T-3 Reliability Instruments

New South Wales and Victoria 2027–28

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AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Tel: 1300 585 165

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Contents

1 AER decisions 1

2 Background 2

2.1 The Retailer Reliability Obligation 2

2.2 Market Liquidity Obligation 3

3 AEMO reliability instrument requests 4

4 AER review 5

4.1 Whether there are material errors in AEMO's calculations, input data or inaccurate assumptions that materially impact the forecast reliability gap **5**

4.2 Whether AEMO used reasonable endeavours to prepare the reliability forecast in accordance with the Forecasting Best practice Guideline **21**

Appendix A – New South Wales 2027–28 T-3 reliability instrument 24

Appendix B – Victoria 2027–28 T-3 reliability instrument 25

1 AER decisions

In accordance with section 14K of the National Electricity Law, the Australian Energy Regulator (AER) has made:

- a T-3 reliability instrument for New South Wales for the forecast reliability gap period of 1 December 2027 to 29 February 2028 (reliability instrument)
- a T-3 reliability instrument for Victoria for the forecast reliability gap period 1 December 2027 to 31 March 2028 (reliability instrument).

The AER is satisfied that the Australian Energy Market Operator's (AEMO) forecast reliability gaps in New South Wales and Victoria have been identified in accordance with the National Electricity Rules (NER).

We found no material errors in AEMO's calculations nor in input data used to inform its reliability forecast. We consider the assumptions that underpin AEMO's forecast data and their impact on unserved energy are accurate and represent the forecast future circumstances. We are satisfied that accuracy, comprehensiveness, and lack of bias have been achieved.

We consider that AEMO used reasonable endeavours to prepare its reliability forecast in accordance with the Forecasting Best Practice Guidelines. The inputs, assumptions and methodologies that underpin the forecast were disclosed to stakeholders and AEMO provided opportunities for consultation throughout the development of the 2024 Electricity Statement of Opportunities (ESOO) and the subsequent reliability forecast.

Therefore, the AER considers it is appropriate, having regard to the decision-making criteria set out in clause 4A.C.11 of the NER to make the reliability instrument. The reliability instrument for New South Wales and Victoria can be found in Appendix A and Appendix B, respectively.

As the Retailer Reliability Obligation (RRO) has been triggered on 22 October 2024, the Market Liquidity Obligation (MLO) will commence:

- in New South Wales on 29 October 2024
- in Victoria on 29 October 2024.

The MLO requires the particular generators for both New South Wales and Victoria – Energy Australia, Snowy Hydro and AGL – to offer MLO products on the Australian Securities Exchange or FEX Global. This ensures there will be sufficient qualifying contracts available for liable entities in New South Wales and Victoria to cover their share of one-in-two-year peak demand throughout the forecast reliability gaps.

2 Background

2.1 The Retailer Reliability Obligation

The AER has a range of roles with regards to the RRO which are outlined in Part 2A of the Electricity Law and Chapter 4A of the Electricity Rules. The RRO is supported by a suite of AER guidelines[1], which provide detail on how the various stages of the RRO operate and impose obligations on entities involved in the RRO. In addition to the AER's specific roles in the administration of the RRO, the AER monitors and ensures compliance with the RRO provisions.

The RRO commenced on 1 July 2019 to support reliability in the National Electricity Market (NEM). In particular, it encourages retailers, and some large energy users, to establish contracts for their share of demand for a prescribed period.

If AEMO identifies a reliability gap in a region of the NEM as part of its ESOO[2], it must provide us with a reliability instrument request, which we then review in accordance with the decision-making criteria set out in the NER.

In doing so, we consider if AEMO's reliability forecast contains any material errors in either calculation or input data, or inaccurate assumptions that materially impact the forecast reliability gap. We also check if AEMO has used reasonable endeavours to prepare the reliability forecast in accordance with the AER's Forecasting Best Practice Guidelines.

The AER's role in deciding whether to make a reliability instrument is to have regard to the decision-making criteria and not to re-create AEMO's reliability forecast, nor is it to duplicate the methodology or modelling used in the reliability forecast. The AER can only make a reliability instrument as requested by AEMO; it is not open to the AER to make changes to the instrument. Further details on our review are set out in Section 4.

Where a reliability instrument is made, liable entities (retailers and other parties that purchase electricity directly from the wholesale energy market) are on notice to enter into sufficient qualifying contracts with generators to cover their share of one-in-two year peak demand in the forecast reliability gap period, and report their net contract position to the AER.

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[1] More information on the relevant guidelines can be found here: Retail Reliability Obligation | Australian Energy Regulator (AER)

[2] The ESOO is an annual report published by AEMO which covers a 10-year period to inform decisions by market participants, investors, and policy-makers in the NEM. It provides information on, and projections of:

- Electricity demand and energy requirements.
- Electricity supply from generators and demand response, considering normal transmission and power system limitations.
- Power system reliability, including the reliability forecast and indicative reliability forecast developed in accordance with the RRO.

2.2 Market Liquidity Obligation

The MLO is a market making requirement designed to facilitate transparency and liquidity in the trading of electricity futures contracts relating to a forecast reliability gap. The MLO commences when the RRO is triggered and provides a source of qualifying contracts for liable entities to purchase to help meet their RRO contracting requirements.

This requires the MLO generators of the region, where RRO is triggered, to offer MLO products on the Australian Securities Exchange or FEX Global. This ensures there will be sufficient qualifying contracts available for liable entities in New South Wales and Victoria to cover their share of one-in-two year peak demand throughout the forecast reliability gap.

3 AEMO reliability instrument requests

On 29 August 2024 AEMO provided the AER with:

- A T-3 reliability instrument request for a forecast reliability gap in New South Wales. The request set out the following details of the forecast reliability gap:
  - The size of the gap: 570 MW
  - The gap period: 1 December 2027 to 29 February 2028 (inclusive)
  - The gap region: New South Wales
  - The one-in-two year peak demand forecast: 13,924 MW
  - The gap trading intervals: between 3:00 pm and 10:00 pm on working weekdays[3].

- A T-3 reliability instrument request for a forecast reliability gap in Victoria. The request set out the following details of the forecast reliability gap:
  - The size of the gap: 130 MW
  - The gap period: 1 December 2027 to 31 March 2028 (inclusive)
  - The gap region: Victoria
  - The one-in-two year peak demand forecast: 10,303 MW
  - The gap trading intervals: between 3:00 pm and 9:00 pm on working weekdays.

AEMO also provided the following documents as part of its reliability instrument request:

- 2024 Electricity Statement of Opportunities (ESOO)
- 2024 Forecasting Assumptions Update
- 2024 Forecasting Best Practice Compliance Report
- Demand side participation Forecast Methodology
- ESOO and Reliability Forecast Methodology Document 2023
- Forecasting Approach Electricity Demand Forecasting Methodology
- 2024 Forecasting Assumptions Update Workbook

[3] The NEM operates in Australian Eastern Standard Time.

4 AER review

The following sections detail our review of the New South Wales and Victoria 2027–28 T-3 reliability instrument requests against the decision-making criteria as set out in clause 4A.C.11 of the NER. These state that the AER must only have regard to whether:

- there are no material errors in AEMO's calculations or input data as it relates to the reliability forecast
- AEMO has not made any assumptions underpinning its forecast data that are inaccurate and which have had a material impact on unserved energy outcomes in the reliability forecast
- AEMO has used reasonable endeavours to prepare the reliability forecast in accordance with the AER's Forecasting Best Practice Guidelines.

In line with the guidance given in our Reliability Instrument Guidelines[4], we focused our assessment on a range of input parameters upon which the determination of the level of reliability is most materially dependent.

Consultation process

On 2 September 2024, we commenced a two-week joint consultation process for both the T-3 reliability instrument requests for New South Wales and Victoria received from AEMO.[5] During our consultation period, we received only 1 submission from Energy Locals on both the New South Wales and Victoria reliability instruments.

We acknowledge the concerns raised by Energy Locals about the RRO framework more broadly and will consider these views when assessing any potential future changes to improve the operation of the RRO. The issues raised in the submission, however, do not relate to the criteria specified in clause 4A.C.11 of the NER and therefore we must not have regard to them in this decision.

4.1 Whether there are material errors in AEMO's calculations, input data or inaccurate assumptions that materially impact the forecast reliability gap

Our approach to reviewing AEMO's New South Wales and Victoria 2027–28 T-3 reliability instrument requests against the criteria set out in clause 4A.C.11 of the NER included reviewing the key inputs and assumptions identified by AEMO in its instrument request against the data sources provided by AEMO (as set out in Section 3) in preparing the reliability forecasts. Specifically, our review focused on:

- reviewing that there are no material errors in AEMO's calculations or input data as it relates to the reliability forecast

4 AER, RRO - Reliability compliance procedures and guidelines, June 2023

5 AER, Reliability instrument requests for New South Wales and Victoria, September 2024

- confirming whether AEMO has not made any assumptions underpinning its forecast data that are inaccurate and which have had a material impact on unserved energy outcomes in the reliability forecast.

In undertaking our review, we also had regard to the materiality of each of the 15 key inputs and assumptions identified by AEMO in its reliability instrument request. The Low, Medium, or High materiality rating provided by AEMO is an approximate guide to each input's contribution towards the New South Wales and Victoria 2027-28 reliability forecast, particularly in the period over which the forecast reliability gap applies. Specifically, the three levels of materiality are defined below[6]:

- **Low** materiality if complete removal of this input from the reliability forecast would result in negligible difference to the size of the forecast reliability gap,
- **Medium** materiality if complete removal of this input from the reliability forecast could result in a noticeable change to the forecast reliability gap, and
- **High** materiality if complete removal of this input from the reliability forecast could result in either complete removal, or more than doubling of the forecast reliability gap.

The 2024 Forecasting Assumptions Report and the 2024 Forecasting Assumptions Workbook provided by AEMO contain the data on which the reliability instrument request was based. The detailed data in the workbook provided information upon which we conducted a thorough review of key inputs and assumptions. These data sources were accompanied by a guide to the key inputs, calculations, assumptions, and methodologies used in the reliability forecast and number of accompanying methodology reports. Our review also included comparing AEMO's data for the relevant key inputs and assumptions, against publicly available reports or datasets.

The outcome of our review is that we did not identify any material errors or inaccurate assumptions that would have a material impact on unserved energy outcomes in the reliability forecast.

The following sections summarise the information that was reviewed to assist in forming our decision on the reliability instrument request. We have also identified the relevant reports and datasets under each of the key inputs and assumptions we have reviewed below.

4.1.1 Distributed photovoltaic systems (including residential, commercial, and larger embedded and photovoltaic non-scheduled generation systems)

Materiality: High

Data reviewed:

- 2023 and 2024 ESOO data
- 2024 AEMO Forecasting Assumptions Update Report
- Green Energy Markets' 2023 Consumer Energy Resources Forecast Report

[6] AEMO, T-3 Reliability Instrument Request for Victoria, August 2024, table footnote A, p. 12

- Commonwealth Scientific and Industrial Research Organisation (CSIRO) 2022 Solar photovoltaic (PV) systems and battery projections Report

Input	New South Wales	Victoria
Distributed PV (including residential, commercial, and larger embedded and PV non-scheduled generation	Estimated average distributed PV generation output during forecast unserved energy for New South Wales in 2027-28 is 586 MW.[7]	Estimated average distributed PV generation output during forecast unserved energy for Victoria in 2027-28 is 628 MW. [8]

Inputs and assumptions relating to distributed PV have the potential for a high material impact on unserved energy outcomes in the reliability forecast. This is because distributed PV is a significant portion of electricity supply during daylight hours and contributes to operational demand in the NEM. Therefore, any changes in the forecast uptake or generation of PV will impact the ability of supply to meet demand (i.e. reliability).

The New South Wales and Victoria forecast installed capacity of distributed PV are 10,943 MW and 8,381 MW respectively under the 2024 ESOO's central scenario.

We note that the forecast capacity of distributed PV systems has increased which AEMO states is due to the effect of an increase in the average system size of rooftop PV systems which outweighs the effect of a lower total number of systems than forecast in the 2023 ESOO. [9]

The distributed PV generation is based on data provided by CSIRO's and Green Energy Markets' trajectories for small-scale solar PV and battery projections in 2022 and 2023 respectively.[10] [11] AEMO has rebased projections from these reports using March 2024 data from the Clean Energy Regulator.[12]

We identified a potentially material change in assumptions regarding the impact of the solar rebound effect on household consumption between the 2023 and 2024 ESOO which AEMO had not adequately explained. The solar rebound effect is the impact on household consumption from installing a PV system.[13] That is, where a household installs a PV system it is expected that household consumption will increase. The cause of this effect is likely due to behavioural change of households after installing PV (e.g. leaving lights on longer or using air conditioner more due to either perceived lower cost or lower emission impact). This input

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7 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

8 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

9 AEMO, 2024 Forecasting Assumptions Update Report, August 2024, p. 25

10 CSIRO, Small-scale solar PV and battery projections 2022, December 2022

11 Green Energy Markets, Projections for distributed energy resources - solar PV and stationary energy battery systems, December 2023

12 AEMO has sourced Clean Energy Regulator data here.

13 CSIRO, NEAR 2021-2022 Solar PV impacts, 30 May 2022, p. 5

was raised by stakeholders through AEMO's consultation for the 2024 ESOO with stakeholders concerned that the assumed solar rebound effect was too high.[14]

Additional information sought from AEMO identified that the change in solar rebound effect value was based on household consumption rather than PV generation (as was done in the 2023 ESOO). They also noted that this change was consistent with stakeholder feedback regarding this input. AEMO further explained that they also made this adjustment based on literature review and found most studies of the solar rebound effect had based it on household consumption rather than PV generation. Using PV generation as the base would estimate the solar rebound effect (i.e. increase in consumption following installing PV) for given levels of PV generation. Alternatively, using household consumption as the base would estimate the solar rebound effect while accounting for both whether the household has a PV system and the current level of household consumption. We also note that AEMO will be considering this assumption further as part of its 2024 Electricity Demand Forecasting Methodology Consultation.

We have assessed the distributed PV generation's calculations, inputs, and assumptions in the 2024 Forecasting Assumptions Update report and workbook and have not found any errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.2 Large industrial loads

Materiality: High

Data reviewed:

- 2024 Forecasting Assumptions Update Report
- 2023 Inputs, Assumptions and Scenarios Report (IASR)

Input	New South Wales	Victoria
Large industrial loads	AEMO's 2027–28 forecast shows 17,591 GWh of consumption in New South Wales related to Large industrial loads, which represents approximately 27.1% of operational consumption. Large industrial load forecast contribution to the maximum operational demand in New South Wales is approximately 14.5%[15]	AEMO's 2027–28 forecast shows 8,426 GWh of consumption in Victoria related to large industrial loads, which represents approximately 20.2% of operational consumption. Large industrial load forecast contribution to the maximum operational demand in Victoria is approximately 8.3%[16]

Large industrial load forecast is important as it contributes to the maximum operational demand in New South Wales and Victoria. It has the potential for a high material impact on unserved energy outcomes in the reliability forecast. This means that a material error in this input could result in either complete removal, or more than doubling of the forecast reliability gap.

[14] AEMO, 2024 Forecasting Assumptions Update - Consultation Summary Report, August 2024, p.16

[15] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

[16] AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

AEMO's process for forecasting large industrial load consumption is a five-step process,[17] which is detailed in its Forecasting Approach – Electricity Demand Forecasting Methodology. The five-step process includes:

- Identifying large industrial users through distribution and transmission network service provider surveys and media searches
- Collecting and analysing historical consumption data
- Requesting survey responses
- Conducting detailed interviews
- Finalising forecasts for each scenario and subsector in each region.

Large industrial load forecasts used in the reliability forecast have not been exhaustively reviewed because they are based on confidential data. AEMO aggregates all subsection forecasts with the other large industrial loads before publishing data to maintain confidentiality.[18]

During our review, we identified that AEMO had reallocated 60 sites from business mass market sector to the large industrial load sector which led to an increase in its forecast of large industrial load consumption.

We also assessed the public calculations, inputs, and assumptions in the 2024 Forecasting Assumptions Update Report and 2023 IASR and did not find any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.3 Generator forced outage rates

Materiality: High

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook
- 2023 IASR Workbook

Input	New South Wales	Victoria
Forced outage rates	Approximately 2,279 MW of unplanned generation outages occur on average during New South Wales 2027–28 forecast unserved energy periods.[19]	Approximately 1,488 MW of unplanned generation outages occur on average during Victoria 2027–28 forecast unserved energy periods.[20]

Generator forced outage rates are a key input used in the reliability forecast as generator outages negatively impact supply of electricity and therefore limit the ability of supply to meet the electricity demand in the NEM. Inputs related to forced outage rates have the potential for a high material impact on unserved energy outcomes in the reliability forecast. This means

17 AEMO, Electricity Demand Forecasting Methodology, August 2024, p.16-20

18 AEMO, Electricity Demand Forecasting Methodology, August 2024, p. 20

19 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

20 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

that a material error in this input could result in either complete removal, or more than doubling of the forecast reliability gap.

AEMO, in its 2024 Forecasting Assumptions Update Workbook, states that outage information for generators is collected via an annual survey process. This outage information is then used to forecast outage rates for each year in the modelling period.[21] To protect confidentiality of individual generators, the outage rates of generators are grouped together by type and then averaged. Due to this, we were only able to review the outputs from AEMO's calculations to consider in our review of the reliability instrument request.

The forced outage rates are based on different assumptions for new entrants and existing generators. The equivalent full forced outages rate for new entrants is provided by Aurecon.[22]

For existing generators, AEMO collected information on the timing, duration, and severity of the unplanned outages via its annual survey process. This included information on historical outages, and (for selected participants) outage projections across the 10-year forecast period. AEMO used this data to calculate the probability of full and partial forced outages in accordance with the ESOO and Reliability Forecasting Methodology.[23]

The outage data was updated based on historical and forward-looking forced outage rates provided by registered participants. AEMO also uses information provided by AEP Elical on their assessment of the reliability of ageing coal-fired generation.[24]

We identified that the unplanned outage rates for batteries had remained the same between the 2023 and 2024 ESOO despite AEMO indicating it had applied a reduction of 10% in the 2024 ESOO. We sought additional information from AEMO which indicated that the reduction was applied to updated survey figures (2.05% in the 2024 ESOO compared with 1.84% in the 2023 ESOO) and subsequently resulted in a similar value for the unplanned outage rate of batteries in the 2024 ESOO after a reduction of 10% was applied.

Noting the confidentiality limitations in relation to generator forced outage rates, we have assessed the public calculations, inputs, and assumptions in the 2024 Forecasting Assumptions Update Workbook and 2023 IASR Workbook and have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.4 Generation availability

Materiality: High

Data reviewed:

- Summer seasonal rating for existing generators and committed projects – 2024 Forecasting Assumptions Update Workbook

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21 AEMO, 2024 Forecasting Assumptions Update Report, August 2024, p. 45

22 Aurecon, 2022 Costs and Technical Parameter Review, December 2022

23 AEMO, 2023 IASR, July 2023, p. 90

24 AEP Elical, 'Assessment of Ageing Coal-Fired Generation Reliability', June 2020

- Maximum capacity for existing generators and committed projects – 2024 Forecasting Assumptions Update Workbook

Input	New South Wales	Victoria
Generation availability	The reliability forecast in the 2024 ESOO considers existing and new generation and battery storage projects that meet the "committed", "committed*" and "anticipated" commitment criteria published in AEMO's Generation Information update in July 2024, subject to delays in full commissioning as per the ESOO and Reliability Forecast methodology.[25]	The reliability forecast in the 2024 ESOO considers existing and new generation and battery storage projects that meet the "committed","committed*" and "anticipated" commitment criteria published in AEMO's Generation Information update in July 2024, subject to delays in full commissioning as per the ESOO and Reliability Forecast methodology.[26]

Availability of existing generators and committed projects is a key input to the reliability forecast because, where generators are unavailable or committed projects do not go ahead, supply of electricity will be affected. This means that a material error in this input could result in either complete removal, or more than doubling of the forecast reliability gap.

In its 2024 Forecasting Assumptions Workbook, AEMO provided details on the seasonal ratings and capacity for existing generators and committed projects.

Our review of the data included comparing the:

- Summer seasonal ratings in the 2024 Forecasting Assumptions Workbook for existing generators and committed projects in the with the summer scheduled capacities recorded in the AEMO NEM Generator Information workbook.
- Maximum capacity in the 2024 Forecasting Assumptions Workbook for existing generators and committed projects with the capacities listed in the AEMO NEM Generator Information workbook.

Our review found that the site names for some of the existing generators and committed projects differed slightly in then 2024 Forecasting Assumptions Workbook and AEMO NEM Generator Information workbook. However, we did not note any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.5 Electric vehicle (Electric Vehicle) uptake

Materiality: Medium

Data reviewed:

- 2024 ESOO
- 2024 Forecasting Assumptions Update Workbook - Battery & Plug-in Electric Vehicles
- CSIRO, Electric Vehicle projections 2023: update to the 2022 projections

[25] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

[26] AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

Input	New South Wales	Victoria
Electric Vehicle uptake	In 2027–28 1,082 GWh of Electric Vehicle consumption is forecast in New South Wales, which represents approximately 1.7% of operational consumption. Demand for Electric Vehicle charging is forecast to be approximately 124 MW at time of maximum 50% probability of exceedance (POE) demand in summer.[27]	In 2027-28, 848 GWh of Electric Vehicle consumption is forecast in Victoria, which represents approximately 2.0% of operational consumption. Demand for Electric Vehicle charging is forecast to be approximately 111 MW at time of maximum 50% probability of exceedance (POE) demand in summer.

Electric Vehicle uptake is a material component of forecast demand which is therefore material to forecasting reliability. It has the potential for a medium material impact on the unserved energy outcomes in the reliability forecast. This means that there is a potential for a noticeable change to the forecast reliability gap if there is a material error in the inputs and assumptions relating to the Electric Vehicle uptake.

The Battery & Plug-in Electric Vehicles data is based on the CSIRO's Electric Vehicle projections[28] and actual Electric Vehicle sales data from Federal Chamber of Automotive Industries.[29] This data has also been included in the 2024 Forecasting Assumptions Update workbook.[30]

This data has been updated from the 2023 and 2022 ESOO, which has resulted in an increase in the consumption forecast and the number of vehicles in New South Wales and Victoria for the 2027–28 period. As identified in the CSIRO report, Australia's Electric Vehicle sales share has experienced strong growth reaching 8.4% in 2022-23 compared to around 4% in the previous year. The impact of this stronger uptake of Electric Vehicles, has been attributed to consideration by the Commonwealth Government of the introduction of a fuel efficiency standard for cars.[31]

Based on our analysis of the data, inputs, and assumptions in the 2024 ESOO, 2024 Forecasting Assumptions Update and the 2024 Forecasting Assumptions Update Workbook in relation to Electric Vehicle uptake, we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.6 Economic growth and population outlook

Materiality: Medium

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook – Economic Growth Forecasts sheet
- Australian Bureau of Statistics, National, state and territory population – June 2023

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27 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

28 CSIRO, Electric Vehicle projections 2023: update to the 2022 projections, December 2023

29 Federal Chamber of Automotive Industries, VFACTS, December 2023

30 AEMO, 2024 Forecasting Assumptions Update Workbook, August 2024

31 CSIRO, Electric Vehicle projections 2022, November 2022, p. v

- Australian Bureau of Statistics, Population Projections, Australia
- Australian Bureau of Statistics, Australian National Accounts: State Accounts – 2022-23 financial year
- New South Wales Treasury, Economic Outlook[32]

Input	New South Wales	Victoria
Economic growth and population outlook	As identified in the 'Demand Forecasting Assumptions', scenario variations, 2023 IASR scenarios capture variation in economic and population assumptions, the selection of these inputs is of medium materiality.[33]	As identified in the 'Demand Forecasting Assumptions', scenario variation, 2023 IASR scenarios capture variation in economic and population assumptions, the selection of these inputs is of medium materiality.[34]

Economic and population growth assumptions are important inputs to the development of energy consumption and maximum demand forecasts. It has the potential for a medium material impact on the unserved energy outcomes in the reliability forecast. This means that there is a potential for a noticeable change to the forecast reliability gap, if there is a material error in the inputs and assumptions relating to the economic and population growth.

We note that Deloitte Access Economics' report was delivered in April 2024 and reports consistent trends and similar proportional magnitudes to publicly available New South Wales Government near-term forecasts[35] and Victorian Government recent economic results[36] for shared metrics with original data sourced from the Australian Bureau of Statistics (ABS). Deloitte Access Economics also sourced their population projections for AEMO from the ABS. The data used was current up to the middle of 2023.

As highlighted in the AEMO's reliability instrument request, economic growth is of medium materiality to the forecast. We consider that the similarity in trend between AEMO's forecasts and state and federal datasets covering economic and population growth demonstrate a robust forecast with little risk of material impact on the unserved energy outcomes in the reliability forecast.

4.1.7 Demand side participation

Materiality: Medium

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook – demand side participation sheet
- 2024 ESOO
- 2023 Demand side participation forecast methodology

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[32] Data from Victorian Department of Treasury and Finance was not reviewed for the Victorian forecast as a comparable data set was not available at the time of our review.

[33] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

[34] AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

[35] New South Wales Treasury, Economic outlook, June 2024

[36] Department of Jobs, Skills, Industry and Regions, Summary of Victorian economic data, October 2024

Input	New South Wales	Victoria
Demand side participation	359 MW of total demand side participation is forecast to be available in New South Wales in 2027–28. [37]	553 MW of total demand side participation is forecast to be available in Victoria in 2027–28. [38]

Inputs related to demand side participation are material to forecasting reliability as the ability to reduce demand through demand side participation can remedy potential shortfalls in forecast supply. This means that a material error in this input could result in either complete removal, or more than doubling of the forecast reliability gap.

Our review found that the reliability response data, which forms part of AEMO's demand side participation forecasts, is based on price response for trading intervals exceeding different pricing levels. The demand side participation input data is based on information provided by registered participants in the NEM through AEMO's demand side participation Information portal and by historical customer meter data.[39]

We understand that AEMO attached medium materiality to demand side participation in New South Wales and Victoria as the scale of change in customer demand during lack of reserve events while significant, is unlikely to materially impact the event. However, we understand that should customer behaviour or government programs change, AEMO will announce and update their methodology for demand side participation accordingly.[40]

Based on our analysis of the data, inputs, and assumptions in the 2024 Forecasting Assumptions Update, 2024 ESOO and the 2024 Forecasting Assumptions Update Workbook in relation to demand side participation, we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.8 Electrification

Materiality: Medium

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook – Electrification sheet
- 2024 and 2023 ESOO
- AEMO Electricity and Gas Forecasting Data Portal – 2024, 2023 and 2022 ESOO

Input	New South Wales	Victoria
Electrification	AEMO's 2027–28 forecast shows 3,864 GWh of consumption in New South Wales related to electrification, which represents approximately 5.9% of operational consumption.[41]	AEMO's 2027–28 forecast shows 1,139 GWh of consumption in Victoria related to electrification, which represents approximately 2.7% of operational consumption.[42]

37 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

38 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

39 AEMO, 2023 Demand Side Participation Forecast Methodology, December 2023, p. 8

40 AEMO, 2023 Demand Side Participation Forecast Methodology, December 2023, p. 16

41 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

42 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

The rate of electrification, that is the shift away from other energy sources such as gas, will increase demand for electricity and hence potentially impact the reliability forecast. It has the potential for a medium material impact on the unserved energy outcomes in the reliability forecast. This means that there is a potential for a noticeable change to the forecast reliability gap, if there is a material error in the inputs and assumptions relating to electrification.

The electrification data is based on the CSIRO's multi-sector energy modelling 2022 report,[43] which has been updated from the 2022 and 2023 ESOOs. The 2024 data for New South Wales indicates that faster investment in electrification is forecast, due to higher electrification forecasts for residential purposes in the near term, before rooftop PV capacity increases. Further increases in electrification due to investment in data centres and industry are also forecast justifying the increase in electrification compared to the 2023 and 2022 ESOOs. It should be identified that New South Wales electrification is still likely to be slower than other states.

The updated data for Victoria indicates that a faster comparative investment in electrification is forecast, due to robust and increasing residential electrification of heating and cooling, a move away from natural gas appliances and increasing incentives for electrification technologies in the short term and increasing into the medium term. For Victoria, a portion of this growth is offset by lower Electric Vehicle adoption and improved energy efficiency discussed elsewhere.[44] The overall effect is slightly increased level of electrification identified for Victoria compared to prior year forecasts.

Based on our analysis of the data, inputs, and assumptions in the 2024 Forecasting Assumptions Update Workbook in relation to electrification, we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.9 Energy Efficiency

Materiality: Medium

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook – Energy Efficiency sheet
- 2024 ESOO
- AEMO Electricity and Gas Forecasting Data Portal – 2024, 2023 and 2022 ESOO

Input	New South Wales	Victoria
Energy Efficiency	AEMO forecast a reduction of 2,362 GWh of consumption in New South Wales due to energy efficiency measures. This represents a reduction of approximately 3.6% of operational consumption.[45]	AEMO forecast a reduction of 1,693 GWh of consumption in Victoria due to energy efficiency measures. This represents a reduction of approximately 4.1% of operational consumption.

[43] CSIRO, Multi-sector energy modelling 2022: Methodology and results - Final report, December 2022

[44] AEMO, 2024 ESOO, August 2024, p. 39

[45] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

Inputs and assumptions relating to energy efficiency forecasts have a medium materiality to the reliability forecast as they impact forecast demand and therefore the unserved energy outcomes in the reliability forecast. This means that there is a potential for a noticeable change to the forecast reliability gap, if there is a material error in the inputs and assumptions relating to energy efficiency.

The energy efficiency forecasts are based on 2 separate approaches to modelling energy efficiency. AEMO sources forecast data from consultants or its own analysis of state and federal government efficiency programs. AEMO also considered market-led energy efficiency investments which occur without policy initiatives. AEMO further consults with government and stakeholder to ensure gains are not double-counted and discounts the total given the rebound effect resulting from an increase in consumption as a result of greater efficiency.

While there is some variance in the short-term due to updated historical data for Victoria, the forecasts for energy efficiency savings become equivalent to the forecasts within the 2023 IASR within 5 years. The New South Wales data showed little to no change to the trend or the practical assumptions regarding energy efficiency over the last three ESOOs. Based on our analysis of the data, inputs, and assumptions in the 2024 Forecasting Assumptions Update Workbook and in AEMO's forecasting approach[46] in relation to energy efficiency we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.10 Behind-the-meter battery storage installed capacity

Materiality: Low

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook- Embedded energy storages
- 2022 and 2023 IASR Workbooks –Embedded energy storages

Input	New South Wales	Victoria
Behind-the-meter battery storage installed capacity	83 MW of coordinated distributed storage is forecast to be available in New South Wales in 2027–28. Due to the sustained nature of forecast unserved energy, the average impact of this coordinated distributed storage during unserved energy events is 20.9 MW. Uncoordinated distributed storage discharge during 50% POE maximum demand events is forecast to be approximately 21 MW.[47]	61 MW of coordinated distributed storage is forecast to be available in Victoria in 2027-28. Due to the sustained nature of forecast unserved energy, the average impact of this coordinated distributed storage during unserved energy events is 18.9 MW. Uncoordinated distributed storage discharge during 50% POE maximum demand events is forecast to be approximately 10 MW. [48]

Behind the meter battery uptake is an important input to the forecast because it offers the potential to reduce demand at peak times. However, since there would be negligible uptake of behind the meter battery in the forecast reliability gap period, it has a low materiality to the

[46] AEMO, Forecasting Approach – Electricity Demand Forecasting Methodology, August 2024, p. 26

[47] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

[48] AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

reliability forecast. This means that a material error in this input would result in negligible difference to the size of the forecast reliability gap.

There has been a decrease in the coordinated distributed storage uptake. This is largely driven by recent slower than anticipated battery sales and the forecast reduction in the number of PV installations, which has resulted in a slower growth in storage.[49] This has resulted in a decrease in the battery power and storage capacity of embedded battery installations for 2027–28, despite the expectation that technology costs will revert to normal levels in 2027.

Based on our analysis of the data, inputs, and assumptions in the 2024 Forecasting Assumptions Update and the 2024 Forecasting Assumptions Update Workbook we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.11 Auxiliary loads

Materiality: Medium

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook- Auxiliary loads
- 2022 and 2023 IASR Workbooks – Auxiliary Loads

Input	New South Wales	Victoria
Auxiliary loads	As part of the generator information updates AEMO request scheduled and semi-scheduled generators to self-report their typical auxiliary load percentage. Approximately 270 MW of auxiliary load is forecast during unserved energy periods in New South Wales in 2027–28.[50]	As part of the generator information updates AEMO request scheduled and semi-scheduled generators to self-report their typical auxiliary load percentage. Approximately 363 MW of auxiliary load is forecast during unserved energy periods in Victoria in 2027-28.[51]

Inputs and assumptions relating to the auxiliary loads have a low materiality to the reliability forecast. This means that a material error in this input would result in negligible difference to the size of the forecast reliability gap.

Auxiliary loads used in the reliability forecast were based on scheduled and semi-scheduled generators confidentially providing self-reports of typical auxiliary load percentage to AEMO through the Generation Information survey process, which are published in aggregate form because of the need to preserve the confidentiality of commercial information. We also reviewed the new entrant data which is consistent with the Aurecon costs and technical parameter review report from October 2022.[52]

Noting the confidentiality limitations in relation to auxiliary loads, we have assessed the public calculations, inputs, and assumptions in the 2024 Forecasting Assumptions Update

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49 AEMO, 2024 Forecasting Assumptions Update Report, August 2024, p. 29-30

50 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

51 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

52 Aurecon, 2022 Costs and Technical Parameter Review, December 2022

and the 2024 Forecasting Assumptions Update Workbook and have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.12 Inter-regional network losses

Materiality: Low

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook – Network losses sheet

Input	New South Wales	Victoria
Interregional network losses	Approximately 9.4 MW interregional network losses are forecast during unserved energy periods in New South Wales in 2027–28.[53]	Approximately 96 MW interregional network losses are forecast during unserved energy periods in Victoria in 2027–28.[54]

Inter-regional network loses are relevant to the forecast because they impact the unserved energy outcomes in the reliability forecast. Assumptions relating to inter-regional network losses have a medium materiality to the reliability forecast. This means that a material error in this input would result in negligible difference to the size of the forecast reliability gap.

AEMO's capacity outlook model[55] uses a topology which splits the five NEM regions into several sub-regions. AEMO receives historical energy losses and total energy at a transmission level and uses this to forecast annual transmission losses using the corresponding regional historical normalised loss factor in the most recent 2023 Inputs Assumptions and Scenarios Report. AEMO does not receive distribution network loss data but uses the latest available year's loss factor as a proxy for future losses[56].

AEMO's reporting for the 2023-24 financial years saw a slight increase in marginal loss factors overall for Victoria contributing to the factor estimate for 2027-28[57].

There were no submissions received in relation to inter-regional network losses during the 2024 Forecasting Assumptions Update consultation process. Based on our analysis of the data, inputs, and assumptions in the 2024 Forecasting Assumptions Update and the 2024 Forecasting Assumptions Update Workbook we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.13 Inter-regional transmission unplanned outage rates

Materiality: Low

Data reviewed:

- 2024 Forecasting Assumptions Update Workbook -Transmission Reliability tab

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53 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

54 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

55 AEMO, ISP Methodology, August 2021, p. 12

56 AEMO, Forecasting Approach – Electricity Demand Forecasting Methodology, August 2024, p. 42

57 AEMO, Marginal Loss Factors: Financial Year 2023-24, July 2024, p. 48

- 2024 Forecasting Assumptions Update
- 2024 ESOO

Input	New South Wales	Victoria
Inter-regional transmission unplanned outage rates	The complete removal of inter-regional transmission unplanned outage rates would be associated with a small change (an average of 21 MW) to unserved energy in New South Wales in 2027–28.[58]	The complete removal of inter-regional transmission unplanned outage rates would be associated with a small change (an average of 26 MW) to unserved energy in Victoria in 2027–28.[59]

Transmission unplanned outage rates have a low materiality to the reliability forecast. This means that a material error in this input would result in negligible difference to the size of the forecast reliability gap.

In forecasting the reliability of the NEM in the ESOO, AEMO applied transmission unplanned outage constraints for some simulated unplanned outages on some inter-regional transmission flow paths, consistent with AEMO's consulted-on methodology. In its 2024 ESOO AEMO identified that information was collated from network service providers on the timing, duration, and severity of the transmission outages to inform transmission unplanned outage rate forecasts.

There was 1 submission received in relation to inter-regional transmission unplanned outage rates in the 2024 Forecasting Update consultation process. AEMO revised Mortlake to South East flow path unplanned outage rates after consultation feedback that was received on draft results in the June 2024 Forecasting Refence Group meeting. This change is reflected in their reliability forecast.[60]

Based on our analysis of the data, inputs, and assumptions in the 2024 Forecasting Assumptions Update and the 2024 Forecasting Assumptions Update Workbook we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast.

4.1.14 Weather and climate

Materiality: High

Weather and climate are a fundamental driver of the maximum demand distribution and the reliability forecast methodology both due to its unpredictability and the impact of weather events on both generation and consumption. As such, it maintains high materiality to the reliability forecast.

We have reviewed AEMO's approach to including weather and climate in its 2024 Forecasting Assumptions Update both as a standalone effect and its impact on the other topics explored in this review. We note AEMO's use of historical weather station data provided by the Bureau of Meteorology to informing its modelling and the associated

58 AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

59 AEMO, T-3 Reliability Instrument Request for Victoria, August 2024

60 AEMO, 2024 Forecasting Assumptions Update, August 2024, p. 48

reasoning of station choice based on based on data availability and correlation to regional consumption to represent the NEM.

The modelling assumptions also aim to capture the range of possible weather driven outcomes. AEMO uses three scenarios that maximum and minimum operational demand forecasts can be presented with:

- A 50% probability of exceedance (POE), meaning the demand forecasts are expected statistically to be met or exceeded one year in two, and are based on average weather conditions (also called one-in-two-year).
- A 10% POE (for maximum demand) or 90% POE (for minimum demand), based on more extreme weather conditions that could be expected one year in 10 (also called one-in-10-year).
- A 90% POE (for maximum demand) or 10% POE (for minimum demand), based on less extreme conditions that could be exceeded nine years in 10.

We understand that variation between 90% and 10% POE maximum demand forecasts, which are partially driven by weather, are material. Further, variation between weather reference years that determine variable renewable energy (VRE) generation and demand outcomes are also material.[61]

Based on our analysis of these assumptions, we do not consider that this methodology has material errors that may impact unserved energy outcomes in the reliability forecast.

4.1.15 Demand forecasting assumptions

Materiality: Medium

Data reviewed:

- AEMO Electricity and Gas Forecasting Data Portal – 2023 and 2024 ESOO
- 2024 Forecasting Assumptions Update Workbook

Input	New South Wales	Victoria
Demand forecasting assumptions	AEMO adopted the Step Change scenario from the 2023 IASR as ESOO Central scenario for the purpose of developing its reliability forecast in the 2024 ESOO. Relative to the 2024 ESOO Progressive Change scenario, 50% POE maximum demand under the ESOO central scenario is forecast to be 177 MW higher.[62]	AEMO adopted the Step Change scenario from the 2023 IASR as ESOO Central scenario for the purpose of developing its reliability forecast in the 2024 ESOO. Relative to the 2024 ESOO Progressive Change scenario, 50% POE maximum demand is forecast to be 230 MW higher.

Demand forecasting assumptions are relevant to the reliability forecast because they impact the unserved energy outcomes in the reliability forecast. Assumptions relating to demand forecasting have a medium materiality to the reliability forecast. This means that a material error in this input would result in negligible difference to the size of the forecast reliability gap.

[61] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

[62] AEMO, T-3 Reliability Instrument Request for New South Wales, August 2024

We checked AEMO maximum demand data from AEMO's Electricity and Gas Forecasting Data Portal[63] for the 2023 and 2024 ESOO. We checked both the 2023 and 2024 ESOO to understand whether there had been any material changes. Both ESOOs adopted the 2023 IASR step change scenario as the central scenario for the purpose of identifying reliability gaps.

The forecast New South Wales maximum demand (50% POE and on an 'as generated' basis) for the 2024 ESOO central scenario in 2027 and 2028 respectively is 13,852 MW and 14,006 MW. This compares with the 2023 ESOO central scenario forecast for 2027 and 2028 of 13,890 MW and 14,113 MW. The Progressive Change scenario has lower forecasts for New South Wales than the central scenario of 13826 MW in 2027 and 13832 MW in 2028.

The forecast Victoria maximum demand (50% probability of exceedance (POE) and on an 'as generated' basis) for the 2024 ESOO central scenario in 2027 and 2028 respectively is 10,244 MW and 10,329 MW. This compares with the 2023 ESOO central scenario forecast for 2027 and 2028 of 10,040 MW and 10,257 MW.

The Progressive Change scenario has lower forecasts for Victoria than the central scenario of 10,043 MW in 2027 and 10,137 MW in 2028.

Based on our analysis of the data in AEMO's Electricity and Gas Forecasting Data Portal, we have not identified any material errors that had a material impact on unserved energy outcomes in the reliability forecast. We also identified that forecast maximum demand in the central scenario had not changed significantly between the 2023 ESOO and 2024 ESOO as we would expect given that both adopted the Step Change scenario from the 2023 IASR.

4.2 Whether AEMO used reasonable endeavours to prepare the reliability forecast in accordance with the Forecasting Best practice Guideline

The Forecasting Best Practice Guideline (the Forecasting Guideline) provides guidance to AEMO on its forecasting practices and processes relating to a reliability forecast. NER clause 4A.B.5(b) states that the guidance within the Forecasting Guideline must be provided having regard to the following principles:

- Forecasts should be as accurate as possible, based on comprehensive information and prepared in an unbiased manner.
- The basic inputs, assumptions and methodology that underpin forecasts should be disclosed.
- Stakeholders should have as much opportunity to engage as is practicable, through effective consultation and access to documents and information.

The Forecasting Guideline also provides additional guidance relevant to AEMO's reliability forecast and its consultation processes.

[63] AEMO, Electricity Forecasting Data Portal, August 2024

In this section we assess AEMO's forecasting approach, against the aforementioned principles set out in our Forecasting Guideline, it has undertaken to develop the 2024 reliability forecast.

AER Assessment

In Table 1 below we have assessed whether AEMO's reliability forecast met the factors included in the Forecasting Guideline.

Table 1 AER assessment of other matters

Forecasting Guideline	AER review
Transparent forecasting methodology	The Forecasting Guideline sets out that AEMO should publish key elements of its forecasting approach which are transparent, fit-for-purpose and accessible to key stakeholders. AEMO should also provide sufficient detail in its reliability forecast guidelines to comply with NER clause 4A.B.4(b), including key forecasting streams on demand forecasts, supply forecasts and its assessment on whether the reliability standard will be met. AEMO's 2024 Forecasting Best Practice Compliance Report provides that it has a dedicated forecasting approach page on its website,[64] which provides: • an overview of its forecasting approach, • consultation timelines associated with each element of its forecasting approach, • links to relevant methodologies and guidelines, and • the AEMO Forecasting Approach Register, which summarises and responds to matters raised outside of formal consultation processes. Since August 2022, a number of elements of AEMO's forecasting approach have been consulted on through the NEM Reliability Forecasting Guidelines and Methodology Consultation.[65] This resulted in changes to a number of elements of AEMO's forecasting approach, including the ESOO and Reliability Forecast Methodology Document.[66] AEMO has also recently consulted and published its Reliability Forecast Guidelines,[67] which set out its how it implements the Forecasting Guideline in preparing a reliability forecast. For these reasons we consider AEMO has reasonably adhered to the Forecasting Guideline in the way in which it has published, consulted on, and implemented methodologies that relate to the reliability forecast.
Consultation	The Forecasting Guideline sets out the consultation process AEMO should undertake when developing the inputs and assumptions that underpin its reliability forecast. This is a single stage consultation process which gives stakeholders the ability to provide submissions. AEMO's Forecasting Best Practice Compliance Report provides that AEMO followed the consultation procedures outlined in the Forecasting Best Practice Guidelines when preparing the 2024 ESOO. AEMO also published a Forecasting Assumptions Update (used in the 2024 ESOO) which updated several of the inputs and assumptions which were published in the 2023 IASR and used in the 2024 ISP. The consultation process for the 2024 Forecasting Assumptions Update had regard to the Forecasting Best Practice Guidelines as it relates to AEMO's reliability forecast. This consultation included:

64 AEMO, Forecasting approach webpage, August 2024

65 AEMO, NEM Reliability Forecasting Guidelines and Methodology Consultation webpage, April 2023

66 AEMO, ESOO and Reliability Forecast Methodology document, August 2023

67 AEMO, Reliability Forecast Guidelines 2024, August 2024

	• a consultation summary report for its 2024 Forecasting Assumptions Update, which addressed feedback received on the Draft 2024 Forecasting Assumptions Update and the Forecasting Reference Group consultations • a draft and final report for the demand side participation Forecasting Methodology consultation it undertook in accordance with the Forecasting Best Practice Guidelines • a final report on the 2023 Forecast Improvement Plan, which addressed feedback received on the draft 2023 Forecast Accuracy Report and draft Forecast Improvement Plan.[68] We consider AEMO's consultation processes, and its final inputs and assumptions used for the 2024 ESOO and reliability forecast are reasonable. Stakeholders were provided with both formal and non-formal options to engage with AEMO's material and AEMO conducted the consultation processes in line with the single stage process set out in the Forecasting Guideline.
Reasonable inputs and assumptions and use and disclosure of data	The Forecasting Guideline states AEMO's forecasts should be based on as up-to-date and comprehensive data as practicable, considering publication timeframes. AEMO should also consider appropriate ways to use confidential information, which is relevant to key inputs for the reliability forecast. For the 2024 ESOO and reliability forecast, AEMO states it has used inputs, assumptions, and scenarios from the 2023 IASR and the 2024 Forecasting Update Report. With no material errors or inaccurate assumptions identified in our review or identified by received submissions, we consider the inputs and assumptions used by AEMO in its forecasts as reasonable. We further note and consider AEMO's use of confidential information for its generation project committed status, auxiliary loads and large industrial load forecasts which is set out in its methodology documents as reasonable.
Transparent drivers of forecasts/effects on inputs	The Forecasting Guideline states AEMO should use a component-based methodology, with components of the forecast developed through consultation. AEMO should also identify key inputs and assumptions that drive forecasts so participants can see how changes will affect final forecasts. We consider AEMO's methodology for the ESOO and reliability forecast uses a component-based methodology which they have consulted on with stakeholders. We also identified that AEMO's forecasting approach webpage[69] publishes a forecasting approach diagram, which highlights how individual components feed into the overall methodology and reliability forecast. The guidelines/documents that govern a large number of key methodologies, inputs and assumptions are also made available, which provide further context to how they impact AEMO's forecasts.
Scenario and sensitivity analysis for individual forecasts	The Forecasting Guideline sets out that AEMO's modelling approach should consider scenarios and identify key parameters for sensitivity analysis. We consider AEMO's modelling approach is in line with the Forecasting Guideline expectations in that the ESOO includes a number of future scenarios which are consulted on with stakeholders. Our review also identified that for the 2024 ESOO and reliability forecast AEMO has retained the step change scenario, as it considers it most likely to occur due to impacts from the energy transition.[70] We consider this was consistent with the requirements of our Forecasting Best Practice Guideline.

68 AEMO, Forecasting Best Practice Compliance Report, August 2024

69 AEMO, Forecasting approach webpage, August 2024

70 AEMO, 2024 Electricity Statement of Opportunities, August 2024, p. 21

Appendix A – New South Wales 2027–28 T-3 reliability instrument

The reliability instrument details are:

Reliability instrument for New South Wales 2027–28	
Region	New South Wales
Size of reliability gap	570 megawatts (MW)
Reliability gap period	1 December 2027 to 29 February 2028 (inclusive)
Trading intervals	Working weekdays trading intervals occurring during the periods ending 3:05PM and 10:00PM[71]
AEMO's one-in-two year peak demand forecast	13,924 megawatts (MW)

[71] The NEM operates in Australian Eastern Standard Time.

Appendix B – Victoria 2027–28 T-3 reliability instrument

The reliability instrument details are:

Reliability instrument for Victoria 2027–28	
Region	Victoria
Size of reliability gap	130 megawatts (MW)
Reliability gap period	1 December 2027 to 31 March 2028 (inclusive)
Trading intervals	Working weekdays trading intervals occurring during the periods ending 3:05PM and 9:00PM[72]
AEMO's one-in-two year peak demand forecast	10,303 megawatts (MW)

[72] The NEM operates in Australian Eastern Standard Time.