

Wholesale Electricity Market Electricity Statement of Opportunities (WEM ES00)

Forecasting Western Australia's (WA) electricity demand and operational consumption trends for the next 10 years.

Key findings¹

WA has sufficient electricity capacity to meet demand over the next decade.

The Reserve Capacity Requirement (RCR) is forecast as 4,421 megawatts (MW) for the 2022-23 Capacity Year.

The staged retirement of Muja C units in 2022 and 2024 is expected to result in a decline in excess capacity in the WEM.

Minimum operational demand is forecast to decline over the first five years of the outlook period.

Behind-the-meter solar PV is forecast to grow by an average 6.5% pa, with an estimated 2,612 MW installed by 2029-30.

For the first time, peak demand is forecast to fall by 0.2% pa of average over the outlook period.

Uptake of DER and the impacts of the COVID-19 pandemic are expected to dampen peak demand growth in both the short and medium term.

Behind-the-meter PV

Includes both residential and commercial rooftop PV that is less than 100 kilowatts (kW) and commercial PV systems ranging between 100 kW and 10 MW in the SWIS.

Peak time shift

The likely timing of peak demand is expected to shift from between 17:00 and 18:00 to after 18:30 by 2023-24 due to the rapid uptake of Distributed Energy Resources

Distributed Energy Resources (DER)

Refers to small-scale embedded technologies that either produce electricity, store electricity, or manage consumption, and reside within the distribution system, including resources that sit behind the customer meter. Any generators that are connected to the distribution network that are assigned Capacity Credits are not included in the definition of DER technologies.

Operational consumption

Residential

Residential consumption is forecast to decline due to continued growth in behind-the-meter PV and improvements in energy efficiency.

Commercial

Commercial consumption is forecast to grow due to a combination of increase in consumption by large industrial loads and of electric vehicles, the rapid uptake of behind-the-meter PV, and energy efficiency improvements.

Reserve Capacity Prices

1. The Demand Side Management (DSM)² Reserve Capacity Price (RCP)³ will receive \$16,730/MW for the 2020-21 Capacity Year.
2. The DSM Facilities will receive the floating RCP of \$78,573/MW for the 2021-22 Capacity Year.
3. The RCP for all the Facilities will be determined once Capacity Credits are assigned for the 2022-23 Capacity Year.

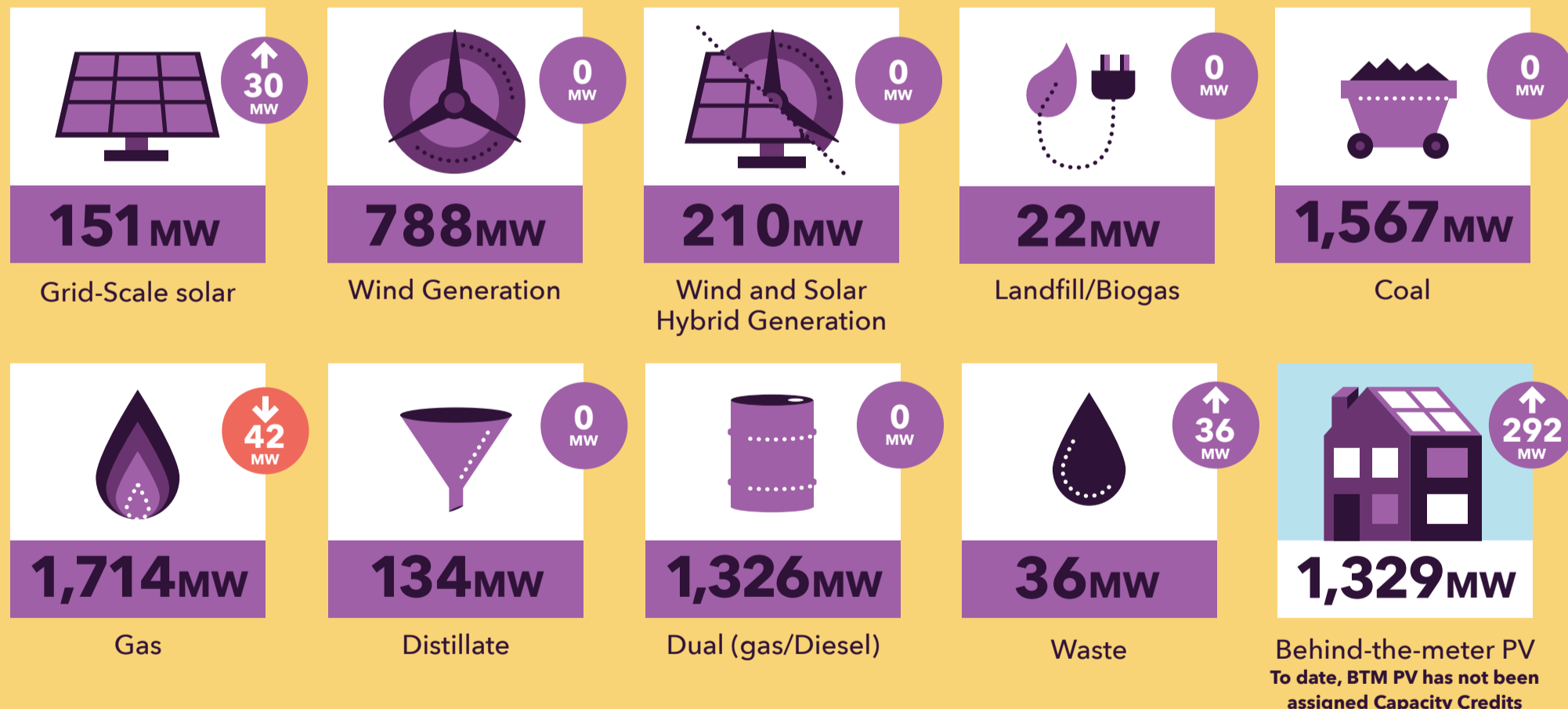
↓ in 2029-30
3,999 GWh

↑ in 2029-30
13,030 GWh

The changing generation mix

Maximum Capacity compared to 2019 WEM ES00 figures

↑ 24 MW
5,947 MW Total



Current market developments

As the independent market and system operator, AEMO is working closely with both government and industry to match the pace of change in WA's electricity markets.

Collaboration on the following bodies of work is key to ensure reliability and security is maintained for all consumers in the SWIS.



¹ Forecasts presented are based on the expected demand growth scenario.
² DSM: A Facility which is capable of reducing its consumption of electricity through the SWIS.
³ RCP: The Price for Reserve Capacity expressed in the dollars per Capacity Credits per year (determined in accordance with clause 4.29.1 of the WEM Rules)
⁴ Based on Facilities assigned Capacity Credits in the 2021-22 Capacity Year.