

2020 Annual Market Performance Review: Market Performance Update January 2020 - June 2020

The Reliability Panel's Annual Market Performance Review (AMPR) provides observations and commentary on the security, reliability and safety of the power system. This review is required under the National Electricity Rules. The annual review is becoming increasingly relevant as the power system faces a period of rapid transition, with the impacts of this transition already being noticed around the market.

Purpose of the market performance update

In order to facilitate more dynamic engagement with key industry stakeholders during this time of heightened challenges for the power system, and responding to stakeholder feedback on last year's AMPR, the Panel will now release a bi-annual market performance update to complement the annual review.

The updates aim to help market participants obtain more timely information about power system performance and about emerging trends in the areas of security, reliability and safety as early as possible.

The updates also aim to help stakeholders provide informed input into current issues and reforms that are underway related to reliability and security of the NEM and so set the context for the more comprehensive annual review. The AMPR annual report will continue to be published each financial year as is the case now.

Most of the data in the market performance update is publicly available. The data provided in the first market update looks at July 2019 to June 2020 and where possible a more in depth look at January 2020 to June 2020.

The value of the market updates comes from the Panel having a diverse membership, bringing together all the relevant information into an accessible format and providing a collated view of what is happening the power system. The new format allows the Panel to communicate the important trends that are emerging to stakeholders on a more regular basis. As the system continues to undergo changes, this will be an important feature in ensuring that solutions can be effectively considered.

Key findings

This market update considers some of the current and emerging issues for the power system, including the resilience of the power system to continued external events.

Operating and maintaining security and reliability of the power system continued to be challenging in 2019/2020. For the period of July 2019 to June 2020, there was an increase in directions and instructions and market notices issued by AEMO, Reliability and Emergency Reserve Trader (RERT) contracting, RERT activation events, and Frequency Control Ancillary Services (FCAS) enablement. The majority of this was linked to the South Australia-Victoria separation event that began on 31 January 2020 and ended on 17 February 2020. New South Wales experienced a significant increase in the number of market price cap events, and Queensland and South Australia experienced a significant increase in the number of market floor price events over the 2019/20 financial year.

Given the number of extreme events that the power system has endured in recent times,

the Panel is of the view that these events, and the trends they bring, should be factored into ongoing planning and approaches to maintain power system resilience in the future.

The market update also provides a snapshot of investment and wholesale price trends and what has occurred with overall and minimum demand over the year and particularly during COVID. The market update highlights that demand has not decreased significantly but the demand mix has changed between residential and industrial/commercial users during the COVID period.

As more people work from home and the power system continues to transition towards a high penetration of variable renewable generation and distributed energy resources, the load and shape of demand during the day is changing from past trends.

AEMO also forecasts that minimum demand levels will continue to decrease over the next 20 years, with South Australia and Victoria predicted to reach negative minimum demand before 2030. Intra-day ramping of demand is also fast becoming an issue, with the mid-day supply in Victoria, South Australia, and to a lesser extent, Queensland causing large dips in demand across the day.

Changes in minimum demand can create system security issues in the context of inertia, voltage control, ramp rates, and potential use of emergency controls.

The Panel notes there is some work underway to look at these issues, but it will be important to consider all potential approaches to maintain power system security in the context of decreasing minimum demand levels going forward.

Next steps

The Panel will continue to consider these issues and other emerging trends for its next market update and annual report. The full annual AMPR report will be published in 2021, with the next market update in six months' time. The Panel work program for 2021 includes the Reliability Standard and Settings Review. This review will be important in the context of the changing market and post-2025 market design work.

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