



AGL Energy Limited

T 02 9921 2999

agl.com.au

ABN: 74 115 061 375

Level 24, 200 George St
Sydney NSW 2000
Locked Bag 14120 MCMC
Melbourne VIC 8001

Australian Energy Market Commission

Level 15, 60 Castlereagh Street

SYDNEY NSW 2000

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RE: Minimum System Load governance and market arrangements (ERC0439 and ERC0417)

AGL welcomes the opportunity to provide feedback on the Australian Energy market Commission's (**AEMC**) consultation paper regarding the Minimum System Load (**MSL**) governance and market arrangements rule change requests.

AGL supports efforts to improve the transparency and predictability of MSL management arrangements in the National Electricity Market (**NEM**). As the NEM continues to transition, with increasing consumer energy resources (**CER**), storage and electrification, periods of minimum system load have increased and are expected to continue as an operation challenge. The current management arrangements were developed under significant time pressure and given that MSL issues are expected to persist over the long term, the framework should be amended to explicitly recognise and accommodate the ongoing challenges, and should:

- Maintain power system security;
- Minimise reliance on out-of-market intervention;
- Support efficient investment signals; and
- Preserve simplicity and coherence within market design.

AGL considers that the Commission should pursue a complementary package of reforms that strengthens market-based responses to minimum system load conditions while providing an appropriate backstop where those signals are insufficient.

In particular, AGL supports further consideration of the Reliability Panel's proposal to set the regional energy price at the market floor price during MSL conditions, as this would provide a clear and efficient oversupply signal to generation, storage and flexible demand. However, price signals alone may not always deliver the specific load-increase capability required to maintain system security.

For that reason, AGL considers that a targeted "reverse RERT" style mechanism should also be considered as a complementary procurement mechanism. Such an approach would allow AEMO to procure load increase capability ahead of forecast MSL conditions through a familiar and proportionate framework, while avoiding the complexity and cost of establishing a new standing ancillary service market.

Conversely, AGL does not support the establishment of a new MSL ancillary service market at this point in time. In our view, the case for introducing a new market mechanism seems a more complex solution that will take time. Exploring the full use of existing NEM price signals and leveraging existing demand management frameworks remain two lower cost alternatives that should be assessed first.

To provide context to our position, we have provided answers to each of the questions in the consultation paper in **Attachment 1** to this letter.



AGL welcomes the opportunity to continue discussions with the AEMC, and should you have any questions about the contents of this submission, please don't hesitate to contact Jordan Dodd at jdodd@agl.com.au or on 0421 418 428.

Yours sincerely,

Ralph Griffiths
General Manager, Policy and Market Regulation



Attachment 1

Question 1: the outlook for MSL events in the NEM in the context of the broader reform program

1. What are your views on the expected frequency, severity and location of MSL conditions over the short, medium and long term?

AGL expects MSL conditions to become more frequent in the short to medium term as rooftop photovoltaic (PV) penetration continues to increase across the NEM. The effects are likely to be most pronounced in regions with high distributed PV penetration and existing periods of low operational demand.

Our view is that the long-term outlook is considerably less certain. The future prevalence and severity of MSL conditions will be influenced by a range of factors, including electric vehicle charging, uptake and orchestration of distributed batteries, data centre uptake and government policy (including increased support for industrial rooftop PV). Any combination of inputs could produce an increased or decreased underlying demand during periods currently flagged with MSL.

AGL therefore considers that the MSL challenge should not be viewed as following a single trajectory. While the risk is likely to increase over the coming decade, the scale and persistence of the issue remains uncertain. Regulatory responses should be proportionate to that uncertainty and capable of adaptation as conditions evolve.

2. Are there specific information gaps in the current MSL outlook that materially affect investment, operational or policy decisions?

Yes.

There remains significant uncertainty regarding the future interaction between consumer energy resources, electrification and demand response. In particular, greater transparency would assist participants in understanding:

- the likely frequency and duration of future MSL conditions;
- the expected evolution of regional minimum operating levels;
- the extent to which emerging technologies may alleviate low demand conditions;
- the future role of distributed batteries and coordinated CER; and
- the extent to which future system security requirements can be met using non-synchronous technologies.

Improved reporting and forecasting of MSL conditions would support more efficient operational and investment decisions by market participants.

3. In the context of the rule change proposals, how should the Commission distinguish between temporary transitional MSL risks and enduring structural MSL risks?

The Commission should distinguish between issues arising from the transitional coexistence of large synchronous fleets and growing CER, and those that are likely to remain once the power system reaches a more mature end state.

Where uncertainty remains high, the Commission should favour scalable and adaptable reforms that leverage existing market frameworks rather than introducing new permanent market structures which override traditional market signals. The degree of regulatory intervention should remain proportionate to the demonstrated magnitude and persistence of the issue.



Question 2: The case for including an MSL governance framework in the NER

1. Do you agree that there is a need for an explicit framework in the NER to more clearly set out the governance arrangements in relation to MSL conditions in the NEM?

Yes, AGL supports establishing a formal MSL governance framework with the NER. The current arrangements have evolved through operational procedures and market notices. Bringing core elements into the Rules would improve transparency, predictability and accountability whilst providing greater certainty for market participants. The framework should broadly mirror the principles under the existing Lack of Reserve framework, while maintaining flexibility to adapt operational methodologies over time.

Question 3: The potential elements of an MSL governance framework in the NER

1. What are your views on the fundamental definitions and naming conventions that would provide the basis for a framework in the NER for MSL conditions?

AGL supports the development of clear and enduring terminology within the Rules.

The framework should focus on system security outcomes rather than specific operational procedures. Definitions should be sufficiently technology-neutral and capable of accommodating future changes in system security requirements.

- a. Would it be appropriate to define the concept of MSL in the NER?

Yes.

The Rules should include a high-level definition of MSL that captures circumstances where operational demand is insufficient to maintain secure system operation.

Detailed methodologies and region-specific thresholds should remain in subordinate procedures maintained by AEMO.

- b. Would it be appropriate to define the concept of a lack of load reserve - or similar - in the NER?

Yes.

AGL sees merit in developing a low-demand equivalent to the Lack of Reserve framework. Doing so would improve consistency across the NEM's security frameworks and provide an established model for declarations, reporting and participant engagement.

- c. Would it be appropriate to define the concept of unscheduled generation shedding - or similar - in the NER?

AGL does not consider this concept should form the primary basis of the governance framework. Unscheduled generation shedding is more appropriately viewed as a consequence of severe low-demand conditions rather than the defining feature of those conditions.

2. What are your views on the potential elements of a rules-based MSL governance framework including potential requirements for :

- a. Forecasting low demand or MSL conditions through ST PASA?

AGL supports incorporation of MSL forecasting into existing ST PASA processes where practicable.

Participants should receive timely and transparent information regarding forecast MSL conditions, expected severity, likelihood and timing.

- b. The declaration of MSL or low demand conditions?



The declaration framework should provide participants with clear information regarding the severity of a forecast event and the expected operational response.

c. **Reporting on MSL or low demand conditions?**

Reporting should include actual occurrences, forecast accuracy, interventions undertaken and associated market impacts. Transparency will be particularly important as MSL conditions become more frequent.

3. **Are there other additional elements that you consider should be included in a MSL rules framework?**

The framework should include:

- a requirement to publish estimated times to intervene;
- transparency regarding intervention outcomes;
- post-event reporting; and
- periodic review of methodologies and thresholds.

These measures would improve accountability and assist participants in responding efficiently to MSL conditions.

Question 4: Is the Nem set up to provide effective price signals to support efficient operational and investment outcomes with respect to MSL conditions

1. **What are your views on the effectiveness of the current market arrangements sending effective price signals to support efficient investment outcomes and avoiding the need for AEMO intervention during MSL conditions?**

AGL considers the current framework does not provide sufficiently effective price signals to efficiently manage emerging MSL conditions.

The continued reliance on directions and other out-of-market mechanisms indicates that existing market arrangements are not consistently delivering the operational demand response required to maintain system security during severe low-demand periods. Where intervention becomes necessary to maintain system security, this suggests there may be a disconnect between underlying system needs and the incentives visible to market participants.

From a market design perspective, AGL considers that market-based responses should be the preferred mechanism for resolving MSL conditions. Participants should be provided with transparent and efficient incentives to increase demand or reduce generation before reliance is placed on administrative intervention. Market responses generally promote more efficient operational outcomes and stronger long-term investment signals than directions-based arrangements.

2. **Do you agree with the Reliability Panel that there is need to revise the NER to enhance the pricing outcomes with respect to MSL conditions? Please provide evidence to support your view.**

Yes, AGL supports consideration of reforms that strengthen pricing outcomes during severe MSL conditions.

The primary objective of any reform should be to ensure market participants receive efficient signals regarding the value of increasing demand or reducing generation during periods where operational demand is approaching security limits.

AGL considers that improving market signals should be the first step in addressing MSL conditions. Where market participants are not exposed to sufficiently strong incentives, it is unsurprising that intervention may subsequently be required. In this regard, reforms that improve the operation of existing market mechanisms should generally be preferred ahead of introducing new administrative or procurement frameworks.



Question 5: The Reliability Panel proposes that the NER requires that the energy price be set at the market floor price during MSL3 conditions

1. Do you support the Panel's proposal to set the price at the market floor price during MSL3 conditions? In particular, do you have views on the degree to which it would improve market efficiency and energy pricing outcomes in the NEM by sending a stronger scarcity/oversupply signal?

AGL broadly supports the Reliability Panel's proposal. The proposed approach seeks to address the underlying market signal associated with MSL conditions. By exposing market participants to a stronger oversupply signal during MSL3 events, the proposal would encourage responses from generation, storage and flexible demand resources before intervention becomes necessary.

Importantly, the proposal builds upon an existing market mechanism rather than introducing an entirely new market construct. AGL considers this to be a more proportionate response given the uncertainty surrounding the future scale and persistence of MSL conditions.

The proposal has the potential to improve both operational efficiency and investment efficiency by signalling that demand-side flexibility and load-increasing capability have value during periods of severe oversupply.

AGL notes however that participant confidence in the framework will be essential. If market participants are expected to respond to an MSL declaration, they must have confidence that the resulting pricing outcome will be sufficiently predictable and durable to support commercial decision-making.

2. What potential related unintended consequences should the Commission be mindful of in relation to the Panel's proposal? How could these be mitigated?

The Commission should consider the implications for assets that remain online or are directed to remain online for system security purposes during an MSL event.

Where market floor pricing applies during an MSL3 condition, there exists the potential for certain participants to incur material financial exposure despite operating in support of system security outcomes.

AGL considers this issue should not prevent implementation of stronger market signals. Rather, it highlights the importance of complementary reforms addressing intervention pricing and compensation arrangements.

Where participants are required to provide services that the market would not otherwise deliver, the framework should ensure those participants are appropriately compensated. This is particularly important where a participant's actions are being undertaken primarily to support system security rather than commercial outcomes.

Accordingly, AGL considers that market signal reforms and compensation reforms should be viewed as complementary rather than competing solutions.

Question 6: Alternative and complementary reforms to improve pricing outcomes in relation to MSL conditions



1. What are your views on the potential application of intervention pricing for AEMO interventions to decrease generation or increase demand during MSL conditions?

AGL supports further consideration of intervention pricing arrangements for MSL-related interventions. Where AEMO intervenes because the market has not delivered the required response, intervention pricing can help ensure prices continue to reflect the underlying scarcity or oversupply conditions that prompted the intervention.

Appropriate intervention pricing also reduces the risk that participants providing services in support of system security are disadvantaged relative to participants that are not required to respond.

2. What are your views on the role of central dispatch and NEMDE in supporting effective price formation for MSL conditions?

AGL considers that, where practical, underlying MSL requirements should be reflected through market systems and dispatch processes rather than through operational workarounds. The more visible system requirements are within central dispatch and pricing processes, the greater the likelihood that market outcomes will efficiently reflect those requirements.

3. Are there other reforms that the Commission should consider, that could improve price signals in the NEM in relation to MSL conditions?

AGL considers a hierarchy of reforms should be adopted. First, market signals should be strengthened to encourage efficient participant responses. Second, where security requirements cannot be delivered efficiently through market responses alone, intervention pricing and compensation frameworks should ensure participants are appropriately rewarded for providing services that support system security. Third, where an enduring requirement remains for dedicated MSL capability, procurement arrangements should be considered.

In AGL's view, addressing market signals and compensation frameworks should be prioritised before introducing entirely new market structures.

Question 7: The case for change to the NER to support the provision of load reserves to manage MSL conditions

1. How effective and efficient do you consider the existing NEM regulatory arrangements are at supporting investment in and availability of load reserves?

While these mechanisms may be effective in addressing immediate system security needs, they provide relatively weak long-term investment signals. Investment is more likely to occur where participants can identify transparent and predictable revenue opportunities than where future opportunities are primarily dependent on discretionary intervention.

2. Do you agree with the CEC that there is a need to change the NER to more explicitly support the provision of load reserves to manage MSL conditions?

AGL does not consider that establishing a new ancillary service market is necessarily the appropriate response. The Commission should first assess whether improved market signals and enhanced compensation arrangements can efficiently deliver the required capability. Only if those approaches prove insufficient should a new ancillary service be considered.

Question 8: The CEC's proposed new MSL market ancillary service



1. What are your views on the potential benefits of the CEC's proposal to establish a new MSL market ancillary service?

AGL does not consider that the benefits of a new MSL market ancillary service have been sufficiently demonstrated at this stage. The more important question is whether that value is best revealed and procured through a new ancillary service market, or whether it can be more efficiently addressed through improvements to existing market signals, intervention pricing, compensation arrangements and procurement mechanisms.

AGL considers that reforms to market price signals should be the first step. Where there is insufficient operational demand to maintain a secure operating state, the market should send a clear oversupply signal that encourages generators to withdraw, flexible demand to increase consumption and storage to position itself efficiently. If the market is capable of delivering the required response through transparent prices, that outcome is preferable to establishing a new administrative market service.

Where market signals are insufficient, the second step should be to ensure that intervention pricing and compensation arrangements properly recognise the services being provided by participants. A properly codified directions and compensation framework would help address the unfairness that can arise where participants are directed to provide a service but are not appropriately compensated for opportunity costs, trading impacts or loss of operational flexibility.

2. What are your views on the CEC's operational vision for a new MSL market ancillary service? What are your views on the implementation and operational costs associated with the CEC's proposal to establish a new MSL market ancillary service?

AGL considers that the operational vision for a new MSL market ancillary service requires further development before it could be adopted into the Rules.

The CEC's proposal appears to contemplate a service through which capable resources would make load increase capability available to AEMO ahead of forecast MSL conditions. AGL recognises the attraction of this model. It could provide AEMO with greater visibility of available response and provide participating resources with a clearer revenue pathway than reliance on directions.

Unlike contingency FCAS, which is enabled close to real time, an MSL service may require resources to position themselves several hours ahead of an expected event. This creates material opportunity costs and trading risks, particularly for batteries. If those costs are not appropriately reflected in the service design, the mechanism may either fail to attract efficient participation or distort energy market behaviour.

AGL also considers that care is required before adding a further market ancillary service to the NEM. Participants are already adapting to increasingly complex market and operational arrangements. Additional service markets should only be introduced where there is clear evidence that they are necessary, proportionate and likely to deliver net benefits compared with simpler alternatives. This was a central concern raised in AGL's earlier engagement on the proposal, where AGL identified risks associated with layering additional ancillary service markets on top of existing energy and FCAS arrangements.

Further, AGL expects the implementation and operational costs of a new MSL market ancillary service would be material. Such a mechanism would likely require changes to AEMO systems, market participant systems, bidding interfaces, dispatch processes, settlement arrangements, compliance obligations and operational procedures. Participants would also need to develop new trading, risk management and optimisation capability to account for another service that may interact with energy and FCAS market outcomes.



These costs should not be assessed solely by reference to implementation expenditure. The Commission should also consider the broader costs associated with market complexity. Each additional service market increases the complexity of portfolio optimisation, bidding, compliance and operational decision-making. In the context of storage assets, this complexity is particularly significant because the same physical capability may be capable of providing energy, FCAS, system security services and potential MSL response, but cannot necessarily provide all services simultaneously without material opportunity cost.

AGL does not consider that these costs are justified unless the Commission can establish that a new MSL market ancillary service is likely to deliver material net benefits relative to lower-cost alternatives.

Question 9: What are your views on alternative or complementary solutions for the pricing and provision of load reserves for MSL conditions?

1. What are your views on potential alternative or complementary solutions for the pricing and provision of load reserves?

AGL considers that the Commission should adopt a staged hierarchy of reforms for the pricing and provision of load reserves during MSL conditions.

First, the Commission should seek to improve market price signals. Where the system is experiencing insufficient operational demand, the primary market response should be a clear and efficient oversupply signal. AGL therefore supports further consideration of the Reliability Panel's proposal to set the regional energy price at the market floor price during MSL conditions. This approach is attractive because it uses an existing market mechanism and directly addresses the underlying pricing issue. It also provides a transparent signal for storage, flexible load and generation to respond efficiently.

AGL recognises that some stakeholders have raised concerns about the consequences of applying the market floor price during MSL conditions, particularly for assets that may need to remain online or be directed on for system security reasons. AGL considers these concerns are legitimate, but they should be addressed through complementary compensation and intervention arrangements rather than by abandoning the price signal. The fact that some participants may require protection from inappropriate financial exposure does not remove the need for the market to send an efficient oversupply signal.

Compensation should recognise opportunity costs, loss of trading flexibility, state of charge impacts and other commercial consequences of the direction. The current process can leave participants exposed to uncertainty and administrative burden, particularly where repeated claims are required after the event.

The Commission should consider targeted procurement mechanisms where there is evidence of an enduring need for load reserve capability that cannot be delivered through energy market signals alone. In AGL's view, a "reverse-RERT" style mechanism warrants serious consideration. Such a mechanism could allow AEMO to procure load increase capability in advance of forecast MSL conditions through a familiar framework, without establishing a new standing ancillary service market.



A reverse-RERT style mechanism would have several advantages. It would preserve the principle that market signals should do the primary work. It would provide AEMO with a backstop mechanism where the market does not deliver sufficient response. It would create clearer investment signals than reliance on directions, because participants would be able to contract for a service rather than wait to be directed. It would also avoid some of the complexity associated with establishing a new real-time ancillary service market.

Directions do not provide a sound basis for long-term investment. Participants are unlikely to invest in new capability on the basis that they may be directed in the future. By contrast, a transparent procurement mechanism can reveal the value of capability and provide a revenue pathway for resources that can support system security during low-demand periods.

Further, the Commission should consider whether existing transitional service arrangements can be refined or expanded while longer-term reforms are developed. Transitional procurement may be appropriate where MSL requirements are uncertain, region-specific or likely to evolve as technology and demand patterns change. Such arrangements should not become a substitute for efficient market design, but they may provide a useful bridge while the Commission assesses the long-term need for enduring arrangements.

Question 10: Assessment framework

1. Do you agree with the proposed assessment criteria?

AGL broadly supports the Commission's proposed assessment criteria.

The criteria of safety, security and reliability, market efficiency, emissions reduction and good regulatory practice are appropriate for assessing reforms to manage MSL conditions. Each criterion is relevant to the issues raised by the rule change requests.