

AEMO summer operations

A snapshot of how we manage the world's longest power grid during its heaviest demand period.

This infographic demonstrates the actions taken by AEMO before, during and after the long, hot Australian summer.

What impacts electricity supply levels in summer?

AEMO plans extensively to secure adequate generation supply for the summer period. However, unplanned events can impact our available resources.



High demand

High usage of air conditioners on hot days contributes to summer being the highest demand period for the year



Extreme weather

Prolonged heatwaves, torrential rain, flash flooding, lightning and damaging winds



Natural disasters

Bushfires, hurricanes, tornadoes



Reduced weather-related generation

Extensive cloud cover, dust storms, wind droughts, water droughts



Critical equipment maintenance

Urgent maintenance that is required to keep equipment safe or operational



Generator outages

Unplanned outages due to an event or technical fault



Transmission outages

Unplanned outages due to an event or technical fault

Planning and preparation

Resource management and event response

Review and report

Pre-summer

Summer

Post-summer

June



Summer planning commences

This includes working with industry members and government to align maintenance timelines and schedules to reduce the number of planned transmission and generation outages in summer.

August



AEMO releases its annual Electricity Statement of Opportunities (ESOO) report

This report looks at the supply-demand outlook for the National Electricity Market over the next ten years and flags any forecast risks to supply levels.

Sep-Dec



AEMO negotiates Reliability Emergency Reserve Trader (RERT) resources, using forecasts in the ESOO

RERT is a mechanism available to AEMO to maintain power system reliability and system security by using off-market generation and demand management contracts (reducing usage).

December



Issue Summer Readiness Plan

This report details the plans and actions AEMO and the industry have taken to prepare Australia's power system for the summer ahead.

Lack of Reserve (LOR) and controlled load shedding

AEMO plans extensively to secure adequate generation supply for the network throughout the year. However, the summer period remains the most challenging, with an increased risk of LOR conditions.

AEMO defines forecast LOR and actual LOR as follows; a forecast LOR occurs when AEMO's forecasts show a reduced amount of electricity reserves. Once a LOR is forecast, AEMO issues a market notice encouraging generators to provide more electricity. An actual LOR is when the market response to the forecast LOR has not been adequate to clear the LOR thresholds, and the LOR becomes an operational reality. LORs are categorized over three tiers;



LOR 1 - This condition exists when reserve levels are lower than the two largest supply resources in a state.



LOR 2 - This condition exists when reserve levels are lower than the single largest supply resource in a state. Once a forecast LOR 2 is declared, AEMO has the power to direct generators or activate the RERT mechanism to improve the supply-demand balance.



LOR 3 - This condition exists when the available electricity supply is equal to or less than the operational demand. This means there are no reserve supplies available. Controlled load shedding may be required as a last resort.



Controlled load shedding

As a last resort, controlled load shedding occurs to protect system security, and prevent long-term damage to system infrastructure. To do this, AEMO will inform the regional transmission network service provider of how much load needs to be shed and when. The transmission network service provider will then work with distribution businesses to action this, including rotating outages if required.



(If required) Incident report

AEMO will conduct an in-depth investigation of the events before, during and after controlled load shedding has occurred. This report will be published on the AEMO website, and the lessons learned will be incorporated into the next Summer Preparedness report.

1st June



Planning for next year's summer begins



For more information, please visit aemo.com.au