AEMC

REVIEW

Australian Energy Market Commission

FINAL REPORT

REVIEW OF THE INTERIM RELIABILITY MEASURE

25 MAY 2023

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Energy Ministers' Meeting (formerly the Council of Australian Governments Energy Council). We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the Energy Ministers' Meeting.

SUMMARY

The Commission is making a final recommendation to extend the interim reliability measure by three years

1 The Australian Energy Market Commission (the AEMC or Commission) has made a final recommendation to continue the application of the interim reliability measure (IRM) to the retailer reliability obligation (RRO) to 30 June 2028. The Commission intends to review the need for the IRM past this date following the Reliability Panel's (the Panel's) 2026 Reliability Standards and Settings Review.

2 As the power system transitions to a high variable renewable energy (VRE), energy-limited power system, reliability risk, particularly tail risk, must be characterised differently. This tail risk represents low-probability events that could have a high impact on reliability outcomes. In making its final recommendation, the Commission considers that removing the IRM as the trigger for the RRO between 1 July 2025 and 30 June 2028 could increase uncertainty about the reliability framework and how tail risk is being managed as the power system transitions to a high VRE power system.

3 In 2020, on the advice of the Energy Security Board (ESB), Energy Ministers introduced the IRM of 0.0006 per cent expected unserved energy (USE) as an interim measure to meet the community expectation that electricity supply remains reliable during a 1 in 10-year summer. This tighter standard is a risk management tool for two measures designed to provide more certainty about reliability; the RRO and the Interim Reliability Reserve (IRR).

While stakeholders had mixed views, the Commission considers the recommendation is in the long-term interest of consumers

4 The Commission considers the final recommendation to extend the application of the IRM to the RRO will best support the national electricity objective (NEO).

5 The Commission received eight submissions from stakeholders on its draft recommendation to extend the application of the IRM to the RRO by three years. Of the eight, two supported the draft recommendation, five did not support and one was neutral on the need for the IRM.

6 Stakeholders have made valid points that the RRO being triggered by the IRM may lead to increased costs as it may result in the RRO being triggered more often. The Commission has taken these points into account in balancing the options and considers that, notwithstanding the risk of increased costs, our recommendation to extend the IRM is warranted in light of the changing nature of the drivers of reliability risk. The IRM plays an important proxy role to address tail risk over the period 1 July 2025 to 30 June 2028 as the market transitions to a high VRE and energy-limited power system. The Commission considers that maintaining the IRM as a supplementary measure while the Panel reviews the form of the reliability standard provides greater certainty to the market on the reliability framework until July 2028.

7 Some stakeholders provided feedback that the Commission should have considered the Panel's recent decision on the level of the reliability standard. However, the Commission notes that the Panel has recommended that a standard of 0.002 per cent USE reflects the value

customers place on reliability for the purpose of the market settings. The Commission supports the Panel's process but considers that the IRM is an additional measure to the market settings to protect customers from increasing reliability risks during the period before the Panel has completed its work on the form of the reliability standard.

8 The Reliability Panel has recognised the need to develop a standard that appropriately addresses 'tail risk' and estimates that this risk may not eventuate until after 2028. The Commission considers that retaining the tighter standard until the new standard is in place serves as a 'safety net' if this risk does emerge sooner. Given the low likelihood that the IRM will trigger the RRO more often, and therefore lead to additional costs, the Commission considers that it is an appropriate balance of the potential risk and cost compared to removing the standard.

9 Therefore, given the size and pace of the energy market transition between now and 2028, the Commission does not consider the removal of the IRM as a proxy risk management tool as being in the long-term interests of consumers.

10 While the Commission is making a final recommendation to extend the tighter standard for the RRO, it does agree that it should only remain until there is an established longer term approach to managing tail risk. Therefore, the Commission intends to review the need for any further reliability measures following the outcome of the Panel's review into the form of the standard and the 2026 Reliability Standard and Settings Review.

A rule change will be required to progress the Commission's final recommendation

11 The Commission will require a rule change request to be submitted to give effect to the recommendation in this final report. The final recommendation is outlined below.

BOX 1: FINAL RECOMMENDATIONS

Recommendation: Extend the application of the IRM to the RRO to 1 July 2028 to align with the outcome of the Panel's review into the form of the standard and the 2026 Reliability Standard and Settings Review.

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1 THE CONTEXT FOR THIS REVIEW

This chapter outlines:

- reliability framework in the national electricity market
- context for introducing the interim reliability measure (IRM)
- the Commission's assessment criteria.

1.1 The reliability framework is designed to ensure reliability at a level consumers value

Reliability in the NEM means having enough generation, demand response, and network capacity to supply customers with the energy they require, with high confidence. However, no electricity system can be completely reliable. Not only are there always unforeseen events that can occur, but there are also significant costs associated with ensuring very high levels of reliability that customers may not value. Therefore, there is a trade-off between cost and reliability.

A critical part of the NEM's reliability framework is the reliability standard which seeks to balance the trade-off between reliability and the value which customers place on it.

The reliability standard establishes an unserved energy threshold, at which the cost of infrastructure needed to supply consumers is balanced against the cost consumers place on the value of reliability. In the NEM, the standard requires sufficient generation and transmission interconnection so that no more than 0.002 per cent of annual electricity demand goes unmet in each region (0.002 per cent unserved energy (USE)).

The reliability standard is a key input for the market price settings which include the Market Price Cap (MPC) and Cumulative Price Threshold (CPT).[1] The market price settings provide financial incentives to market participants for operational decisions and to invest in energy infrastructure, supporting reliability in the NEM. In contrast, the IRM is not used for market settings and has much more limited application as triggers for the interim reliability reserve (IRR) and retailer reliability obligation (RRO).

The Reliability Panel's (Panel's) 2022 Reliability Settings and Standard Review recommended that the current standard of 0.002 per cent USE remain in place from 1 July 2025 to 30 June 2028. Using this standard it then recommended the associated market settings.[2] Further, it recommended a review into changing the form of the standard to incorporate a 'tail risk' metric.[3]

The Panel has commenced work to review the form of the standard. This review will consider amongst other things, the changing nature of supply and demand in the NEM with greater

1 The market price settings set by the reliability standard are the market price cap, cumulative price threshold, administered price cap and market floor price.

2 Reliability Panel, *2022 Review of the Reliability Standard and Settings, Final report*, p. iii.

3 Ibid, p. iv.

levels of variable renewable energy (VRE), consumer energy resources and changes in demand patterns.

The Panel's review of the form of the standard will be important in establishing if a new reliability framework is needed from 1 July 2028, which transitions to longer term reliability settings, that more comprehensively addresses tail risk.

1.2 The IRM was introduced while further work on the reliability framework was completed

The NEM is undergoing a significant transformation. It is shifting from a capacity-limited thermal power system to a more energy-limited power system characterised by high levels of VRE. The transformation requires careful consideration of how reliability is characterised and managed to continue to ensure the system can meet customer demand at a level they value.

As part of the rethinking of reliability risk, in 2019, Ministers requested advice from the Energy Security Board (ESB) on the possibility of a tighter reliability standard. The ESB recommended that moving to a tighter reliability standard of 0.0006 per cent USE would best meet the expectation that electricity supply remain reliable during a 1 in 10-year summer.[4]

In 2020, at the advice of the ESB, energy ministers introduced the IRM, based on a trigger of 0.0006 per cent USE. The IRM triggers two measures:

1. the RRO
2. the IRR (an out-of-market capacity reserve) which allows the Australian Energy Market Operator (AEMO) to enter multi-year reserve contracts for reliability.

Ministers intended that these measures would preserve reliability and system security by supplementing the existing framework and reliability standard for a limited period.

Further, in 2022, Ministers agreed to two additional changes to the IRR and RRO trigger.

- Ministers in all jurisdictions can now make T-3 instruments at any time without linking the instrument to a specific reliability gap.[5] However, only AEMO can request the Australian Energy Regulator (AER) make a T-1 instrument based on a forecast reliability gap in AEMO's Electricity Statement of Opportunity (ESOO) publications.
- AEMO can now enter multi-year contracts triggered by the IRM beyond mid-2025.[6] In practice, this extends the IRR by three years to March 2028 for contracts made prior to 31 March 2025.

Appendix B provides further information on the IRM, RRO and IRR.

Alongside the IRM, energy ministers also agreed that the Commission should review the IRM by 30 June 2023. As part of this review the Commission must:

- publish terms of reference

4 Further information on the decision to set the interim standard at 0.0006 per cent USE including the underlying modelling delivered by the COAG Energy Council is available here.

5 ESB, *T3 trigger for the RRO — Draft Bill*, 20 July 2022.

6 *National Electricity Amendment (Interim Reliability Reserve) Rule 2022*.

- follow the rules consultation procedure
- consult with the Reliability Panel.[7]

1.3 The Commission must act in the long-term interests of consumers

The Commission can only recommend changes to the regulatory framework in its reviews if it is satisfied changes will or are likely to contribute to achieving the relevant energy objectives.

For this review, the relevant energy objective is the national electricity objective (NEO):

> To promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> 1. price, quality, safety, reliability and security of supply of electricity; and
> 2. the reliability, safety and security of the national electricity system.

1.4 We have assessed our recommendation using five criteria

In considering the NEO and the issues raised in the terms of reference for this review, the Commission has assessed its recommendation using five assessment criteria. A summary of how the final recommendation meets the assessment criteria is provided in section 2.6.

1. **Efficiency:** The regulatory framework should encourage innovation and efficient investment in the supply of energy services.

2. **Appropriate allocation of risk:** Risks should be borne by parties who are in the best position to manage them and have the incentives to do so.

4. **Predictability and stability:** The regulatory framework should promote confidence in the market by clearly defining roles and responsibilities, and support sufficient information for parties to make decisions. The framework should also result in predictable outcomes for all participants.

5. **Simplicity and transparency:** The regulatory framework should be as simple and practicable as possible. The framework should be without excessive regulation that might impose unnecessary complexity, risks or costs.

6. **Timing and practicality:** Any proposed changes should consider how likely a practical policy solution will be developed and implemented. Additionally, how likely recommended changes will achieve the intended benefits in a timely, proportionate, and targeted way.

7 See clause 11.128.12(c) of the NER.

2 THE COMMISSION'S FINAL RECOMMENDATION

On 9 March 2023, the AEMC published terms of reference and a draft report on this review. The Commission received eight submissions in response to the draft recommendation.

This chapter outlines:

- the Commission's analysis and final recommendation
- stakeholder views on the draft recommendation
- how the final recommendations meet the NEO.

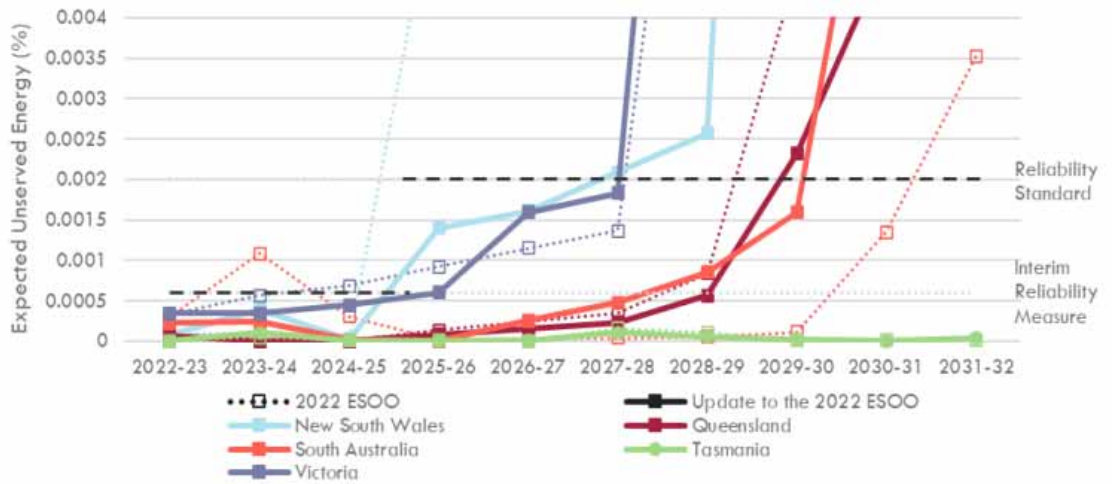
2.1 The Commission recommends the IRM be extended by three years

The Commission's final recommendation is to extend the IRM as it applies to the RRO by three years to 30 June 2028. This will be in place while the Panel reviews the need for a new form of the reliability standard to establish an enduring approach to address tail risk in the reliability framework.

Extending the IRM will give the market more certainty on what reliability measures are in place until 30 June 2028. Further, extending the IRM as it applies to the RRO by three years maintains consistency with the recent decision by Ministers to extend three year IRR contracts to 2028 for contracts made before 31 March 2028.

Figure 2.1 from AEMO's *Update to the 2022 ESOO* identifies reliability gaps in New South Wales and Victoria over the period 2025-26 to 2027-28 which sit between 0.0006 per cent USE and the Panel's recommended reliability standard of 0.002 per cent USE.

Figure 2.1: Reliability and indicative reliability forecast, all regions, 2022-23 to 2031-32



Source: AEMO, *Update to the Electricity Statement of Opportunities*, February 2023, p. 3

The Commission considers the incremental costs of the extension of the IRM are likely to be low if it only triggers T-3 RRO requirements between 2025-26 and 2027-28 which do not translate into T-1 RRO requirements.

The Commission notes that unserved energy forecasts may be subject to change and that this may change its underlying assessment of costs. As an example, in April 2023 AEMO updated its 2023 ESOO and Reliability Forecast Methodology Document such that the ESOO Reliability Forecasts (for the T-3 timeframe only) now includes all production units that are existing, committed or anticipated in accordance with clause 3.7F of the NER. Previously, anticipated projects were excluded from the ESOO Reliability Forecast. By considering a broader range of production units that are likely to proceed to commissioning, AEMO may be less likely to determine a reliability gap for the T-3 timeframe, other things being equal, and therefore costs are less likely to occur.

The Commission is satisfied that the final recommendation aligns with other aspects of the broader NEM reliability framework. The recommendation is likely to better contribute to the achievement of the NEO by providing predictability, transparency, and stability for the market while the Panel does further work on understanding 'tail risk'.

Details of the Commissions' considerations and response to stakeholder feedback are below.

2.2 Stakeholders had mixed views on the draft recommendation

Of the eight submissions the Commission received, two supported the draft recommendation, five did not support and one was neutral on the need for the IRM. This section summarises stakeholder feedback on:

- how the IRM addresses reliability risks
- the role of the IRM in the reliability framework
- the costs associated with the IRM.

The Commission's analysis of these issues is provided in section 2.3 to section 2.6.

2.2.1 There were mixed views on whether the IRM is needed to address reliability risk.

The Commission recognises that there were different views in submissions on the need for the IRM to address reliability risks to a level that consumers value.

AEMO and Hydro Tasmania argued that the IRM plays an interim role in addressing tail risk until a new form of the standard is in place.

Hydro Tasmania argued "[a]t a time when the NEM is rapidly evolving and reliability outcomes are less certain than historically, Hydro Tasmania understands and appreciates the rationale for extending the application of the IRM for a period of three years".[8]

AEMO noted that "the IRM continues to be an appropriate interim risk management tool and an important temporary measure to support the changing nature of reliability risk. The

8 Hydro Tasmania, submission to draft report, pg 1.

0.0006% USE standard continues to supplement the reliability standard to meet consumer expectations per its original design".[9]

However, the AEC, Alinta, EnergyAustralia, Energy Users Association of Australia (EUAA) and Shell argued that the existing market settings and mechanisms based on the reliability standard should play the primary role of addressing tail risk, reflecting the value that consumers place on reliability.[10] EnergyAustralia further noted that potential new measures like the Commonwealth's Capacity Investment Scheme could further support reliability which addresses tail risk.[11]

The Reliability Panel has recognised the need to develop a standard that appropriately addresses 'tail risk' and estimates that this risk may not eventuate until after 2028. The Commission considers, retaining the tighter standard until the new standard is in place serves as a 'safety net' if this risk does emerge sooner. Given the low likelihood that the IRM will trigger the RRO more often, and therefore lead to additional costs, the Commission considers that it is an appropriate balance of the potential risk and cost compared to removing the standard. See section 2.3 for more detail on the Commission's position.

2.2.2 Some submissions consider an extension would create an inconsistent framework.

Some stakeholders argued that the use of the IRM, conflicted with the reliability standard of 0.002 per cent and that the IRM creates uncertainty in the market.

Alinta Energy argued, "the IRM also adds complexity to the market, by introducing a competing and inconsistent standard with the reliability standard". [12] The AEC argued the Reliability Panel should be the body responsible for setting reliability standards.

However, AEMO "considers that the continued use of the IRM as the trigger for the RRO appropriately signals an upcoming need for investment in firm generation at the level that aligns with community expectations of reliable electricity supply during a one-in-10-year summer, at lowest cost to the market".[13]

The Commission considers that extending the IRM is a consistent NEM wide approach to managing reliability risk embedded in the NEL and NER and is preferable to multiple different jurisdictional approaches. The work by the Reliability Panel to establish a new form of the standard along with the 2026 RSS review will be important to establishing a NEM-wide approach that more comprehensively addresses tail risk from 1 July 2028. Further information on this is provided in section 2.4.

2.2.3 Five submissions argued that the IRM results in higher costs

The Commission recognises that there were different views in submissions on the potential costs of an extension.

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9 AEMO, submission to draft report, pg 2.
10 Submissions to draft report; AEC pg, 1, Alinta pg 2-3, EnergyAustralia pg 1, EUAA pg 2 and Shell Energy pg 2.
11 EnergyAustralia, submission to draft report, pg 3.
12 Alinta, submission to draft report, pg 3.
13 AEMO, submission to draft report, pg 3.

Submissions from the AEC, Alinta Energy, EUAA, EnergyAustralia and Shell argued that extending the IRM will potentially deliver higher costs to consumers, as it is potentially triggered more often, as well as increased regulatory burden to liable entities. However, in AEMO's view, the costs on liable entities are limited as they are only required to contract to cover their share of one-in-two-year peak demand, rather than contracting to the 0.006 per cent USE standard. A summary of stakeholder views is outlined in Table 2.1 below:

Table 2.1: Stakeholder views on the costs associated with the IRM

STAKEHOLDER	COMMENT
EnergyAustralia	Expects "that RRO costs are higher than the $77 million estimated by the ESB in its Regulatory Impact Statement and quoted by the Commission. We intend to submit further information on cost impacts to the Commission as part of its concurrent review of the RRO".
EUAA	A rise in Q1, 2024 forward cap prices in South Australia that occurred after the AER's issued T-1 Reliability instrument for the RRO, demonstrated the IRM delivering higher costs for consumers than otherwise would have been if the reliability standard was the trigger for the RRO.
Shell	"Extending the IRM for three more years risks increasing costs at a time when many consumers, large and small, are faced with cost pressures".
AEMO	The "IRM is used to trigger the Retailer Reliability Obligation (RRO), but it does not place an obligation on market participants to contract to the 0.0006% USE level. Under the RRO obligation and guidelines, if a gap is identified at T-1 and a reliability instrument is created, liable entities must only enter sufficient contracts to cover their share of one-in-two-year peak demand".

Source: Submissions to draft report; EnergyAustralia pg 2, EUAA pp 3-4, Shell Energy pg 2, AEMO, pg 3.

Stakeholders have made valid points that the RRO being triggered by the IRM may lead to increased costs as it may result in the RRO being triggered more often. The Commission has taken these points into account in balancing the options and considers that, notwithstanding the risk of increased costs, our recommendation to extend the IRM is warranted in light of the changing nature of the drivers of reliability risk in the power system. Section 2.5 outlines the Commission's views on the costs associated with extending the IRM.

2.3 Extending the IRM supports certainty in the reliability framework as the market rapidly transitions

Energy Ministers, on the advice of the ESB, established the IRM as a temporary measure to protect customers from increasing reliability risks, particularly low-probability events that could have a high impact on reliability outcomes, while an enduring market design is developed.

Since the IRM was introduced, the Panel has recommended maintaining the reliability standard at 0.002 per cent USE. In the Panel's view, 0.002 per cent meets the value customers place on reliability for the purposes of market settings. The Panel also recommended reviewing a new form of the reliability standard to more comprehensively address tail risk. Any new form of reliability standard the Panel may recommend is expected to be in place by 1 July 2028.

The Commission has not sought to repeat the Panel's work in the review of the IRM. However, the Commission acknowledges the Panel's recommendation that reliability risk, particularly tail risk, may need to be characterised differently as the market transitions to net-zero by 2050.

The Commission considers maintaining the IRM as a supplementary measure, while the Panel reviews the form of the reliability standard, provides greater certainty to the market to 1 July 2028. Further, given the size and pace of the energy market transition between now and 2028, the Commission does not consider the removal of the IRM as a proxy risk management tool as being in the interests of consumers, until a new form of the reliability standard is in place which more comprehensively addresses tail risk.

In the recent *Update to the 2022 ESOO*, AEMO has examined the level of firm, dispatchable and continuously available capacity that would be needed to meet relevant standards and found that over the decade, "to achieve this requirement, firm capacity solutions such as electricity storage are needed, particularly longer duration storage solutions most able to meet the breadth of system challenges that may lead to reliability risks".[14]

The IRM supports reliability by supplementing the existing reliability standards by triggering RRO requirements that liable entities must enter into sufficient qualifying contracts to meet their share of expected system peak electricity demand on a 50 per cent probability of exceedance (PoE) (one-in-two year demand peak).

The Panel's upcoming review of the form of the reliability standard may lead to important changes to the way the reliability standard applies to reliability settings in the NEM. Once decisions on the form of the reliability standard are known and following the 2026 Reliability Standards and Settings Review, the Commission intends to review whether further measures like the IRM are needed beyond 1 July 2028.

2.4 Keeping the IRM provides a consistent market-wide solution to reliability

There are a range of reliability projects recently completed or currently underway in the NEM, including:

- a rule change request from the Panel to adjust the MPC, CPT and Administered Price Cap (APC) for 1 July 2025 to 30 June 2028, following its 2022 Reliability Standards and Settings Review[15]

14 AEMO, Update to the Electricity Statement of Opportunities, February 2023, p. 5.

15 Reliability Panel, *2022 Review of the Reliability Standard and Settings*, Final report, p. iii.

- the extension of the use of the IRM for IRR to 31 March 2028[16]
- the extension of the T-3 Ministerial lever for the RRO to all NEM regions[17]
- work underway through the Energy and Climate Change Ministers Meeting on managing risks of a disorderly exit of coal generation
- the Panel's review of the form of the reliability standard
- the Commonwealth's Capacity Investment Scheme
- Jurisdictional measures including the New South Wales Electricity Infrastructure Road map, the Victorian Storage Targets and the Queensland Energy and Jobs Plan.

Extending the IRM as the trigger for the RRO to 30 June 2028 aligns with the decision by Ministers to extend the IRR to 2028 and creates a consistent approach to the use of the IRM until that time. Further, given the Panel's work to determine the long-term reliability framework, the Commission considers an extension of the IRM provides certainty of how the reliability framework will operate between now and 2028. It also minimises the administrative impact of changing the standard several times over a short period.

The Commission notes the feedback that the market has been assuming that the IRM would expire on 30 June 2025, and therefore we are creating more uncertainty by extending it. When Ministers introduced the IRM, it was intended to be in place until such time as a more enduring market design was implemented. To that end, Minister's included a review requirement in the rules rather than a specific end date. The review requirement therefore requires us to consider whether the IRM should end or be extended.

2.5 The risk of additional costs associated with an extension are low

The Commission has considered potential impacts on consumers in light of current energy cost increases.

There have been recent changes to the RRO and IRR that mean the main cost impact on consumers of extending the IRM is limited to its use as a T-1 trigger for the RRO. These changes are:

- a recent rule change enables contracting under the IRR to be extended to 2028
- that ministers are able to trigger T-3 RRO events without reference to the IRM or reliability standard.

2.5.1 Extending the IRM trigger could result in the RRO applying more often

There are different costs incurred when the RRO is triggered at T-3 and T-1.

- T-3 RRO costs are limited to reporting costs and any market making actions. These costs are expected to be low in the context of broader system costs. The Regulatory Impact Statement (RIS) for the RRO estimated total business compliance costs across the NEM of $77 million (or $7.7 million per annum) over 10 years for the RRO.[18]

16 *National Electricity Amendment (Interim Reliability Reserve) Rule 2022*.
17 ESB, *T3 Trigger for the RRO — Draft Bill*, 20 July 2022.
18 Energy Security Board, *Retailer Reliability Obligation Decision Regulation Impact Statement* – 19 December 2018.

- T-1 RRO costs (if they are realised) are potentially higher, comprising Procurer of Last Resort (PoLR) costs, contracting costs and potentially penalties for non-compliance. For customers of non-compliant liable entities, these costs may be significant, but with the purpose of reducing instances of unserved energy which can in themselves place a significant cost burden on the broader community.

The IRM trigger may result in the RRO applying more often. As noted above, the main cost impact on customers of a liable entity of extending the IRM would be if a T-1 RRO is triggered more often by extending the IRM by three years to 2027-28.

The Commission considers the incremental costs of the extension of the IRM are likely to be low if it only triggers T-3 obligations. T-3 reliability gap costs are limited and do not place significantly higher costs on consumers.

Potentially higher costs through contracting and the PoLR cost recovery mechanism are largely incurred through RRO compliance with T-1 reliability gaps, which would only be realised if a gap continued to be in place one year (T-1) from the period of the gap (T). However liable entities (typically retailers) have three years notice at T-3 about the need to comply with the RRO and therefore contract to sufficient levels to protect their customers from these costs. While there will be higher contracting costs at T-1 for liable entities required to contract to a one in two year peak demand, these costs are not likely to be significant if entities enter contracts early. More significant costs can eventuate (at T) if system peak electricity demand is higher than a 50 per cent PoE and liable entities have not sufficiently contracted. These more significant costs are only born by the customers of individual liable entities which have not complied with the RRO by entering into sufficient qualifying contracts to meet their share of a 50 per cent PoE.

The Commission also notes the comments from stakeholders regarding the increase in contracting costs resulting from the IRM triggering a T-1 instrument. Contracting is key to the operation of the RRO, to encourage market investment and support reliability by reducing instances of USE that place a significant cost burden on the broader community. Conclusively identifying the cause of the increase in contracting costs from the RRO is difficult but the Commission agrees that contract costs appear to have risen in SA before the T-1 RRO contract position day. The Market Liquidity Obligation (MLO), which operated until the SA T-1, provided liable entities with the opportunity to purchase competitively priced contracts to fulfil their forecast 50 per cent PoE customer demand by T-1. The Commission is looking at the operation of MLO as part of the review of the RRO. The review will consider if the MLO is working as intended to facilitate transparency and liquidity in the trading of electricity futures contracts relating to a forecast reliability gap.

2.5.2 The risk of additional T-3 and T-1 trigger events is likely to be low

The Commission notes that in the *2022 ESOO* and *Update to the 2022 ESOO*, AEMO also assessed that if sufficient 'anticipated and expected projects' proceed as planned, this will potentially reduce reliability gaps below the IRM through to 2028-29. If these projects became 'committed projects', T-1 reliability gaps would not eventuate in future ESOO publications.

The *2022 ESOO* notes that:[19]

> An additional 3.4GW of 'anticipated' investments are in the pipeline and will improve the outlook if they progress as planned. When generation and storage projects classed as anticipated in the (2022) ESOO is considered alongside the anticipated and actionable transmission developments identified in the 2022 ISP, based on current schedules the reliability forecasts improves significantly. It shows that anticipated generation projects reduce forecast USE to below IRM and within the reliability standard' over coming years, until actionable transmission developments further support the reliability of these regions.

The *Update to the 2022 ESOO* notes that:[20]

> While not yet sufficiently developed to meet AEMO's commitment criteria, many generation, storage and transmission developments are progressing, and if developed to their current anticipated schedules will lessen the reliability risk and reduce the forecast capacity requirements.

In addition, in April 2023 AEMO updated its ESOO and Reliability Forecast Methodology Document, such that the ESOO Reliability Forecast (for the T-3 timeframe only) now includes all production units that are existing, committed or anticipated in the most recent generation information page published in accordance with clause 3.7F of the NER.[21] Previously, anticipated projects were excluded from the ESOO Reliability Forecast. AEMO notes that the updated methodology seeks to include in the forecast "a greater number of projects that are likely to proceed, while sufficiently delaying developments that are less advanced and more prone to delays". By considering a broader range of production units that are likely to proceed to commissioning, AEMO may be less likely to determine a material reliability gap for the T-3 timeframe, other things being equal.

2.5.3 The IRM is not used for the market price settings

Some stakeholders provided feedback that in their view we had not considered the Panel's recent decision on the level of the reliability standard. They argued that the Panel has recommended a standard that reflected the level of reliability customers value and the IRM is above that level. However, the Commission notes that the IRM has limited application, compared to the reliability standard.

The reliability standard is a key input for the MPC and CPT. The MPC and CPT are the critical investment signals for the NEM. They are set at levels that are sufficiently high to support the investment required to achieve reliability outcomes consistent with the standard, but not too high to create systemic financial risks that may compromise the stability of the market.[22] The IRM itself is not used to set the level of the MPC. It is an additional risk management tool

19 AEMO 2022 Electricity Statement of Opportunities, pg 9.
20 AEMO 2022 Update to the Electricity Statement of Opportunities, pg 5.
21 AEMO, 2023 ESOO and Reliability Forecast Methodology Document.
22 Reliability Panel, *2022 Review of the Reliability Standard and Settings, Final Report*, p. 63.

that may contribute to reliability by triggering requirements on retailers to contract for their load and to enable AEMO to contract for out of market reserves.

Further, the Commission notes and agrees with the Panel's view of the changing nature of reliability risk. It is important to address the changing nature of reliability risk now through the IRM while the Panel is considering if the current form of the standard remains fit for purpose for the future NEM.

2.6 The final recommendation contributes to the NEO

Having regard to the issues raised in the terms of reference, the Commission is satisfied that the final recommendation will, or is likely to, better contribute to the achievement of the NEO. The final recommendations are consistent with the proposed assessment framework as:

- **Predictability and stability**: The final recommendation to extend the IRM, aligns with the decision by Ministers to extend the use of the IRM as it applies to the IRR to 2028. Extending the IRM as it applies to the RRO, therefore, maintains consistency in the approach to the IRM as a reliability measure in the NEM through to 30 June 2028, after which time the Panel's work on a new form of the reliability standard will establish an enduring approach to better managing tail risk.
- **Simplicity and transparency**: The IRM and its application to the RRO and IRR are understood by industry and governments. Extending the IRM allows the market to operate in a simple and transparent manner while work is completed by the Panel on a new form of the reliability standard.
- **Efficiency**: Potentially higher costs associated with the draft recommendation are only expected if a future ESOO forecast triggers T-1 reliability gaps above 0.0006 per cent USE and below 0.002 per cent between 2025-26 and 2027-28. The Commission notes that in the context of AEMO's *2022 ESOO* and *Update to the ESOO*, the risk of T-1 costs would be low if 'expected and anticipated' projects become 'committed' projects over the three-year period.
- Further AEMO has updated its 2023 ESOO and Reliability Forecast Methodology Document such that the ESOO Reliability Forecasts (for the T-3 timeframe only) now includes all production units that are existing, committed or anticipated.
- **Appropriate allocation of risk**: In recommending the IRM, the ESB considered that it is an appropriate interim proxy risk management tool to meet community expectations that electricity supply remains reliable during a 1 in 10 year summer. The Commission considers that the IRM continues to meet this objective, pending the outcomes of the Panel's review of the new form of the reliability standard establishing an enduring approach to better manage tail risk from 1 July 2028.
- **Timing and practicality**: The final recommendation requires only minimal changes to the NER as the IRM is already implemented and operating. Reviewing the need for the IRM at a later date, and after the 2026 Reliability Standards and Settings Review allows for more data to be gathered on the effectiveness and need for the IRM, taking into account decisions on the new form of the reliability standard.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
APC	Administered Price Cap
Commission	See AEMC
CPT	Cumulative Price Threshold
ESB	Energy Security Board
ESOO	Electricity Statement of Objectives
IRM	Interim Reliability Measure
IRR	Interim Reliability Reserve
MCE	Ministerial Council on Energy
MLO	Market Liquidity Obligation
MPC	Market Price Cap
NEL	National Electricity Law
NEO	National electricity objective
NER	National Electricity Rules
NSW	New South Wales
PoE	Probability of Exceedance
PoLR	Procurer of Last Resort
RERT	Reliability and Emergency Reserve Trader
RRO	Retailer Reliability Obligation
SA	South Australia
USE	Unserved Energy
Vic	Victoria

A SUMMARY OF OTHER ISSUES RAISED IN SUBMISSIONS

This appendix sets out other issues raised in the first round of consultation on this review process and the AEMC's response to each issue.

Table A.1: Summary of other issues raised in submissions

STAKEHOLDER	ISSUE	AEMC RESPONSE
AEMO	Sought clarity on whether the IRM should be further extended as it applies to triggering the IRR between 1 July 2025 and 30 June 2028	The Commission did not consult on extending the IRR beyond what Ministers had already recently agreed. Therefore we do not consider it in scope to consider any further extension of the IRR. The Commission also considers its recommendation to extend the IRM as it applies to the RRO has broadly the same effect as the recent decision by Ministers. While the use of the IRM to trigger RRO T-1 reliability events can occur to 30 June 2028, the IRM must be first used to first initiate T-3 reliability instruments which can only occur prior to 31 March 2025 (3 years and 3 months before 30 June 2028).
All	Submissions supported the Panel's review of the form of the reliability standard	The Panel has commenced its review of the form of the reliability standard. The Commission agrees with stakeholders that the outcomes of this review will be important in establishing a new form of the standard which more comprehensively addresses tail risk. The outcomes of the Panel's review of the form of the standard and the 2026 RSS Review will be important to any future recommendations around removing the IRM as a trigger for the RRO.

STAKEHOLDER	ISSUE	AEMC RESPONSE
All	Submissions indicated they would make separate submissions to the RRO review. Some stakeholders argued that the IRM should end as the RRO was not operating as intended and was a significant compliance burden on liable entities.	The Commission has commenced a separate review of the operation of the RRO. Feedback received on the operation of the RRO will be considered as part of this review under the separate terms of reference.
EnergyAustralia	EnergyAustralia proposed that the Commission should consider decoupling the IRM from the RRO and IRR and allow jurisdictions to opt back into the IRM as an intervention measure.	The Commission considers the risk of having multiple standards to trigger the RRO in different jurisdictions would create unnecessary complexity. Further, it will not provide certainty for the market on the reliability framework to be in place of the coming years if jurisdictions have the option to opt in at any time. The Commission considers that the IRM should remain the same as that agreed by Ministers in their original decision reflected in the NEL and NER.

B INTERIM RELIABILITY MEASURE

The IRM was introduced to improve reliability during the transition to the Post-2025 market. It supplements the reliability standard and comprises two triggers for:

- the RRO based on a breach of 0.0006 per cent USE
- an out-of-market capacity reserve (the IRR).

B.1 Decision on the IRM

The 0.0006 per cent USE was established by Energy Ministers on advice from the ESB that moving to a standard of 0.0006 per cent USE would best meet the expectation that electricity supply remains reliable during a 1 in 10-year summer, which was referred to in the COAG Terms of Reference for the review of the Reliability Standard.

The IRM of 0.0006 per cent USE was originally considered by AEMO in the *2019 ESOO* reflecting a USE of 0.002 per cent once every 10 years, which was later considered to approximate an annual USE value of 0.0006 per cent as established by the ESB for the IRM.[23]

The aim as expressed in the *2019 ESOO* was to refine a reliability standard to ensure "there are sufficient dispatchable reserves (MW) available in each region such that USE is less than 0.002 per cent of total energy demand in 9 out of 10 years".[24]

The IRM of 0.0006 per cent USE is established in 3.9.3C of the NER.

The former COAG Energy Council released further information on the decision to set the IRM at 0.0006 per cent including the underlying modelling.[25]

Since the IRM was introduced, Ministers have made changes to extend its use as a trigger for the IRR. The changes extend the use of the 0.0006 per cent USE trigger for IRR contracts made before 30 June 2025 to 31 March 2028. This change was enacted in October 2022 through the *National Electricity Amendment Interim Reliability Reserve Rule 2022.*[26]

Given the decision by Ministers to extend the application of the IRR, the Commission is not reviewing this component of the IRM.

B.2 Use of the IRM

B.2.1 Trigger for the Interim Reliability Reserve

The IRR is one of several interim measures aimed at preserving reliability in the NEM ahead of the Post 2025 market design project and the review of the form of the reliability standard making more permanent recommendations.

The IRR is an out-of-market reserve that AEMO can procure to avoid load shedding. It aims to help address reliability gaps that may occur by providing greater flexibility in procuring

23 AEMO, *2019 Electricity Statement of Opportunities, August 2019*, p. 15.
24 ibid.
25 ESB, *Interim Reliability Measures — RRO Trigger* is available here.
26 Available here.

backup supplies. It replaces long-term Reliability and Emergency Reserve Trader (RERT).[27] To date AEMO has not procured any reserves under the IRR.

The *National Electricity Amendment (Interim Reliability Measure) Rule 2020*, which implemented the IRR provides for the following features of the IRR:

- The volume of reserve capacity to ensure expected USE is no more than 0.0006 per cent in any region in any year (the Interim Reliability Measure) as forecast in the ESOO report or ESOO updates.
- AEMO would be responsible for procuring the IRR following consultation with, and approval from the relevant Energy Minister of directly impacted states and/or territories.
- AEMO should be encouraged to procure at least part of the reserve through a reverse auction process that would allow for the development of standardised contracting.
- Contract terms of up to 3 years would be allowed depending on:
  - whether an exceedance of the IRM has been forecast for two out of the three years with an exceedance occurring in the first year of the term; and
  - the option is more cost effective than entering shorter duration contracts covering the same period.
- The volume procured under a multi-year contract, must be no more than AEMO considers reasonably necessary to ensure the reliability of supply in the region. In addition, for each year of the contract, the volume is to be no more than AEMO considers to be reasonably necessary to address the largest Interim Reliability Exceedance identified for the contract period.
- The reserve would temporarily replace long notice RERT (with the short and medium notice RERT to remain in place).
- Activation and dispatch of RERT would remain unchanged.
- The term and target quantity reserve for an IRR contract that is not a multiyear contract will be determined in the same manner as long-notice and medium-notice reserve contracts, except that the interim reliability measure applies instead of the reliability standard.

The term and target quantity of a multi-year reserve contract is determined in accordance with the RERT Principles in clause 3.20.2(b) of the NER and clause 11.128.4 of the NER.

Costs associated with any IRR are recovered from participants similarly to RERT costs, as prescribed in clause 3.15.9(e) of the NER.

B.2.2 Trigger for the Retailer Reliability Obligation

The RRO is one of several interim measures aimed at preserving reliability in the NEM. It commenced on 1 July 2019, with the aim of providing "stronger incentives for market participants to invest in the right technologies in regions where it is needed, to support reliability in the NEM".[28]

27 See Clause 11.128 of the NER.

28 AER, Retailer Reliability Obligation webpage, available here.

AEMO identifies any potential reliability gaps in each NEM region in the coming five years using the ESOO. If AEMO identifies a material gap three years and three months out, it will apply to the AER to trigger the RRO by making a reliability instrument. Since 2023, Energy Ministers in all NEM regions are also able to initiate a T-3 reliability instrument.[29]

Where a reliability instrument is made, liable entities are on notice to enter into sufficient qualifying contracts to cover their share of a one-in-two year peak demand:

- At T-3, a MLO placed on generators is designed to ensure there are contracts available to smaller market customers by requiring certain generators in each region to make contracts available to the market. AEMO can also run a Voluntary Book Build mechanism to help liable entities secure contracts with new resources.
- At T-1, if the market response is insufficient and the AER confirms a reliability gap one year out (T-1), liable entities (typically retailers) must report their contract positions for the reliability gap period to the AER. Liable entities must enter into sufficient qualifying contracts to meet their share of expected system peak electricity demand reported on a 50 per cent PoE (one-in-two year demand peak).
- At T, if actual system peak demand exceeds an expected one-in-two year peak demand, the AER will assess the compliance of liable entities and determine whether their share of load for the reliability gap period was covered by qualifying contracts.

The review of the operational aspects of the RRO is subject to a separate review process.

B.3 Costs of the IRM

B.3.1 Retailer Reliability Obligation

The RRO Decision Regulatory Impact Statement released in 2018 estimated total business compliance costs of $77 million (nominal) for the 10 years from 2020-21 to 2029-30.[30]

These costs relate to the administration costs associated with the continuing operation of the RRO.

The per-incidence contracting costs are the same whether the trigger is 0.002 per cent USE or 0.0006 per cent USE.

If the AER confirms a reliability gap one year out (T-1), liable entities must report their contract positions for the reliability gap period to the AER. If actual system peak demand exceeds an expected one-in-two year peak demand, the AER will assess the compliance of liable entities and determine whether their share of load for the reliability gap period was covered by qualifying contracts.

AEMO may commence procurement of emergency reserves at this point through the RERT framework to address the remaining gap with costs to be recovered through the Procurer of Last Resort cost recovery mechanism.

29 *National Electricity (South Australia)(Ministerial Reliability Instrument) Amendment Bill 2022.*

30 ESB, *RRO Decision Regulation Impact Statement*, 19 December 2018.

Entities whose required share of load is not covered by qualifying contracts for the specified period will be required to pay a portion of the costs for the Procurer of Last Resort, up to an individual maximum of $100 million.

As of May 2023, the RRO has been triggered on seven occasions with only two instances being triggered by the IRM as outlined in Table B.1 below.

Table B.1: Register of Reliability Instruments

REGION AND GAP	STATUS
South Australia: January - March 2025	Current
South Australia: January - March 2026	Current
New South Wales: December 2025 - February 2026	Current
South Australia: January - February 2024	Current
New South Wales: January - February 2024	Revoked
South Australia: January - March 2023	Revoked
South Australia: January - March 2022	Revoked

Source: Australian Energy Regulator

The SA T-1 reliability gap is for the period January - February 2024. AEMO's *Update to the 2022 ESOO* identifies that this reliability gap is no longer forecast as expected USE is now below the IRM due to the commitment of the Bolivar Power Station and Tailem Bend BESS, and the delayed retirement of Osbourne Power station. RRO requirements remain under the T-1 reliability instrument, as the change occurred after the T-1 reliability gap instrument was issued.

Figure 2.1 shows the reliability and indicative reliability forecasts in the NEM as presented in the *Update to the 2022 ESOO*. If the IRM is extended to 2027-28, and reliability gaps continue to be observed in future ESOO publications, T-3 reliability gaps are expected to be triggered in New South Wales and Victoria over the period 2025-26 to 2027-28.

B.3.2 IRR

The IRR is calculated based on purchased load by energy retailers, then passed through to consumers based on their MWh consumption. Charges are received by the retailers in line with AEMO's calendar which operates in arrears.

AEMO has reported that there have been no costs related to use of the IRR in 2020-21 and 2021-22.[31]

31 AEMO, *Reliability and Emergency Reserve Trader (RERT) End of Financial Year 2021-22 Report, August 2022.*