



Forecasting growing data centre demand

As Australia's independent energy system and market operator, and planner for the National Electricity Market (NEM), the Australian Energy Market Operator (AEMO) helps prepare the power system for changing energy needs, including the growth of the data centre sector.

AEMO supports the secure integration of data centres into the power system by working with network service providers to connect new projects and through its role in supporting the rules and performance standards that help maintain power system security and reliability.

AEMO also forecasts electricity demand to inform planning, investment and policy decisions. This includes forecasting demand from emerging large electricity users, such as data centres, to help ensure the power system can continue to meet consumers' needs reliably over time.

This explainer outlines how AEMO develops data centre demand forecasts, including the assumptions, analysis and forecasting methods used in the [2026 Electricity Statement of Opportunities \(ESOO\)](#).

Data centre electricity demand today

The rapid growth of cloud computing and artificial intelligence (AI) is increasing electricity demand from data centres across the NEM.

Today, there are around 165 data centres that consumed approximately 5 terawatt hours (TWh) of electricity in financial year (FY) 2026, equivalent to around 3% of total NEM operational electricity consumption.

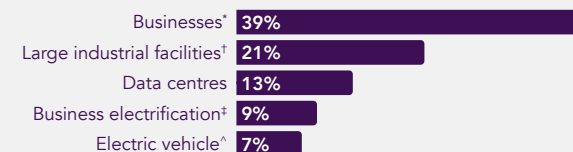
Average monthly data centre demand observed across the NEM between January 2018 and June 2026 shows an increase from nearly 200 MW to more than 700 MW. The FY26 demand distribution by region was:

- New South Wales (66%)
- Victoria (30%)
- South Australia (2%)
- Queensland (1%)
- Tasmania (<1%)

Major electricity users

Electricity supplied through the NEM is used by households, businesses and industry across eastern and south-eastern Australia.

The way homes and businesses are using electricity is changing. While data centres are forecast to become a larger consumer of electricity over the next decade, they aren't expected to become the largest. By FY36, the biggest consumers of electricity from the grid will be:



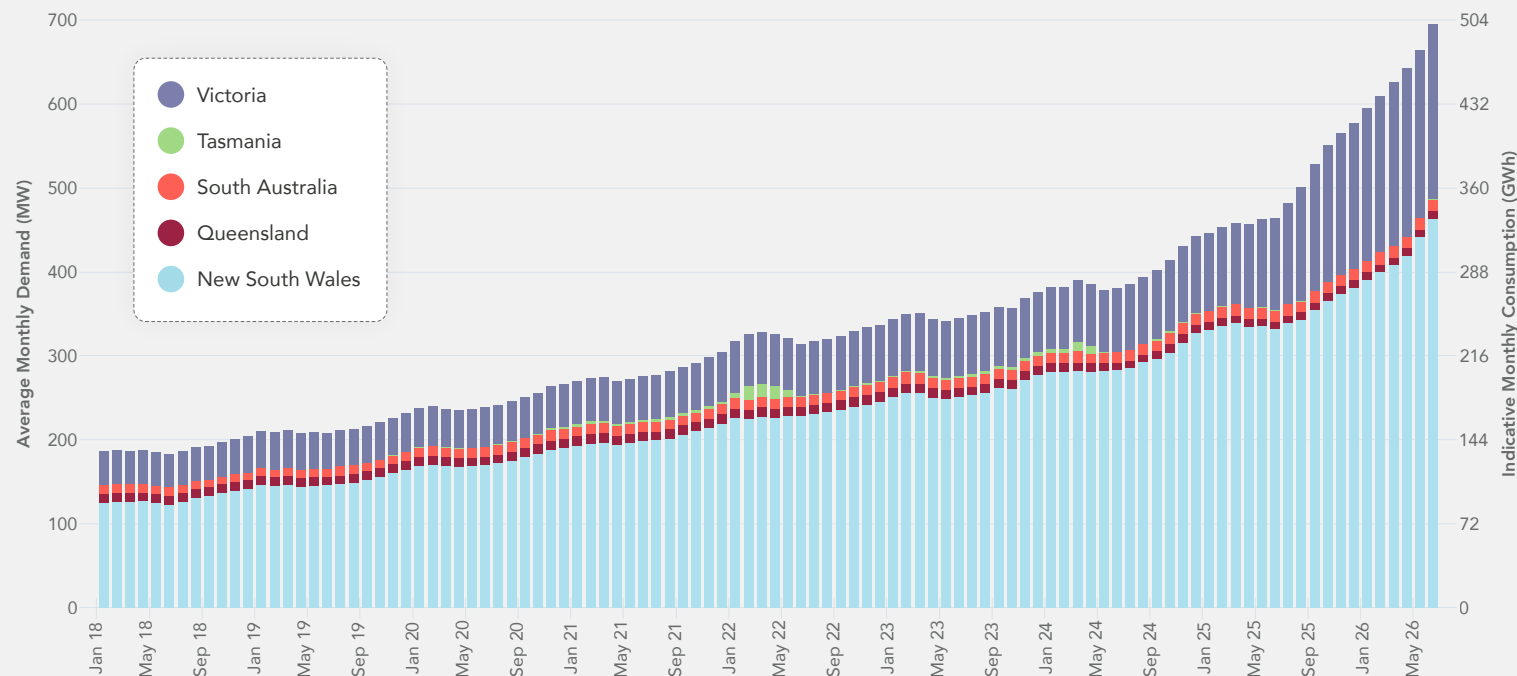
*Commercial and small-to-medium businesses.

†Manufacturers, processing plants and mining operations.

‡Where businesses switch equipment and processes from fossil fuels to electricity.

^Residential and business.

Actual average data centre monthly demand and consumption, by region (MW and GWh)



Data centre forecast methodology

Due to the high pace of their development and the uncertainty in the overall expected need for digital services in the medium to long term, through its NEM ESOO, AEMO forecasts data centre loads separately from other business consumers and traditional large industrial loads (such as manufacturing and mining businesses).

AEMO's data centre forecast methodology combines **project level information**, gathered from developers and network service providers, with an **economic outlook** that reflects broader digital transformation and artificial intelligence (AI) adoption. Data captured to inform these forecasts include:



Projects in development: 225 data centres with 67 GW of combined capacity



Probability of project completion: 36% of developing projects in 2025 ESOO were cancelled



Grid connection utilisation: averaging ~27% in FY26



Load maturity: 5 to 10 years

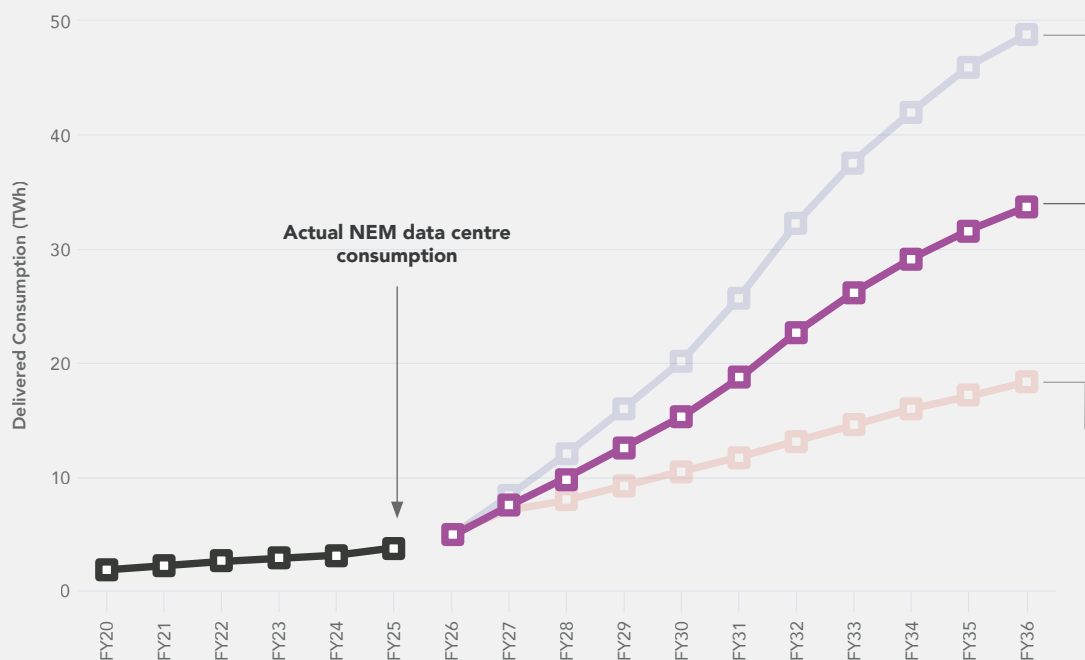
Data centre policies, standards and market reforms being considered

Governments, regulators and market bodies across Australia are considering a range of reforms to support the efficient connection and operation of data centres as electricity demand grows. These measures aim to ensure new data centres can be integrated into the power system while maintaining reliability, security and affordability for consumers.

Energy ministers are also considering reforms that would require data centres to support the energy system by investing in new renewable generation, firming capacity and demand flexibility measures. Other proposed reforms would improve how the costs of connecting large new electricity users are allocated and strengthen operational arrangements for large inverter-based loads, including data centres.

State governments are exploring measures to support data centre development while managing impacts on electricity networks and consumers. These include planning and connection frameworks, technical requirements, and policies intended to support reliable and efficient integration of large new loads into the power system.

Actual and forecast NEM data centre consumption, Step Change scenario, FY20 to FY36 (TWh)



Project approach: gathered from developers and network service providers.

Forecast data centre growth under the Step Change scenario: combines the project level approach and economic outlook.

Under the mostly likely scenario for forecasting demand in the NEM, the Step Change scenario, data centre consumption is forecast to triple to around 15 TWh or 7.8% of forecast operational consumption by FY30 and grow nearly seven times to around 34 TWh or 13% of forecast operational consumption by FY36, before growth starts to taper off.

Economic approach: reflects broader digital transformation and AI adoption, underlying economic demand for data centre services, both domestically and internationally.