p>Currently, there are different interpretations and understandings among stakeholders including NSPs and proponents, which leads to inconsistency in communication.</p>
Do stakeholders agree that arrangements poorly define the types of credible contingencies in relation to disturbance ride-through requirements for schedule 5.2 plant?	<p>Yes, Vestas agrees that the current arrangements are not well defined. The absence of standardised definition results in varied interpretations between NSPs and developers adding complications in design and assessment of generating system. While our turbines are designed to be flexible and grid-compliant, clearer definitions would help streamline integration and reduce ambiguity in compliance expectations.</p> <p>It would be helpful to have an industry wide consultation on the types of faults that must be considered as credible.</p> <p>Absence of clarity can lead to excessive research and development investment to meet schedule 5.2 requirements with no real benefit to system security and reliability.</p>
Do stakeholders support AEMO's proposed rule to clarify the types of contingency events that a schedule 5.2 plant must be able to ride through?	<p>Yes, Vestas supports AEMO's initiative to bring clarity on this topic. A defined and transparent list of credible contingency events would allow us to align our control system design and testing protocols with real-world expectations and reduce the risk of late-stage design changes or non-compliance issues. We also see this as a step toward harmonizing expectations across the NEM, which is particularly valuable for OEMs operating across multiple jurisdictions.</p> <p>In summary, a clear definition of these events would bring consistency to the performance standards and negotiations, reducing in meeting connection milestones.</p>
Do stakeholders have any concerns or suggestions in relation to this element of AEMO's	<p>Vestas supports the intent of AEMO's proposed rule, but we are concerned that a fixed list of contingency events may quickly become outdated as the grid evolves.</p>

proposed rule? If so, please describe your concerns and any related suggestions and reasoning	<p>This could limit the use of newer technologies and create unnecessary design challenges for wind turbines.</p> <p>As a suggestion, Vestas recommends keeping the list flexible and updated regularly in a specific AEMO's guideline with practical examples for clarity, after extensive consultation with OEMs and other stakeholders.</p> <p>In summary, the focus should be on achieving stable grid performance - such as maintaining voltage and frequency stability - rather than meeting a fixed set of events.</p> <p>The rules should also be adaptable to different technologies, including wind turbines.</p>
<b>Testing and commissioning</b>	
Do stakeholders support AEMO's proposed amendments to clause 5.7.3 to refer to schedule 5 plant in respect of AEMO's ability to request compliance tests for registered plant?	Yes, Vestas generally supports AEMO's proposed amendments to clause 5.7.3.
Do stakeholders support AEMO's proposed changes to clauses 5.7.2 and 5.7.3 to extend the rights for testing of power system plant to apply to non-registered schedule 5 plant?	Yes, Vestas supports the application of testing requirements to non-registered schedule 5 plant to ensure consistent treatment of all plants connecting to the grid.
Do stakeholders support AEMO's proposed changes to the NER to extend the requirement for coordinating commissioning procedures for non-registered schedule 5 plants with a maximum capacity equal to or greater than 30MW or 30MVA?	Yes, Vestas generally supports AEMO's proposal to extend the requirement for coordinating commissioning procedures to non-registered Schedule 5 plant.
Should the Commission consider extending enforceability and compliance requirements under rules 4.14 and 4.15 to all 'schedule 5 participants', which includes non-registered participants?	Yes. By applying enforceability and compliance requirements to all Schedule 5 participants promotes transparency and a level playing field, ensuring all relevant plant meet technical operating standards.
Do stakeholders have any concerns or suggestions in relation to this element of AEMO's proposed rule? If so, please describe your concerns and any related suggestions and reasoning	<p>Yes, Vestas raised a few concerns regarding AEMO's proposed rule, as below:</p> <ul style="list-style-type: none"> <li>• Procedural transparency and timelines</li> <li>• Implementation Rules</li> <li>• Technical and system security risk.</li> <li>• Regulatory overlap and clarity.</li> </ul> <p>Some key suggestions points are:</p> <ul style="list-style-type: none"> <li>• Transparency and accountability</li> <li>• Ongoing consultations</li> </ul>
<b>Extension of time for complex issues in future access standards reviews</b>	
Do stakeholders agree that the requirement to complete each review within 12 months of the approach paper being published is too inflexible or may inhibit proper analysis and consultation?	Yes, Vestas agrees that the current 12 month review requirement may be too rigid and could hinder comprehensive analysis and meaningful consultation, particularly for complex and technically sensitive reviews. This can limit the depth of stakeholder engagements and industry alignment.
Do stakeholders consider that AEMO should be responsible for setting a new date for publication of the final report? Is there an	While Vestas supports AEMO having the ability to set new publication dates, there is a clear preference for mechanisms that ensure transparency, accountability, and stakeholder engagement in that decision.

alternative approach that would better address the issue?	Alternative approaches involving collaborative decision-making or independent oversight are seen as ways to better balance flexibility with confidence in the review process.
Do stakeholders agree that AEMO should publish a notice when an extension is needed, outlining the reasons as they may relate to complexity/difficulty, or a material change in circumstances?	Yes, Vestas agrees that AEMO should publish a formal notice whenever extension is needed. This notice should outline the reasons for the delay, including any technical complexities, impertinencies and change of circumstances. Vestas believes transparency and clear communication are pivotal to maintain stakeholders trust and ensure timelines remains accountable, reflecting best industry practices.
Do stakeholders have any concerns or suggestions in relation to this element of AEMO's proposed rule? If so, please describe your concerns and any related suggestions and reasoning?	While Vestas supports the principle of publishing extension notices, there should be a clear, timely, and detailed communication process in place, along with formal guidelines and engagement plans, to ensure transparency and maintain trust throughout the review process. Some concerns are listed below <ul style="list-style-type: none"> <li>• Timelines and details of notice</li> <li>• Potential for frequent extensions</li> </ul> Some suggestion to prevent delays: <ul style="list-style-type: none"> <li>• Having clear reasons for extensions</li> <li>• Setting clear guidelines for notice content and timing</li> <li>• Including an engagement plan</li> <li>• Setting maximum extension cap</li> <li>• Providing interim progress updates</li> <li>• Setting mechanism for stakeholder input should a second extension be required</li> <li>• Provision for dealing with special circumstances</li> </ul>