



3 March 2022

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

By electronic lodgement: [www.aemc.gov.au](http://www.aemc.gov.au)

## **2022 Reliability Standard and Settings Review (REL0082)**

Dear Charles,

Alinta Energy welcomes the opportunity to respond to the Reliability Panel's issues paper on the review of the Reliability Standard and Settings (2022).

Alinta Energy, as an active investor in energy markets across Australia with an owned and contracted generation portfolio of more than 3,000MW and 1 million electricity and gas customers has a strong interest the reliability standard and settings supporting it, particularly in a time of rapid energy transition in the National Electricity Market.

We note the rule change request lodged by Dr Kerry Schott and draft (more preferable rule) made by the Commission in December 2021. The recent making of the more preferable rule will ensure the Reliability Panel has more time to model any changes to the Reliability Standard and Settings.

There is significant uncertainty in assessing appropriate levels for the RSS in the context of the rapid energy transition underway in the NEM and Alinta Energy understands the complex challenge facing the Panel to determine the RSS for the period 1 July 2025 to 30 June 2028. The relatively stable, historic mix of generation and dominance of synchronous thermal generation has materially changed in the last decade (and is accelerating) and will remain a feature throughout the 2022 RSS review period.

The results of modelling plausible scenarios of the likely generation mix over the review period may require some adjustment to the current settings and whether the standard remains appropriate.

Alinta Energy is not in a position to recommend changes at this stage of the review, however key settings (including the Market Price Cap, Cumulative Price Threshold and the Administered Price Cap) are likely to warrant adjustment following detailed modelling and sensitivity analysis. This is particularly so given the high level of uncertainty caused by the ongoing rapid transition in the energy sector and an uncertain policy environment.

The need to provide investment signals suitable for the energy transformation underway, while maintaining the National Energy Objective and supporting reliability and security of supply makes the Panel's modelling task more challenging than previous reviews. Alinta Energy supports the Panel's work and looks forward to the results of the review.

We respond to the questions raised in the issues paper below and we welcome further discussion with the Reliability Panel as it works to finalise its review. Please contact Jacinda Papps (Manager, National Wholesale Regulation) on (08) 9486 3009 in the first instance.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'G. Hamilton', is positioned below the closing text.

**Graeme Hamilton**

General Manager, Government and Regulatory Affairs

### **Question 1: Changes in the generation mix**

- How do stakeholders consider changes in the generation mix interact with the assessment of the reliability standard and settings, in particular for the period of 2024-2028? What are the implications of the changing generation mix for the reliability standard and settings?
- What other factors should the Panel account for when considering economically driven retirement decisions?

The acceleration of variable renewable energy generation entry and the concomitant retirement of synchronous thermal generation present a significant modelling and decision-making challenge to the setting of the standard and settings for the Panel. The unprecedented scale of this challenge is clearly greater than the Panel has had to consider in the past. The settings need to account for investment incentives commensurate with the change in the generation mix (increased storage, the entry of Snowy 2.0, retirement of large thermal plant such as Liddell and Eraring in the review timeframe). At the same time, the long-term interests of consumers need to be protected under the National Energy Objective.

We believe each of the settings will require thorough analysis through the scenarios and sensitivities modelled by the Panel, but in particular; the Market Price Cap, the Cumulative Price Threshold and Average Price Cap warrant close attention depending on underlying generation mix assumed in the scenarios modelled.

In terms of other factors, while difficult to model, continuing government intervention in the operation of the NEM and policy decisions made at the state and federal level will impact on the retirement (and investment) decisions for existing and new generation. The development and maturation of the Integrated System Plan and scope and operation of Renewable Energy Zones, the rate of substitution to small and large scale VRE and incentives for transmission and storage investment are factors that can be impacted by government policy. We acknowledge that confidently predicting material changes to government policy is not possible but encourage the Panel to consider the policy environment and implications in establishing its modelling scenarios.

### **Question 2: Changes on the demand side**

- How do recent and expected future demand side trends interact with the Panel's assessment of reliability standard and settings? What are the implications of these trends for the reliability standard and settings?

We agree with the Commission that increasingly low net demand conditions and the frequency of low or negative price events in the NEM has implications for the setting of an efficient floor price. While some demand side incentives (load shifting, network and retail tariff signals) may alleviate this in addition to network investment in synchronous condensers to support system security, the persistence of low or zero demand (particularly at the sub transmission level) will impact the MFP.<sup>1</sup>

Electric vehicles and electrification more generally will impact on the pattern of demand as increased sales of EVs in the second half of the 2020s and government policies to reduce carbon emissions from the gas sector (as in Victoria) impact upon the level and pattern of

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<sup>1</sup> Reliability Panel (2022), *2022 Reliability Standard and Settings Review – Consultation Paper*, page 33.

electricity demand. A shift to winter peak demand and the implications of this for the likely generation mix and the role of storage is a key consideration for the Panel's modelling, which is discussed in the Panel's consultation paper.<sup>2</sup>

**Question 3: Changes in wholesale market operation and pricing dynamics**

- How do recent and expected future electricity pricing dynamics, and the introduction of 5-minute settlement interact with the reliability settings and the Panel's assessment for this review? What are the implications of these trends for the reliability standard and settings?

As the mix of generation is becoming more dispersed in terms and ownership structures, scale and technologies are changing rapidly, the reliance on bidding behaviors to model price outcomes that emphasise volume-based strategies (e.g., Nash-Cournot bidding) will decrease in value. This issue is complex, but with increasing exit of thermal generation, historic approaches to modelling simulated bidding behaviour will require reassessment and sensitivity analysis in our view.

**Question 4: ESB Post-2025 Market Design reforms**

- How may the Post-2025 market design reforms impact on the reliability standard and settings? What are the implications for the reliability standard and settings?

As the final form and scope of the Energy Security Board's Market Design Initiatives are unknown, we support the Panel's approach to model the RSS based on the existing energy-only market structure. While the MDI's (and particularly any capacity market mechanism) will impact on the determination of the RSS, current uncertainty and the likely implementation of reforms would suggest a conservative approach would be apply the energy only market as the basis for modelling for period the RSS is to apply.

**Question 5: Impact of government policies on reliability settings**

- What implications does continued uncertainty in emissions policy have for the reliability standard and settings?
- What are your views on the impact of State and Federal government energy policies on the reliability settings?

Uncertain government policy on emissions policy remains a concern for investment in the NEM and the modelling of the RSS. However, emissions targets for NEM jurisdictions are known and this provides an envelope for the Panel's medium-term model task in assessing the RSS.

State and Federal government energy policies may impact energy demand (through EV incentives for example), but at the same time, energy efficiency targets and the commissioning of state-owned plant (Snowy 2.0, Kurri Kurri). We believe the Panel has captured the key policies that will impact the reliability settings in its consultation paper.

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<sup>2</sup> Reliability Panel (2022), Ibid. page 31.

**Question 6: Other considerations for the panel to take into account**

- In addition to the other considerations set out above, do you consider that there are factors that the Panel should have regard to?

Alinta Energy believes the Panel has identified key considerations for the review.

**Question 7: The level of the Reliability Standard and considerations on VCR**

- Do you consider that there is evidence that a different level of the reliability standard would deliver better overall outcomes for the NEM?
- What factors do stakeholders suggest should be considered alongside the AER's VCR in determining the level of the reliability standard?

Alinta Energy does not consider there is sufficient evidence to warrant a change in the Reliability Standard. The current standard of 0.002% unserved energy appropriately balances the trade-off between the cost of unserved energy to various consumer cohorts and the cost of additional capacity to meet the standard.

The interim reliability standard (USE level of 0.0006% in any region in any year to apply until 2025) is inappropriate and the benefits of this tighter standard are questionable at best. Determining the standard outside of the Panel's review process weakens market participant confidence in the regulatory framework and in our view was an unnecessary and arbitrary intervention that we acknowledge was outside the Panel's control.

**Question 8: Form of the Reliability Standard**

- Do stakeholders consider there are shortcomings with USE that justify its replacement with an alternate standard form?
- What are the benefits of using an alternative standard form over the existing form? If so, what alternative forms are considered appropriate and why?
- Do stakeholders consider that supplementary or additional metrics, in addition to USE, should be considered to help provide further insight to reliability events?

For the current RSS review, we do not believe alternative forms of USE should be applied. While a single USE metric may seem limiting, alternative measures carry untested forecasting risks - for example forecasting the probability of USE being breached or loss of load probability. It is likely that adopting a different approach to the standard will require significant additional effort (and create further uncertainty) for limited improvement in accuracy.

### **Question 9: Changes in the amount of DER and its effect on the Reliability Standard**

- Over the period 2024 – 2028, is the amount of DER within the NEM likely to materially change the way that consumers value their reliability of electricity supply?
- Are there any other issues of relevance for the Panel to consider for its review of the reliability standard?

For the period 2024-28, we do not believe the growth in DER (particularly for residential and small business customers) will materially influence consumer valuation of reliability. While increasing rooftop solar PV and battery installations provide a sense of self-sufficiency, most customers understand this is restricted by distribution network reliability and constraints on physically islanding from the grid.

### **Question 10: Further issues regarding the MPC**

- Do you consider that the emergence of new technologies warrants a change in the MPC in order to enable technology-neutral investment to meet the reliability standard in the most cost-effective way?
- Do you consider that the implementation of five-minute settlement in October 2021 will affect the efficacy of the MPC in managing the risk exposure of market participants, while still providing efficient price signals?
- Do you consider that the introduction of new markets would mean a change to the MPC is required?
- What is the effectiveness of the MPC in allowing for investment in a technology-neutral, least-cost manner in the current environment of the NEM in transition?
- What factors or issues regarding spot prices, investment, market participants and/or the predictability and flexibility of the regulatory framework should the Panel pay particular attention to?
- Do you consider that the introduction and continuation of government investment schemes means that changes to the MPC should be considered?
- Do stakeholders consider implementation of five-minute settlement, and other recent changes, leading to materially different outcomes than those seen in historical data?

The emergence of new generation technologies does not of itself warrant a change in the MPC. The current setting is technology neutral in our view.

New markets may, over time, impact the appropriate setting of the MPC, however we do not believe the impact of new markets will be material enough over the review period to materially influence the Panel's modelling and considerations in setting the MPC between 2025-28.

Alinta Energy acknowledges there are several overlapping issues that create uncertainty around the setting of the MPC consistent with the efficient achievement of its purpose. Given the level of uncertainty, a reduction in the MPC at this time would not be appropriate and may threaten investment in new capacity. The impact of five-minute settlement and direct investment in generation by government need to be fully understood before an assessment can be made on the level of the MPC. We look forward to the results of the Panel's modelling on this setting and the scenarios applied to its determination.

**Question 11: Issues relating to the setting of the MFP**

- Do you consider that the form and level of the MFP remains appropriate in the context of greater entry of storage and greater demand side participation in the NEM?
- In your view, should the Panel consider a negative cumulative price threshold? If so, what factors should be considered when determining the level of a negative CPT?
- In your view, is there benefit in the Panel considering setting technology specific market floor prices?
- Do you consider that the level of the MFP should be adjusted to account for the real reduction in its level over time? What form of indexation would be appropriate?
- Would the creation of new system services markets change your view on the appropriate form of the MFP?
- Would the creation of new system services markets change your view on the appropriate level of the MFP?
- Do stakeholders consider implementation of five-minute settlement, and other recent changes, leading to materially different outcomes than those seen in historical data?

The level of the MFP and the number of low-priced events (primarily in South Australia, but also increasingly in Queensland and likely in Victoria in the future) requires some examination as part of this review.

Alinta Energy believes there is merit in examining the usefulness of a negative CPT. This would reduce exposure to risks faced by generators that have must run and minimum generation characteristics and reduce the costs of disorderly or early exit of synchronous thermal plant. Such a measure would provide symmetry with the (positive) CPT leading to greater equity among market participants.

**Question 12: Issues regarding the CPT**

- Do you consider that the form and level of the CPT remain appropriate to encourage investment signals in a technology-neutral manner regarding the emergence of new technologies?
- Do you consider that the current time period that the CPT is assessed against (seven days) remains appropriate to allow participants to manage their price risk, while maintaining investment signals?
- Do you consider that the form and level is appropriate to manage sustained high prices in both energy and FCAS markets?

The transition to greater VRE and storage in the NEM will impact the effectiveness of the cumulative price threshold. The existing CPT settings and length should be tested against the likely generation mix modelled in the Panel's chosen scenarios. It may be the case that the threshold and period that it is to apply will need to be extended to encourage investment in resources that can alleviate a future energy constrained system and manage droughts in VRE generation (particularly in winter).

### **Question 13: Issues regarding the APC**

- How should the Panel consider setting the APC for technologies such as hydro and utility scale batteries?
- Have typical generator SRMC increased significantly since the previous review period? Or are they expected to do so over the period 2024-2028?
- Do you consider that the APC remains appropriate to compensate generators during APPs?
- Is there evidence that the APC is affecting the contract prices and so affecting incentives for new investment?
- Is there a case for the APC to be indexed going forward?
- Given recent market developments and pricing outcomes, is the current form and or level of the APC appropriate? If not, what would be an appropriate form of the administered price cap, why and what is the evidence supporting your view? If not, what would be an appropriate level of the administered price cap, why and what is the evidence supporting your view?
- Do you consider that the current APC provides sufficient investment signal for new technologies?

The APC is an artefact of highest cost marginal generator costs dating from the inception of the NEM. It is likely therefore that it is not reflective of a reasonable administered price level that would encourage investment or incentivise supply during administered events. However, the APC itself has become linked to contract markets (particularly caps) and as with any of the settings, careful consideration on the purpose, form and likely use of the APC will be necessary.

Alinta Energy agrees that other sources of dispatchable supply (such as grid-scale batteries) have short-run marginal costs that are difficult to quantify. The increasing penetration of storage combined with the continued role of peak gas and distillate turbines with very low-capacity factors to supply the market during APC events may warrant a change in this setting and/or a more sophisticated form of administered price.

### **Question 14: Indexation**

- Are there any specific considerations the Panel should take into account for this review, relating to the indexation of the MPC and CPT?

Alinta Energy supports the Panel's proposed approach to indexation of the MPC and CPT for the review.

### **Question 15: Introduction to the modeling task**

- Do stakeholders consider the high-level modelling approach used by ROAM and EY remain appropriate for the Panel's 2022 RSS review?

The approach used by ROAM and EY remain appropriate for the 2022 RSS review, with the caveats and limitations described above.

**Question 16: Principles guiding the Panel's modelling**

- Do stakeholders have any feedback on the principles and high-level approach proposed?
- Are there additional high-level principles and considerations that the Panel should consider in its modelling to inform the RSS review?

Alinta Energy supports the high-level approach and principles described in section 7.2 of the issues paper.

**Question 17: Specific issues and considerations relevant to modelling for the 2022 RSS Review**

- Are there any stakeholder views on the importance of price-dispatch modelling at 5-minute resolution and welcomes suggestions on hybrid approaches?
- The Panel is therefore interested in stakeholder views on sensible simplifying assumptions that can be applied that will allow revenues to be appropriately approximated without requiring full co-optimised modelling?
- The Panel is interested in stakeholder views on the range of risks that should be captured in the scenarios modelled for the review?
- The Panel welcomes stakeholder views on the approach to modelling the impact of demand response on efficient reliability standard and settings is welcomed.
- Are there any stakeholder suggestions on approaches to modelling energy limited storage resources as reliability providers?

To the greatest extent possible, modelling should reflect the realities of the NEM, including five-minute settlement. We acknowledge the modelling task is significantly amplified under a five-minute settlement and dispatch approach. If a hybrid approach is chosen, it should attempt to mimic five-minute intervals to avoid muting signals or the dispatch behaviour of new entrant storage and demand response.