

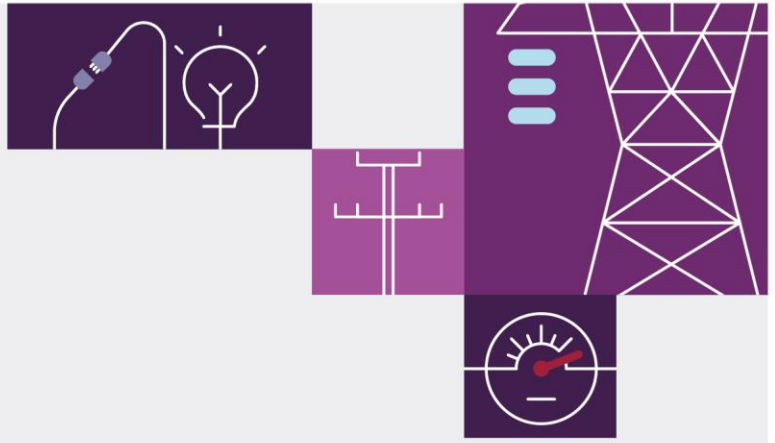
Reliability and Emergency Reserve Trader (RERT)

May 2024

Quarterly Report Q1 2024

A report for the National Electricity Market





Important notice

Purpose

AEMO publishes this Reliability and Emergency Reserve Trader (RERT) Quarterly Report under clauses 3.20.6 and 11.128.5 of the National Electricity Rules. This publication is generally based on information available to AEMO as of 1 April 2024 unless otherwise indicated and relates to the period 1 January 2024 to 31 March 2024.

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Version control

Version	Release date	Changes
1	14/05/2024	First issue

Executive summary

Reliability and Emergency Reserve Trader (RERT) is an intervention mechanism under the National Electricity Rules (NER) that allows AEMO to contract for emergency reserves, such as generation or demand response, that are not otherwise available in the market. AEMO uses RERT as one of a number of mechanisms in the event that a critical shortfall in reserves is forecast. RERT may be activated when it is the most suitable mechanism after market options have been exhausted, typically during periods when the supply demand balance is tight.

Interim Reliability Reserves are a category of RERT which AEMO may procure for up to three years to address interim reliability exceedances identified in the AEMO Electricity Statement of Opportunities (ESOO) or updates to the ESOO.

Interim Reliability Reserve (IRR) – Victoria and South Australia

An additional 19MW of Interim Reliability Reserves (IRR) was contracted in Victoria during the period from 1 January 2024 to 31 March 2022.

These IRR were contracted to address the interim reliability exceedances identified in AEMO's 2023 Electrical Statement of Opportunities (ESOO) and supplement the amounts of IRR contracted in Victoria and South Australia in Q4 2023 (increasing the total IRR available in Q1 2024 to 119MW in Victoria and 10MW of in South Australia). The total amounts contracted are 1MW and 108MW less than the forecast reliability reserve gaps in Victoria and South Australia, respectively, because no other eligible reserves were available for contracting within AEMO's tender requirements.

The total amount payable by AEMO for contracted IRR over the reporting period billing weeks was \$3,511,958. Table 1 provides the cost breakdown per region.

27 January 2024 Short Notice RERT - Queensland

On 27 January 2024, a forecast LOR2 condition was declared in the Queensland region. AEMO contracted 343MW of short notice reserves in response to this forecast LOR2, which subsequently developed into a forecasted LOR1 condition. However, as AEMO did not pre-activate or activate these reserves, no costs were incurred.

13 February 2024 Short Notice RERT - Victoria

On 13 February 2024, AEMO contracted 275MW of short notice reserve in Victoria in response to forecast LOR2 conditions. The forecast LOR2 conditions were triggered by the trip of the Moorabool (MLTS) to Sydenham (SYTS) 500kV lines in Victoria. Following the trip, thermal limits on the 220 kV lines between Geelong Terminal Station (GTS) and MLTS were intermittently violating between dispatch intervals ending 1315 hrs to 1420 hrs. There was enough generation in the Victorian region to meet demand, however due to the constraints on the network generation was not able to supply the load. RERT could not assist in relieving the constraints because the location of the RERT reserves was either not known or not in a suitable location. To maintain the system in a secure operating state, AEMO issued a direction under clause 4.8.9 of the NER to shed 300 MW of load in the Keilor Terminal Station, Thomastown Terminal Station and Rowville Terminal Station metropolitan area.

AEMO's process of contracting RERT was consistent with the principles of having the least distortionary effect on the market, while maximising the effectiveness of reserve contracts at the least cost to end use consumers of electricity. At the times of contracting, AEMO had estimated the average amount payable under reserve contracts to be less than the estimated average VCR, see section 4 for more detail.

This report is published under clauses 3.20.6 (b) of the NER, applied and amended as required by clause 11.128.5 for reserve contracts for IRR, and considers all reserve contracts entered into by AEMO or otherwise in effect during the period 1 January 2024 to 31 March 2024 (reporting period).



Contents

Executive summary	3
1 RERT activity summary Q1 2024	6
1.1 Contracting	6
1.2 Activation	6
1.3 Costs incurred	6
2 Reserve procurement	7
2.1 Interim Reliability Reserves	7
2.2 Panel arrangements for short notice reserves	8
2.3 Short Notice reserves contracted	9
2.4 AEMO's methodology for contracting RERT	10
3 Intervention	12
3.1 Decision to intervene	12
3.2 Intervention pricing	12
3.3 No changes in dispatch outcomes	12
3.4 Impact on reliability	12
4 Cost of exercising RERT	13
5 AEMO's intervention process	14
A1. Appendix A1	15
Glossary	21

Tables

Table 1	IRR costs incurred for Q1 2024	6
Table 2	Expected USE gap and Reliability Reserve gap	7
Table 3	Victoria Region Contracted IRR	8
Table 4	South Australia Contracted IRR	8
Table 5	Short notice reserve contracted	10
Table 6	Breakdown of costs recovered from Market Customers, RERT Q1 2024	13
Table 7	Timeline of key events on 27 January 2024 Queensland	15
Table 8	Timeline of key events on 13 February 2024 Victoria	17

1 RERT activity summary Q1 2024

1.1 Contracting

In Q1 2024, additional Interim Reliability Reserves (IRR) were contracted to cover the period from 1 January 2024 to 31 March 2024 for the region of Victoria. These IRR were contracted in accordance with clause 3.20, as modified by clause 11.128, of the National Electricity Rules (NER) to address an interim reliability exceedance (expected unserved energy (USE) above the Interim Reliability Measure (IRM) of 0.0006% USE) forecast for those regions in the summer months of 2023-24.

In Q1 2024, Short Notice reserves were contracted on 27 January 2024 in Queensland and 13 February 2024 in Victoria in response to forecasted Lack of Reserve 2 (LOR 2) conditions¹.

1.2 Activation

RERT was not activated during the reporting period (1 January to 31 March 2024).

1.3 Costs incurred

The total amount payable by AEMO for IRR during the Q1 billing weeks (1 January to 31 March 2024²) was \$3,511,958. Table 1 shows a breakdown of the amounts payable for IRR in Victoria and South Australia and payment categories (all amounts paid were availability costs). No costs were incurred for short notice reserves as no reserves were pre-activated or activated, despite being contracted in QLD and VIC.

Table 1 IRR costs incurred for Q1 2024

NEM region	Availability costs (\$)	Pre-activation costs (\$)	Activation costs (\$)	Intervention costs (\$)	Total cost (\$)
South Australia	\$83,850	\$0	\$0	\$0 ³	\$83,850
Victoria	\$3,428,108	\$0	\$0	\$0	\$3,428,108
Total cost					\$3,511,958

The average availability costs for IRR contracts in South Australia is \$97.5 per day per MW and in Victoria is \$645 per day per MW.

¹ LOR 2 signals a tightening of electricity supply reserves. This condition exists when reserve levels are lower than the single largest supply resource in a state. At this level, there is no impact to the power system, but supply could be disrupted if a large incident occurred. Once a forecast LOR 2 is declared, AEMO has the power to direct generators, cancel network outages, or activate the RERT mechanism to improve the supply demand balance.

² The 31st of December 2023 is included in billing week 1 of 2024 so has been added to this quarterly report.

³ Intervention costs are subject to change under clause NER 3.12.1(a).

2 Reserve procurement

2.1 Interim Reliability Reserves

The 2023 Electricity Statement of Opportunities (ESOO)⁴ identified a potential risk of unserved energy (USE) in the regions of South Australia (in FY 2023 – 2024) and Victoria (in FY 2023 – 2024 and FY 2024 – 2025). In each case, the expected USE was forecast to be above the Interim Reliability Measure (IRM) of 0.0006% USE. Factors that influence when and how USE occurs include occurrences of unexpected generator outages and high demand at the same time as low wind and solar generation condition.

In addition, the Bureau of Meteorology forecast a hot and dry summer, with elevated bushfire risks and El Nino weather patterns likely. Refer to Table 2 below for the forecasted USE gap in GWH and Reliability gap in MW.

Table 2 Expected USE gap and Reliability Reserve gap

NEM region	Fin Year	Expected USE for the gap period (GWH)	Reliability Reserve Gap (MW)
South Australia	2023-24	0.11	118
Victoria	2023-24	0.32	120
	2024-25	0.27	55

The forecast exceedance of the IRM provided a trigger for AEMO to contract IRR to help cover the forecast Reliability Reserve Gap⁵. AEMO's intention when entering into IRR contracts is to ensure availability of the reserves when needed. The Reliability Panel's RERT guidelines provide that AEMO should not rely on Short Notice RERT where it has forecast a shortfall in reliability reserves between 10 weeks to 12 months ahead.

In consultation with relevant State governments, AEMO opened a tender process in September 2023 to seek 118MW of IRR in South Australia and 120MW of IRR in Victoria, based on the expected reliability gaps forecast in the ES00.

AEMO conducted the IRR tender in accordance with the NER, including assessing IRR tenders against evaluation criteria that included operational factors, ability to respond, capacity, reserve period, risk and value for money. The evaluation process included scenario analysis to test whether the expected cost of IRR would be lower than the Value of Customer Reliability over the contract period. The tender process also required potential providers to explain how they currently operate their reserve capability including in response to high regional electricity prices.

AEMO also assessed whether contracted IRR could impact on, or interact with, the retailer reliability obligation (RRO). IRR contracted were not considered to be part of arrangements used by liable entities for the purpose of

⁴ In accordance with clause 3.20.6(d)(2), AEMO's modelling, forecasting and analysis published in the Electricity Statement of Opportunities informed AEMO's decision to enter into the IRR contracts and the amount of reserve procured under those contracts.

⁵ See NER 11.128.4

RRO compliance. Details of how AEMO would allocate costs of IRR to liable entities under the RRO can be found in the Procurer of Last Resort (POLR) Cost Procedures published on the AEMO website⁶.

AEMO was able to secure IRR contracts in Victoria and South Australia for the summer period of 2023-24. No IRR has been contracted beyond March 2024. IRR contracts with 3 participants for a total of 110 MW of reserve were entered in Q4 2023. In January 2024, AEMO signed 2 additional IRR contracts to provide a further 19 MW of reserve from January 2024 to 31 March 2024. Refer to Tables 3 and 4 below for details of all IRR contracted.

Table 3 Victoria Region Contracted IRR

NEM region	Location of Reserve	Volume of Reserve (MW)	Duration
Enel X Australia Pty Ltd	Victoria	16	1 Dec 2023 to 31 March 2024
Shell Energy Retail Pty Ltd	Victoria	40	1 Dec 2023 to 31 March 2024
Progressive Green Pty Ltd T/A Flow Power	Victoria	44	1 Dec 2023 to 31 March 2024
AGL Energy Services Pty Ltd	Victoria	3	18 Jan 2024 to 31 March 2024
Visy Industries Australia Pty Ltd	Victoria	16	1 Jan 2024 to 31 March 2024
Total		119	

Table 4 South Australia Contracted IRR

NEM region	Location of Reserve	Volume of Reserve (MW)	Duration
Progressive Green Pty Ltd T/A Flow Power	South Australia	10	1 Dec 2023 to 31 March 2024
Total		10	

2.2 Panel arrangements for short notice reserves

AEMO also maintains a panel of potential RERT providers that are able to offer reserves on short notice in South Australia, Victoria, New South Wales, Queensland, and Tasmania . These short notice reserves are able to be contracted on pre-negotiated contract terms.

In consultation with relevant State governments, and as required by the RERT guidelines⁷, AEMO has entered into panel agreements with potential short notice reserve providers that meet detailed cost, technical, and verification criteria. These short notice RERT resources can have different response lead times, activation conditions, costs, and response capabilities; as a result, not all resources will necessarily be activated for a given shortfall event.

⁶ <https://aemo.com.au/consultations/current-and-closed-consultations/polr-cost-procedures>

⁷ At https://www.aemc.gov.au/sites/default/files/2020-08/Updated%20Amended%20Panel%20RERT%20Guidelines%20-%2018%20August%202020%20-%20Final%20for%20publication_0.pdf.

In the relevant quarter, AEMO had a panel of short notice RERT providers representing well over 2000 MW of available reserves across the NEM.

2.3 Short Notice reserves contracted

AEMO must take all reasonable actions to ensure reliability of supply by negotiating and entering contracts to secure the availability of reserves under reserve contracts. In short notice situations, AEMO may enter into a short notice reserve contract in response to a forecast or actual LOR2 or LOR3 condition. The Reserve Level Declaration Guidelines published by AEMO provide guidance for determining the term and quantity associated with a reserve shortfall.

In addition to forecast or actual LOR2 and/or LOR3 conditions, other factors such as projected assessment of system adequacy (PASA) generator availability, may also be considered as inputs into the decision-making process for contracting short notice reserves. Under AEMO's panel arrangements, AEMO contracts with potential providers of short notice reserves at no cost to consumers (unless the reserve is pre activated or activated under a reserve contract). RERT contracting occurs in the context of highly uncertain and complex power system conditions, where actual and projected reserve levels can change at short notice.

On 27 January 2024, AEMO contracted 343MW of short notice RERT in Queensland in response to forecast LOR2 conditions, which subsequently developed into a forecast LOR1 condition. AEMO contracted all short notice reserves in Queensland available at the time of contracting based on the forecast capacity reserve requirement of 520MW. A number of short notice providers were unavailable as the LOR2 occurred on a weekend. None of the contracted short notice reserves were activated or preactivated as the forecast LOR2 was cancelled before the relevant lead times had elapsed.

On 13 February 2024, AEMO contracted 275MW of short notice RERT in Victoria in response to forecast LOR2 conditions. The forecast LOR 2 conditions were triggered by the trip of the Moorabool (MLTS) to Sydenham (SYTS) 500kV lines in Victoria. Following the trip, thermal limits on the 220 kV lines between Geelong Terminal Station (GTS) and MLTS were intermittently violating between dispatch intervals ending 1315 hrs to 1420 hrs. There was enough generation in the Victorian region to meet demand. However, due to constraints on the network, generation was not able to supply the load. RERT could not assist in relieving the constraints because the locations of the reserves were either not known or not in suitable locations. Instead, in order to operate the power system in a secure operating state, AEMO intervened by issuing a direction to shed 300 MW of load in the Keilor Terminal Station, Thomastown Terminal Station and Rowville Terminal Station metropolitan area.

Table 5 below shows short notice reserve contracts entered into by AEMO in Q1 2024. The 'Time' column in Table 5 sets out the initial term (reserve period) of each contract. This is the period that was considered reasonably necessary at the time of contracting to cover the period of the forecast LOR conditions and to cover operational requirements such as forecast uncertainty, pre-activation periods, activation periods, deactivation periods, and minimum activation durations. Note to cover uncertainty or operational constraints of providers, reserve contract times and quantity may exceed or be less than the forecast LOR conditions.

Table 5 Short notice reserve contracted

Provider	Location of reserve	Contracted reserve capacity	Time*	Date	Basis for contract
Energy Australia Pty Ltd	Queensland	10	17:30 to 21:00	27 January 2024	Forecast LOR2
Origin Energy Electricity Limited	Queensland	6	18:30 to 21:00	27 January 2024	Forecast LOR2
Origin Energy Electricity Limited	Queensland	18	17:30 to 21:00	27 January 2024	Forecast LOR2
QGC Pty Limited	Queensland	121	17:30 to 21:00	27 January 2024	Forecast LOR2
QGC Pty Limited	Queensland	31	17:30 to 21:00	27 January 2024	Forecast LOR2
Visy Industries Australia Pty Limited	Queensland	7	17:30 to 21:00	27 January 2024	Forecast LOR2
Boyne Smelters Limited	Queensland	150	18:30 to 20:30	27 January 2024	Forecast LOR2
Sub Total		343			
Energy Australia Pty Ltd	Victoria	17	15:30 to 17:30	13 February 2024	Forecast LOR2
Paper Australia Pty Ltd	Victoria	17	15:30 to 17:00	13 February 2024	Forecast LOR2
VIVA Energy Refining Pty Ltd	Victoria	6	15:00 to 17:00	13 February 2024	Forecast LOR2
Alcoa Portland Aluminium Pty Ltd	Victoria	235	15:30 to 19:30	13 February 2024	Forecast LOR2
Sub Total		275			

* Please note AEMO contracts for short notice reserve at no cost. These contracts may, or may not, be subsequently activated. If activated, the initial contracted times may not align with eventual activation times, because activation times may be refined as conditions evolve.

2.4 AEMO’s methodology for contracting RERT

Where market mechanisms are not successful in alleviating a reserve shortfall and the latest time to intervene has been reached, AEMO may intervene in the market by issuing a direction or a clause 4.8.9 instruction, or by exercising the RERT in accordance with NER clauses 3.8.14 and 3.20.

AEMO’s approach to determining its choice of supply scarcity mechanism when the need for intervention arises (RERT, direction, or clause 4.8.9 instruction) is detailed in the Supply Scarcity Procedure⁸.

In making this decision, AEMO must use reasonable endeavours to choose the mechanism, or combination of mechanisms, that is effective in addressing the supply scarcity conditions while minimising the associated direct and indirect costs.

AEMO’s procedure for the exercise of RERT sets out the methodology which it follows in determining the triggers for RERT, as well as the quantity and term of reserves contracted.

⁸ The Supply Scarcity Procedure can be found in appendix A of the Short Term Reserve Management procedure numbered SO_OP_3703, at <https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/power-system-operation/power-system-operating-procedures>.

AEMO followed its procedures and the NER (including the RERT principles) in contracting for RERT, including:

- RERT Panel recruitment and IRR procurement.
- Publication of notices.
- Requiring that reserves are not otherwise offered to the market or engaged.
- Determining the term and quantity of reserves to be contracted.

Under NER clause 3.20.2(b), AEMO must have regard to the RERT principles in exercising the RERT. These principles stipulate that AEMO is to take actions that have the least distortionary effect on the operation of the market, that actions taken should aim to maximise the effectiveness of reserve contracts at the least cost to end use consumers of electricity and that the average amount payable by AEMO does not exceed the estimated average Value of Customer Reliability (VCR) per region.

When entering into reserve contracts, AEMO factored these RERT principles into its decision-making:

- To minimise distortionary effects on the operation of the market, AEMO categorises RERT into the following three types based on their pre-activation and activation times:
 - Type 1 – capacity that can be pre-activated and activated in less than 30 minutes. These contracts are pre-activated and activated post-contingency (when an actual LOR3 occurs).
 - Type 2 – capacity where the sum of the pre-activation and activation lead times is greater than 30 minutes, but the activation lead time alone is less than 30 minutes. This means that for this capacity to be activated post-contingency (when an actual LOR3 occurs), it must be pre-activated in advance of the actual LOR3.
 - Type 3 – capacity whereby activation requires more than 30 minutes. This capacity needs to be pre-activated and activated in advance to ensure RERT is delivered on time.
- The use of these categories allows for minimal pre-activation and activation, since Type 1 and 2 categories can be activated post-contingent (during LOR3). This not only minimises impacts on the market, but also maximises the effectiveness of reserve contracts at the least cost to end use consumers of electricity.
- AEMO assesses whether offers by potential short notice RERT providers will exceed VCR, based on the pre-activation and activation of reserves for one hour or more.
- Interim reliability reserves contracted were assessed based on operational factors, ability to respond, capacity, reserve period, risk and value for money. AEMO assessed the total cost of interim reliability reserves under scenarios based on information provided in the ESOO forecasts.

3 Intervention

3.1 Decision to intervene

AEMO did not pre-activate or activate RERT in the 1stth quarter of 2024.

On the 13 February 2024, in order to maintain the power system in a secure operating state AEMO intervened by issuing a direction under clause 4.8.9 of the NER to shed 300 MW of load in the Keilor Terminal Station, Thomastown Terminal Station and Rowville Terminal Station metropolitan area. Refer to section 2.3 above for further details.

3.2 Intervention pricing

Although short notice reserves were contracted, AEMO did not activate RERT on 27 January 2024 (for the Queensland region) or 13 February 2024 (for the Victoria region). As no reserves were preactivated or activated in response to these events, RERT charges had no influence on spot prices or ancillary services payments in any intervention trading intervals which occurred during the reporting period.

3.3 No changes in dispatch outcomes

The activation of RERT can result in changes in dispatch outcomes because the activation of RERT during an actual LOR2 lowers demand, meaning less generation is dispatched. However, no RERT was activated in Q1 2024, so there were no changes to dispatch outcomes.

3.4 Impact on reliability

AEMO contracted an additional 19 MW of IRR in the reporting period to address interim reliability exceedances identified in the 2023 ESOO (as updated).

On 27 January 2024, AEMO contracted short notice RERT on the basis of a forecast LOR2 condition, but this was not activated.

For the 13 February 2024 RERT event, AEMO contracted short notice RERT on the basis of a forecast LOR2 condition, but this was not activated.

4 Cost of exercising RERT

NER clause 3.20.2(b)(2) requires that when AEMO exercises RERT it should have regard to the RERT principles, including the principle that actions taken should aim to maximise the effectiveness of the reserve contracts at the least cost to end-use consumers of electricity. Accordingly, AEMO enters into reserve contracts based on location, cost, capacity, time to activate, minimum activation time, and the profile of the forecast lack of reserve.

AEMO acts to minimise the total cost to consumers by contracting, pre-activating and activating the lowest cost reserves possible. Although no RERT was preactivated or activated, AEMO incurred costs under IRR contracts during the reporting period because these reserve contracts include availability charges. These costs are summarised in Table 1 (in section 1.3 of this report).

Table 6 below presents the cost recovery for IRR from Market Customers using electricity during the contracted period, as per NEM clause 3.20.6(f)(2). All RERT costs were recovered from Market Customers.

Table 6 Breakdown of costs recovered from Market Customers, RERT Q1 2024

Region	Participant Category	Payment type	Recovery period start	Recovery period end	Amount Recovered*	Period Total Energy (MWh)	Recovery rate (\$/MWh)
SA	Market Customers	Availability	31/12/2023 00:00	31/03/2024 23:30	\$83,850	2,674,218.16	\$0.03
VIC		Availability	31/12/2023 00:00	31/03/2024 23:30	\$3,428,108	8,996,194.76	\$0.38

*The recovery amount is inclusive of Wk1 to Wk13. As 31/12/2023 is included in Wk1, and is added to this quarterly report.

As no RERT was activated or dispatched during the reporting period, AEMO has not estimated any avoided costs of load shedding for the purposes of NEM clause 3.20.6 (e)(9).



5 AEMO's intervention process

AEMO's general process for deploying RERT is documented in SO_OP_3717 - Procedure for the Exercise of the Reliability and Emergency Reserve Trader.

AEMO considers that it followed all relevant provisions under NER clause 4.8 and procedures in SO_OP_3717 in the exercising of RERT in Q1 2024, to the extent it was able to do so.

A1. Appendix A1

The table below provide a summary timeline for RERT events in Q1 2024.

Table 7 Timeline of key events on 27 January 2024 Queensland

Date	Event/comment
<p>26/01/2024 2018 hrs MN 113819</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>AEMO declares a Forecast LOR2 condition under clause 4.8.4(b) of the National Electricity Rules for the QLD region for the following Period:</p> <p>[1.] From 1700 hrs 27/01/2024 to 2030 hrs 27/01/2024. The forecast capacity reserve requirement is 657 MW. The minimum capacity reserve available is 568 MW.</p> <p>AEMO is seeking a market response.</p> <p>AEMO has not yet estimated the latest time at which it would need to intervene through an AEMO intervention event.</p> <p>Manager NEM Real Time Operations</p>
<p>27/01/2024 0026 hrs MN 113824</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>The Forecast LOR2 condition in the QLD region advised in AEMO Electricity Market Notice No. 113819 has been updated at 0000 hrs to the following:</p> <p>[1.] From 1700 hrs 27/01/2024 to 2030 hrs 27/01/2024. The forecast capacity reserve requirement is 520 MW. The minimum capacity reserve available is 369 MW.</p> <p>[2.] From 2100 hrs 27/01/2024 to 2200 hrs 27/01/2024. The forecast capacity reserve requirement is 520 MW. The minimum capacity reserve available is 362 MW.</p> <p>AEMO is seeking a market response.</p> <p>AEMO has not yet estimated the latest time at which it would need to intervene through an AEMO intervention event.</p> <p>Manager NEM Real Time Operations</p>
<p>27/01/2024 0759 hrs MN 113827</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>The Forecast LOR2 condition in the QLD region advised in AEMO Electricity Market Notice No. 113824 has been updated at 0745 hrs to the following:</p> <p>From 1700 hrs 27/01/2024 to 2200 hrs 27/01/2024. The forecast capacity reserve requirement is 541 MW. The minimum capacity reserve available is 131 MW.</p>

Date	Event/comment
	<p>AEMO is seeking a market response.</p> <p>AEMO has not yet estimated the latest time at which it would need to intervene through an AEMO intervention event.</p> <p>Manager NEM Real Time Operations</p>
<p>27/01/2024 1152 hrs MN 113840</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>The Forecast LOR2 condition in the QLD region advised in AEMO Electricity Market Notice No. 113827 has been updated at 1130 hrs to the following:</p> <p>From 1800 hrs 27/01/2024 to 2030 hrs 27/01/2024. The forecast capacity reserve requirement is 520 MW. The minimum capacity reserve available is 315 MW.</p> <p>AEMO is seeking a market response.</p> <p>AEMO estimates the latest time it would need to intervene through an AEMO intervention event is 1230 hrs on 27/01/2024.</p> <p>Manager NEM Real Time Operations</p>
<p>27/01/2024 1149 hrs MN 113841</p>	<p>AEMO ELECTRICITY MARKET NOTICE.</p> <p>Reliability and Emergency Reserve Trader (RERT) Intention to negotiate for additional reserve – QLD1 Region-27/01/2024</p> <p>Refer to AEMO Electricity Market Notice no. 113840.</p> <p>AEMO intends to commence negotiations with RERT Panel members for the provision of additional reserve by issuing requests for tender for the following period of time; 17:30 to 21:00 hrs 27/01/2024</p> <p>If reserve is required, the period of activation or dispatch will be within this period but may not be for the entire period.</p> <p>AEMO will issue a further advice if reserve is contracted.</p> <p>Manager NEM Real Time Operations</p>
<p>27/01/2024 1241 hrs MN 113846</p>	<p>AEMO ELECTRICITY MARKET NOTICE.</p> <p>AEMO Intervention Event, Reliability and Emergency Reserve Trader (RERT) – QLD1 Region – 27/01/2024</p> <p>Refer to AEMO Electricity Market Notice no. 113841.</p> <p>AEMO has entered into a reserve contract and may implement a AEMO Intervention Event by dispatching that reserve contract to maintain the power system in a Reliable operating state during the following period of time; 17:30 to 21:00 hrs 27/01/2024</p> <p>If reserve is required, the period of activation or dispatch will be within this period, but may not be for all the entire period.</p> <p>AEMO will issue a further advice if the reserve contract is dispatched/activated.</p>

Date	Event/comment
	Manager NEM Real Time Operations
27/01/2024 1419 hrs MN 113853	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>The Forecast LOR2 condition in the QLD region advised in AEMO Electricity Market Notice No. 113840 has been updated at 1400 hrs to the following:</p> <p>[From 1900 hrs 27/01/2024 to 1930 hrs 27/01/2024. The forecast capacity reserve requirement is 520 MW. The minimum capacity reserve available is 514 MW.</p> <p>AEMO is seeking a market response.</p> <p>Manager NEM Real Time Operations</p>
27/01/2024 1420 hrs MN 113854	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>The Forecast LOR1 condition in the QLD region advised in AEMO Electricity Market Notice No. 113785 has been updated at 1400 hrs to the following:</p> <p>[1.] From 1700 hrs 27/01/2024 to 1900 hrs 27/01/2024. The forecast capacity reserve requirement is 1045 MW. The minimum capacity reserve available is 583 MW.</p> <p>[2.] From 1930 hrs 27/01/2024 to 2200 hrs 27/01/2024. The forecast capacity reserve requirement is 1009 MW. The minimum capacity reserve available is 540 MW.</p> <p>Manager NEM Real Time Operations</p>
27/01/2024 1550 hrs MN 113865	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>The Forecast LOR2 condition in the QLD region advised in AEMO Electricity Market Notice No. 113853 is cancelled at 1530 hrs 27/01/2024.</p> <p>Manager NEM Real Time Operations</p>

Table 8 Timeline of key events on 13 February 2024 Victoria

Date	Event/comment
13/02/2024 1322 hrs MN 114577	<p>AEMO ELECTRICITY MARKET NOTICE.</p> <p>Significant power system event - 13 Feb 2024</p> <p>At 1308 hrs 13/02/2024 a significant power system event occurred.</p>

Date	Event/comment
	<p>Description of event - Multiple tripping of generation and transmission lines in the Vic region</p> <p>Transmission element(s) tripped - Moorabool Sydenham No1 and No2 500 kV lines tripped</p> <p>Region/s - Vic</p> <p>Load interrupted - in excess of 1000 MW</p> <p>Generation volume tripped - 2300 MW</p> <p>Updates will be provided as additional information becomes available.</p> <p>This Market Notice is issued in accordance with NER clause 4.8.3.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1352 hrs MN 114589</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>AEMO declares a Forecast LOR2 condition under clause 4.8.4(b) of the National Electricity Rules for the VIC region for the following Period:</p> <p>[1.] From 1430 hrs 13/02/2024 to 1600 hrs 13/02/2024. The forecast capacity reserve requirement is 562 MW. The minimum capacity reserve available is 384 MW.</p> <p>AEMO is seeking a market response.</p> <p>AEMO has not yet estimated the latest time at which it would need to intervene through an AEMO intervention event.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1418 hrs MN 114602</p>	<p>AEMO ELECTRICITY MARKET NOTICE.</p> <p>Reliability and Emergency Reserve Trader (RERT) Intention to negotiate for additional reserve - VIC1 Region-13/02/2024</p> <p>Refer to AEMO Electricity Market Notice no. 114589.</p> <p>AEMO intends to commence negotiations with RERT Panel members for the provision of additional reserve by issuing requests for tender for the following period of time; 15:00 to 17:00 hrs 13/02/2024</p> <p>If reserve is required, the period of activation or dispatch will be within this period but may not be for the entire period.</p> <p>AEMO will issue a further advice if reserve is contracted.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1418 hrs MN 114603</p>	<p>AEMO ELECTRICITY MARKET NOTICE.</p> <p>Reliability and Emergency Reserve Trader (RERT) Intention to negotiate for additional reserve - VIC1 Region-13/02/2024</p> <p>Refer to AEMO Electricity Market Notice no. 114589.</p> <p>AEMO intends to commence negotiations with RERT Panel members for the provision of additional reserve by issuing requests for tender for the following period of time;</p>

Date	Event/comment
	<p>15:00 to 17:00 hrs 13/02/2024</p> <p>If reserve is required, the period of activation or dispatch will be within this period but may not be for the entire period.</p> <p>AEMO will issue a further advice if reserve is contracted.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1427hrs MN 114604</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>Actual Lack Of Reserve Level 3 (LOR3) in the VIC region - 13/02/2024</p> <p>Customer load shedding of non-interruptible load is occurring in the VIC region as a result of a shortfall of available capacity reserves.</p> <p>An Actual LOR3 condition has been declared under clause 4.8.4(b) of the National Electricity Rules for the VIC region from 1420 hrs.</p> <p>The Actual LOR3 condition is not forecast in Pre Dispatch.</p> <p>The maximum load to be interrupted is up to 450 MW from 1420 hrs 13/02/2024</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1435 hrs MN 114607</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>Load Shedding Direction in the Vic Region</p> <p>AEMO has directed load shedding commencing at 1420 hrs 13/02/2024 in the Victoria region to restore power system security.</p> <p>The direction was issued under section 116 of the NEL, and was a clause 4.8.9 instruction under the NER.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1506 hrs MN 114625</p>	<p>AEMO ELECTRICITY MARKET NOTICE.</p> <p>At 1308 hrs 13/02/2024 the Moorabool Sydenham No1 and No2 500 kV lines tripped. There have been reports of towers on the ground.</p> <p>In the Victorian region 1000 MW of customer load lost during the fault has been restored 2690 Generation tripped</p> <p>The AEMO instructed loadshed of 300 MW is being progressively restored.</p> <p>Updates will be provided as additional information becomes available.</p> <p>This Market Notice is issued in accordance with NER clause 4.8.3.</p> <p>Manager NEM Real Time Operations</p>

Date	Event/comment
<p>13/02/2024 1508 hrs MN 114627</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>Load Restoration Direction in the Vic Region</p> <p>AEMO has directed load restoration commencing at 1450 hrs 13/02/2024 in the Victoria region</p> <p>The direction was issued under section 116 of the NEL, and was a clause 4.8.9 instruction under the NER.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1513 hrs MN 114629</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>Cancellation - Load Restoration Direction in the Vic Region - 13/02/2024</p> <p>Refer to AEMO Electricity Market Notice ID 114607</p> <p>Load restoration as directed is complete. Direction cancelled from 1510 hrs 13/02/2024.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1519 hrs MN 114632</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>Cancellation of Actual (LOR3) condition in the VIC region - 13/02/2024</p> <p>The Actual LOR3 Condition in the VIC region advised in AEMO Electricity Market Notice No.114604 is cancelled at 1515 hrs 13/02/2024.</p> <p>Manager NEM Real Time Operations</p>
<p>13/02/2024 1615 hrs MN 114644</p>	<p>AEMO ELECTRICITY MARKET NOTICE</p> <p>Cancellation of Actual (LOR2) condition in the VIC region - 13/02/2024</p> <p>The Actual LOR2 Condition in the VIC Region advised in AEMO Electricity Market Notice No.114589 is cancelled at 1614 hrs 13/02/2024.</p> <p>Manager NEM Real Time Operations</p>

Glossary

Terms defined in the National Electricity Law and the NER have the same meanings in this report unless otherwise specified below.

Term	Definition
ESOO	Electricity Statement of Opportunities
IRM	Interim Reliability Measure
IRR	Interim Reliability Reserves
LOR1	Lack of Reserve level 1. The threshold for an LOR1 is determined by the larger value of either the FUM or the sum of the two largest credible risks in the region (LCR2).
LOR2	Lack of Reserve level 2. The threshold for an LOR2 is determined by the larger value of either the FUM or the largest credible risk in the region (LCR).
LOR3	Lack of Reserve level 3. The threshold for an LOR3 condition is when the forecast reserve for a region is at or below zero.
NER	National Electricity Rules
RERT	Reliability and Emergency Reserve Trader
RRO	Retailer Reliability Obligation
USE	Unserviced Energy
VCR	Value of Customer Reliability