AUSTRALIAN ENERGY REGULATOR

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John Kim
Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2001

Dear Mr Kim

Re: Directions paper – Review of the form of the Reliability Standard and Administered Price Cap

The Australian Energy Regulator (AER) welcomes the opportunity to provide a submission to the directions paper for the Reliability Panel's review of the form of the reliability standard and administered price cap. We note the important role that both the form and level of the reliability standard play in balancing the reliability of energy supply with affordability for consumers.

The AER exists to ensure energy consumers are better off, now and into the future. As part of our functions, the AER develops and publishes estimates of the values of customer reliability (VCR) that reflect the value different types of customers place on a reliable electricity supply under different conditions. The AER will conduct its next review of VCR methodology and update its VCR estimates throughout 2024. There are potential synergies across the AER VCR review, the current review of the form of the reliability standard, and the subsequent review of reliability standard and settings (RSS). It is important to ensure stakeholders have clarity on the respective roles and limitations of the reliability standard setting and VCR estimates. It is in the context of these functions and roles that the AER provides the comments in this submission.

This submission seeks to clarify some properties and composition of the AER's VCR estimates and how they relate to aggregate customers' willingness to pay to avoid outages due to reliability events in the context of the Reliability Panel's current review, as well as the subsequent RSS review.

There is an important difference between the assumptions underpinning the current form of the reliability standard and the assumptions used in the AER VCR methodology.

The current form of the reliability standard is, indeed, linear with respect to the amount unserved energy (USE) arising in reliability events (this property is also referred to as 'risk-neutrality' by some stakeholders). This form is agnostic to such attributes of USE events as duration and timing. It takes a region-wide perspective and does not account for how the impacts of USE events are distributed across individual energy customers via jurisdictional

load-shedding schedules.

The focus of the AER VCR estimation, on the other hand, is on how individual customers experience electricity outages. The AER VCR methodology allows for a customer's willingness to pay (WTP) to avoid an outage to differ depending on the customer's characteristics and outage attributes, including:

- type of customer (residential, business, large business user),
- geography (climate zone, remoteness, state),
- industry sector,
- outage duration (0-12 hours),
- outage timing (weekday/weekend, season, peak/off-peak) and
- outage scale (localised/widespread).

Therefore, it would not be correct to suggest that the AER VCR 'assumes societal tolerance for reliability events does not vary based on duration, scale, or frequency of the event'[1]. In fact, as observed by Endgame Economics[2], when expressed in $/kWh terms, AER VCR estimates tend to decline with outage duration.[3]

This means that the 'risk-neutrality' property of the reliability standard is not an inherent feature of the AER VCR approach, but rather a result of adopting the current form of the standard.

The AER notes the region-wide aggregate customers' willingness to pay to avoid a reliability event depends on how that event is experienced by individual customers. This would, in turn, depend on how jurisdiction rotational load-shedding schedules allocate total USE across energy customers in the region. For example, for the same level of USE, aggregate customers' willingness to pay may differ between two regions: one where typical customer's load is shed for 30 minutes and another where load is shed for a period of 2 hours. To understand how customers value a particular reliability event, it is therefore necessary to map that event into outage experiences of individual customers.[4]

The AEMC has previously considered how reliability events would map into individual customer experiences in its 2022 Review of Reliability Standard and Settings. While its 'base case VCR' scenario used the AER's customer load-weighted state VCR averages, the AEMC conducted 'low case VCR sensitivity to calculate VCR values for consumer load that is most likely to be rotationally load shed'.[5] Further, the 'high case VCR sensitivity' is based on the observation that VCR for shorter duration outages tend to be higher and that 'load that is rotationally load shed is mostly likely switched off for a period 45 minutes to one hour at a time'.[6]

A similar 'mapping' exercise can help shed light on the impacts of reliability events modelled in the current review on individual customers and therefore on the relevant values of

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1 AEMO, Submission to the Review of the Form of the Reliability Standard and Administered Cap – Issues paper, May 2023, p. 8.

2 Endgame Economics, Form of the reliability standard, report for the Australian Energy Council, July 2023, p. 24.

3 Further detail on AER VCR estimates by outage attributes and customer characteristics is available at AER web-site: https://www.aer.gov.au/industry/registers/resources/reviews/values-customer-reliability-2019/update. For example, appendix B provides updated VCR estimates by duration and timing.

4 A similar observation was made by Endgame Economics, Form of the reliability standard, report for the Australian Energy Council, July 2023, pp. 19-21.

5 AEMC, 2022 Review of the Reliability Standard and Settings, Final Report, September 2022, p. 108.

6 AEMC, 2022 Review of the Reliability Standard and Settings, Final Report, September 2022, p. 109.

customer reliability.

The AER is happy to engage with the AEMC and the Reliability Panel to assist in understanding the implications of the changing reliability risk for the VCR. One option in that regard, as indicated by the AEMC, may be to include additional questions in the AER VCR surveys. The AER notes there is a range of methods for obtaining information on how customers value reliability, and the method that is most appropriate in the context of the current Reliability Panel's review will depend on the knowledge gaps that are identified. The AER will continue engaging with the AEMC to explore these issues further.

We thank the Reliability Panel and the AEMC for the opportunity to provide our input to this consultation, and we welcome the opportunity to work closely with the AEMC on issues identified above as the review progresses.

If you have any questions in relation to this submission, please contact Dr Yuliya Moore (Director, VCR), at VCR2024@aer.gov.au, or on (03) 9658 6400.

Yours sincerely,

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