



11 July 2022

Mr Charles Pople
Chair
AEMC Reliability Panel

Lodged via the AEMC website

Dear Mr Pople,

Submission for 2022 Reliability Standard and Settings Review Draft Report

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia. We represent over 1,000 of the leading businesses operating in renewable energy, energy storage and renewable hydrogen. We are committed to accelerating Australia's clean energy transformation.

In particular, we are focussed on developing regulatory frameworks to support efficient investment in the large number of new renewable generation and storage projects that are needed to deliver secure, reliable and zero emissions energy for consumers.

The CEC welcomes the opportunity to comment on the Reliability Panel's (the Panel) 2022 Reliability Standard and Settings Review (RSSR) draft review paper (the draft).

The key challenge to delivering a safe and rapid decarbonisation of the National Electricity Market (NEM) relates to ensuring there is a stable investment environment. Investors already need to manage a great deal of risk and uncertainty, both in terms of the regulatory, technical, and commercial environment, in order to bring projects to market. It is therefore essential that regulatory reform is carefully calibrated, to ensure it is fit for purpose and minimises the complexity and uncertainty managed by clean energy investors.

Consideration of energy shortfalls, tail risk and a change to the standard

The CEC applauds the Panel's nuanced and thoughtful assessment of the changing reliability risk profile of the NEM. This is precisely the kind of thinking that should underpin the development of mechanisms to enhance the reliability of the power system. The CEC considers that the Energy Security Board (ESB) should follow the Reliability Panel's lead and give better consideration to the actual physical drivers of reliability risk in the power system, rather than jumping to implementation of a capacity mechanism.

Digressions aside, the CEC agrees with the Reliability Panel's draft position that the form of the standard ought to be reassessed and adapted to account for increasing tail risk associated with both diurnal and seasonal energy shortfall events. We also agree with the specific design options proposed by the Panel, particularly the acknowledgement of decision maker bias, and how this can be accounted for through imposition of clear deterministic parameters around probabilistic assessments of reliability risk.

The historical form of reliability planning can no longer be the benchmark for assessment. This approach was based on a clear relationship between installed capacity and expected peak demand, with annual peak power demand driving reliability requirements. As the Panel outlines in section 4.2.1, this current

system is a contradiction to where the NEM is heading – to an energy-limited power system driven by high variable renewable generation (VRE). This sees the need for a change to how we plan and consider risk, as there is likely to be a change in the nature of at-risk periods, which could include very different energy shortfall events such as diurnal ramping and ‘energy droughts’ / ‘dunkelflaute’ periods which could last for up to two weeks.

While it’s not yet clear exactly what reliability at risk periods will look like in the medium to long term, it is reasonably likely that reliability at-risk periods are less likely to be driven by any imbalance between peak demand and MW capacity. It appears more likely that a disconnect between weather-driven supply and demand will become an increasing driver of reliability at risk. As put in the draft paper, “there is no longer a clear link between installed capacity and available power output at peak times”.¹ This requires considered and incremental assessment to determine if the single unserved energy (USE) metric is appropriate, and how it is best paired with the reliability settings.

The CEC therefore supports the Panel’s discussions around development of a revised form of the reliability standard, and we consider this should be implemented sooner rather than later.

We recognise the time constraints faced by the Panel in undertaking this analysis and that it may not be possible to implement a change to the standard through this particular review process. However, it is also noted that the Panel has full discretion as to when it undertakes its reviews, and when to lodge rule change requests to the AEMC to change any element of the reliability frameworks. Specially, National Electricity Rule (NER) clause 3.9.3A(d) requires the Panel to undertake the review *by 30 April of each fourth year*. This clearly identifies that the Panel has discretion to undertake reviews on a more frequent basis than every four years.

The CEC therefore urges the Panel to undertake a follow up review of the standard within the next two years, with adequate time to undertake the requisite analysis, and then make a clear recommendation and lodge a rule change request to adapt the reliability standard to reflect the findings of the draft report.

The Panel note that uncertainty was a key consideration in this review, including operational uncertainty relating to an increase of weather dependant VRE². As the paper itself highlights, “a case for changing the form of the reliability standard as the NEM transitions from primarily capacity limited thermal power system to a more energy limited VRE power system” has been identified³. The CEC agree that this shift to a future power system needs to be a key priority of this review.

In the CEC’s previous submission, we urged the Panel to reassess the nature of the demand trends that are most likely to impact on reliability. This is consistent with our general view that understanding the nature of the physical drivers on a high renewable system is central to understanding any challenges for efficient investment and associated reliability problems and remains a key request of this submission.

We also encourage the Panel to undertake further work to explore in detail the nature of other challenges to reliability. We suggest the Panel undertake further quantitative analysis of what these reliability at risk periods might look like over the review period, and what optimal solutions might be adopted to address them, by varying underlying modelling input assumptions and scenarios, such as by:

1. Adopting more aggressive thermal coal retirement scenarios
2. Adopting more severe weather traces, such as longer coincident periods of low wind and solar generation availability

¹ AEMC Reliability Panel, 2022 Draft Review of the reliability standard and settings, p. 30

² AEMC Reliability Panel, 2022 Draft Review of the reliability standard and settings, p. 13

³ AEMC Reliability Panel, 2022 Draft Review of the reliability standard and settings, p. iv

3. Considering alternative forms of marginal new entrant technologies, such as flow battery or compressed air technologies

We recognise that any such changes to the modelling will first flow into reconsideration of the form of the reliability standard, and then into the form and level of the MPC / CPT. However, as discussed below, we consider that reassessment of the level of the CPT in particular also warrants specific analysis, given its potential role as a mechanism for driving investment in the energy storage technologies that are likely going to be increasingly important to maintaining reliability of supply.

Moreover, geopolitical impact on fuel prices (as opposed to structural change) should not be considered an anomaly – there is a real risk these kinds of events may reoccur and will continue to impact fuel prices in the coming years and decades. More consideration of how to adapt to these extreme fluctuations is required to be better prepared to response to significant global impacts on fuel prices and availability.

Role of MPC and CPT

A primary concern to the CEC is ensuring we accurately support market signals for energy availability, and how a shift towards a future energy limited system will require a different set of settings to manage this. We do not see provision of vanilla *MW capacity* as being a current risk to the system, but more so how we ensure we can deliver sufficient *MWh energy capability* in a reliable and economic manner.

We appreciate the Panels recognition that this review is being undertaken in a time of unprecedented change and needing to be completed with haste. We also understand that adequate consideration needs to be taken with each phase of the review, however this review and subsequent changes are particularly time sensitive, as the market is in desperate need of clear signals to drive the correct mix of investment to maintain energy supply.

It is imperative we harness existing tailored elements of the of the NER, such as the standards and settings, before introducing new mechanisms. However, this requires pace to ensure we do not have work occurring in parallel that cancels one another out.

A stated plainly in the draft, for the period of 1 July 2025 to 30 June 2028 there is a “materially significant misalignment between existing MPC and CPT with the MPC/CPT which is required to provide investment consist with the reliability standard”⁴. With the purpose of these settings being to protect long term market integrity by limiting high prices and guiding investment in new capacity, this misalignment needs to be addressed.

The CEC therefore supports the Panel’s draft recommendation that increases to the CPT and MPC are likely to be warranted in the short to medium term. We also strongly support the efficient frontier approach to considering the most efficient combination of these settings. Finally, we also support increasing the levels of the CPT and MPC to support the needed investment in new storage technologies.

We also encourage the Panel to consider different combinations of the MPC / CPT, particularly approaches where the CPT is increased while MPC is maintained at current levels. This is on the basis

⁴ AEMC Reliability Panel, 2022 Draft Review of the reliability standard and settings, p. v

that longer periods of sustained high prices are needed to provide investment signals in the storage capacity that is increasingly likely going to be central to maintaining system reliability. An increase of the CPT could provide clearer signals to address prolonged energy supply-side scarcity, by incentivising new entrant technologies such as medium and long term storage that are capable of meeting sustained energy demand.

Building on the CPT ranges explored in the draft, we therefore support the concept of reviewing the impact of extending the multiplier relationship of MPC to MPC, which currently corresponds to 7.5 hours at the existing MPC. We encourage the Panel consider alternative combinations along the MPC/CPT efficient frontier, especially combinations where the MPC is kept at a lower value, but the CPT is extended to higher multiple values.

While there is no specific value recommended for either metric that the modelling determined to be suitable, based on the ranges presented in the draft⁵, the CEC agree that the modelling ranges above current MPC and CPT settings is required.

We also encourage the Panel to carefully consider the rate of change of implementation of any such increases in the level of the MPC and CPT. While on the one hand a rapid increase could exacerbate financial risks for participants, there is no reason to expect that existing risk hedging mechanisms cannot be adopted by retailers to manage this risk. Furthermore, the Panel must balance the urgency of the need for new investment in energy storage capability in the NEM against these increased risks. We recommend that the Panel engage with industry, including vertically integrated and merchant players, to understand the details of how different speeds of implementation might impact their risk management strategies.

In conclusion, we encourage the Panel to consider the following in its modelling:

- Can the CPT be extended to higher multiple values while leaving the value of the MPC at current levels?
- Are there any benefits in adjusting the temporal dimensions of when the CPT binds, such as by shortening the current 7-day cumulative price period?
- Building on Figure 6.1, how do variations of efficient frontiers look with other VRE technologies considered?

APCs responsibility to accurately signal scarcity

The CEC do not agree that the current level which the APC is set at meets its purpose as defined in the draft as a “mechanism to minimise financial stability risks to the market arising from an extended period of supply scarcity and corresponding high prices”⁶. While noting the Panels view that the level and form of the APC at \$300/MWh may remain appropriate for the period 1 July 2025 to 30 June 2028, we would request the Panel to give additional consideration between the draft and final reports on how the APC could fortify outcomes for participants given future fuel cost increases, in alignment with recognised “recent increase in fuel costs”⁷ referenced in the draft.

⁵ MPC of around \$21,000/MWh to \$29,000/MWh and corresponding CPT of \$1,359,100 (corresponding to 7.5 hours at the existing MPC) and \$4,176,000 (corresponding to 12 hours at a maximum MPC of \$29,000/MWh)

⁶ AEMC Reliability Panel, 2022 Draft Review of the reliability standard and settings, p. vi

⁷ AEMC Reliability Panel, 2022 Draft Review of the reliability standard and settings, p. 89

The CEC see the level of the APC as a key element that contributed to the recent market crisis. Aside from whether or not the current gas price crisis continues, the cap hasn't been reassessed in years and is quite inflexible. We consider that further work is needed here to reassess its underpinnings, and consideration must be given to alternative forms of the APC. This includes review of indexation to gas hub prices, perhaps on a weekly or even more granular basis, automatic resets every year by the Reliability Panel, and some form of interlinkage between the gas market cap price and the APC.

We acknowledge the recent submission of a rule change to increase the level of the APC, however, note this may be accompanied by a sunset clause. We therefore encourage the Panel to consider permanent changes to the APC, once this stop gap rule change rolls off (assuming it is made by the AEMC in the first place).

We appreciate the Panels consideration of the above, and if you would like to discuss any of the issues raised in this submission further, please contact Morgan Rossiter on mrossiter@cleanenergycouncil.org.au.

Yours sincerely,

Christiaan Zuur
Director Energy Transformation