RELIABILITY
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21 April 2026
Nicola Falcon
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By email: Nicola.Falcon@aemo.com.au

Dear Nicola,

Reliability Panel comments on AEMO's Transition Plan for System Security

The Reliability Panel welcomes the opportunity to provide feedback on the Australian Energy Market Operator's (AEMO) 2025 Transition Plan for System Security (TPSS or Transition Plan).

AEMO is required under the National Electricity Rules (NER) to publish the TPSS on an annual basis.[1] The TPSS provides information to market participants on:

- how AEMO is planning to maintain system security as we transition to a low- or zero-emissions system
- AEMO's current technical understanding of what is needed to maintain power system security in a low- or zero-emissions power system and the work AEMO is undertaking to improve this understanding
- the range of security services that will be required.

Under clause 5.20.8(d) of the NER, the Panel may provide written commentary to AEMO within six months of the TPSS's publication. The Rules provide that the next iteration of the TPSS must publish and respond to the Panel's comments.[2] We will also publish this letter on the AEMC website for transparency.

In this letter, the Panel provides commentary in four key areas:

- **Overall high quality of the TPSS:** The Panel commends AEMO on the quality of the 2025 TPSS, which effectively sets out key transition points and associated system security needs. We recognise the substantial work AEMO has done over 2025 to improve the TPSS and address Panel and stakeholder feedback on the inaugural 2024 plan.
- **Stakeholder engagement:** The Panel recognises that AEMO is actively consulting on the 2025 TPSS, including by inviting submissions. We encourage AEMO to continue exploring ways to strengthen stakeholder engagement on the TPSS, including through broader communications and consultation with targeted stakeholder forums.
- **Supporting coordinated action on the Transition Plan:** The TPSS is a plan that requires coordinated action by a range of stakeholders who share responsibility for system security. It is important to consider the roles of all stakeholders, provide all the information stakeholders may need to act, and continue monitoring transition point readiness.

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[1] NER clause 5.20.8(a) and (b).
[2] NER clause 5.20.8(c)(10) and (e).

- **Dealing with change and uncertainty:** AEMO and the energy industry must continue to be flexible and adaptable to achieve readiness for transition points in a constantly changing environment.

The TPSS presents an excellent analysis of the system security needs for the energy transition

The Panel commends AEMO's work on developing the 2025 TPSS, which is an impressive achievement and an important enabler of the NEM energy transition. The TPSS provides a clear summary of key transition points for the next 10 years and the associated known and emerging system security issues. The Panel also acknowledges and appreciates that AEMO has undertaken extensive modelling to inform the TPSS.

The Panel considers that the 2025 TPSS marks a substantial improvement from the 2024 TPSS. It more clearly sets out the preparatory actions required for each transition point, and the consequences if those actions are not completed. AEMO has incorporated feedback from the Panel and other stakeholders, including:[3]

- Extending the Horizon 2 analysis from five years out to 10 years
- Providing more detail on the outlook for each NEM region, the operational tools that AEMO may use to maintain system security, and other matters
- Merging the TPSS with AEMO's reporting on network support and control ancillary services (NSCAS), system strength and inertia.

The Panel considers there will be opportunities for continuous improvement of the TPSS as the NEM transition continues. We are confident that AEMO will continue to build on and evolve its work in this area. The Panel has the following suggestions for AEMO to consider for future iterations of the TPSS:

- Adding a summary of what has changed in the transition plan since the previous TPSS – for example, any changes in the timing or nature of transition points, AEMO's assessment of system security risks, or the tools available to manage those risks.
- Considering what further information can be included on the details of studies and/or modelling that AEMO has conducted. For example, this could be provided in a supplementary technical report. This information could assist stakeholders across the industry in meeting their system security responsibilities to action the TPSS, as discussed further below.

The Panel encourages AEMO to continue strengthening stakeholder engagement on the TPSS

The Panel acknowledges and appreciates AEMO's proactive engagement with stakeholders in seeking feedback on the 2024 and 2025 Transition Plans. Since publication, AEMO has continued to engage industry stakeholders, including by holding a public webinar to present key findings, and by formally calling for submissions on the 2025 TPSS. These activities have supported transparency and enabled a broad range of perspectives to inform the TPSS.

[3] AEMO, 2025 TPSS, pp 46-48.

Looking ahead, the Panel encourages AEMO to continue exploring ways to strengthen its stakeholder engagement to support the continuous improvement of the TPSS and its implementation. By balancing broad outreach with more targeted consultations, stakeholders can bring different perspectives informed by their operational, industry and regional experience, and may identify emerging system security and reliability challenges that are not evident in AEMO's analysis. Engagement also helps recognise that delivering the transition pathway is a shared responsibility; bringing those who will help execute the plan into the process supports understanding of the TPSS, encourages practical input, and helps build readiness for required actions.

In this context, the Panel considers there may be value in targeted engagement focused on each NEM region to address the complex and technical issues covered in the TPSS. This is facilitated by the regional transition plans provided in Part B of the TPSS, which the Panel welcomes as a key development in the 2025 TPSS. AEMO could consider structured engagement with key stakeholders in each region through jurisdiction-specific discussions or technical focus groups, which could serve as efficient forums for engagement. Such engagement would ideally take place throughout the development of the TPSS.

To support effective engagement across different stakeholder groups, AEMO could consider adopting a more tailored communication approach - for example, targeting briefings to specific stakeholder groups or including a guide within the TPSS to identify relevant sections. Where appropriate, AEMO could also continue to leverage existing forums to undertake engagement on the development of the TPSS.

The Panel notes that the TPSS relies on coordinated action by multiple stakeholders

The Transition Plan outlines the actions that multiple parties need to execute in a coordinated way to support the NEM transition. As AEMO has noted throughout the TPSS, system security is a shared responsibility between AEMO, network service providers (NSPs), governments, and market participants.[4] While AEMO has clear responsibility for system security under the NER, many stakeholders also play a role in delivering a secure power system.

The Panel recognises and emphasises the need for coordinated action in the successful execution of the TPSS. Readiness for coal decommitments requires essential system services (such as system strength, inertia, NSCAS, and restart capability) to be in place, as well as supply adequacy (bulk renewable generation, firm generation and storage). All need to be available at a sufficient level before each coal plant can be closed – or before seasonal decommitments or two-shifting can be undertaken – without compromising system security. As identified in the TPSS, each of these readiness components requires coordinated action and investments in advance.[5]

This underscores the importance of continuing to monitor transition point readiness and of all stakeholders meeting their system security responsibilities. The Panel considers it important

[4] AEMO, 2025 TPSS, pp 33-34.
[5] AEMO, 2025 TPSS, pp 5-7.

that the TPSS considers whether timely investment is occurring. Future iterations of the TPSS should continue to report on whether investment is on track and the consequences if it is not.

The TPSS has an important role in providing information to guide stakeholder actions

Since many stakeholders have intersecting roles in maintaining a secure power system, it is important that they have all the information they need to prepare for each transition point. The Panel encourages AEMO to ensure the TPSS includes sufficiently detailed data and information for this purpose.

In the 2025 TPSS, AEMO identifies the system security gaps for each transition point and notes that if these gaps are not addressed, it may need to use operational interventions that would impact consumers, potentially including last-resort measures such as load shedding or de-energising part of the network.[6] Again, addressing system security gaps requires investment with appropriate lead times. If investments are not made in advance, AEMO will need to begin planning for how it can use its operational tools to manage system security impacts. Future iterations of the TPSS could be more specific about when AEMO should start actively planning operational interventions at each transition point, if there is no evidence that stakeholders are taking action to address the relevant system security gaps.

DNSPs have an increasingly important role in system security

The Panel notes that while system security responsibilities largely rest with AEMO and transmission network service providers (TNSPs), some system security challenges are emerging at the distribution level. Distribution network service providers (DNSPs) have been developing new capabilities over the last several years to meet these system security needs, as discussed in Part C, Section 9 of the TPSS.[7] The role of distribution networks could also be considered more centrally in future iterations of the TPSS, or in other appropriate AEMO processes, as it becomes more significant.

Research and development of new system security technologies

The Panel welcomes AEMO's progress on Type 2 Transitional Services and the publication of five Statements of Need. These transitional services would trial new ways of providing security services, such as restart capability and protection-quality fault current, using non-synchronous technologies.[8] These Type 2 trials play an important role in bridging the gap between research and development and making new technologies available to the market. We encourage AEMO to consider how Type 2 trials can be used to actively support the deployment of new technologies and capabilities to manage system security.

The AEMC is considering improvements to the system security frameworks

The Panel notes that potential changes to the system security frameworks related to the TPSS and its implementation may improve their effectiveness and efficiency in meeting system security needs in a timely manner. This could improve confidence that coordinated action by all

[6] AEMO, 2025 TPSS, p 28.
[7] AEMO, 2025 TPSS, p 132.
[8] AEMO, 2025 TPSS, p 42.

relevant parties will successfully deliver on security needs. The AEMC is currently considering two rule change requests from AEMO and from the Australian Energy Council (AEC) and Clean Energy Council (CEC) seeking to enhance system security arrangements for the NEM.[9] These rule change requests raise issues and potential changes relating to procurement timing, clarity of investment signals, and system security governance.[10]

The Panel considers that transition readiness must remain adaptable to change and uncertainty

AEMO is planning for system security in an environment that is subject to change and uncertainty. Many of the assumptions underlying the TPSS analysis can change quickly, including the completion dates for new infrastructure, coal closure dates, and expected demand. The Panel acknowledges the substantial work undertaken by AEMO to prepare a comprehensive Transition Plan in this challenging context, and recognises the importance of its ongoing work to update the TPSS annually (as required under the NER).

AEMO's ongoing work to anticipate emerging risks and opportunities in various scenarios is essential to support a secure transition

The Panel recognises that the 2025 TPSS has incorporated some scenario planning, for example, by testing many transition points under both system normal and rare (but plausible) onerous system conditions.[11] AEMO should continue stress-testing readiness for each transition point across a range of system conditions. This is important because system security risks are influenced by conditions that can vary widely in operational timeframes. System security at any transition point (such as the removal of a coal power station from service) should also be robust across a variety of operational conditions, including maximum and minimum demand, renewable droughts, and potential system restart or island conditions.

More broadly, the Panel encourages AEMO to consider how the TPSS can best anticipate and prepare for emerging risks. We note that the discussion of emerging and ongoing developments, including technological developments, in Part C of the TPSS is one way to do this. Looking forward, we encourage AEMO to continue moving from technology- or asset-specific security requirements towards a more technology-neutral, performance-based specification of technical requirements for system security to help capture opportunities to meet system security needs in new ways.[12] We acknowledge AEMO's recent work in developing

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[9] AEMO, *Security framework enhancements* rule change request, November 2025.
AEC and CEC, *Clarity and transparency in security frameworks* rule change request, January 2026.
[10] AEMC, *Security framework enhancements* and *Clarity and transparency in security frameworks* joint consultation paper, March 2026, pp i-v.
[11] See for example the analysis of the NSW and QLD Minimum System Load transition points in the 2025 TPSS, p 54 and p 72 respectively.
[12] The Panel notes AEMO's ongoing Grid-Forming Technology (GFM) Access Standards Technical Requirements Review is considering how the access standards can enable GFM technology to better support system security. We understand AEMO intends to submit a rule change request to the AEMC in 2026.

Statements of Need for Type 2 Transitional Services and consider the Type 2 framework to be one avenue for developing these new approaches.[13]

While this work is underway to develop new approaches to security management, the Panel recognises that existing technologies will play an important role in addressing the security risks associated with near-term transition points. Given current investment lead times for existing technologies, it will be prudent and necessary in some cases to invest now in these solutions, rather than rely on new technologies that have not yet been demonstrated.

Preparatory work for all identified transition points should continue, although expected timing may change

The Panel acknowledges that the recently announced extension of Eraring Power Station operations to 2029 will change the timing of NSW's first coal decommitment transition point.[14] This reduces some near-term system security risks and changes the priority or sequencing of some actions identified in the TPSS. For example, synchronous condensers are now more likely to be in place in NSW before the Eraring closure.[15] In general, however, there remains a pressing need to prepare for coal closures, seasonal decommitments and two-shifting across several NEM regions.

It is important for relevant stakeholders to prepare for all transition points regardless of their expected timing. To this end, the Panel encourages AEMO to consider how it can provide as much specific information as possible on the preparatory work required for each transition point, whenever it may occur.

Yours sincerely

Rainer Korte
AEMC Commissioner and Chair of the Reliability Panel

[13] AEMO, 2025 TPSS, p 42.
[14] Origin Energy, 'Origin extends Eraring Power Station operations to 2029', 20 January 2026, https://www.originenergy.com.au/about/investors-media/origin-extends-eraring-power-station-operations-to-2029/.
[15] Delivery of synchronous condensers procured by Transgrid is scheduled to begin in 2028. See AEMO, 2025 TPSS, p 52.