

Our ref: REL0091
 23 December 2024
 Violette Mouchaileh
 Australian Energy Market Operator
 20 Bond Street
 Sydney NSW 2000

By email: violette.mouchaileh@aemo.com.au

Dear Violette,

Request for AEMO advice for the Reliability Panel’s review of the system restart standard

The AEMC seeks technical advice from AEMO to support the draft determination of the Reliability Panel’s *Review of the System Restart Standard* (the Review). This letter documents the scope of the advice sought. In accordance with clause 8.8.1(a)(1A) of the NER, the Panel will conduct the Review on AEMO’s advice.¹

It is critical that system standards and market settings are consistent with, and informed by, the relevant engineering requirements. The Panel seeks technical advice from AEMO on how system restart services will be provided in a future where existing service providers are not available. This advice will inform an understanding of the efficient level of SRAS and help the Panel identify necessary changes to the Standard.

As outlined in the terms of reference for the Review, issued to the Panel by the AEMC, the Panel is undertaking this review in two stages:²

- **Stage 1:** a review of the system restart regulatory framework to make recommendations to the Commission with respect to the considerations outlined in the terms of reference for the Review.
- **Stage 2:** new settings for the system restart standard informed by stage 1, to reflect an up-to-date understanding of the power system including the risk of a major supply disruption and the costs and availability of SRAS.

The Panel asks that AEMO’s advice be in the form of a report for publication. The scope of the advice sought is outlined in Attachment A. The following table provides an overview of the project schedule for this review, including the key milestones for the provision of the AEMO advice.

Milestone	Date
Issues paper and terms of reference published	12 December 2024
Stage one advice:	
<ul style="list-style-type: none"> • Draft preliminary advice (slides) for project team discussion • AEMO presentation to the Panel – preliminary advice • Stage one draft advice – for Panel comment • Stage one final advice 	<ul style="list-style-type: none"> • by 26 March 2025 • Final slides due by – 2 April 2025 for Panel meeting by – 8 April 2025 • By 1 May 2025 • By 29 May 2025

¹ NER clause 8.8.1(a)(1A)

² AEMC, 2024. Review of the system restart standard AEMC terms of reference to the Reliability Panel. 12 December 2024. p.5.

<p>Stage two advice:</p> <ul style="list-style-type: none"> • Draft preliminary advice (slides) for project team discussion • AEMO presentation to the Panel – preliminary advice • Stage two draft advice – for Panel comment • Stage two final advice 	<ul style="list-style-type: none"> • By 1 May 2025 • Slides due by – 7 May 2025 for Panel meeting by – 13 May 2025 • By 5 June 2025 • 30 June 2025
<p>Publish draft determination, draft Standard and AEMO advice</p>	<p>Before August 2025</p>
<p>Publish final determination and final Standard</p>	<p>By 30 December 2025</p>

The Panel may also consider seeking additional external technical engineering and economic advice to support the objectives of this review. This may include advice on system restart arrangements and insights from major power system incidents internationally.

We also invite AEMO to provide advice and commentary on other matters relevant to the system restart regulatory framework for the Panel’s consideration.



Tim Jordan

AEMC Commissioner and Chair of the Reliability Panel

Enclosed: Attachment A: Scope of technical advice

Attachment A: Scope of technical advice

Stage one scope of AEMO technical advice

The Panel requests that AEMO's stage one advice include:

- General advice to inform an understanding of how system restoration will work under the power system scenarios envisaged in the 2024 ISP, describing and assessing:
 - the exit and reduced availability of existing coal-fired black start capable resources
 - the range of technological and locational options for new black start capability in the national electricity system
 - the potential role of renewable generation and renewable energy zones in supporting or initiating black start
 - the potential role of batteries and storage in supporting or initiating black start
 - the potential role of the distribution system during system restoration along with the technical challenges and opportunities for re-energisation of the transmission network via distribution level power islands.
 - the potential role of non-black start equipment and plant (SRAS support services) in supporting stable restoration.
 - options for restart during daylight hours and high distributed PV output
 - the role of AC interconnectors for system restart and the resilience benefits of interconnectors for each of the NEM regions with respect to system restoration
 - the potential role of HVDC transmission elements to facilitate future system restoration.
- Consideration of how changes in the system might influence the likelihood of a major supply disruption or black system event in the future in a qualitative manner, and identification of how low-risk, resilient restart approaches could be built to mitigate potential issues.
- Consideration of how the current regulatory framework, including the NER, Standard and AEMO procedure and guidelines may be restricting supply of new sources of SRAS and identification of potential high-level changes that may resolve any such restriction.

Stage two scope of AEMO technical advice

The Panel requests that AEMO's stage two advice include:

- Specific advice to inform the Panel determination of a revised Standard, including potential amendments to the form of the Standard and procurement options for SRAS likely to be available in 2027-2032, accounting for:
 - Black start and restoration support services
 - the exit and reduced availability of existing black start capable resources
 - development of new system restart capability including a high level scoping of related capital works
 - provision of high level cost estimates for new and existing system restart capability
 - renewable energy zone development and the NEM's changing generation and network footprint
 - the range of technological and locational options for new investment in new black start capable SRAS, including relative cost estimates
 - a projection of the changing restart pathways and associated restoration timeframes based on the potential SRAS sources.