

2027 General Power System Risk Review (GPSRR) Approach Webinar

19 October 2026



Please note that this meeting will be recorded for internal purposes.





We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country, and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO Group is proud to have launched its first Reconciliation Action Plan in May 2024. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation – a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

Read our
RAP





Webinar Introduction and Expectations

Daniel Cassidy

Manager – Grid Performance & Integration

How to interact today



Ask questions during the session

- Ask questions or post comments using the Teams chat function
- We'll respond to questions during the Q&A part of the session



- Share your feedback through our [post-event survey](#)

For any further questions or comments, contact the project team at gpsrr@aemo.com.au.

AEMO forum and meeting expectations

This charter explains expectations regarding participation and behaviour in AEMO's stakeholder forums.

Meeting expectations

All participants will:

- Respect the diversity of the group.
- Maintain a respectful stance towards all participants.
- Listen to others' points of view and try to understand others' interests.
- Share information openly, promptly, and respectfully.
- Remain flexible and open-minded and actively listen and participate in meetings.

Meeting material

- Material is intended to support stakeholder feedback and is not for public reporting or attribution.
- Meetings may be recorded for internal purposes. No part of this meeting is to be recorded by external stakeholders.
- Media enquiries and requests for comment should be directed to: media@aemo.com.au.

Roles and responsibilities

Forum stakeholders agree to:

- Be specific and fact-based in their feedback on a specific workstream or emerging issue;
- Review and provide feedback on papers and reports;
- Maintain a focus on solutions or outcomes that benefit all energy consumers.

AEMO agrees to:

- Provide technical expertise in a manner that is considerate of the audience and their level of expertise;
- Assist participants in understanding issues enough to represent their views;
- Provide all participants the opportunity to voice their views (including through the Teams chat function).

Agenda



Purpose

- Overview of the draft 2027 GPSRR Approach Paper
- Discuss proposed priority risks and assessment methods
- Ask questions and provide feedback on the proposed approach

Key discussion points for today:

- **Purpose and scope:** the 2027 GPSRR will assess risks that could lead to cascading failures or major supply disruptions.
- **Priority risks and assessment approach:** overview of the four proposed priority risks, planned assessment approach, and possible mitigation options.
- **Consultation and next steps:** questions and feedback on the proposed approach, submissions by 12 November 2026, and publication milestones.



Introduction to the GPSRR

Daniel Fracalossi

Principal Engineer – Grid Performance & Integration

Purpose of today's session

- The purpose of this session is to encourage stakeholder participation in the 2027 GPSRR approach paper consultation process.
- The approach paper is intended to outline:
 - The proposed priority risks to be considered.
 - The scope and planned approach for assessing each priority risk.
 - AEMO's approach to consulting with relevant parties for the purposes of the GPSRR.

General Power System Risk Review

What is the GPSRR?

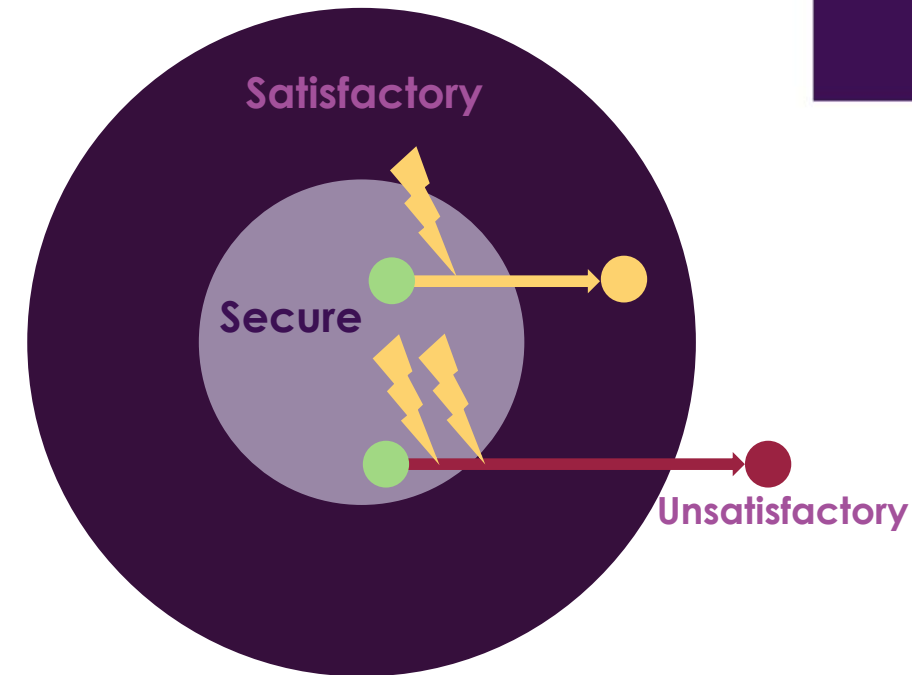
- Under NER 5.20A, AEMO must undertake a GPSRR annually. It assesses low-probability, high-consequence events that could lead to cascading failures or major supply disruptions (such as the 2016 South Australia System Black).

Required scope

- Non-credible contingency events likely to cause uncontrollable frequency changes, leading to cascading outages or major supply disruptions.
- Other events or conditions, including contingencies, that may cause cascading outages or major supply disruptions.
- Current risk management arrangements and options for future management.

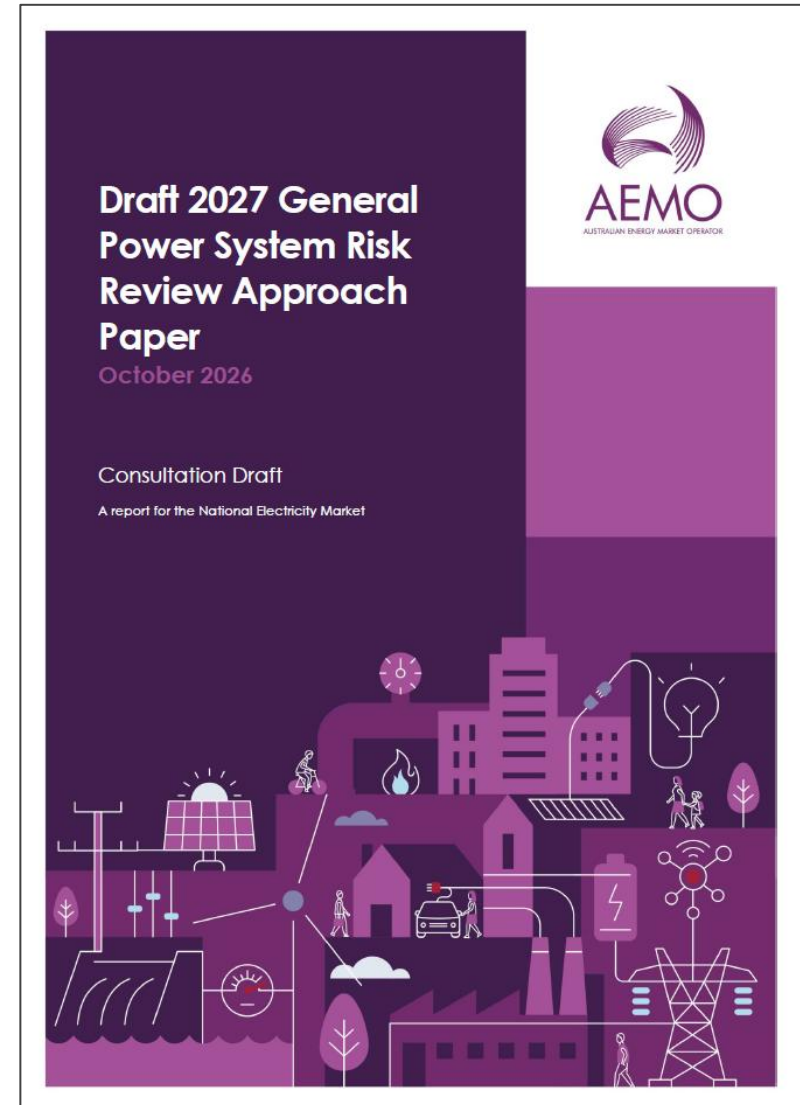
How it fits with other AEMO reports

- The GPSRR works alongside the Transition Plan for System Security (TPSS) and the Engineering Roadmap in identifying future risks and options for their management.



Draft 2027 GPSRR Approach Paper

- The draft 2027 GPSRR approach paper was [published on AEMO's website](#) for consultation on 13 October 2026.
- Consultation period closes on 12 November 2026.
- AEMO invites written submissions on the 2027 GPSRR approach within this consultation period.



Consultation timeline



Activity	Indicative timeline
Engaging with AEMO internal teams and NSPs to finalise the scope of 2027 GPSRR.	May 2026 to July 2026 (Completed)
Review of any information or early feedback provided by NSPs on draft 2027 GPSRR approach paper.	July 2026 to September 2026 (Completed)
Industry consultation on the draft 2027 GPSRR approach paper.	October 2026 to November 2026
Regular meetings with NSPs to update on GPSRR progress and to discuss risk inputs for current and future GPSRRs.	November 2026 to March 2027
Publication of the final 2027 GPSRR approach paper.	December 2026
On completion of the studies, AEMO to share findings with NSPs.	January 2027 to March 2027
Seeking feedback from NSPs on the draft 2027 GPSRR report.	Mid-April 2027 to late-April 2027
Draft 2027 GPSRR report published for industry consultation.	May 2027
Publication of final 2027 GPSRR report.	By 31 July 2027

} **Current stage**



2027 GPSRR Priority Risks

Daniel Fracalossi

Principal Engineer – Grid Performance & Integration

Nathan McKillop

Senior Engineer – Grid Performance & Integration

Proposed 2027 GPSRR priority risks

Non-credible contingency management

Recommending the use of the indistinct events framework or a protected event to manage specific high risk non-credible contingency events.



Operational technology and digital systems risks

Credible or non-credible events related to loss of SCADA, forecasting errors or operational tools are having similar impacts as severe power system events.



Voltage control and inverter-based load risks

Additional risks related to temporary inverter-base load (IBL) disconnection, non-credible contingencies or other behaviour to impact system voltages, particularly in weaker networks.



Power system oscillation risks

Demonstrate the risks associated with power system oscillations, including low-frequency inter-area oscillations, converter-driven oscillations, and forced oscillations.



Non-credible contingency management



Risk context

- As demonstrated in the 2026 GPSRR, non-credible contingency sizes are increasing as transmission line transfers grow.
- Complex remedial action schemes (RAS) are reaching their risk mitigation limits and may introduce other risks.
- A specific case study is proposed to assess a high-impact non-credible contingency event, which if unmanaged, could lead to interconnector tripping, cascading instability, and potential system black events.

Proposed studies and analysis

- A case study of N-2 events on the 500 kV lines between Heywood and Moorabool terminal stations in South-West Victoria.
- Assessment of contingency impacts and the wider system response to RAS operation.
- Cost-benefit analysis of alternative non-credible contingency management options.

Possible recommendations and solutions

- Application of the indistinct events framework or declaration of a protect event.
- Procurement of increased and/or regional FCAS.
- Review of UFLS and performance enhancements.

Operational technology and digital systems risks



Risk context

- Digital system failures can impact the coordination of generation and demand, reduce visibility of power system conditions, and degrade operational responses.
- This may lead to insecure operation and cascading failures for subsequent contingencies.
- Evolving frontier AI capabilities may further influence this risk environment.

Proposed studies and analysis

- Review of self-forecasting, SCADA, market, operational and third-party dependencies.
- Review of recent NEM incidents involving digital or third-party system failures.
- Assessment of emerging AI-enabled cyber security threats.
- Assessment of hypothetical widespread digital system failure scenarios.

Possible recommendations and solutions

- Regulate third-party systems used in market and power system operation.
- Stronger operator readiness and coordinated response arrangements across AEMO, NSPs, and participants.
- Managing growing operational complexity through integrated real-time monitoring, modelling, decision support, and automated controls.

Voltage control and inverter-based load risks



Risk context

- Growing and concentrated IBL connections may increase voltage control challenges due to their temporary disconnection in response to voltage disturbances.
- While significant progress has been made on IBL performance since the 2026 GPSRR, ongoing assessment remains important as power system conditions continue to evolve.
- Low system strength can increase voltage sensitivity and min/max demand conditions can limit reactive headroom.
- Unmanaged overvoltages may inhibit IBL reconnection after credible or non-credible disturbances, with potential cascading over/undervoltage and frequency impacts.

Proposed studies and analysis

- Study temporary IBL disconnection and reconnection, including voltage and frequency impacts.
- Assess post-disturbance overvoltages and available reactive support under low system strength and min/max demand conditions.
- Assess non-credible contingencies involving multiple IBL connections.

Possible recommendations and solutions

- Strengthen voltage control through additional dynamic reactive support equipment.
- Investigate other technical mitigations to support the integration of IBL in the NEM.

Power system oscillation risks



Risk context

- Potential reductions in damping of oscillatory modes may emerge as synchronous condensers replace retiring synchronous generation.
- Oscillatory behaviour is expected to change with new interconnector paths, renewable energy zone integration, and new technologies.
- This may increase the likelihood and consequences of oscillatory instabilities.

Proposed studies and analysis

- Review of recent NEM and international oscillation events.
- Assessment of how oscillation risks may evolve through the energy transition.
- Discussion of existing tools, modelling capabilities, processes, and management options.

Possible recommendations and solutions

- Targeted operational actions and longer-term risk management options.
- Adequate visibility, accurate modelling and operational preparedness.
- Shared AEMO and industry understanding to inform oscillation management priorities.



Consultation details

Daniel Fracalossi

Principal Engineer – Grid Performance & Integration

Consultation details



Submitting formal feedback

- All stakeholders are invited to provide a written submission on the draft 2027 GPSRR approach paper.
- Submissions should be sent in PDF format to gpsrr@aemo.com.au by **5:00pm (AEDT) Thursday 12 Nov 2026**.
- All feedback received will be considered for the final 2027 GPSRR Approach Paper and Consultation Report that will be published in December 2026.
- The final GPSRR report will be published by 31 July 2027 and will outline the analysis and assessment on the four priority risks.

For any further questions or comments, contact the project team at gpsrr@aemo.com.au.

Summary of consultation questions

Question

1. Do the current approach, scope, risk assessment and consultation arrangements for the GPSRR provide an appropriate framework for assessing material power system risks? If not, please identify any deficiencies and describe additional arrangements that would improve the effectiveness of future GPSRRs.
2. What are stakeholder views on the proposed priority risks and the associated approach and methodology for assessment in the 2027 GPSRR?
3. Are there any other higher priority current and emerging system operator risks that should be included for discussion in the 2027 GPSRR?
4. Does the proposed consultation approach meet stakeholder expectations and do stakeholders have any suggestions on how AEMO could best engage with industry on the development of the 2027 GPSRR?
5. Are there any suggested improvements regarding the risk assessment methodology?
6. What are stakeholder views regarding the proposed modelling approach for the priority risks for assessment in the 2027 GPSRR?
7. What are stakeholder views regarding the proposed risk cost assessment methodology to be applied in the 2027 GPSRR?

Discussion: Any other feedback or suggestions for the 2027 GPSRR?



Discussion and Q&A

Q&A facilitated by:

Daniel Cassidy

Manager – Grid Performance & Integration





For more information visit

aemo.com.au