

The National Electricity Market

The National Electricity Market (NEM) operates on one of the world's longest interconnected power systems. It covers around 40,000 km of transmission lines and cables, supplying a population exceeding 23 million.

The NEM involves wholesale generation that is transported via high voltage transmission lines from generators to large industrial energy users and to local electricity distributors in each region, which deliver it to homes and businesses.

The transport of electricity from generators to consumers is facilitated through a 'pool', or spot market, where the output from all generators is aggregated and scheduled at five-minute intervals to meet demand and to provide a better price signal for investment in faster response technologies, such as batteries and gas peaking generators.

Western Australia and the Northern Territory are not connected to the NEM. They have their own electricity systems.



NEM RECORDS

Maximum demand record

35,796 MW (29 Jan 2009)

Minimum demand record

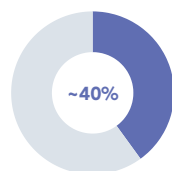
10,073 MW (26 Oct 2024)



Driven by mild weather and rooftop solar generation, which reduces demand for energy from the grid.

Average

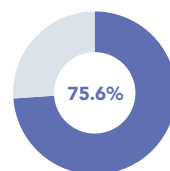
annual renewable contribution



Instantaneous

renewable contribution record

6 November 2024



Generation capacity

By fuel type as at December 2024

Thermal energy

Gas

13.8% | 12,177 MW

Coal

24.1% | 21,255 MW



Renewable energy

Rooftop solar

25.5% | 22,500 MW

Wind

13.3% | 11,691 MW

Grid solar

11.4% | 10,025 MW

Hydro

9.1% | 7,979 MW

Battery storage

2.7% | 2,363 MW

Biomass/other

0.2% | 143 MW

NEM facts



Commenced as a wholesale electricity market in December 1998.



More than 600 registered participants, including generators, transmission and distribution network service providers, and market customers, including retailers.



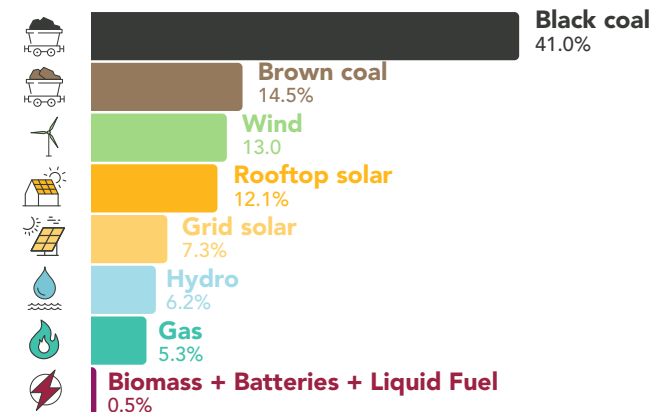
Approx 181.4 terawatt hours of electricity supplied to homes and businesses a year.



\$17.7 billion traded in FY23-24.

Generation supply mix

By fuel type as at December 2024



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