AEMC

REVIEW

Australian Energy Market Commission

DRAFT REPORT

REVIEW OF THE INTERIM RELIABILITY MEASURE

9 MARCH 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.

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SUMMARY

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

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

As the power system transitions to a high variable renewable energy (VRE) 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 draft recommendations, 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, in particular, how tail risk is being managed as the power system transitions to a high VRE power system.

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).

Under the National Electricity Rules (NER), the IRM is currently in place until 30 June 2025, at which time the trigger for the RRO and IRR revert to the reliability standard of 0.002 per cent USE. This means that gaps identified by Australian Energy Market Operator (AEMO) in their current and future Electricity Statements of Opportunities (ESOO) will be assessed against the 0.002 per cent USE threshold unless the NER is amended.

The NER (clause 11.128.12) requires the Commission to review the IRM and the terms of reference sets out the approach to the review.

For this review, the Commission has considered two options:

1. ending the application of the IRM to the RRO on 30 June 2025
2. extending it by 3 years to 1 July 2028, to align with the commencement of a potential new form of the reliability standard.

We have considered a number of factors in making the draft recommendation

In recommending an extension of the IRM by three years the Commission has considered a number of factors.

1. The Reliability Panel (the Panel) is about to begin work to develop a new form of the reliability standard to more comprehensively address 'tail risk'. However, this won't be in place until 1 July 2028.

2. The original decision by Energy Ministers was to introduce the IRM as a risk management measure to address reliability during a 1 in 10-year summer. Risks to reliability remain as the NEM moves to a high VRE power system. The outcomes of the Panel's review of the form of the standard will be important to any future recommendations around removing the IRM as a trigger for the RRO.
3. Energy Ministers have already agreed to changes to the arrangements for the IRR and RRO. Energy Ministers in all national electricity market (NEM) jurisdictions will be able to trigger T-3 reliability instruments at any time without linking the instrument to the IRM or reliability standard. Further, AEMO can also enter multi-year IRR contracts triggered by the IRM to 2028.

The interim measure remains an important proxy risk management tool and is in the interests of consumers

The Commission considers the draft recommendation to extend the application of the IRM to the RRO will support the NEO. 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.

The Commission notes that, during the ESB's consultation on the tighter reliability standard, some stakeholders expressed concern about the impact on the cost to customers.

The lower IRM trigger of 0.0006 per cent USE may result in the RRO applying more often. The Commission has considered this issue in light of the current energy cost increases, the 2022 ESOO and the *Update to the 2022 ESOO* released by AEMO on 21 February 2023.

While the Panel has recently recommended that a standard of 0.002 per cent USE reflects the value customers place on reliability, in introducing the IRM, governments made the deliberate choice that they wanted a higher standard of reliability to protect customers from increasing reliability risks. These tail risk events are the subject of the Panel's upcoming review into whether the form of the reliability standard remains fit for purpose. 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 effectively addresses tail risk.

The *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. If these gaps continue to be present in the 2023 ESOO, due in August 2023, and in future ESOO publications, they will trigger new T-3 reliability gaps if the IRM is extended.

However, there are different costs when T-3 and T-1 reliability gaps trigger the RRO.

T-3 RRO costs are limited to administration and reporting costs and any market making actions. These costs are expected to be low.

T-1 RRO costs are potentially higher, comprising Procurer of Last Resort (PoLR) costs, contracting costs and penalties for non-compliance. These costs may be higher, but importantly they have the purpose of reducing instances of unserved energy which can in themselves place a significant cost burden on the broader community.

Further, the Commission notes that in the *2022 ESOO* and the *Update to the 2022 ESOO*, AEMO observes that reliability forecasts will significantly improve if anticipated and actionable developments proceed as planned. AEMO observes in the *2022 ESOO* that if these projects become 'committed projects', USE is forecast to drop below the IRM over the coming years, reducing the likelihood of T-1 gaps and therefore reducing any potential cost impacts on consumers.

While the Commission is making a draft recommendation to extend the tighter standard for the RRO, it does agree that it should remain an interim measure until there is an established longer term approach to managing reliability 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.

We are seeking feedback on the draft recommendations

The Commission encourages stakeholders to provide feedback on the Review's analysis and recommendations. Submissions are due by 13 April 2023. The Commission will release its final report in May 2023.

A rule change will be required to extend the application of the IRM to 1 July 2028, and include any transitional arrangements.

The Commission has consulted with staff at the AEMO and the AER and with the Panel in making its draft recommendation.

BOX 1: DRAFT RECOMMENDATIONS

Recommendation 1: Extend the application of the IRM to the RRO to 1 July 2028, to align with the commencement of an expected new form of the reliability standard recommended by the Reliability Panel's 2022 Reliability Standards and Settings Review.

Recommendation 2: The AEMC consider reviewing the need for the IRM, following the 2026 Reliability Standard and Settings Review.

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1 THE CONTEXT FOR THIS REVIEW

We are seeking stakeholder feedback on the Review of the interim reliability measure (IRM) initiated by the Australian Energy Market Commission (AEMC or Commission).

1.1 The reliability framework in the NEM is designed to ensure reliability is delivered at a level consumers value

Reliability in the national electricity market (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 Cap (MPC) and Cumulative Price Threshold (CPT) which are financial incentives to market participants to invest in energy infrastructure, supporting reliability in the NEM. The IRM in contrast 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.[1] Further, it recommended a review into changing the form of the standard to incorporate a 'tail risk' metric.[2]

In 2023, the Panel will commence 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 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 a new reliability framework from 1 July 2028, which transitions to longer term reliability settings, incorporating a tail risk metric.

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

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. Following its work, 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.[3]

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 into 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 will be able to make a T-3 instrument at any time without linking the instrument to a specific reliability gap.[4] However, only AEMO can request the Australian Energy Regulator (AER) make a T-1 instrument based on a forecast reliability gap in AEMO's ESOO publications.
- AEMO can now enter multi-year contracts triggered by the IRM beyond mid-2025.[5] In practice, this extends the IRR by three years to March 2028.

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

The Commission must review the IRM by 30 June 2023. As part of this review the Commission must publish terms of reference, follow the rules consultation procedure and consult with the Reliability Panel on the review.[6]

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 it will or is likely to contribute to achieving the relevant energy objectives.

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

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

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

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

6 See clause 11.128.12(c) of the NER

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 recommendations using five criteria

In considering the NEO and the issues raised in the terms of reference for this review, the Commission has assessed its draft recommendations using five assessment criteria. A summary of how the draft recommendations meet the assessment criteria is provided in section 3.

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:** Whether the regulatory framework promotes confidence in the market by clearly defining roles and responsibilities, and whether parties, have sufficient information to make decisions. The framework should also result in predictable outcomes for all participants.

5. **Simplicity and transparency:** Whether the regulatory framework is as simple and practicable as possible, and 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.

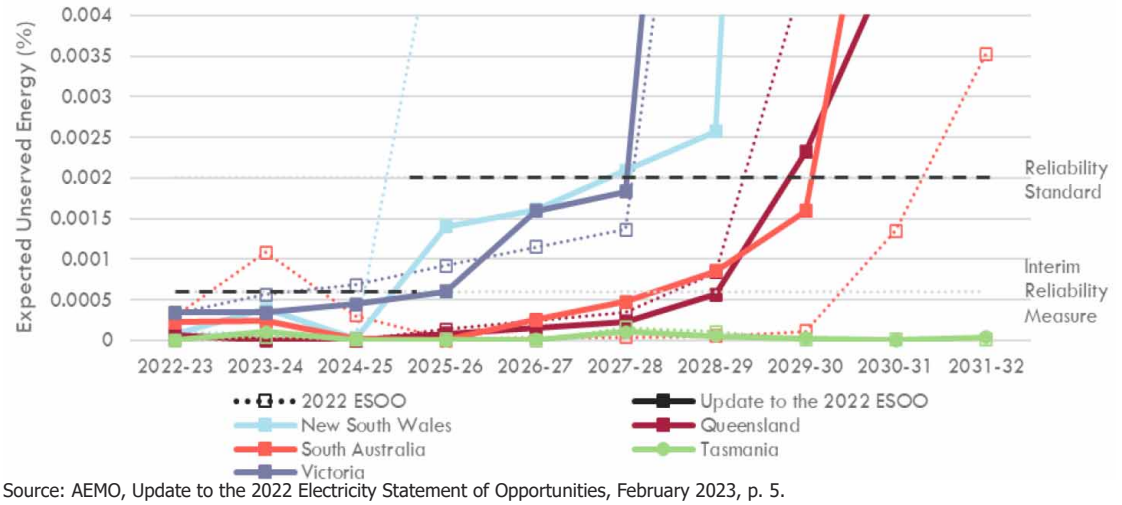
2 THE COMMISSION'S DRAFT RECOMMENDATION TO EXTEND THE IRM

The Commission is making a draft recommendation to extend the IRM as it applies to the RRO by three years to 1 July 2028 while the Panel works on a new form of the reliability standard which will 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 1 July 2028 and keep the focus on the Panel's review of the form of the reliability standard. Further, extending the IRM as it applies to the RRO by 3 years, maintains consistency with the recent decision by Ministers to extend the IRR to 2028.

The Commission has also considered the potential consumer cost impacts from extending the IRM as it applies to the RRO by three years.

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 2022 Electricity Statement of Opportunities, February 2023, p. 5.

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. Therefore, the Commission intends to review the need for the IRM following the 2026 Reliability Standards and Settings Review.

The Commission is satisfied that the draft recommendations to extend the use of the IRM to 2028 and consider a further review of the need for the IRM align with other aspects of the broader NEM reliability framework and are 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' draft considerations are below.

2.1 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 has also recommended establishing a new form of the reliability standard to more comprehensively address tail risk in the transition to a high VRE power system. The new form of the standard 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 effectively 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.'*

The IRM supports reliability by supplementing the existing reliability standards by triggering RRO requirements that retailers must enter into sufficient qualifying contracts to meet their share of expected system peak electricity demand reported on a 50 per cent PoE.

As noted in section 2.3, the Commission further considers that the incremental costs of a three-year extension are likely to be low if projects identified by AEMO as 'expected and anticipated' in the *2022 ESOO* become 'committed' and T-1 reliability gaps do not eventuate.

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.

2.2 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 future rule change 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[7]
- the extension of the use of the IRM for IRR to 31 March 2028[8]
- the extension of the T-3 Ministerial lever for the RRO to all NEM regions[9]
- work underway through the Energy Ministers Meeting on managing risks of a disorderly exit of coal generation
- the Panel's upcoming review of the form of the reliability standard
- the Commonwealth Government's Capacity Investment Scheme.

Extending the IRM as the trigger for the RRO to 1 July 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.

2.3 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.

The recent changes to the RRO and IRR, mean the main cost impact on consumers of extending the IRM is limited to its use as a T-1 trigger for the RRO. A recent rule change enables contracting under the IRR to be extended to 2028. Further, a bill before the South Australian Parliament will enable Ministers to trigger a T-3 RRO event without reference to the IRM or reliability standard.

There are different costs accrued 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.[10]

7 Reliability Panel, *2022 Review of the Reliability Standard and Settings*, Final report, p. iii.
8 *National Electricity Amendment (Interim Reliability Reserve) Rule 2022*.
9 ESB, *T3 Trigger for the RRO - Draft Bill*, 20 July 2022.
10 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 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. For example the costs of non-compliance in the legislation is capped at $100 million.

A lower 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. As noted above, 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 accrued 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. If costs eventuate (at T) because system peak electricity demand is higher than a 50 per cent PoE, they 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 further 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:[11]

> 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:[12]

> While not yet sufficiently developed to meet AEMO's commitment criteria, many

11 AEMO 2022 Electricity Statement of Opportunities, pg 9.

12 AEMO 2022 Update to the Electricity Statement of Opportunities, pg 5

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.

The Commission further 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.[13] The IRM itself is not used to set the level of the MPC. It is an additional risk management tool 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.

In considering extending the IRM, the AEMC has not re-quantified the overall benefits of the RRO as this is out of scope for this review.

2.4 The draft recommendations contribute to the NEO

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

- **Predictability and stability**: The draft 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 1 July 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. This will allow stakeholder focus to remain on the critical work of the Panel.
- **Efficiency**: Potentially higher costs associated with the draft recommendations 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.
- **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

13 Reliability Panel, *2022 Review of the Reliability Standard and Settings, Final Report*, p. 63.

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 draft recommendations require 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.

2.5 How to make a submission

Stakeholders can help shape the recommendations by participating in the review process. Engaging with stakeholders helps us understand the potential impacts of our recommendations and, in so doing, contributes to well-informed, high quality review recommendations.

2.5.1 How to make a written submission

Due date: Written submissions responding to this draft report must be lodged with Commission by 13 April 2023.

How to make a submission: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code EPR0900.[14]

Tips for making submissions are available on our website.[15]

Publication: The Commission publishes submissions on its website. However, we will not publish parts of a submission that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).[16]

Please contact the project leader with questions or feedback at any stage.

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14 If you are not able to lodge a submission online, please contact us and we will provide instructions for alternative methods to lodge the submission.

15 See: https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/our-work-3

16 Further information is available here: https://www.aemc.gov.au/contact-us/lodge-submission

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
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NSW	New South Wales
PoE	Probability of Exceedence
RERT	Reliability and Emergency Reserve Trader
RRO	Retailer Reliability Obligation
USE	Unserved energy
Vic	Victoria

A INTERIM RELIABILITY MEASURE

The IRM was introduced to improve reliability during the transition to the Post-2025 market design.

The IRM 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 (an 'Interim Reliability Reserve').

A.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.[17]

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.*[18]

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.[19]

Since the IRM was introduced, Ministers have further agreed to extend the use of the IRR, effectively extending the use of the 0.0006 per cent USE to IRR contracts ending on 31 March 2028. This change was enacted in October 2022 through the *National Electricity Amendment Interim Reliability Reserve Rule 2022.*[20]

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

A.2 Use of the IRM

A.2.1 Trigger for the Interim Reliability Reserve

The IRM triggers the operation of the IRR.[21]

17 AEMO, *2019 Electricity Statement of Opportunities, August 2019*, p. 15.
18 ibid.
19 ESB, *Interim Reliability Measures - RRO Trigger* is available here.
20 *Available here.*
21 See Clause 11.128 of the NER.

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.

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 backup supplies. It replaces long-term RERT.

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 Council 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 as described in this Procedure, 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 the NER and 11.128.4 of the NER.

Costs associated with any IRR are recovered from participants on a similar basis to RERT costs, as prescribed in clause 3.15.9(e) of the NER. To date AEMO has not procured any reserves under the IRR.

A.2.2 Trigger for the Retailer Reliability Obligation

The IRM also triggers the RRO in Chapter 4A of the NER.

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'*.[22]

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. As recommended by the Energy Security Board, a bill currently before the South Australian Parliament seeks to extend the T-3 Ministerial trigger to all regions in the NEM, triggered by requests from respective jurisdictional Energy Ministers.[23]

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 Market Liquidity Obligation (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% PoE.

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.

A.3 Costs of the IRM

A.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.[24]

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.

22 AER, Retailer Reliability Obligation webpage, available here.
23 *National Electricity (South Australia)(Ministerial Reliability Instrument) Amendment Bill 2022*
24 ESB, *RRO Decision Regulation Impact Statement*, 19 December 2018.

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 Reliability and Emergency Reserve Trader framework to address the remaining gap with costs to be recovered through the Procurer of Last Resort cost recovery mechanism.

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 January 2023, the RRO has been triggered on seven occasions[25] with only two instances being triggered by the IRM.

Table A.1: Register of Reliability Instruments

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

Source: Australian Energy Regulator

Four triggers are current, see Table A.1 above, of which two T-3 reliability gaps have been triggered by SA Ministers, one T-3 reliability gap triggered by the IRM in NSW and one T-1 reliability gap triggered by the IRM in SA.

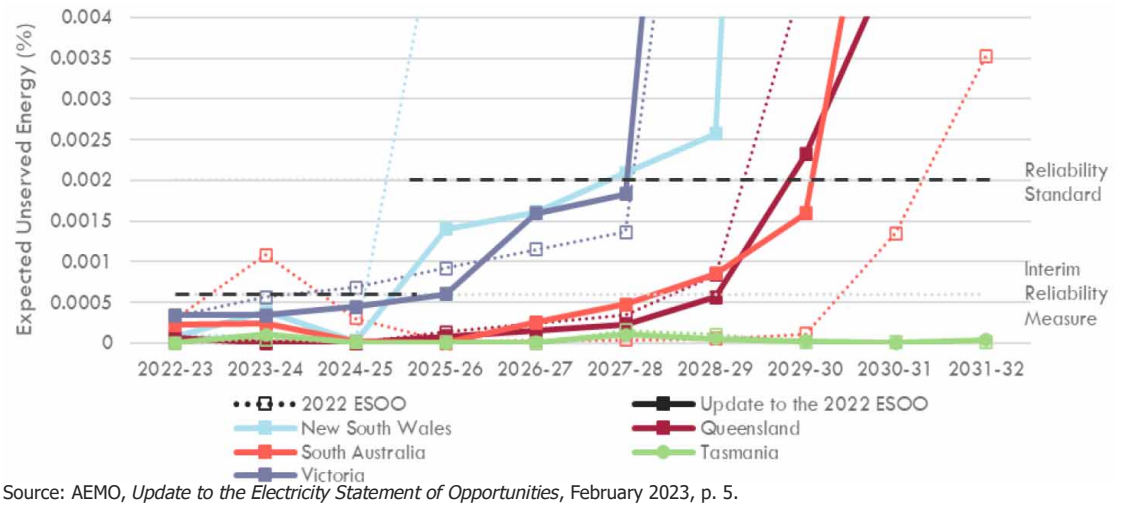
Figure A.1 shows the reliability gap breach by the IRM in NSW between December 2025 – February 2026, as reported in AEMO's *Update to the 2022 ESOO*.

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.

25 Available here

Figure A.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.

Figure A.1: Reliability and indicative reliability forecasts, all regions, 2022-23 to 2031-32



Source: AEMO, *Update to the Electricity Statement of Opportunities*, February 2023, p. 5.

A.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.[26].

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