

20 August 2026

Ms Anna Collyer
Chair
Australian Energy Market Commission
Level 15, 60 Castlereagh Street
Sydney NSW 2000

Submitted via AEMC portal at www.aemc.gov.au

Reference ERC0417 and ERC0439

Dear Ms Collyer

Re: Stanwell response to the Minimum System Load Governance and Market Arrangements Consultation

Stanwell Corporation Limited (Stanwell) welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) consultation on the Minimum System Load Governance and Market Arrangements.

Stanwell is Queensland's leading provider of electricity and energy solutions to the National Electricity Market (NEM) and large energy users along the eastern seaboard of Australia. With over 40 years of continuous operations, Stanwell maintains a reliable supply of power from two of the most efficient coal-fired power stations in Australia – the Tarong power station near Kingaroy and Stanwell Power Station near Rockhampton.

Stanwell's experience working with communities to build, operate and maintain reliable coal-fired power stations is also being applied through partnerships with the private sector to build the new energy, storage and firming solutions Queensland needs for the future.

Stanwell acknowledges the work of the AEMC in preparing this consultation paper and consulting with industry on proposals for Minimum System Load (MSL) governance and market arrangements.

This response contains the views of Stanwell only and should not be construed as indicative or representative of the views of the Queensland Government.

Introduction

Minimum System Load events occur when operational demand falls to a level below the safe operating levels needed to maintain system security.¹ An MSL risk is most likely to appear during periods of low underlying customer demand, and more particularly at times when grid-connected generation is producing energy at the same time as output from rooftop photovoltaic (PV) and other behind the meter resources are high.² The Australian Energy Market Operator (AEMO) forecasts an increase in MSL events across the NEM over the medium to longer-term.³

¹ The Australian Energy Market Operator, 2025 Fact Sheet: Minimum System Load as cited in the Australian Energy Market Commission Consultation Paper "Minimum system load governance and market arrangements" 9 July 2026, p 8.

² Australian Energy Market Commission Consultation Paper "Minimum system load governance and market arrangements" 9 July 2026, p 8.

³ AEMO NEM Spring Readiness Industry Briefing 20 August 2025; AEMO Transition Plan for System Security for the National Electricity Market (TPSS), Appendix A3 MSL Regional Assessments, December 2025.

AEMO currently has several tools to manage aspects of MSL. These tools are fragmented and do not provide a standing or transparent mechanism for preserving visible, controllable, or sustained load reserve.

For the NEM, MSL is a system security challenge, and is not simply a regional energy oversupply problem. As such any actual or pre-emptive response must be matched to the relevant system need. This requires reforms that improve MSL governance and transparency using market-based responses.

The wholesale price signal is not the only factor impacting MSL and should not be regarded as the primary solution. Other interrelated issues must be addressed including generator bidding and price response – changing generator incentives in an existing market structure will not in and of themselves resolve the underlying demand issue.

Two solutions have been proposed

MSL events have to date been challenging to forecast because future demand development is less predictable than supply development, and emerging industrial, storage and electrification loads may not be fully captured in demand forecasts.⁴ There is uncertainty whether MSL events will increase, their rate of increase, and whether current MSL arrangements are sufficient to adequately address these challenges into the future. Two rule change proposals have been submitted to the AEMC in an attempt to address these issues:

1. *The Reliability Panel propose:* a formal MSL framework (modelled on the lack of reserve (LOR) framework) that would define MSL conditions and AEMO's responsibility to forecast, declare and report them. The proposal also suggests that in order to preserve the underlying regional price signal, an MSL "trigger" would be applied that will set the regional spot price at the market floor price (\$-1,000/MWh) when system demand is expected to be insufficient for secure system operation (i.e. when AEMO declares a forecast-based MSL3 event).⁵
2. *The Clean Energy Council (CEC) propose:* to procure, reserve, and enable controllable load before forecast MSL conditions eventuate. A new technology neutral market ancillary service would be created broadly modelled on the existing Frequency Control Ancillary Services (FCAS) framework. The service would procure defined volumes of load response over specific periods. Responsive load capable of offering dispatchable reserve (including batteries, pumped hydro, and behind-the-meter resources) would bid availability to be used by AEMO during periods of forecast MSL.⁶

Both Rule change proposals have merit, but neither is a complete solution

Neither proposal establishes a complete framework that links the security need to the appropriate response, nor recognises that other system needs, linked to MSL events such as voltage control, inertia, system strength, and local network requirements, may necessitate separate services or network actions.

Governance framework

AEMO currently applies an operational framework under which it monitors and responds to forecast-based and real-time operation of MSL1, MSL2, and MSL3 conditions.⁷ However, there is currently no MSL governance framework under the *National Electricity Rules* (Rules). While Rule 4.3 sets out AEMO's general power system security responsibilities, including monitoring the operating status of the power system and maintaining power system security,⁸ Stanwell does not believe that the frameworks or intervening powers available to AEMO are sufficient to manage MSL events going forward.

Stanwell supports formalising the Reliability Panel's proposed MSL governance, forecasting, declaration and reporting arrangements in the Rules. This would partially address the identified governance gap, improve

⁴ Australian Energy Market Commission, Minimum system load governance and market arrangements, Consultation paper, 9 July 2026, section 2.3.

⁵ Reliability Panel AEMC, Rule change request submitted 23 April 2026, initiated 9 July 2026 [ERC0439].

⁶ Clean Energy Council, Minimum System Load reserve services, Rule change request initiated 9 July 2026 [ERC0417].

⁷ Australian Energy Market Commission, Minimum system load governance and market arrangements, Consultation paper, 9 July 2026, pp ii and 39; Australian Energy Market Operator, Managing Minimum System Load, accessed August 2026.

⁸ *National Electricity Rules*, version 251, cl 4.3.1, and cl 4.3.2; Australian Energy Market Commission, Minimum system load governance and market arrangements, Consultation paper, 9 July 2026, section 3.1.

transparency and accountability, and provide market participants with greater certainty about MSL conditions, thresholds and the circumstances in which AEMO may intervene.

Importantly, the governance framework should clarify the sequence, transparency, and reporting of AEMO actions that attempt to prevent a forecast MSL event from materialising (say for example when services are procured through transitional Type 1 and Type 2 contracts). However, it should not be limited to formalising an MSL3 declaration and associated floor price outcome.

If the proposed framework is based on the existing LOR framework it will suffer the same drawbacks, most notably that events occurring away from the regional reference node will not trigger the same governance actions or intervention pricing. Remote assets will remain subject to uncompensated imposition of constraints despite offering the same effective service as assets near the reference node.

Generator incentives

While the Reliability Panel's negative price proposal may encourage flexible generation to reduce output and storage to increase consumption, an automatic -\$1,000/MWh regional floor-price trigger should not be considered a primary response. This is because the trigger alone would not ensure that the response is visible, controllable, sustained or locationally effective. It may also penalise the synchronous generation that is required to remain online for system security purposes.

This triggered approach also suffers from its own success leading to regulatory induced cycling. That is, if the -\$1000/MWh price drives behaviour that resolves the MSL condition, then the trigger will be released and the incentive removed. Participants would then rationally revert to their former behaviour, triggering intervention.

Subject to further design interrogation, Stanwell recognises that the CEC's proposal may provide a useful foundation for competitively procuring visible, controllable and technology-neutral MSL load reserve, giving AEMO greater certainty that sufficient load will be available at the required volume and duration for a forecasted MSL event. This in turn would reduce reliance on opportunistic price responses, directions, transitional contracts, and support more transparent and efficient dispatch. Again, noting this is not a complete solution.

The outcome should determine the mechanism

As stated earlier, an MSL event is not as simple as there being too much generation. Low operational demand may create several distinct challenges that have not been addressed in the proposals including how an MSL declaration would distinguish an aggregate regional energy imbalance from frequency management, voltage control, system strength, inertia, local network constraints and firm load reserve.

The specific security outcome needed must be identified before determining the response as these issues can arise at different locations and may not be solved by a regional price. For example, sufficient frequency response, inertia and system strength must remain available to ensure system stability. Simply increasing load or reducing generation triggered through a regional price signal will not necessarily secure or stabilise the power system.

Similarly, local over-voltage issues are network-specific and are unlikely to be region-wide energy imbalances and should be addressed with locationally targeted responses or dedicated voltage support services, rather than relying on a single regional energy price to drive a response in addition to all its existing purposes. For example, a Queensland-wide energy price is an imprecise signal; although it may induce load at the regional reference node or another unconstrained location, it is unlikely to address issues at a remote or electrically weak sub-region

Without identifying the specific security outcome there is a risk that a well-intended mechanism could significantly change the megawatt (MW) imbalance and fail to address the underlying system security requirements.

Wholesale price signal is not the only factor impacting MSL and should not be regarded as the primary solution

Any intervention-pricing methodology should maintain transparency and preserve incentives for other in-market resources to respond and avoid reliance on price alone as a substitute for procuring visible, controllable and locationally effective capability. As such, the floor price should not be considered an automatic response applied as a complete and universal solution.

Where AEMO activates contracted load reserve or otherwise intervenes to prevent an MSL condition, the intervention may increase operational demand or alter dispatch before the condition materialises, causing the spot price to mask the low-demand conditions that prompted the intervention. As noted above, it may also expose system security critical synchronous generators to negative prices.

Instead, pricing arrangements should preserve the negative signal that would most likely prevail without the intervention. This could include applying the market floor price, but only where it reasonably reflects the counterfactual market outcome.⁹

Generation

In response to negative prices, flexible generation may reduce output or withdraw from dispatch. However, that response may be temporary, unpredictable or weakened by other arrangements because it cannot be assumed that all participants will respond directly to spot prices. Power Purchase Agreements (PPAs) and other contractual arrangements may shield some generators from negative spot prices and weaken the behavioural response expected from a -\$1,000/MWh trigger. In which case, where the response cannot be demonstrated to be sufficiently predictable, visible, or dependable, then a negative price trigger should not be relied on as firm MSL capability. Thermal or synchronous units will also seek to reduce to minimum load on a -\$1,000/MWh price signal, with the unintended consequence of removing system frequency lower capability from the network.

Load response

Additional controllable load can absorb excess energy and improve the regional supply-demand balance, and as in the case of generation, must be visible to AEMO, controllable, available for the required duration and, where relevant, located in an electrically effective part of the network. A short, price-driven response may cycle on and off, remove its own price signal or shift the low-demand problem into an adjacent interval, and cannot be treated as firm load reserve.

A better alternative is a standing MSL load-reserve service

The CEC proposal for a self-committed service modelled on the FCAS markets provides a useful foundation to support a standing MSL ancillary service that would operate alongside, but separately from, FCAS.

The service could adopt relevant aspects of the FCAS framework, including offers, enablement and co-optimisation – but would procure a different product. That is, FCAS manages frequency through rapid changes in generation or demand, whereas an MSL reserve would procure the availability and activation of incremental scheduled load over a defined period.

As an alternative to an FCAS-style market, a scheduled reserve market with implied offers and payments for scheduled resources could be applied to an MSL service. This approach would be symmetrical with the reserve market we recommended as part of the NEM Review making it consistent with the symmetric approach in the AER rule change request.¹⁰ The service should remunerate resources for being visible, available and dispatchable – not only when activated.

The MSL service would provide firm load reserve but would not replace separate procurement or network action for voltage control, inertia, system strength or other local security needs. This would provide AEMO with dependable

⁹That is, where AEMO's intervention prevents an MSL condition from materialising, the counterfactual price is the regional price likely to have prevailed without that intervention. This may be the market floor price where the underlying low demand conditions would otherwise have driven the price to -\$1,000 / MWh, however that floor should not be assumed to be the counterfactual outcome in every case.

¹⁰ Stanwell Corporation Limited response to the National Electricity Wholesale Market Settings review draft Report and Recommendations – Short-term: Reforms to support the continued and efficient operation of the spot market.

load reserve and improve its ability to manage shortfalls without costly intervention. By encouraging resources to become scheduled, this approach would also support AEMO operations by reducing the proportion of the market which is non-visible and does not reveal its intentions.

Stanwell notes that an MSL reserve service would require careful construction to ensure controls are in place to limit opportunities for market gaming. We look forward to providing further comment on these guardrails once they have been developed.

Conclusion

Stanwell supports a standing MSL ancillary service, where capacity is offered in advance and enabled only when required. This would reduce reliance on directions, constraints, transitional arrangements and emergency backstop measures. We believe this is the most direct and effective way to secure load reserve.

A technology-neutral market, founded on FCAS design features, would allow capacity to be offered in advance and enabled only when required, ensuring AEMO visibility and control over volume, duration and to an extent, location of available load to address MSL events. This in-market approach would also act as an incentive for new, highly controllable loads to make themselves visible to AEMO in order to participate in the market.

An enduring MSL framework should combine Rules-based governance, define MSL conditions and thresholds, and set out AEMO's forecasting requirements, declaration and escalation responsibilities. It should also include transparent intervention pricing and targeted procurement of firm load reserve through an ancillary service, while recognising resources required to remain online for system security.

Stanwell welcomes the opportunity to discuss further with the AEMC any of the issues raised in this submission. Please contact Lya McTaggart at lya.mctaggart@stanwell.com.

Yours sincerely



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