



Government
of South Australia

Department for
Energy and Mining

Our Ref: F2022/000204

Mr Charles Popple
Chair
Reliability Panel
c/- Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Popple

Charles

Thank you for the opportunity to make a submission on the *2022 Reliability Standard and Settings Review issues paper*.

This submission does not represent the views of the South Australian Government, which has entered a caretaker period. The views and opinions expressed in this submission may be amended in the future to reflect the priorities and positions of the incoming government.

The electricity supply is in the process of rapidly transitioning to a carbon constrained future, with South Australia leading this transition. As expressed in the issues paper, this is resulting in technically different electricity supply entering the market and radical changes to customer demand from the electricity system.

The Energy and Technical Regulation Division (the Division) welcomes the Reliability Panel's (the Panel's) acknowledgement of the potential shift in the profile of risks to reliability seen in the National Energy Market (NEM). The Division supports the Panel's decision to consider the key changes underway in the NEM's physical and policy environment in its 2022 Reliability standard and settings review (2022 RSS review).

In particular, with South Australia at the forefront of the electricity power system transition, the Division encourages the Panel to investigate the impacts on the reliability standard and settings of the increasing entry of storage and variable renewable generation, as well as the changing time-of-day and seasonal electricity peak and consumption demand profiles compared to the last review period.

When considering how best to amend the reliability standard and settings in light of these energy market changes, the key consideration of the Panel should be meeting consumer expectations to have access to a reliable supply of electricity at a reasonable cost.

Energy and Technical Regulation Division

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Reliance on a single metric to signal reliability

While the Division appreciates the focus the 2022 RSS review is placing on quality improvements, we consider there are challenges with the existing reliability standard in the face of the increased complexity of system supply and demand.

The Division agrees with the Panel's statement on page 58: "Given the changing power system reliability risk profile, and increasingly diverse sources of reliability risk, the Panel is considering whether more than one form and metric may be required to appropriately signal reliability outcomes and risk given an evolving NEM."

While there remains material uncertainty around the outlook for reliability because of the quickly evolving NEM, supplementing the reliability standard with associated metrics would appear to be beneficial. However, alternative metrics presented should only be included if relevant and beneficial to stakeholder understanding with respect to the current and expected characteristics of the power system.

Other factors further challenging the effectiveness of the existing reliability standard include the potential future design and implementation of a congestion management model, the impacts of new markets for system services and essential system services, the implementation of other prospective Energy Security Board (ESB) Post 2025 reforms, and the acceleration in the scale and scope of jurisdictional renewable energy targets and energy infrastructure investment schemes.

The existing form of the reliability standard and market price cap

The Division questions the appropriateness of the existing form of the reliability standard. With the existing standard requiring unserved energy (USE) to be averaged across the full range of possible outcomes for a given financial year, the Division queries how well this standard reflects the value that consumers truly place on electricity system reliability.

Consumers expect continuity of power supply during increasingly likely, high impact events (such as extreme weather events or coincident planned outages). The Division considers that the community places a high value on the frequency, duration, and depth of reliability events during these periods, which may be masked by the nature of the existing form of the reliability standard.

Reinforcing this observation, the Division notes that the fact that Energy Ministers, following advice from the ESB, agreed to set an interim reliability standard to improve the resource adequacy of the electricity system for the short term further raises questions on the appropriateness of the current standard. South Australia has acted on this concern by triggering the Retailer Reliability Obligation following internal risk assessments of supply interruptions during summer periods.





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Reflecting the points made above, the Division suggests that the Panel consider one or more of the forms of the reliability standard described in Table 5.1 of the issues paper for further consideration. The Division supports any such assessment occurring in line with the National Electricity Objective and the Panel's General Assessment Principles, while also considering addressing tail risk exposure to involuntary load shedding and the heightened electricity market volatility expected throughout the transition to June 2028.

Any updating of the market price settings by the Panel requires reliable forecasts of electricity price trends to June 2028. The uncertainty implied by recent price volatility for SA, as shown in figure 3.11, highlights the challenge in developing accurate forecasts. Reinforcing this, both the variability and upward trend in the number of Market Price Cap (MPC) events shown in figure 3.12 infers the need for a review of the level of the MPC but also highlights the challenge in determining this level.

Minimum demand and the Market Floor Price

The Australian Energy Market Operator (AEMO) noted in 2020 that South Australia would approach zero operational demand due to such high proportions of demand being met by distributed energy resources (DER), such as rooftop solar. These observations have since played out, and on 21 November AEMO noted scheduled demand fell to -38MW in a five minute period.¹

The Division notes that the number of Market Floor Price (MFP) events has trended upwards in recent years. The MFP provides an important signal for generation to reduce output and a signal to price responsive load to increase. The Division therefore supports the Panel's consideration of indexation of the MFP, as currently occurs for the MPC as this is likely to improve price signals in the market.

In relation to a mechanism that limits market participant exposure to sustained negative prices, similar in principle to the existing cumulative price threshold (CPT), it is not clear to the Division how such a mechanism would be consistent with the intention of the MFP to provide a signal to reduce generation output and increase load. In South Australia the generation that is operating in negative price periods is capable of responding to the MFP signal and limiting their exposure. Such a mechanism may also limit opportunities for demand side participation, such as battery storage.

The Division considers that price signals in the market are set to best support the changing structure of the energy market, with increasing levels of renewable generation, reduced thermal generation and increasing demand side participation.

¹ AEMO, Quarterly Energy Dynamics Q4 2021, January 2022, p.8





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Thank you again for the opportunity to make a submission. If you have any further queries, please contact Mark Pedler on (08) 8429 3361.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Vince Duffy".

Vince Duffy

EXECUTIVE DIRECTOR, ENERGY AND TECHNICAL REGULATION

3 / 2 / 22

