



Load shedding

Load shedding is the reduction of electricity to selected areas to protect the electricity network from long-term damage and widespread consumer outages during extreme events.

Used as a last resort in rare circumstances, load shedding assists in balancing supply and demand to maintain power system security.

There are two types of load shedding: under frequency load shedding (UFLS) and manual planned load shedding (MPLS).

In Western Australia's main power grid, the South West Interconnected System (SWIS), load shedding is extremely rare, with zero MPLS events and only two small UFLS triggers in the last decade.



What causes electricity shortfalls?

AEMO operates the Wholesale Electricity Market (WEM) in Western Australia and continually forecasts demand from homes and businesses in the SWIS. It then ensures enough supply is available to meet this demand and dispatches electricity from a range of sources in real-time.

On rare occasions, there isn't enough supply to meet demand due to a range of factors, including:



Extreme weather events, such as heatwaves, floods and storms



Fuel source disruptions, such as gas or coal supply issues



Generation and/or infrastructure outages



Under frequency load shedding (UFLS)

Changes to frequency occur when supply and demand become imbalanced. In these cases, UFLS can kick in to quickly stop the frequency drop, preventing it from collapsing completely and allowing the system to be re-secured.

Which areas could be affected by MPLS?

AEMO does not decide which areas have their power turned off.

If all AEMO's available levers fail to eliminate a shortfall, the amount and duration of the expected electricity shortfall will be determined.

AEMO will monitor the situation and if electricity demand breaches the limit in which AEMO can safely and securely operate the power system, it will issue a MPLS direction to Western Power. Western Power is Western Australia's transmission and distribution network service provider.

Western Power will determine how MPLS is undertaken with the aim of minimising impact to consumers.

The MPLS process will involve rotational controlled outages that are typically one-to-two hours' long.

MPLS is undertaken on a rotational basis to minimise impact to homes and businesses.

AEMO also works with Western Power, and the Western Australian Government to limit the impact on the community, particularly major health facilities, emergency services and public transport.

However, all electricity consumers should be prepared for power outages.

When is manual load shedding required?

AEMO continuously updates its supply and demand forecasts. If a supply shortfall is identified and AEMO has undertaken every option available, then MPLS may be required.

Prior to issuing a direction for MPLS, AEMO will:

- Dispatch all available generation and demand side responses (large electricity consumers reducing use).
- Activate [Supplementary Capacity](#) contracts.
- Draw on all available emergency back-up reserves.



Supplementary Capacity mechanism

In the WEM, if AEMO identifies a shortfall within six months of the upcoming summer, it can procure additional capacity through the Supplementary Capacity mechanism.

This mechanism successfully helped maintain system security and reliability throughout challenging record demand and heatwave conditions in the 2023-24 and 2022-23 summers.

Did you know?

Load shedding is different to local outages.

Planned outages are prearranged and necessary for routine maintenance, inspections and improvements on various electricity infrastructure.

Local unplanned outages are interruptions to generation, transmission, or distribution of electricity that is unscheduled and can occur as a result of damage to wires or infrastructure.

About us: AEMO is the independent energy market and system operator and system planner for the National Electricity Market (NEM) and Western Australia's Wholesale Electricity Market (WEM). We are a not-for-profit company, with a membership of state and federal governments (60%) and energy industry members (40%).

More info: aemo.com.au/about/who-we-are