Reliability and Emergency Reserve Trader (RERT)
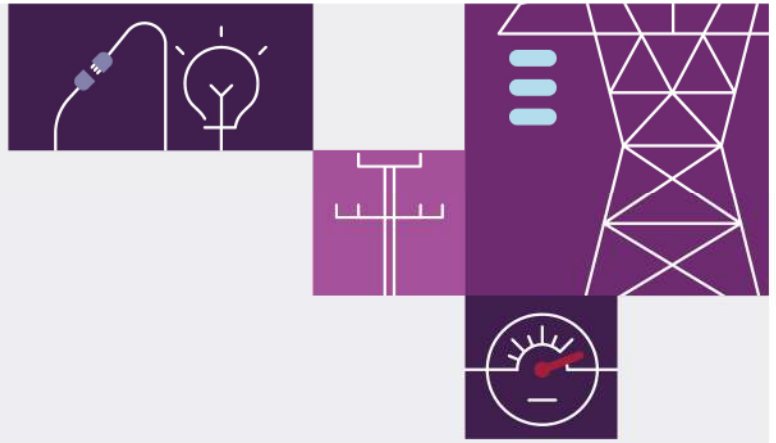
November 2022

Quarterly Report Q3 2022

1 July to 30 September 2022

A report for the National Electricity Market

Important notice

Purpose

AEMO publishes the Reliability and Emergency Reserve Trader (RERT) Quarterly Report under clause 3.20.6 of the National Electricity Rules.

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Version control

Version	Release date	Changes
1	11/11/2022	First issue

AEMO acknowledges the Traditional Owners of country throughout Australia and recognises their continuing connection to land, waters and culture. We pay respect to Elders past and present.

Executive summary

The 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.

5 July 2022 RERT – Queensland

On 5 July 2022, in Queensland, AEMO contracted 63 megawatts (MW) of short notice reserves in response to a forecast Lack of Reserve 2 (LOR2).

The total cost payable by AEMO for this RERT event was $639,016. This includes the pre-activation of reserves which were subsequently not activated, as well as the costs for reserves which were both pre-activated and activated.

The pre-activation of reserves in effect pays reserve providers (typically commercial and industrial loads) to be ready for activation based on a forecast or actual lack of reserve. This is an operational requirement that must be sequenced before AEMO can activate RERT to improve the supply-demand balance..

On 5 July 2022, 63 MW of reserves were pre-activated, however the forecast lack of reserve improved quickly when network limits were unexpectedly revised allowing generator availability to increase; 10 MW of reserves had already been activated at this time.

AEMO acted to minimise the total cost to consumers by pre-activating and activating the lowest possible cost reserves. The pre-activation costs for reserves which were subsequently not needed led to the total cost per megawatt hour (MWh) of reserves increasing to more than the average value of customer reliability (VCR).
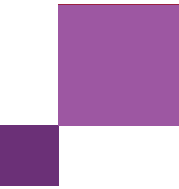
The total short notice RERT cost per MWh was $71,161, which is more than the average VCR of $41,520 per MWh for Queensland. The activation cost per MWh was $18,000, which reflects the rate paid for the reserves delivered, excluding the pre-activation and market compensation costs.

AEMO's contracting and activation of 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.

This report is published under clause 3.20.6 (b) of the NER, and accounts for reserve contracts entered into and activated by AEMO in the period from 1 July 2022 to 30 September 2022 (Q3 2022).

The end of financial year information specified under clause 3.20.6 (g) of the NER will be reported on the AEMO Reliability and Emergency Reserve reporting web page[1].

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[1] At https://aemo.com.au/energy-systems/electricity/emergency-management/reliability-and-emergency-reserve-trader-rert/rert-reporting.
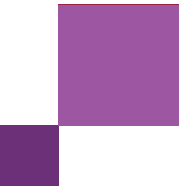
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1 RERT activity Q3 2022 (1 July to 30 Sept)

1.1 Procurement

The 2021 *Electricity Statement of Opportunities* (ESOO) and April 2022 *Update to the 2021 ESOO* presented reliability forecasts against the 0.002% reliability standard and against the Interim Reliability Measure (IRM) of 0.0006%.

Neither the 2021 ESOO or the *Update to the 2021 ESOO* forecast expected unserved energy (USE) above the reliability standard or the IRM in any NEM region for this period. As a result, no Long Notice Reserve or Interim Reserve was contracted in the National Electricity Market (NEM).

AEMO established a panel of providers, in consultation with the relevant governments, for the provision of reserves at short notice. At the start of Q3 2022, up to 2,030 megawatts (MW) of potential reserve capacity was in place through panel agreements. Under the panel agreements, no capacity is contracted until required and the total reserves available may vary. No payments for short notice reserves are made until a reserve shortfall is forecast or arises and reserves are contracted and pre-activated or activated.

In Q3 2022, short notice reserves were contracted; see Section 2.2.

In Q3 2022, AEMO activated Reliability and Emergency Reserve Trader (RERT) on 5 July 2022, this activation will be covered in this report.

1.2 Costs incurred

The total amount paid by AEMO for RERT in Q3 2022 was $639,016. Table 1 shows a breakdown of the amounts paid including payment type for all contracts activated in Q3 2022. Additional RERT costs can be incurred in Q3 2022 through the settlement revision process.

Table 1   Short notice RERT costs incurred for Q3 2022

NEM region	Availability costs ($)[A]	Pre-activation costs ($)	Activation costs ($)	Intervention costs ($)[B]	Total cost ($)
Queensland	$-	$478,211	$161,637	-$832	$639,016
Totals	$-	$478,211	$161,637	-$832	$639,016

A. Availability payments do not apply for short notice contracts. NER 3.20.6(d)(1) requires average values per region, which in the case of a single event in a region are the same values as calculated for that event.
B. This is the sum of all affected participant compensation, a negative value means affected participants need to pay AEMO.

2 Reserve procurement

2.1 Panel arrangements

Through open tendering processes under the NER and in consultation with relevant state governments, in 2021 AEMO established a panel of providers representing estimated additional reserves of up to 2,030 MW in total across the NEM under short notice panel agreements. This short notice RERT panel was in place for Q3 2022.

These agreements enable potential RERT providers to offer reserves in short notice situations on pre-negotiated contract terms. The short notice RERT panel is one of the tools AEMO can use to help ensure the reliability standard in a region is met. Short notice reserve panel agreements were entered into in South Australia, Victoria, New South Wales, and Queensland.

RERT resources can have different response lead times, activation conditions, costs and response capability; as a result, not all resources will necessarily be suitable for activation for a given shortfall event.

Under the short notice panel agreements, no availability costs are incurred, and payments will only be made based on pre-activation and/or actual megawatt hours (MWh) activated. There is no cost to consumers unless the reserve is pre-activated and/or activated.

AEMO did not enter into panel arrangements for medium notice Reserve in Q3 2022.

2.2 Short notice reserves contracted

AEMO may enter into reserve contracts at short notice to ensure that the reliability of supply in a region meets the reliability standard. In short notice situations, contracts may be entered into if there is a forecast or actual Lack of Reserve (LOR) 2 or LOR3. 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 can contract for short notice reserves with no cost to consumers (unless the reserve is pre activated or activated). 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.

AEMO contracted 63 MW of short notice RERT in Queensland on 5 July 2022 in response to a forecast LOR2 condition. AEMO contracted these reserves based on the maximum load forecast to be interrupted in the event of a credible contingency of at least 240 MW.

These short notice reserves were contracted in case they would be required to maintain reserves, thereby reducing the potential risk of load shedding. No costs were incurred at the point of contracting because short notice panel agreements utilise contracts that have no ongoing availability costs and payments are only made based on pre-activation and/or actual MWh activated.

Table 2 below shows short notice reserve contracts entered into by AEMO in Q3 2022.

The 'Time' column in Table 2 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.

Table 2   Short notice reserve contracted

Provider	Location of reserve	Contracted reserve capacity	Time*	Date	Basis for contract
AGL Energy Services Pty Ltd	Queensland	6	15:00 to 20:00	5 July 2022	Forecast LOR2
Enel X Australia Pty Ltd	Queensland	23	14:00 to 21:00	5 July 2022	Forecast LOR2
Shell Energy Retail Pty Ltd	Queensland	12	15:00 to 21:00	5 July 2022	Forecast LOR2
EnergyAustralia Pty Ltd	Queensland	12	15:30 to 21:00	5 July 2022	Forecast LOR2
Origin Energy Electricity Limited	Queensland	10	06:00 to 23:30	5 July 2022	Forecast LOR2
Sub total		**63**			

* 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.

2.3 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 Procedure[2].

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.

AEMO followed its procedures and the NER in contracting for short notice RERT, including:

• RERT Panel recruitment.

• 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.

• The basis for determining the estimated Value of Customer Reliability (VCR).

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

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[2] 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.

market, and actions taken should aim to maximise the effectiveness of reserve contracts at the least cost to end use consumers of electricity.

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.

- During the establishment of the RERT panel, AEMO implemented the use of VCR as the maximum for assessing offers by potential RERT panel members, based on the pre-activation and activation of reserves for one hour or more.
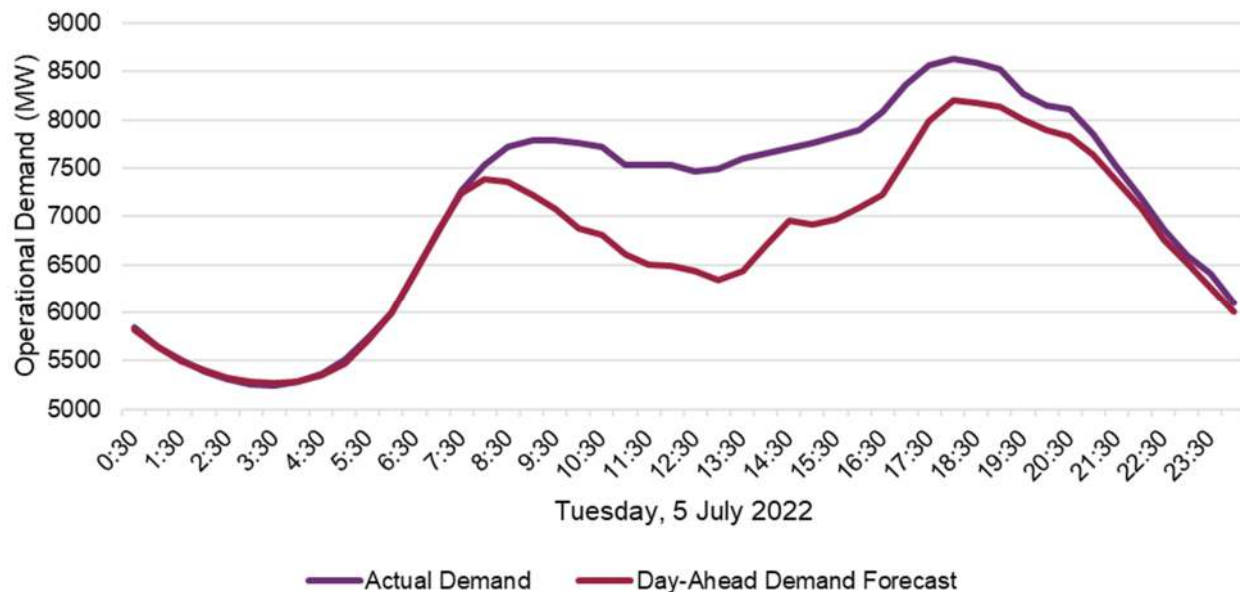
3 RERT activation on Tuesday 5 July 2022

3.1 Pre-event conditions

On the morning of Tuesday 5 July 2022, an east coast low had decayed, leaving a trough over New South Wales. As this trough was migrating north, the focus of heavy rain shifted to the Hunter and mid north coast of NSW. This trough maintained thick, extensive cloud over south east Queensland, which kept daytime temperatures low. The apparent temperature on this day was forecast to be no higher than low teens. Day-ahead maximum temperature forecasts were 13.9°C, 16°C and 14.9°C in Archerfield, Coolangatta and Amberley respectively. The inclement weather resulted in a day-ahead maximum operational demand of 8,203 MW at 1800 hrs.

As the day evolved, temperatures remained well below day-ahead forecasts at all three of the weather stations listed above. Maximum temperatures at Archerfield and Amberley were 12.3°C and 11.7°C. As a result of the cooler than forecast temperatures, the Queensland operational demand forecast at 1200 hrs had increase to 8,715 MW for the evening peak at 1800 hrs.

Figure 1   Queensland day-ahead forecast and actual operational demand, Tuesday 5 July 2022

3.2 Assessment of market response and latest time to intervene

On 5 July 2022, AEMO complied with NER clause 3.8.14 and followed its procedures in determining that RERT was the appropriate mechanism to address the conditions of supply scarcity. When the decision was made at the latest possible time to respond to the forecast lack of reserve:
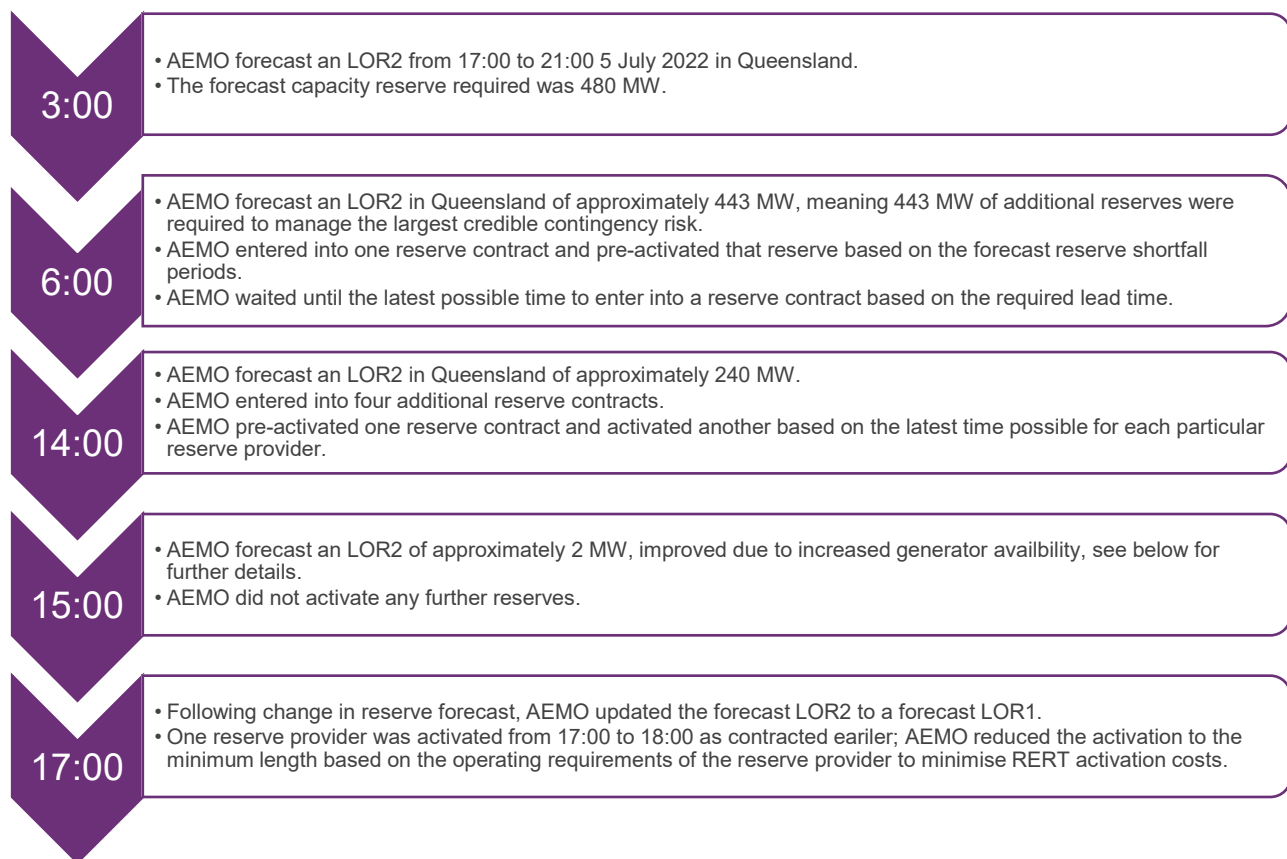
• Direction options had been exhausted as far as reasonably practical, and

• The cost of pre-activating and activating RERT was estimated to be less than that of issuing a clause 4.8.9 instruction for load shedding based on the full pre-activation and activation of reserves forecast to be needed.

At 0252 hrs, AEMO issued Market Notice (MN) 99941[3], forecasting a LOR2 in the Queensland region from 1700 hrs to 2100 hrs on 5 July 2022. The forecast capacity reserve required was 480 MW. The latest time to intervene for RERT was estimated to be 0900 hrs and was subsequently re-estimated to be 0600 hrs. The reserve providers were pre-activated and activated at the latest times possible based on their lead times; see Section 3.3 below.

3.3 Intervention event

RERT contracts vary in terms of pre-activation and activation lead times, as well as response times (for example, an industrial load responding to a request to reduce load under RERT may need several hours to prepare plant or undertake a safe shutdown) and minimum continuous run times. On 5 July 2022, in response to forecast LOR2 conditions in Queensland, based on the minimum lead times of the RERT provider, AEMO followed the procedure for the exercise of RERT[4] to take the actions summarised in Figure 2. Note that the times used in Figure 2 are illustrative, please refer to market notices for precise timings of events.

Figure 2   High level timeline (AEST)

3:00	• AEMO forecast an LOR2 from 17:00 to 21:00 5 July 2022 in Queensland. • The forecast capacity reserve required was 480 MW.
6:00	• AEMO forecast an LOR2 in Queensland of approximately 443 MW, meaning 443 MW of additional reserves were required to manage the largest credible contingency risk. • AEMO entered into one reserve contract and pre-activated that reserve based on the forecast reserve shortfall periods. • AEMO waited until the latest possible time to enter into a reserve contract based on the required lead time.
14:00	• AEMO forecast an LOR2 in Queensland of approximately 240 MW. • AEMO entered into four additional reserve contracts. • AEMO pre-activated one reserve contract and activated another based on the latest time possible for each particular reserve provider.
15:00	• AEMO forecast an LOR2 of approximately 2 MW, improved due to increased generator availbility, see below for further details. • AEMO did not activate any further reserves.
17:00	• Following change in reserve forecast, AEMO updated the forecast LOR2 to a forecast LOR1. • One reserve provider was activated from 17:00 to 18:00 as contracted earler; AEMO reduced the activation to the minimum length based on the operating requirements of the reserve provider to minimise RERT activation costs.

The above timeline shows that the forecast lack of reserve changed significantly, from approximately 240 MW at 1400 hrs when the decision was made to enter contracts, pre-activate and activate reserves, to approximately

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[3] Market Notices are published at https://aemo.com.au/market-notices.

[4] See the RERT procedure at https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/power_system_ops/procedures/so_op_3717-procedure-for-the-exercise-of-the-reliability-and-emergency-reserve-trader.pdf?la=en.

2 MW at 1500 hrs. The main factor contributing to the reserve conditions changing so rapidly was the improvement in generator availability. Generator availability was constrained by a network limitation, where the network limitation was subsequently revised, in effect reducing the constraints on generation.   Network ratings can be revised by Network Service Providers (NSP) based on the ambient weather conditions. AEMO followed its process to communicate with NSPs in the morning and throughout the day on options to address the LOR 2 condition. It was not known by AEMO if the network ratings could be revised and the NSP decision to make the revision occurred after the latest time intervene using short notice RERT.

AEMO is seeking to reduce short notice RERT lead times to decrease the risk of pre-activating or activating reserves that are subsequently not needed.

AEMO proceeded to deactivate all reserve contracts at the earliest possible times. All reserve providers were de-activated by 18:00 hrs, reflecting the minimum deactivation lead time required by the reserve provider. At 1814 hrs, AEMO issued MN 100025 to declare the deactivation of RERT and that the AEMO intervention event had ended.

In total, on 5 July 2022, AEMO instructed the activation of 10 MWh of RERT from 1700 hrs to 1800 hrs[5].

3.4 Intervention pricing

Intervention pricing was applied for this event in accordance with NER 3.9.3(b) for the intervention periods from the trading intervals (TIs) ending 1705 hrs to 1800 hrs on 5 July 2022.

Intervention pricing is applied based on the constraints populated into the National Electricity Market Dispatch Engine (NEMDE). These constraints are created by AEMO's RERT scheduling tool based on the times the contracted reserves are scheduled. Intervention pricing on 5 July 2022 reflects 10 MWh of RERT load applied throughout the RERT intervention pricing period.

3.5 Changes in dispatch outcomes

The activation of RERT resulted in changes in dispatch outcomes. Table 3 compares the variation in total generation between the physical and pricing runs[6] for each region. Table 4 compares the variation in total interconnector flows between the physical and revised pricing runs for each interconnector.

Table 3   Summary of total energy generation during 5 July 2022 RERT event (MWh)

	NSW	QLD	SA	TAS	VIC
Physical run	10,877	8,759	1,730	1,856	6,705
Pricing run	10,839	8,718	1,730	1,844	6,803
Change	37	41	0	12	-98

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[5] Where the volume of RERT delivered by a RERT provider is greater than the amount set out in the activation instruction, the payment is only for the volume activated.

[6] The intervention pricing methodology uses two runs of NEMDE – physical and pricing. The physical run constraint would dispatch the RERT load to zero and the pricing run constraint would dispatch the activated RERT load to cause a different price outcome for intervention pricing.

Table 4   Summary of total interconnector flows during 5 July 2022 RERT event (MWh)

	Terranora	QNI	VIC-NSW	Heywood	Murraylink
Physical run[7]	1	-122	-17	86	48
Pricing run	3	-72	72	86	48
Change	**-2**	**-50**	**-89**	**0**	**0**

3.6 Impact on reliability

For the 5 July 2022 RERT event, there was no manual involuntary load shedding. AEMO activated RERT on the basis of forecast LOR2 conditions which developed into an actual LOR1 condition from 1747 hrs (MN 100023) until 1900 hrs.

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[7] Positive numbers are for flows flowing north or west, negative for flows flowing south or east.

4 Cost of exercising RERT

NER clause 3.20.2(b)(2) requires that when AEMO activates 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 activated reserve contracts based on location, cost, capacity, time to activate, minimum activation time, and the profile of the forecast lack of reserve.

AEMO acted to minimise the total cost to consumers by pre-activating and activating the lowest possible cost reserves. The pre-activation costs for reserves which were subsequently not needed led to the total cost per megawatt hour (MWh) of reserves increasing to more than the average value of customer reliability (VCR).

The total cost of exercising RERT in Q3 2022 was $636,016, which includes pre-activation, activation, and intervention costs. The cost per MWh has been calculated based on the total cost divided by the MWh delivered for the activation event. The average cost per MWh associated with exercising RERT in Q3 2022 is $71,161/MWh which is more than the average VCR of $41,520 per MWh for Queensland. The activation cost per MWh was $18,000, which reflects the rate paid for the reserves delivered, excluding the pre-activation and market compensation costs.

Table 5 below shows a breakdown of the costs associated with exercising RERT during Q3 2022, which were included in the 3 August final statements, as per NER clause 3.20.6(f)(1).

Table 5   Costs associated with activating RERT in Q3 2022

	State	Pre-activation costs ($)	Activation costs ($)	Intervention costs ($)*	Total cost ($)	Cost per megawatt hour ($/MWh)
5 July 2022	QLD	$478,211	$161,637	-$832	$639,016	$71,161.16

*Intervention costs represent the compensation paid to Market Participants due to the intervention event (for example, to compensate for energy generation which is displaced by RERT capacity), and to Eligible Persons (Settlement Residue Auction [SRA] holders) due to changes in interconnector flows, and therefore changes in the value of Settlement Residues. Note that these costs are subject to change under clause NER 3.12.1(a). A negative value means affected participants need to pay AEMO.

Table 6 below presents the cost recovery for the activation event, including a breakdown of the cost recovery from Market Customers using electricity during the RERT event (Usage) and cost recovery from Market Customers using electricity in the billing week[8] (Other), as per NEM clause 3.20.6(f)(2). All RERT costs were recovered from Market Customers.

Table 6   Breakdown of how costs were allocated to the Market Customers, RERT Q3 2022

Region	Participant category	Payment type	Recovery period start	Recovery period end	Amount recovered	Period total energy (MWh)	Recovery rate ($/MWh)
QLD	Market Customers	Usage	05/07/2022 17:05	05/07/2022 18:00	$160,805	8,107.32	$19.83
QLD		Other	03/07/2022 0:05	10/07/2022 00:00	$478,211	977,670.84	$0.49

On 5 July 2022, the forecast LOR2 became an actual LOR1. As such, the contingency risk and avoided manual load shedding as a cost is zero.

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[8] The billing period is the period ending 18 June 2022.

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 Q3 2022, to the extent it was able to do so.

A1. Timeline for RERT events in Q3 2022

Table 7   Timeline of key events on 5 July 2022, Queensland

Date	Event/comment
5/07/2022 **2:52 hrs**	MN99941 - PDPASA - Update of the Forecast Lack Of Reserve Level 2 (LOR2) in the QLD Region on 05/07/2022 The Forecast LOR2 condition in the QLD region advised in AEMO Electricity Market Notice No. 99921 has been updated at 0230 hrs to the following: [1.] From 1700 hrs 05/07/2022 to 2100 hrs 05/07/2022. The forecast capacity reserve requirement is 480 MW. The minimum capacity reserve available is 66 MW. AEMO is seeking a market response. AEMO has estimated the latest time it would need to intervene through an AEMO intervention event is 0900 hrs 05/07/2022. Manager NEM Real Time Operations
5/07/2022 **5:25 hrs**	MN99962 - INTENTION TO COMMENCE RERT CONTRACT NEGOTIATIONS Reliability and Emergency Reserve Trader (RERT) Intention to negotiate for additional reserve - QLD1 Region-05/07/2022 Refer to AEMO Electricity Market Notice no. 99941. 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; 17:00 to 23:30 hrs 05/07/2022 If reserve is required, the period of activation or dispatch will be within this period but may not be for the entire period. AEMO will issue a further advice if reserve is contracted. Manager NEM Real Time Operations
5/07/2022 **5:56 hrs**	MN99963 - INTENTION TO IMPLEMENT an AEMO INTERVENTION EVENT WITH RERT AEMO Intervention Event, Reliability and Emergency Reserve Trader (RERT) - QLD1 Region - 05/07/2022 Refer to AEMO Electricity Market Notice no. 99962. 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 Secure and Reliable operating state during the following period of time; 17:00 to 21:30 hrs 05/07/2022 If reserve is required, the period of activation or dispatch will be within this period, but may not be for all the entire period. AEMO will issue a further advice if the reserve contract is dispatched/activated. Manager NEM Real Time Operations
5/07/2022 **14:00 hrs**	MN99992 - RERT DISPATCHED AEMO Intervention Event, Reliability and Emergency Reserve Trader (RERT) - QLD1 Region- 05/07/2022 Refer AEMO Electricity Market Notice no. 99963 AEMO has dispatched/activated reserve contract(s) to maintain the power system in a Secure and Reliable operating state. The reserve contract(s) was dispatched/activated at 17:00 hrs 05/07/2022 and is forecast to apply until 21:00 hrs 05/07/2022 AEMO has implemented an AEMO intervention event for the duration the reserve contract(s) is dispatched/activated/ To facilitate the RERT process, constraints commencing with the following identifiers may be evident at various times in dispatch, #RT_QLD1 Manager NEM Real Time Operations
5/07/2022 **18:14 hrs**	MN100025 - End of RERT Dispatch - 05/07/2022 and End of intervention event End of Reliability and Emergency Reserve Trader (RERT) dispatch for - QLD1 Region - 05/07/2022 and end of AEMO Intervention Event. Refer AEMO Electricity Market Notices 99992 Activation of reserve contract(s) has ended. The reserve contract(s) were activated from 17:00 hrs 05/07/2022 to 18:00 hrs 05/07/2022 The AEMO Intervention Event ended from 18:00 hrs 05/07/2022 Manager NEM Real Time Operations

Glossary

This document uses many terms that have meanings defined in the National Electricity Rules (NER). The NER meanings are adopted unless otherwise specified.

Term	Definition
ESOO	Electricity Statement of Opportunities
IRM	Interim reliability measure
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.
MN	Market notice
MW	Megawatt/s
MWh	Megawatt hour/s
NEM	National Electricity Market
NER	National Electricity Rules
RERT	Reliability and Emergency Reserve Trader
SRA	Settlement Residue Auction
USE	Unserved energy
VCR	Value of Customer Reliability