

Submitted online: <https://www.aemc.gov.au/contact-us/lodge-submission>

13 April 2023

AEMC Review of the Interim Reliability Measure: Draft Report

The Australian Energy Council (the “AEC”) welcomes the opportunity to make a submission in response to the AEMC Review of the Interim Reliability Measure: Draft Report.

The Australian Energy Council is the peak industry body for electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. AEC members generate and sell energy to over 10 million homes and businesses and are major investors in renewable energy generation. The AEC supports reaching net-zero by 2050 as well as a 55 per cent emissions reduction target by 2035 and is committed to delivering the energy transition for the benefit of consumers.

In reviewing the Interim Reliability Measure (“IRM”) it is important to review the history of how it came to be implemented. This is especially important because as its name states, it was established as an ‘interim’ measure. The IRM was only to be in place for three years ostensibly covering the interim period until the Reliability Panel (“Panel”) completed its next Reliability Standards and Settings (RSS) review in late 2022.¹ The Panel which has representatives from a range of stakeholders including market bodies, industry, major users and consumers, conducts its review over a period of 18 months. These reviews are conducted every four years. At the conclusion of this review the Panel found no evidence to support a tighter standard and concluded:

The Panel’s analysis indicates the IRM, at 0.0006% expected USE, is significantly tighter than a level of reliability consistent with consumer willingness to pay for reliability. The Panel, therefore, does not consider the IRM is a suitable level for the NEM reliability standard.²

Hence, for the period commencing 1 July 2025 to 30 June 2028 a reliability standard 0.002% Unserved Energy (“USE”) provides for the optimum economic trade-off between cost and reliability. The AEC has previously argued for the maintenance of this standard.³

History

In November 2019, the COAG Energy Council requested the ESB provide advice on the implementation of interim measures to preserve reliability and system security, including reviewing the reliability standard, during the transition to the post-2025 market design. Sections of the Terms of Reference included:

- “identify options that may reduce energy costs to consumers including by incentivising investment in new generation and interconnection; and
- reflect community expectations that electricity supply will remain reliable during a “1 in 10” year summer.”⁴

¹ <https://www.aemc.gov.au/sites/default/files/2022-09/2022%20RSS%20Review%20Final%20Report%20%281%29.pdf>

² <https://www.aemc.gov.au/sites/default/files/2022-09/2022%20RSS%20Review%20Final%20Report%20%281%29.pdf>

³ <https://www.energycouncil.com.au/media/32ihycb4/20181221-aec-triple-submission.pdf>

⁴ <https://webarchive.nla.gov.au/awa/20210603103935/https://energyministers.gov.au/node/1026>

The politics at this time were clear, governments wanted to tighten the reliability standard irrespective of evidence to the contrary and the additional costs to consumers. Accordingly, the ESB recommended an IRM of 0.0006% USE as opposed to the reliability standard of 0.002% USE as determined by

The ESB engaged consultants to undertake modelling to support the case for tightening the standard and the modelling did just that. In their conclusion they stated “their results indicate a higher standard is certainly justified on economic grounds.” However, their modelling is unconvincing in that it appeared to use an extremely high Value of Customer Reliability (“VCR”) estimates which would inflate the value customers place on reliability. The modelling also included Reliability and Emergency Reserve Trader (RERT) arrangements as part of its Demand Response (DR) resources. The inclusion of RERT reduced the cost of avoiding load shedding and thereby supported a tighter reliability standard. However, it is inappropriate to include RERT because it is a non-market process and should thereby be excluded when estimating an appropriate reliability standard level. Furthermore, the RERT data is not publicly available information.

In contrast, for Demand side participation (and wholesale demand response) the Panel’s modellers used - AEMO 2021 input and assumptions dataset which is publicly available. They exclude reliability response volumes because, Reliability and Emergency Reserve Trader (“RERT”) is a non-market process and is out of scope.⁵

Undermining the Integrity of the Panel’s Conclusions

The market settings that are recommended by the Panel are dependent on many exogenous and endogenously generated parameters. One of the key endogenous outputs is the USE standard which is a key determinant for setting the MPC and which is calculated to be at a level that will incentivise the market to invest in additional supply. Market based solutions will lead to the most efficient and cost-effective solutions for a given reliability standard. The IRM represents a departure from this approach in that it establishes a tighter standard without adjusting the MPC to encourage a market response. In the absence of a higher MPC the only likely solutions for meeting the IRM are non-market solutions such as RERT and the Retailer Reliability Obligation (“RRO”).

Tail Risk

The Consultation paper argues that the reliability metric needs to incorporate ‘tail risk’. In its 2022 RSS review the Panel did discuss ‘tail risk’ and identified a potential case for considering a change to the form of the reliability standard by the next RSS review period which would set the standards and settings to apply from 1 July 2028.

The Panel commissioned extensive modelling and analysis. This considered a range of topics including the VCR. In December 2019 the Australian Energy Regulator (“AER”) completed a review of VCR and concluded that VCR values were similar to those the Australian Energy Market Operator (“AEMO”) found in 2014.⁶ The Panel and its consultants drew on the AER’s VCR estimates with some modification and also modelled low, base and high cases scenarios. The Panel concluded that if it was to satisfy the National Electricity Objective (NEO), the 0.002% USE should be retained, ie, the appropriate level of reliability is one which is set near the optimal trade-off between the cost of additional supply and the cost of customer interruption inconvenience.

With respect to the IRM, the Panel also noted,

“... this level of reliability does not reflect, customer willingness to pay for reliability.”

⁵ <https://www.aemc.gov.au/sites/default/files/2022-08/IES%20-%20Final%20modelling%20report.pdf>

⁶ <https://www.aer.gov.au/system/files/AER%20-%20Values%20of%20Customer%20Reliability%20Review%20-%20Final%20Report%20-%20December%202019.pdf>

This suggests that there is no impetus for the continuation of the interim reliability measure of 0.0006% USE.

Furthermore, the AEC considers the mathematical concept of “tail risk” has been misunderstood by the AEMC in suggesting it is relevant to the reliability metric, when in fact it is only relevant to reliability modelling.

Extreme power system outcomes have always been possible due to unfortunate combinations of events. Existing monte-carlo based simulations employed by AEMO attempt to assess these outcomes using combinations of stochastic variables. These tail events are generated by the model and their resulting Unserved Energy (USE) is correctly captured within the accumulated USE.

Naturally, these models should adapt to the transitioning power system, so that they capture the scope and probability of new types of extreme unfavourable events.

However, the need to update models has no implications for the economically optimum reliability metric. The Paper appears to have confused the need to improve the calculation technique with the desired calculation result. It is the task of AEMO to ensure these models are tuned to correctly capture the extreme events. It is not the task of the reliability standard to counteract perceived limitations of the models by introducing an intentional conservatism.

Retailer Reliability Obligation triggers

The Consultation paper states that Ministers in all jurisdictions can make a T-3 instrument at any time without linking the instrument to a specific forecast reliability gap from the ESOO reliability assessment process. Hence, the IRM is irrelevant with respect to T-3 instruments. While a T-1 instrument can only be triggered by AEMO and after AER approval.

EMO’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. Hence, there is potential for unnecessary triggers of RRO requirements at additional and unwarranted costs to consumers if the IRM is maintained.

Consistency with the National Electricity Objective (“NEO”)

The NEO is “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

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.”⁷

The AEC notes the reasons set out in the Consultation paper but believes the retention of the IRM fails to meet the primary consideration of the NEO, efficient investment. The Panel has very recently reviewed and re-confirmed the most appropriate level for the Reliability Standard, therefore the continuation of a stricter standard, and the associated increased investment to meet that standard, cannot be construed as “efficient investment ... for the long-term interests of consumers...”, given that the additional investment and interventions required will result in increased costs for consumers. As noted earlier in this submission, this proposal to extend the IRM fails to align with the value of customer reliability as expressed by consumers in their responses to a detailed AER survey. A reliability standard that is known to be inconsistent with the value of customer reliability cannot by definition be in “the long-term interest of consumers”.

⁷ *National Electricity (South Australia) Act 1996*, Clause 7

Conclusion

The AEC remains unconvinced that the IRM has led to any benefits for the market that would satisfy the NEO and suggests it should be discontinued and the reliability standard as recently re-confirmed by the Panel should be the only standard. To do otherwise usurps the governance structure of the NEM in that the body responsible for setting the reliability standard has been overruled by a less inclusive and less expert body. This review of the IRM represents a great opportunity for the AEMC to restore appropriate governance and remove unnecessary costs on consumers.

Any questions about this submission should be addressed to the writer, by e-mail to Peter.brook@energycouncil.com.au or by telephone on (03) 9205 3103.

Yours sincerely,

Peter Brook

Wholesale Policy Manager
Australian Energy Council