

7 August 2025

Subject: Atmos Renewables submission relating to the proposed changes to the Power System Security and Reliability (PSSR) Standards and governance framework for the SWIS.

To: Energy Policy WA

Email: energymarkets@demirs.wa.gov.au

Introduction

Atmos Renewables (**Atmos**) appreciates the opportunity to provide feedback on the Power System Security and Reliability (PSSR) Standards Review consultation paper (19 June 2025).

Atmos is a leading Australian clean energy developer and operator. Our SWIS flagship **100 MW/400MWh Merredin BESS** project is currently under construction and upon completion will enhance our existing **>1.5 GW of operational renewable capacity** across wind and solar in the NEM. In addition, Atmos has a significant pipeline of development-stage projects across both the National Electricity Market (NEM) and the Wholesale Electricity Market (WEM).

Atmos is committed to enabling a secure, reliable, and low-emission electricity system by deploying advanced technologies such as grid-forming battery energy storage systems (BESS) solutions. Atmos is owned by funds managed by Igneo Infrastructure Partners, a global infrastructure investment manager with over \$238 billion in assets under management, and is led by an experienced executive and technical team with deep expertise in energy markets and grid integration.

Atmos' submission focuses on proposals that most directly impact the connection and operation of inverter-based resources (IBR), including grid-forming technologies, in the SWIS.

Executive Summary

Atmos strongly supports the goal of consolidating and modernising PSSR Standards to deliver clarity, consistency, and reliability for the SWIS. However, we are concerned that the current proposals, while well intentioned, are overly prescriptive and may unintentionally discourage the adoption of grid-forming (GFM) technologies, which are critical to maintaining system strength and facilitating the transition to a low-carbon electricity system.

Key concerns and recommendations:

1. Alignment with NEM approach – The WEM should adopt a model similar to the Voluntary Specification for Grid-Forming Inverters (AEMO, May 2023).
2. Incentives for GFM adoption – Introduce clear financial mechanisms to support GFM uptake, including long-term NCESS contracts or similar instruments.
3. Avoid over-prescription – Replace overly detailed technical constraints with performance-based requirements.

4. Hybrid facilities – A single set of GPS requirements should apply at the connection point.
5. SCR requirements – Revise minimum and automatic standards upward, widen negotiation range.
6. Phase angle jump – Reduce requirement from 60° to 25° in line with NEM.
7. Response times – Relax commencement and rise time requirements to reflect practical capability.

Detailed Comments on Consultation Proposals

Network Planning Standards for PSSR (Proposal 1)

Atmos supports the introduction of customer outcome standards and improved clarity in network planning, however:

- There is no detail on effective incentive mechanisms to achieve these outcomes or encourage adoption of advanced capabilities like GFM.
- Without incentives, prescriptive technical limits risk creating additional barriers to connection in weaker parts of the SWIS where GFM capability is most needed.

Atmos recommends:

- Introducing financial incentives for GFM technologies, such as long-term NCESS contracts or alternative revenue streams.
- Ensuring deterministic criteria remain guidelines rather than hard limits.

User Facility Standards Framework (Proposals 2–5)

Proposal 3 – Application of Standards:

- The negotiation window between Automatic and Minimum User Performance Standards is too narrow.
- **Recommend** expanding negotiation range and recognise technology performance limits during transients.

Proposal 4 – Hybrid Facilities:

- Dual GPS requirements for hybrid facilities are impractical.
- **Recommend** applying a single set of GPS requirements at the point of connection.

Proposal 5 – Governance:

- Support AEMO engagement and transparency; request clarity on facilities requiring monitoring plans.

Suitability of Technical Requirements (Proposals 6–11)

Proposal 6 – Withstand SCR:

- Automatic Standard (1.2) and Minimum Standard (2.0) create a narrow negotiation band.
- **Recommendation:** *Align with NEM (SCR ≥ 3.0), allow flexibility during commissioning.*

Proposal 7 – Voltage Phase Angle Jump:

- 60° requirement is not feasible;
- Recommend 25° in line with NEM voluntary spec.

Proposal 8 – Active and Reactive Current Response:

- Commencement time of 10 ms is too aggressive; recommend ≥ 30 ms and remove 20 ms voltage magnitude change requirement.

Proposal 9 – Disturbance ride through for multiple disturbances:

- Further clarity will be required on how network related issues such as rotor angle stability should be considered when assessing this requirement

Proposal 10 - Damping of power system oscillations

- No additional comment

Proposal 11 - Partial Load Rejection

- Tentatively support for this proposal provided that our feedback in relation to opposing phase angle jumps and frequency response is incorporated into the revised rules.

Summary of overarching concerns

- Why has the WEM not adopted the NEM's Voluntary GFM Specification?
- Why is there no financial incentive to encourage developers to adopt GFM?
- Overly prescriptive technical standards risk slowing decarbonisation.
- Hybrid facility treatment is impractical and costly.
- SCR limits and phase angle jump requirements need revision.

Conclusion

Atmos Renewables strongly supports the intent of the PSSR Standards Review but urges EPWA to adopt a flexible, incentive-based, and performance-focused framework to accelerate the deployment of GFM technologies and to support a secure and affordable transition to a low-carbon SWIS.

We would welcome the opportunity to engage further on these proposals and contribute to technical working groups.

Yours sincerely,



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