

# Review of the form of the reliability standard and administered price cap

**The national electricity market is undergoing a significant transformation which impacts how we think about reliability. The Reliability Panel is commencing a review of the form of the reliability standard to ensure we have an effective reliability framework as the market transitions. We are seeking stakeholder feedback on whether the existing reliability standard can meet demand with a level of reliability that consumers value.**

A reliable power system has enough capacity to meet consumer needs at any time. To maintain reliability, a power system needs investment in enough new capacity to meet customer demand and to replace generators when they exit the market or break down.

Historically reliability risk was relatively well understood, with the range of generation technologies connecting to the grid being dominated by conventional hydroelectric and thermal generators. An increase in battery storage and high levels of variable renewable energy brings new and more complex risk factors to understanding reliability.

The Reliability Panel (the Panel) recognises the importance of an effective reliability framework as the market transitions to net-zero. The outcome of this review will be a form of the standard that supports reliability, by incentivising efficient investment in levels of firmed capacity, storage and demand response with sufficient duration to limit unserved energy events to a level that customers value.

## **The proposed approach to assessing options for a new form of the standard**

The Panel is yet to form a view on the most appropriate form of a new standard. This Issues Paper is an initial step in exploring issues for the Panel to consider. The Issues Paper outlines the Panel's initial considerations around the nature of tail risk and the value consumers may place upon addressing reliability as the NEM transitions. Tail risk refers to the risk of high impact, low probability outcomes reflected in the 'tail' of unserved energy (USE) events in a probability distribution.

The paper sets out the Panel's proposed approach to modelling USE in a high VRE power system with greater weather variability and potential mathematical approaches, tools and techniques that could be used to inform the selection of an enhanced reliability standard.

## **Administered Price Cap**

The Panel is also considering whether potential changes to the form of the administered price cap (APC) are needed. The Panel will consider if the current form of the APC or other approaches could better balance systemic risk management and incentives for generation and storage operation.

## **We are seeking feedback on our issues paper**

The Panel encourages stakeholders to provide feedback on matters raised in the Issues Paper. Submissions are due by 4 May 2023. Following the Issues Paper, the Panel plans to release a directions paper and draft report, before making its final recommendations in February 2024.

Any final recommendations the Panel makes will be considered against the National Electricity Objective and objectives and criteria set out in the Issues Paper.

## Background and context

In its 2022 reliability standards and settings review, the Panel formed the view that reliability risk will need to be characterised differently in a more energy-limited, high VRE power system, with greater USE 'tail risk'. USE refers to the amount of energy that is required (or demanded) by consumers but which is not supplied due to a shortage of generation or interconnection capacity caused by reliability issues, which may result in supply interruptions for consumers.

Given such a change would require extensive analysis and consultation, the Panel recommended a follow-up review to assess specific changes to the form of the standard.

The Australian Energy Market Commission (AEMC) has issued the Panel with terms of reference and requested the Panel finalise the review by February 2024. In requesting the Panel's advice, the AEMC outlined the purpose of the review as follows:

- Reliability risk will need to be characterised differently as the NEM transitions from a primarily capacity-limited thermal power system to a more energy-limited, VRE power system, with a commensurate shift in USE distribution towards greater 'tail risk'.
- A single average 'expected value of USE' metric may not provide sufficient information on an acceptable USE distribution in a high VRE power system nor effectively reflect the NEM's changing reliability risk profile by 2028.
- The existing standard is 'risk neutral'. It does not provide scope for recognising any possible insurance value of investments to address a higher degree of consumer risk aversion to severe, but low probability, tail risk reliability events.

This review is the first stage in determining whether the form of the reliability standard is appropriate to incentivise efficient reliable investment in a high VRE power system. The Panel's 2026 reliability standards and settings review for the period 1 July 2028 to 30 June 2032 will consider the level of the standard and implementation approach.

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