
Reliability Panel AEMC

FINAL GUIDELINES

REVIEW OF THE RELIABILITY
STANDARD AND SETTINGS
GUIDELINES

1 JULY 2021

GUIDELINES

INQUIRIES

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ABOUT THE RELIABILITY PANEL

The Panel is a specialist body established by the Australian Energy Market Commission (AEMC) in accordance with section 38 of the National Electricity Law and the National Electricity Rules. The Panel comprises industry and consumer representatives. It is responsible for monitoring, reviewing and reporting on reliability, security and safety on the national electricity system, and advising the AEMC in respect of such matters.

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1 INTRODUCTION

These guidelines set out the principles, assumptions and criteria the Reliability Panel must comply with when conducting its Reliability Standard and Settings Review (RSS reviews). They are prepared in accordance with National Electricity Rules (NER) clause 3.9.3A.

The guidelines set out the:

- **Assessment framework**, specifically the key principles it will apply for assessing whether the reliability standard and settings will, or are likely to, contribute to the achievement of the National Electricity Objective (NEO).
- **Assessment approach**, including the requirements and criteria that Panel must use when undertaking its assessments of the form and level of the reliability standard and settings. These requirements will form the materiality assessment for the Panel to apply.
- **General approach to and principles for the modelling** the Panel will use in each review.

The overarching purpose of the guidelines is to provide useful and transparent information to market participants about how the Reliability Panel intends to conduct its RSS reviews.

The guidelines do not determine, nor set the values of the reliability standard (the standard) and the reliability settings (the settings). The Panel's comprehensive assessment of the reliability standard and settings is undertaken in the RSS reviews and in accordance with these guidelines. Any assessment of the reliability components, and hence recommended change by the Panel will, or is likely to, contribute to the achievement of the NEO, meet the assessment principles and criteria in the guidelines, and take into account other factors such as modelling and stakeholder outcomes.

When the Reliability Panel undertakes an assessment of the reliability standard and settings in a review, it must set out its conclusions and recommendations as part of its Final Report. The Panel must submit its Final Report to the AEMC as soon as practicable after the completion of each review.

If the Panel recommends, as part of its RSS reviews, that the current standard or settings should change, then it would need to submit a rule change request to the AEMC in order to implement these changes.¹ The AEMC would then consider the rule change in accordance with its requirements in the NEL and NER.

¹ NER clause 3.9.3A(i).

2 ASSESSMENT FRAMEWORK

The Reliability Panel is guided by the National Electricity Objective (NEO) when developing these guidelines and when undertaking each review. The NEO is:²

[T]o promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

When developing these guidelines and undertaking each review, the Reliability Panel's key focus is to support efficient investment in and operation of electricity services to maintain the reliability of the supply of electricity and the reliability of the national electricity system. However, the costs of providing reliability and the value customers place on this reliability are also part of the Reliability Panel's considerations.

When undertaking each review of the reliability standard and settings, the Reliability Panel will be guided by the following general assessment principles in order to meet the NEO:

1. **Allowing efficient price signals while managing price risk:** The Reliability Panel will exercise its judgement to balance allowing for efficient price signals against managing wholesale price risk for participants.

The settings should allow sufficient scope for competition between buyers and sellers in the market to set efficient prices to achieve the standard, over the long run.

The settings should be designed to provide a sufficient range to promote this behaviour in the market.

The settings should also provide protection from uncapped prices in any given trading interval, and sustained high prices over a defined period, such that wholesale market outcomes do not result in inefficient over-investment, overly high financing costs or excessive price risk for all participants.
2. **Delivering a level of reliability consistent with the value placed on that reliability by customers:** The Reliability Panel will have regard to estimates of the value placed on reliability by customers when exercising its judgement as to the level of the standard. The settings should be sufficient to support the level of investment necessary to deliver the reliability standard, over the long run.
3. **Providing a predictable and flexible regulatory framework:** The Reliability Panel will exercise its judgement to achieve predictable outcomes recognising the importance stability creates for market participants in terms of investment, while taking into account changing market conditions, to support efficient investment and operational decisions by participants. The assessment principles, approach and supporting criteria informs the materiality assessment that the Panel will apply in its consideration of the form and level

² National Electricity Law, s.8 as contained in National Electricity (South Australia) Act 1996 (SA).

of reliability standard and settings. For any recommended changes to the reliability standard and settings the Panel would need to satisfy the NEO as outlined and meet the guidelines requirements and have regard to terms of reference issued by the AEMC and any other factors including but not limited to modelling outcomes and stakeholder feedback. Following the Panel recommending a change, this would need to be progressed through an AEMC rule change process.

3 COMPONENTS OF THE RELIABILITY STANDARD AND SETTINGS

These guidelines provide information on the standard and each of the settings. These are divided into the following components of the reliability regulatory frameworks, which include the **form** and the **level** of the:

- Reliability standard
- Market price cap (MPC)
- Cumulative price threshold (CPT)
- Market floor price (MFP), and
- Administered price cap (APC).

3.1 Approach to assessment

The Reliability Panel's approach to reviews of the standard and settings is designed to balance predictability and flexibility in the development of the regulatory frameworks for reliability. It does this by assessing the form and level of each of the components of the reliability standard and settings under:

- The general assessment principles
- The function of the standard or setting and associated assessment criteria, and
- Other considerations as set out in the NER.

There are a number of requirements in the NER that, collectively, relate to the assessment of the reliability standard and each of the settings. The overarching assessment criteria in the NER include that the Reliability Panel will:³

- Comply with the reliability standard and settings guidelines
- Have regard to terms of reference provided by the AEMC
- Have regard to the potential impact of any proposed change to a reliability setting on:
 - Spot prices
 - Investment in the National Electricity Market (NEM)
 - The reliability of the power system, and
 - Market Participants.
- Have regard to any value of customer reliability determined by the [AER] which the Panel considers relevant, and
- May take into account any other matters specified in the guidelines or which the Panel considers relevant.

These along with the criteria and other relevant factors in the guidelines inform the materiality assessment the Panel will apply for assessing the reliability standard and settings

³ NER clause 3.9.3A(e).

in each review. Recommendations for any change to the level and/or form of the reliability standard and settings should only be made if the Panel considers there is a material benefit in doing so. The first step in the review process should therefore determine whether there is a reasonable possibility that:

- A change in the form of the reliability standard or settings, and/or
- A change in the level of the reliability standard or settings

will, or is likely to, contribute to the achievement of the NEO and meet the assessment criteria set out in the guidelines in a materially better way. The Panel must also have regard to any terms of reference provided by the AEMC, stakeholder consultation and responses, modelling and any other factors the Panel considers relevant.

In accordance with the NER requirements, when the Panel undertakes an assessment of the reliability standard and settings in a review, the Panel must set out the Panel's conclusions and recommendations as part of its Final Report to the AEMC.⁴ A Final Report must be submitted to the AEMC as soon as practicable following the completion of the Panel's review.

If the Panel recommends, as part of its RSS reviews, that the current standard or settings should change, then it is required to submit a rule change request to the AEMC in order to implement these changes.⁵ The AEMC would assess the rule change request against the NEO and process it through the rule change process set out in the NEL and NER.

3.2 Reliability standard

3.2.1 Form of reliability standard

Function: The standard is a measure applied to generation and inter-regional transmission elements in the NEM, the purpose of which is to define the maximum expected amount of energy that is at risk of not being served in a region in a given financial year.

3.2.2 Level of reliability standard

Function: The standard is currently set as a percentage of USE, being the maximum amount of energy that is at risk of not being served in a region in a given financial year.

3.2.3 Assessment criteria

The Reliability Panel will apply the following NER requirements in its assessment of the reliability standard of the level and the form. The criteria include that the Panel, among other things:

- Must have regard to any value of customer reliability determined by the AER which the Reliability Panel considers to be relevant, and
- May take into account any other matters specified in the guidelines or which the Panel considers relevant.⁶

⁴ NER clause 3.3.9B

⁵ NER clause 3.9.3A(i)

⁶ NER clauses 3.9.3(e)(4) and (5)

The Reliability Panel will also consider factors including but, not limited to:

- Any changes made to AER's value of customer reliability measure, and
- Any marked changes in the way consumers use electricity, particularly through the use of new technology, that suggests a large number of consumers may place a lower value on a reliable supply of electricity from the NEM.

3.3 Market Price Cap

3.3.1 Form of market price cap

Function: The MPC is the maximum market price, measured as a \$/MWh value, that can be reached in any dispatch interval and in any trading interval. It is indexed to movements in the Consumer Price Index (CPI).

3.3.2 Level of market price cap

The purpose of the MPC is to:

- Enable the market to achieve and send efficient price signals, to support the efficient operation of and investment in electricity services over the long run, and
- Manage participant exposure to price risk.

3.3.3 Assessment criteria

The Reliability Panel will apply the NER requirements in its assessment of the MPC. These are that the Reliability Panel can only recommend an MPC which the Panel considers will, among other things:

- Allow the reliability standard to be satisfied without use of AEMO's powers to intervene,⁷ and
- Not create risks which threaten the overall integrity of the market.⁸

The assessment criteria requires that if the Reliability Panel is of the view that a decrease in either the market price cap or the cumulative price threshold may mean the reliability standard is not maintained, the Reliability Panel may only recommend such a decrease where it has considered any alternative arrangements necessary to maintain the reliability standard.⁹

When assessing the level of the MPC, the Reliability Panel will consider the following principles:

- The MPC should not be used to actively steer the market into a short-run equilibrium position, or to actively drive disinvestment decisions
- While the MPC may move either up or down over time, these movements should be gradual. These movements should occur over a period of several review periods, and

⁷ AEMO's powers to intervene are provided for under clauses 3.20.7(a) and 4.8.9(a)

⁸ NER clause 3.9.3A(f)

⁹ NER clause 3.9.3A(g)

- When setting the MPC, the Panel should give consideration to the MPC's effect on the financial burden faced by participants from high market prices, including price volatility and impacts on retailers.

3.4 Cumulative Price Threshold

3.4.1 Cumulative price threshold

Function: The CPT is the maximum total market price, measured in Australian dollars, that can be reached in *the period of trading intervals set out in clause 3.14.2(c)(1) of the NER*¹⁰ before an administered price period (APP) commences and the APC is applied to market prices. Its level is indexed to movements in CPI.

3.4.2 Level of cumulative price threshold

The purpose of the CPT is to:

- Cap the total price risk to which market participants are exposed, over a given time period, and
- Maintain the effectiveness of the MPC, by not hindering the market price signals for efficient operational decisions and efficient investment in generation capacity and/or demand-side response.

3.4.3 Assessment criteria

The Reliability Panel will apply the NER requirements in its assessment of the CPT. That is, the Panel can only recommend a CPT which the Panel considers will:

- Allow the reliability standard to be satisfied without use of AEMO's powers,¹¹ and
- Not create risks which threaten the overall integrity of the market.¹²

The NER requires that if the Reliability Panel is of the view that a decrease in either the market price cap or the cumulative price threshold may mean the reliability standard is not maintained, the Reliability Panel may only recommend such a decrease where it has considered any alternative arrangements necessary to maintain the reliability standard.¹³

When assessing the level of the CPT, the Panel will consider the following principles:

- The CPT should protect all market participants from prolonged periods of high market prices, with particular consideration to impacts on investment costs and the promotion of market stability;
- The CPT should not impede the ability of the market to determine price signals for efficient operation and investment in energy services; and
- The CPT should be determined giving consideration to the level of the MPC.

¹⁰ *The period of trading intervals is currently 336, however, the National Electricity Amendment (Five Minute Settlement) Rule 2017 No. 15 will amend this to 2016 trading intervals when it commences.*

¹¹ AEMO's powers to intervene are provided under clauses 3.20.7(a) and 4.8.9(a) of the NER.

¹² NER clause 3.9.3A(f).

¹³ NER clause 3.9.3A(g).

3.5 Market Floor Price

3.5.1 Form of market floor price

Function: The MFP serves as the minimum price that can be achieved in any dispatch and trading interval, measured in \$/MWh.

3.5.2 Level of market floor price

The purpose of the MFP is to allow the market to clear during low demand periods, while preventing market instability by imposing a negative limit on the total potential volatility of market prices. In making this decision, the Reliability Panel will consider factors including but not limited to:

- The number and frequency of trading intervals where the market price has been, or has approached, the level of the MFP, and
- Whether there have been significant changes in the generation fleet, such that average generator cycling costs have changed significantly.

3.5.3 Assessment criteria

The Reliability Panel may only recommend a MFP which it considers will:

- Allow the market to clear in most circumstances, and
- Not create substantial risks which threaten the overall stability and integrity of the market.¹⁴

The Reliability Panel will consider factors including but not limited to:

- The number and frequency of trading intervals where the market price has been, or has approached, the level of the MFP, and
- Whether there have been significant changes in the generation fleet, such that average generator cycling costs have changed significantly.

3.6 Administered Price Cap

3.6.1 Form of administered price cap

Function: The APC is the maximum market price paid to participants, measured as a \$/MWh value, that can be reached in any dispatch interval and any trading interval, during an APP.

3.6.2 Level of Administered price cap

The purpose of the APC is to cap participant exposure to the potential of what could otherwise be high prices during an APP, while maintaining incentives for participants to supply energy.

¹⁴ NER, clause 3.9.3A(h)

3.6.3 **Assessment criteria**

The Reliability Panel will consider the matters outlined in the NER and factors including but not limited to whether there have been any:

- Significant changes in the typical short-run marginal costs of generators in the NEM, and
- Any compensation claims since the last review.

3.7 **Indexation**

3.7.1 **Application of indexation**

- MPC and CPT are currently subject to indexation.
- MFP and APC are not currently subject to indexation.

3.7.2 **Form of indexation applied to the cumulative price threshold and market price cap**

MPC and CPT are subject to annual indexation to movements in the CPI. The indexation approach to MPC and CPT will continue to be based on the CPI, unless the Reliability Panel considers that there may be a material benefit in reassessing and changing this approach.

The Reliability Panel will consider the following factors in its assessment that include but not limited to whether:

- There have been material changes in the basket of goods used to calculate the CPI that make it less relevant for indexation of the settings
- There have been changes in the methodology used to calculate the CPI, and
- A more preferable index becomes available and/or there is a change in the designation of the CPI as an official statistic.

4 MODELLING REQUIREMENTS

In developing modelling for the purposes of informing its assessment of the standard and settings, the Reliability Panel will consider the following general principles:

- The model should consider how a long-term equilibrium between price and reliability can be achieved in the market, and
- In considering long-term equilibrium, the modelling should consider both new investment and the potential for retirement of capacity.

When designing the specifics of the model, the Reliability Panel will consider the following principles:

- The model should be technology-neutral and assess the settings on the basis of the cheapest available marginal technology that can be used to deliver the standard
- The assumptions, data and parameters that underpin the model should be transparent to be visible and consulted on by stakeholders, and
- Sensitivity analysis should be applied on assumptions where there exists material uncertainty on the true or forecast value.