

2021 Wholesale Electricity Market Electricity Statement of Opportunities (WEM ES00)

Key Insights & Findings

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Agenda

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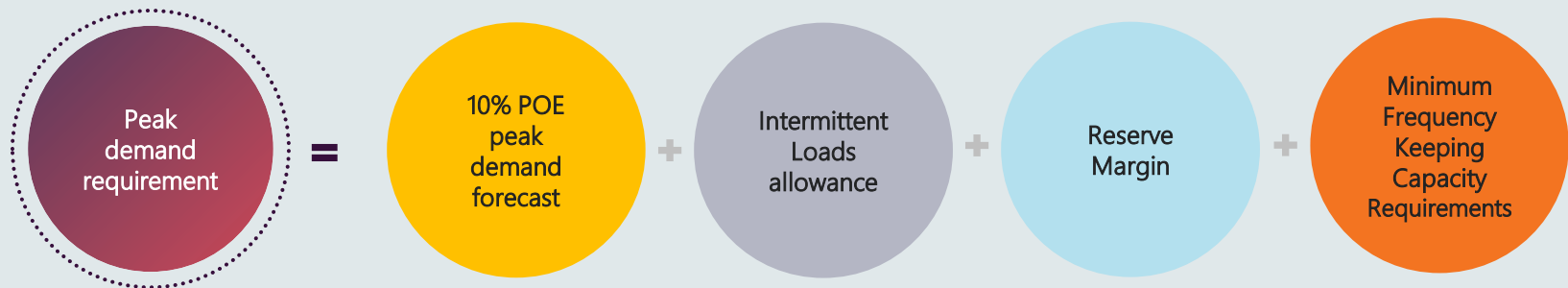
Minimum
demand outlook

Capacity outlook

DER forecasts
(PV, battery
storage, EV)

Background


- The 2021 WEM ESOO sets the Reserve Capacity Requirement (RCR) for the 2021 Reserve Capacity Cycle based on the Long Term Projected Assessment of System Adequacy (PASA) (2021-22 to 2030-31).
- The Long Term PASA study ensures sufficient capacity is available in the South West interconnected system (SWIS) to meet:
 - Peak demand requirement¹:



- Expected Unserved Energy (EUE) requirement: annual EUE \leq 0.002% of annual energy consumption.

[1] POE represents probability of exceedance. A 10% POE value is expected to be exceeded, on average, one-year-in-10, reflecting hot weather conditions.

Key findings



The RCR = 4,396 MW for the 2023-24 Capacity Year with sufficient capacity to meet forecast demand over the outlook period.

10% POE peak demand forecast to grow at an average annual rate of 0.2% compared to a 0.2% decline in the 2020 WEM ESOO.

Operational consumption forecast to fall at an average annual rate of 0.8% compared to a 0.4% decline in the 2020 WEM ESOO.

Behind-the-meter PV capacity forecast to reach an estimated 4,069 MW by 2030-31.

Minimum demand is expected to decline to 232 MW by 2025-26, predominantly due to growth in behind-the-meter PV installations.

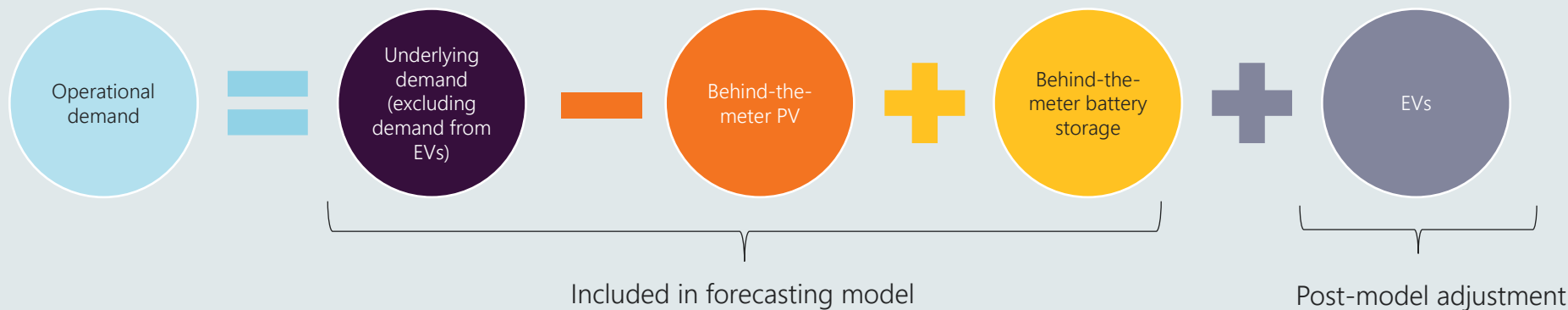
Forecasting methodology

Peak demand, minimum demand and operational consumption forecasts for the WEM ESOO have been developed in-house by AEMO using methodologies that are consistent with the 2020 NEM ESOO and WEM-specific features.

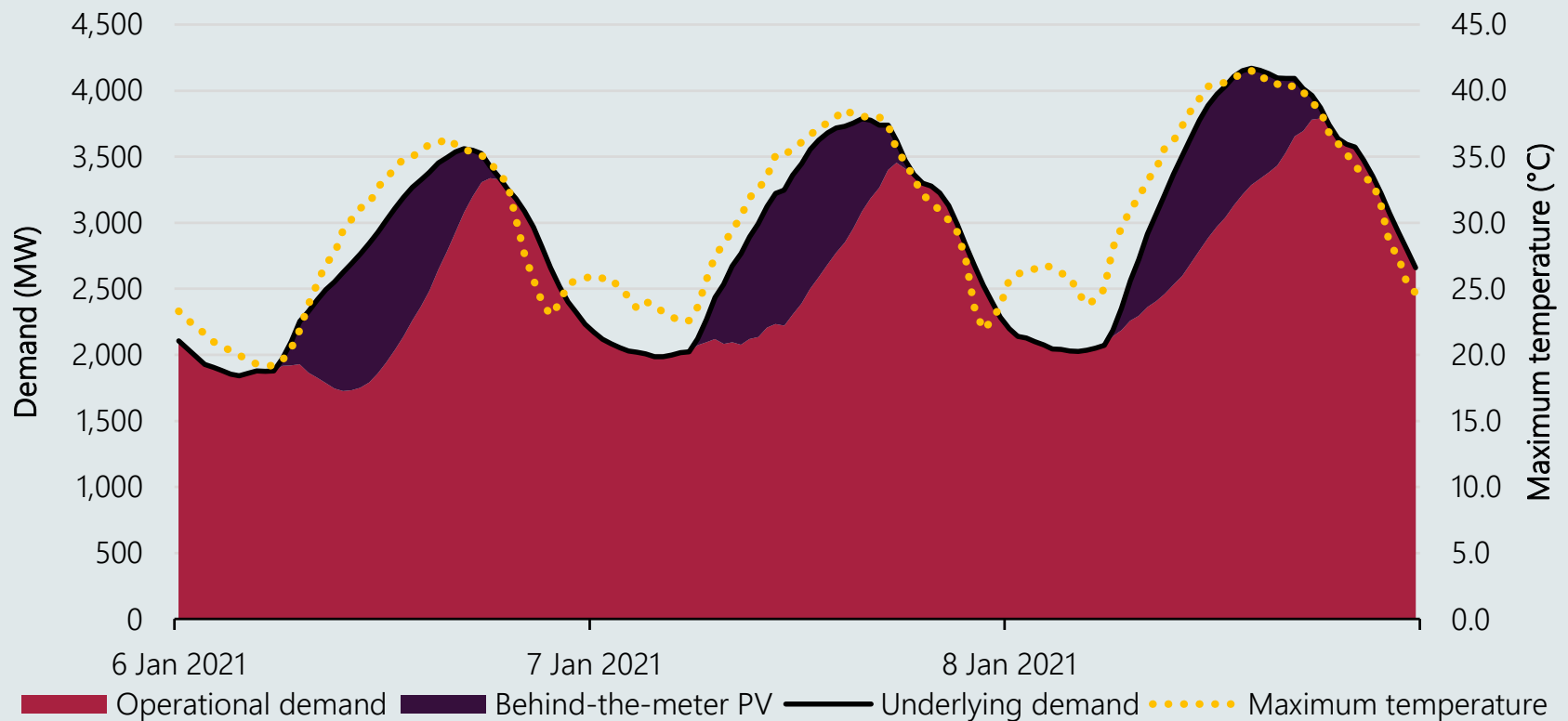
Various inputs were used to prepare the peak demand forecasts, including:

- Economic growth forecasts - BIS Oxford Economics.
- Behind-the-meter PV, battery storage forecasts - Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Green Energy Market (GEM).
- EV forecasts – CSIRO.
- Large industrial loads forecasts – AEMO.

Note: 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.

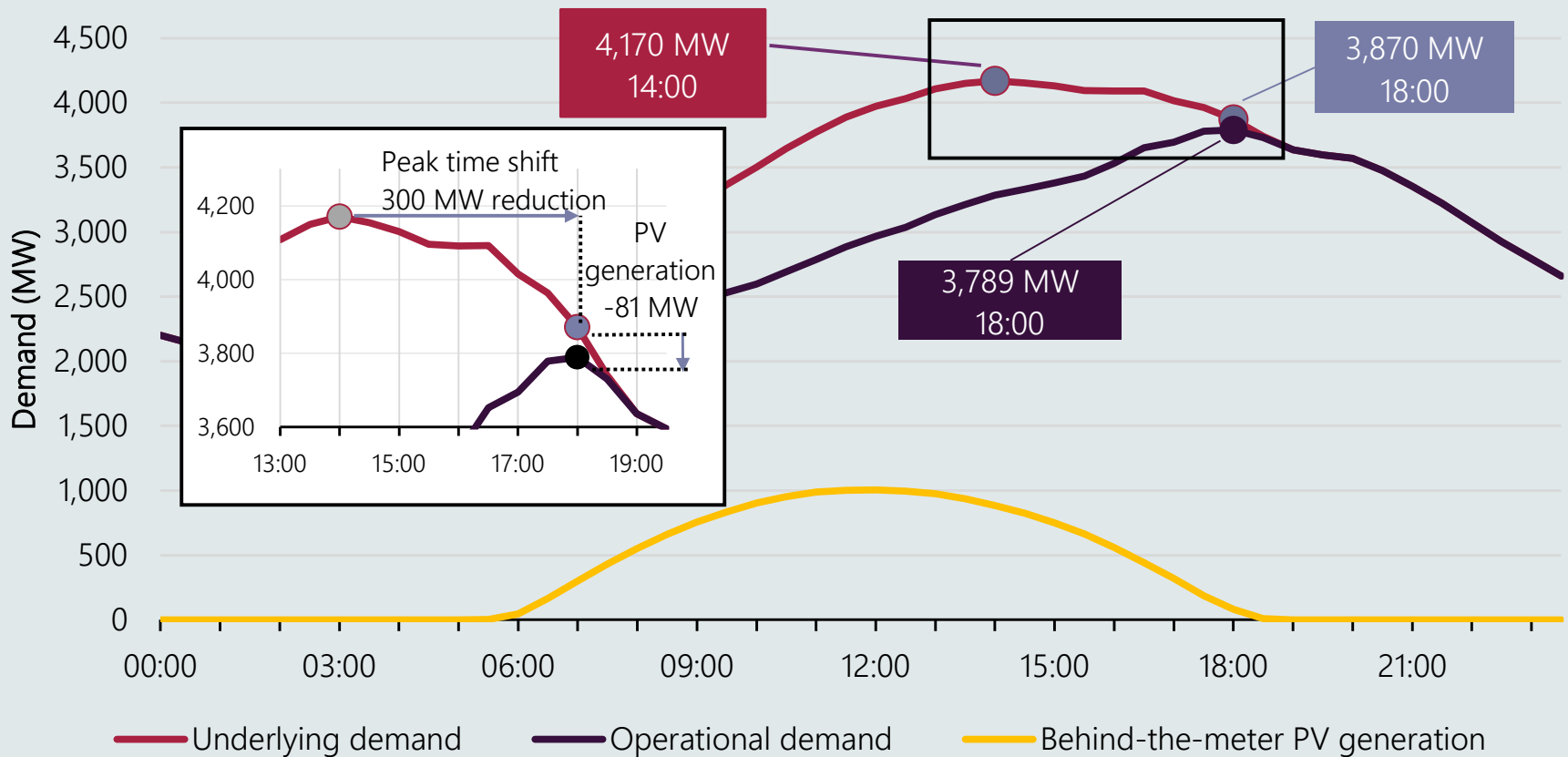


2020-21 peak demand



Source: AEMO, Bureau of Meteorology (BOM), Clean Energy Regulator (CER) and Solcast.

Behind-the-meter PV impact on 2020-21 peak demand

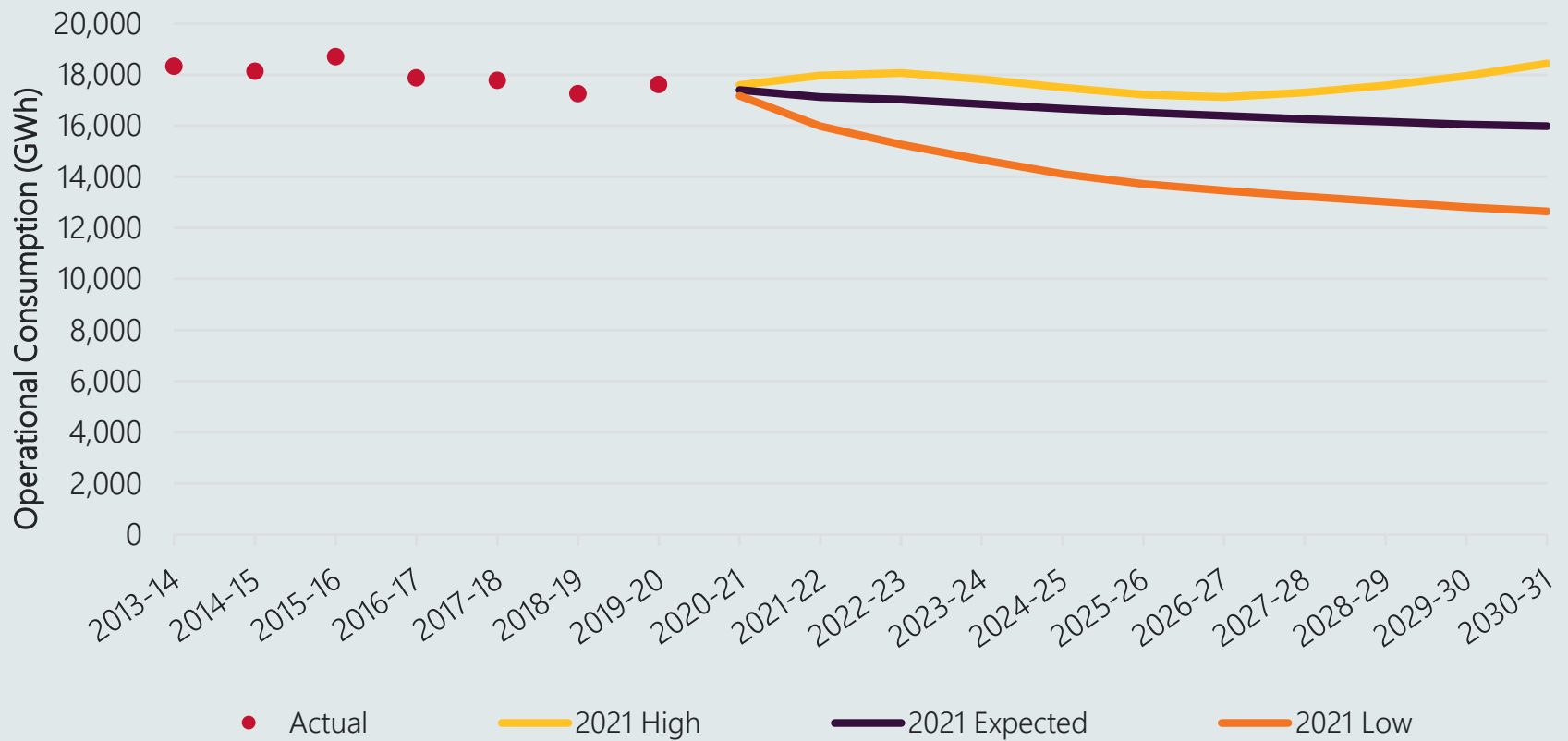


Source: AEMO, BOM, CER and Solcast.

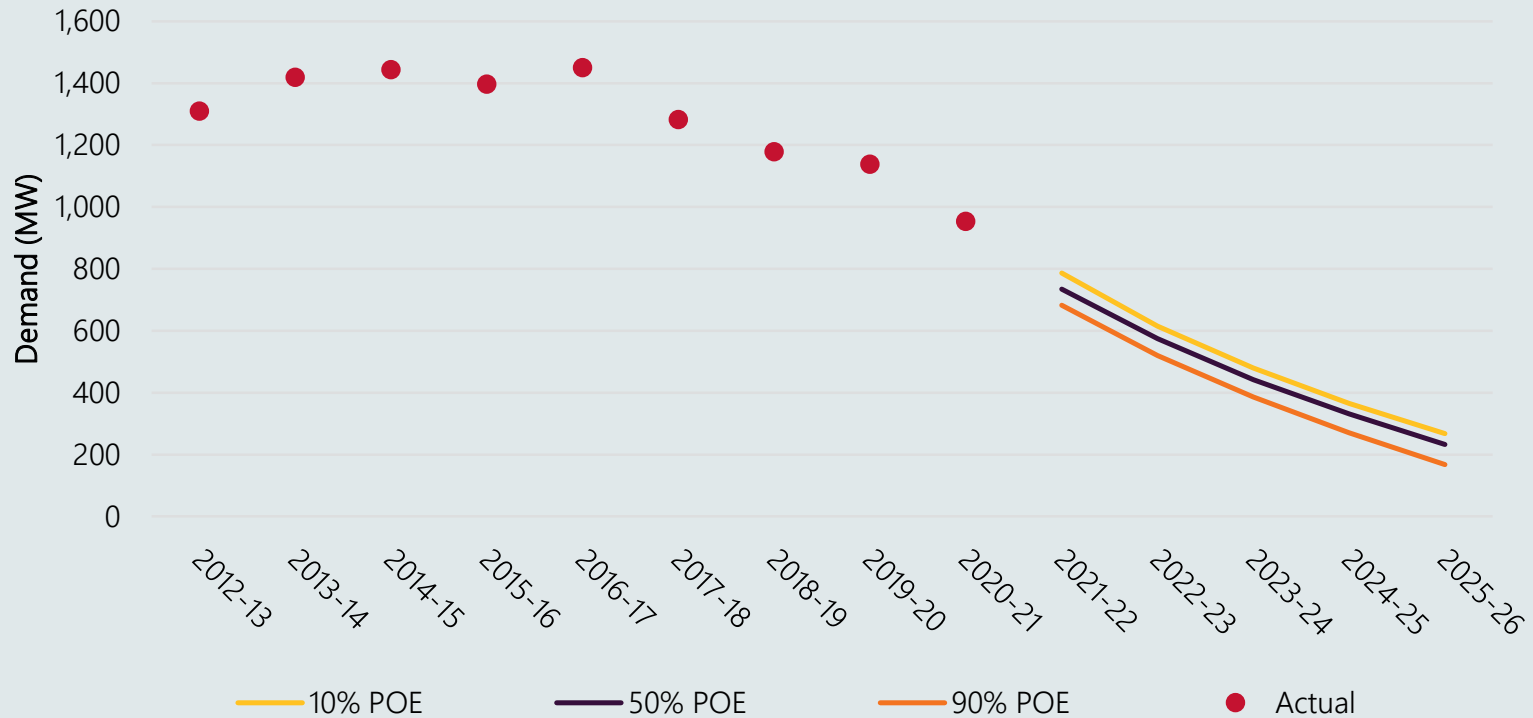
10% POE peak demand outlook



Consumption outlook

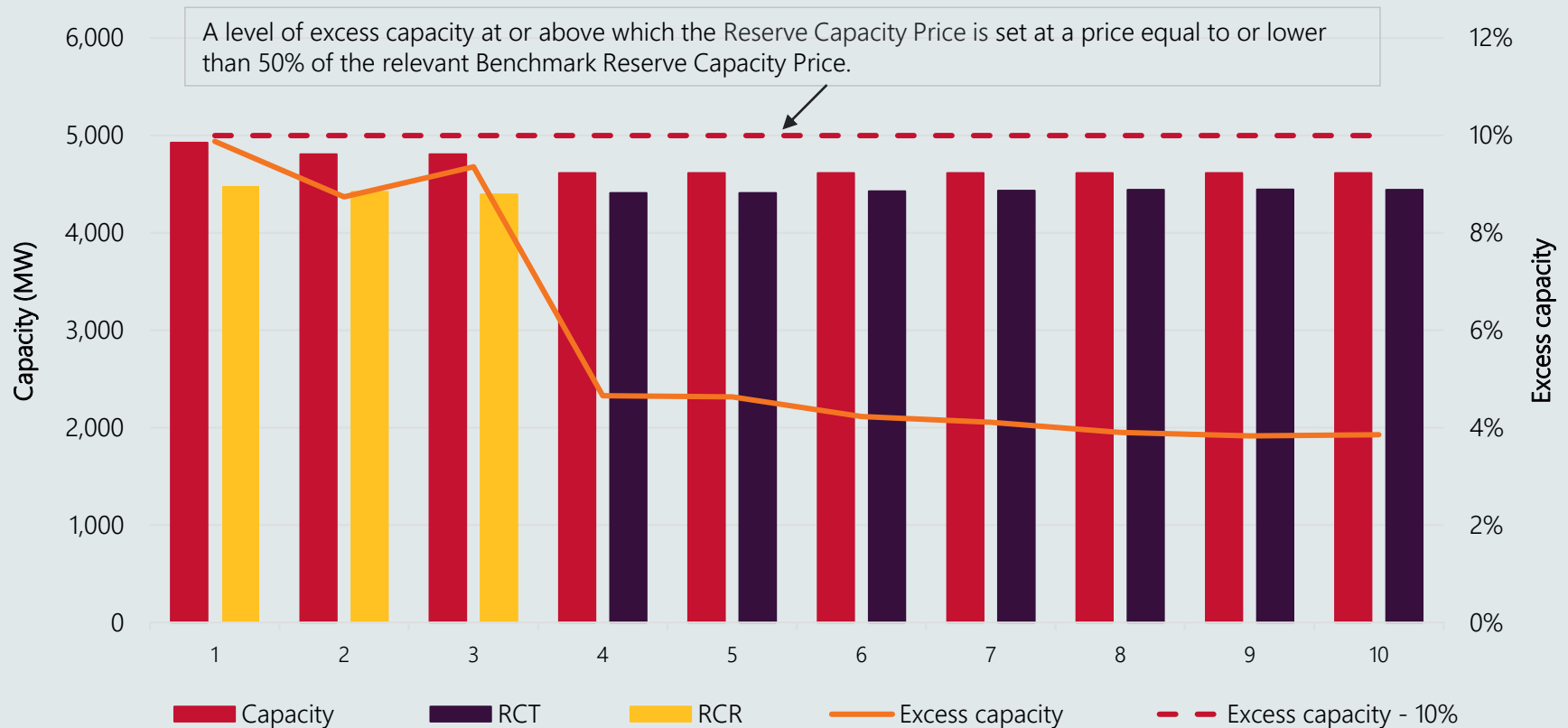


Minimum demand outlook

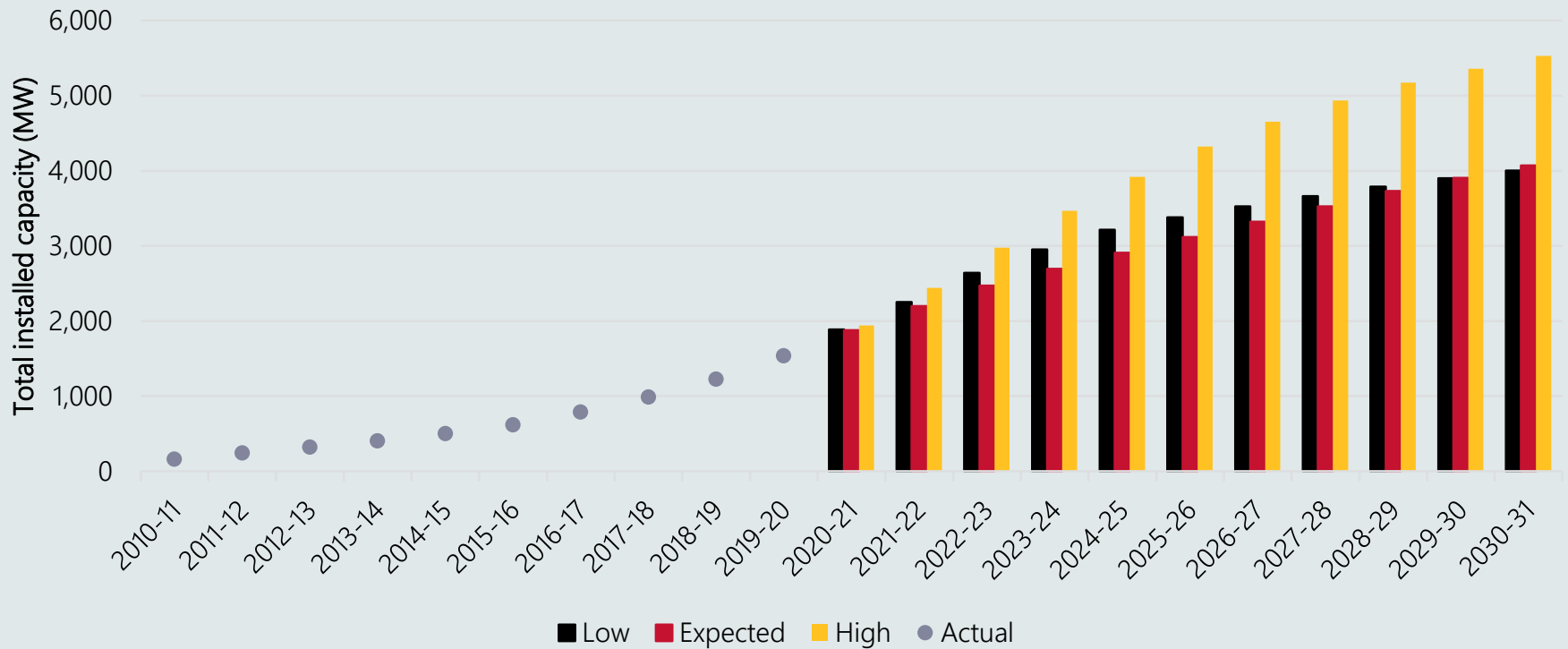


Capacity outlook

- Sufficient capacity is expected to be available to meet the Reserve Capacity Targets (RCT) for the entire outlook period.



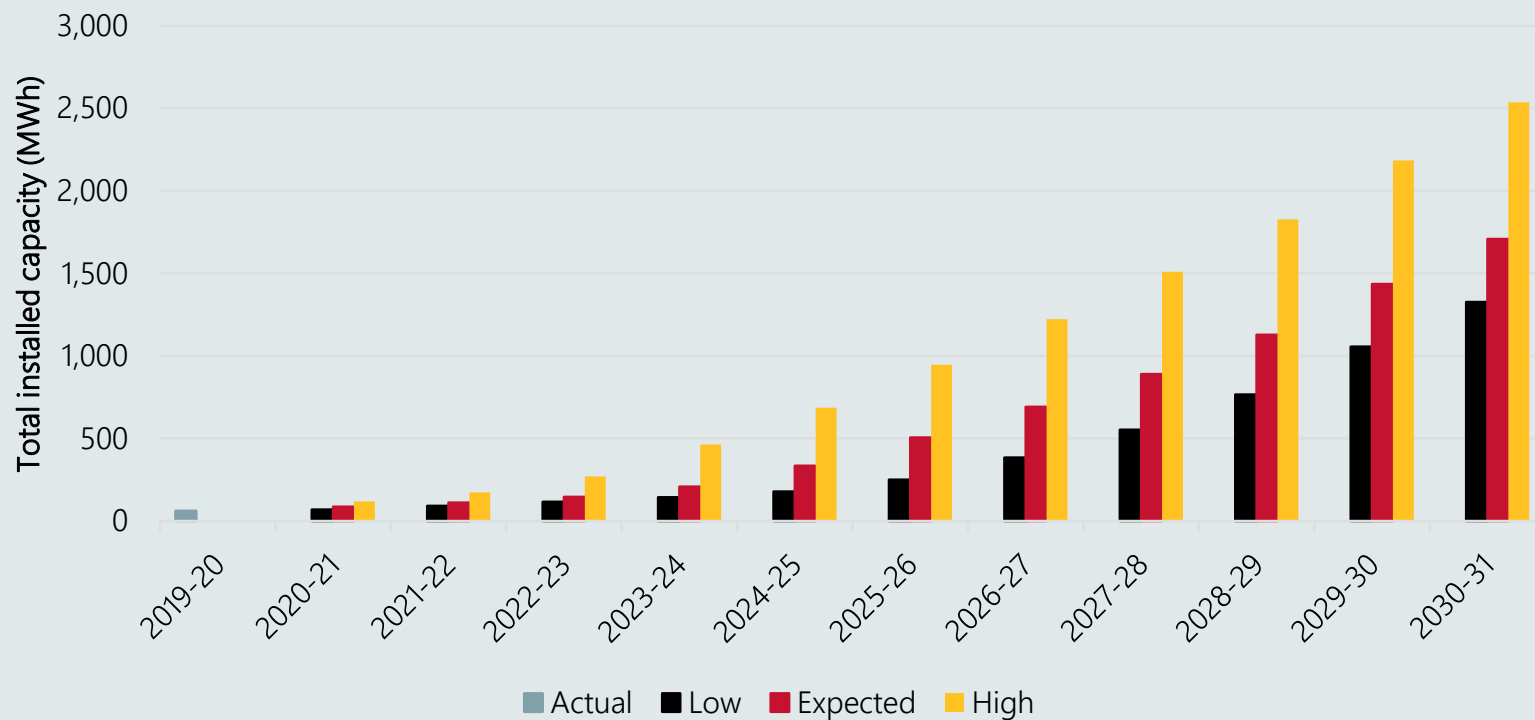
Behind-the-meter PV capacity actuals and forecast



Source: CER, CSIRO and GEM.

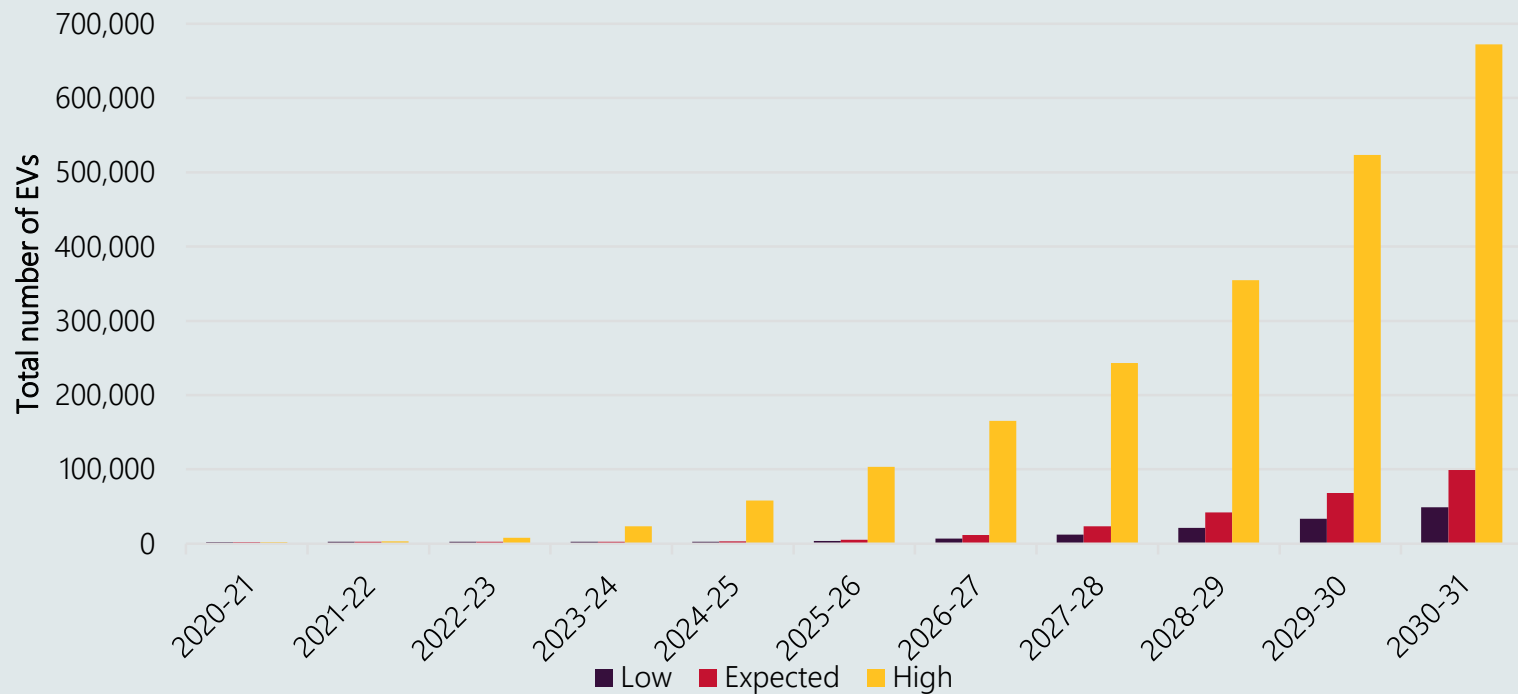
A. PV actual installed data from the CER, with minor adjustments by AEMO.

Behind-the-meter battery storage forecasts



Source: CSIRO and GEM.

Electric Vehicles uptake forecasts



Source: CSIRO.



Questions?

Feedback can be addressed
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