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INFORMATION

Reliability Panel
AEMC

Fact sheet: the NEM reliability standard

This fact sheet provides an explanation of reliability and the reliability standard in the National Electricity Market (NEM).

Reliability of the National Electricity Market

Reliability is a term used across different industries where the meaning and the measure of 'reliability' can be quite different. Reliability of the power system relates to ensuring there is enough capacity to generate and transport electricity to meet all consumer demand. When considering the reliability of the NEM, the capacity of generation and the 'bulk transmission' sectors are relevant (where bulk transmission capacity equates to inter-regional capability).

The level of reliability experienced by end-use consumers of electricity depends not only on the generation and bulk supply sectors but also on the reliability performance of the local transmission and distribution networks. More information about reliability, particularly in relation to the distribution network, is provided in the 'what is reliability' fact sheet, which is available at: http://www.aemc.gov.au/Market-Reviews/Completed/review-of-distribution-reliability-outcomes-and-standards-national-workstream.html.

The reliability standard

The reliability standard that applies to generation and bulk supply is the primary mechanism to signal the market to deliver enough capacity to meet consumer demand for electricity.

This reliability standard is set by the Reliability Panel (Panel) where reliability under the standard is measured in terms of maximum expected unserved energy (USE), which refers to the amount of energy that is required by customers but cannot be supplied.

Currently the reliability standard is set at 0.002 per cent USE per region or regions per financial year, which means that out of 100,000MWh of demand, no more than 2MWh of outage would be allowed.

The reliability standard takes into account events that could impact power system performance but which may not affect the overall reliability of the NEM. The reliability standard therefore defines the reliability incidents for generation and bulk supply that are to be included and excluded from assessing power system reliability.

Although the Panel has conducted a number of reviews on the reliability standard, including the Panel's comprehensive reliability review (CRR) completed in 2007 and a review of the reliability standard and settings completed in April 2010, the Panel has retained the 0.002 per cent USE level of the standard. As such, the level of the standard has remained unchanged since it was established by the Panel in 1998.

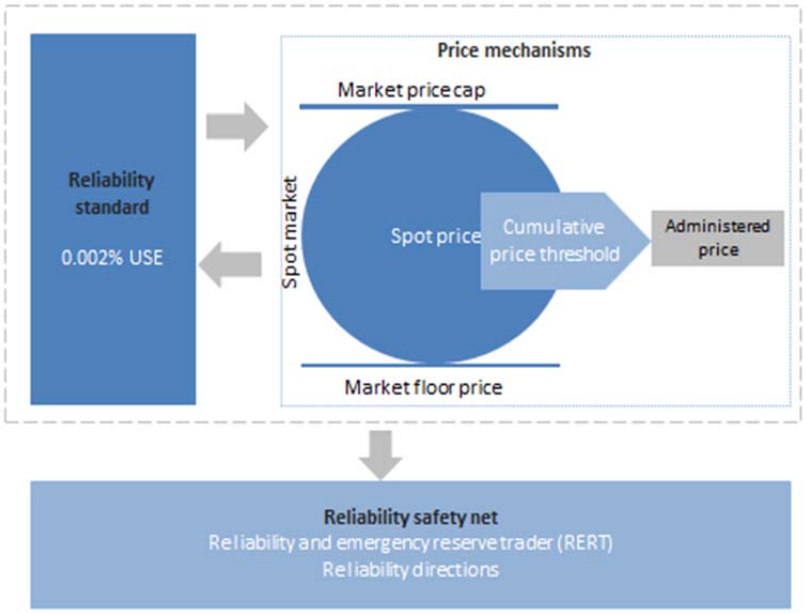
Among other things, in the Panel's reviews of the reliability standard, consideration was given to the appropriate trade-off between the value consumers place on supply reliability and the overall power system costs associated with achieving a certain reliability level. Tightening the reliability standard would reduce the costs associated with supply losses but it would also raise the prices consumers must pay.

The NEM reliability standard is published on the AEMC Reliability Panel website: http://www.aemc.gov.au/panels-and-committees/reliability-panel/guidelines-and-standards.html.

Interrelationship between reliability standard and reliability settings

The reliability standard and the reliability settings are inter-related. An increase in the level of the reliability standard would likely require a corresponding increase in the level of market price cap, or some other form of generation remuneration, to signal the appropriate level of investment to deliver the higher standard. Depending on the effectiveness of that pricing signal, there could potentially be reliability shortfalls. The short-falls may be managed by Australian Energy Market Operator (AEMO) through two intervention mechanisms – the reliability and emergency reserve trader and reliability directions. These two intervention mechanisms provide a 'safety net' if there were insufficient generation capacity to meet demand. These relationships are depicted diagrammatically below.

For information on the reliability settings please refer to the 'reliability settings' fact sheet.



Review of the reliability standard and reliability settings

Under the National Electricity Rules, the Panel is required to carry out reviews of the reliability standard and reliability settings once every four years. This regular review allows the Panel to take into account any changes in market arrangements and consider whether the reliability standard and reliability settings remain suitable, or whether changes should be made to ensure these mechanisms continue to meet the requirements of the market, market participants and consumers.

A review is currently in progress and is to be completed by 30 April 2014. For this review the Panel is considering the reliability standard and reliability settings that should apply from 1 July 2016. Throughout the review process the Panel will consult with stakeholders including seeking submissions on an issues paper and a draft report. At least one public forum will also be held.

The Panel published an issues paper on 9 May 2013, which provides background information and outlines a number of questions for comment and feedback. Submissions on the issues paper are due on 21 June 2013.

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