AusNet

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Locked Bag 14051
Melbourne City Mail Centre
Victoria 8001 Australia
T: 1300 360 795
www.ausnet.com.au

Ms Kami Kaur
Acting Executive General Manager, Network Regulation
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Via email: capex@aer.gov.au

Dear Ms Kaur,

Network resilience guidelines – AusNet's feedback on the draft network resilience guidelines

AusNet welcomes the opportunity to provide feedback on the Australian Energy Regulator's draft network resilience guidelines. AusNet broadly supports the proposed framework for assessing resilience investments, while seeking further clarity and detail on certain points. Specifically, AusNet supports:

- **Clearer guidance and an earlier review of the Value of Network Resilience (VNR).** The current VNR approach and application may not accurately value the customer impacts of prolonged outages and can be difficult to apply. Practical interim guidance and an earlier review (completed by the end of 2028) is required to ensure regulatory proposals for the 2031-36 regulatory period are supported by robust VNR data reflecting customers' willingness to pay and make for a smoother regulatory determination process.
- **Incorporate more detailed modelling guidance into the guideline, reflecting experience gained from the most recent round of regulatory determinations.** This would put resilience guidance on a more equal footing with other expenditure categories (e.g., repex, CER integration, ICT), improve the consistency and transparency of resilience expenditure assessments, reduce information gaps between DNSPs and the AER, and support more efficient regulatory outcomes.
- **A forward-looking approach to assessing resilience risk.** Historical outage data provides a useful comparison but may not adequately capture rare events or expected changes in climate conditions. The guidelines should clarify how historical data should be reconciled to forward-looking climate projections, probabilistic modelling and high-impact low probability events.
- **Clarity regarding the role of consumer engagement in the assessment of resilience expenditure proposals,** particularly how to balance economic assessments and consumer preferences when they are inconsistent. This is required to support high-quality regulatory proposals, improve regulatory efficiency and ensure consumer engagement delivers maximum value for customers.

AusNet also endorses the submission from Energy Networks Australia (**ENA**) on the draft guidelines. AusNet seeks further guidance on the following areas to support the clarity and effectiveness of the guidelines.

Definition of resilience

AusNet supports the revised definition of network resilience referring to prolonged outages caused by severe weather events. Its inclusion helps to distinguish resilience from expenditure primarily aimed at maintaining or improving reliability under normal operating conditions. The definition could be further strengthened by explicitly referring to the need to reduce the risk and impact of prolonged outages caused by severe weather events, as our customers' lived experience from recent events have signalled that risk and impact reductions are necessary i.e.,

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'Network resilience is a performance characteristic of a network and its supporting systems. It is the network's ability to ***reduce the risk and impact of prolonged outages caused by severe weather events and*** *its ability to continue to adequately provide network services and recover those services from prolonged outages caused by severe weather events.*'

AusNet supports the separate definition for community resilience because it:

- acknowledges that resilience investments can extend beyond network hardening
- acknowledges the supporting role of Distribution Network Service Providers (**DNSPs**) in supporting communities; and
- enables an assessment process suited to community initiatives, notwithstanding more clarity is needed around the role of consumer preferences in a prudency assessment given they are inter-related.

The guidelines should also acknowledge that network resilience and community resilience are complementary measures and not mutually exclusive. The former aims to prevent the outages, while the latter aims to reduce the impact to communities acknowledging that some types and levels of outages may be unavoidable.

Applicability of the principles to transmission networks

We welcome the AER's draft position that transmission networks may have regard to the principles in the guidelines when preparing resilience expenditure proposals, and the recognition of the need to apply these principles on a case-by-case basis, given the differences in the transmission and distribution operating environments. In future, AusNet would welcome more detailed guidance that reflects the distinct characteristics of transmission networks. Examples of transmission-specific expenditure benefits assessment, and expectations for supporting information (e.g. on climate modelling) would support the development of fit-for-purpose resilience proposals and therefore promote investments that drive better customer outcomes.

Consumer preferences

AusNet agrees that consumer preferences should inform resilience proposals and that, more broadly, consumer engagement should continue to play an important role in informing regulatory proposals and expenditure plans. However, greater clarity is needed regarding how engagement findings will explicitly influence the AER's assessment. This is particularly the case given the AER's expectations for engagement-related supporting information identified in the draft guideline are substantial and, as drafted, would likely require a significant investment by DNSPs, customers and stakeholders to exhaustively address.

AusNet and its customers invested significant resources into our most recent Electricity Distribution Price Review (**EDPR**) research and engagement program, demonstrating generally strong support and willingness-to-pay for upfront resilience investments. However, the AER's assessment of our proposed resilience plans primarily focused on a technical and economic assessment of prudency and efficiency. The AER took a similar approach to its assessment of our proposed reliability investments in the Euroa region and a broad-based regional reliability allowance.

We recognise that the role of consumer engagement in the regulatory determination process is being considered by the AEMC in Package 2 of its Electricity Network Regulation Review (**ENRR**). Consistent with our submission to the AEMC's consultation paper, AusNet is seeking clarification regarding the role of consumer preferences within the regulatory framework and determination process. Greater clarity is required to support high-quality regulatory proposals, improve regulatory efficiency and ensure consumer engagement delivers maximum value for customers. There is a need for clearer guidance on how investments that meet customer preferences but do not align with prudent and efficient investment should be considered by networks and the AER. While the ENRR process will continue

beyond the finalisation of the AER's resilience guideline, to more clearly set expectations for future determination processes, these issues should be recognised in the consumer engagement expectations set out in the final resilience guideline. The guidelines should explain how consumer preferences are incorporated alongside technical and economic assessments, particularly how the AER would assess Net Present Value (**NPV**) negative investments that have a high level of customer support.

Earlier VNR review and clarity on the current VNR framework

AusNet advocates expediting the VNR review earlier than 2029 given it is one of the key assumptions underpinning the assessment of prudent and efficient level of resilience investment. Similar to the VCR's role in forecasting the efficient amount and timing of traditional network expenditure (e.g., augex, repex), the availability of robust VNRs is crucial to ensuring resilience investment plans reflect customers' willingness-to-pay.

AusNet's regulatory proposal for the 2031-36 EDPR is due for lodgement in January 2030. he majority of the engagement activities and business case justification to support it will occur during the two-year period prior to submission. A VNR review completed by the end of 2029 will not provide us with sufficient time to incorporate updated values into our regulatory proposal for the 2031-36 period. In these circumstances, the current VNR framework may be applicable for the next 10 years to June 2036. To the extent the current framework does not properly reflect the available evidence on the impacts of prolonged outages on consumers, there is a material risk this will lead to inefficient resilience investment levels and suboptimal consumer outcomes over that period.

There is also the need for clarity around how to apply the current VNR framework in the interim. The current VNR framework is a tiered approach, applying different multiplies to the VCR depending on the band of the outage duration, which is capped at an upper bound. The below table presents the VNR calculations from AusNet's 2026-31 EDPR revised proposal which the AER did not accept[1]. We are seeking clarification on the corrections needed to this methodology as it was not explained in the AER's final decision. More broadly, we remain concerned that the current VNR approach using the 6-12 hour VCR value as a starting point undervalues the impacts of prolonged outages on consumers.

In our experience, the customer value placed on restoring supply following a prolonged outage is likely to increase (per kWh of disrupted supply) as the outage duration increases, given the increasing inconvenience, disruption and additional costs caused over time. While the current VNR approach attempts to reflect this by applying multiples of the standard VCR for outages beyond 12 hours, in practice this results in a declining rate per kWh as the outage progresses, as shown in the table below.

We do not consider the rationale for adopting the 6-12 hour VCR as the choice of the standard VCR in the current approach was adequately established[2] and, therefore, requires careful re-examination through a timely VNR review. The adoption of the 6-12 hour VCR as the choice of the standard VCR was first introduced in the Final Decision and not previously consulted on during the Draft Decision. The Draft Decision defined standard VCR as the VCR applying for the first 12 hours[3], which suggests the use of state averages given they reflect the value for outages up to 12 hours, while the Final Decision defined standard VCR as 6-12 hour VCR.[4] Prior to the VNR review, we would welcome clarity on the basis and application of the current VNR through the final resilience guideline.

[1] AER 2026, AusNet Services – Electricity Determination 2026-31, Final Decision, Attachment 2 – Capital expenditure, May, p.32.
[2] AER 2024, Value of Network Resilience 2024, Final decision, September, p. 24.
[3] AER 2024, Value of Network Resilience 2024, Draft Decision, July, p. 3.
[4] AER 2024, Value of Network Resilience 2024, Final Decision, September, p. 24.

		Base VCR type	Base VCR ($ per kWh)	VNR multiple	Resulting VNR ($ per kWh)
Residential customers	<12h	Vic average residential	$49.23	1	$49.23
	12-24h	6-12h VCR	$23.0	2	$46.1
	24h to 7 days	6-12h VCR	$23.0	1.5	$34.6
	>7days	6-12h VCR	$23.0	0	Nil

For the above reasons, we encourage the AER to complete its next VNR review by the end of 2028. This provides approximately two years to undertake the review, following the publication of the final resilience guidelines. This would provide sufficient time for the updated VNR approach and values to be reflected in pre-lodgement consumer engagement activities and Victorian DNSP regulatory proposals due 31st January 2030. This would support the AER's expectation that, as part of preparing regulatory proposals, a DNSP will "identify, test (including through engagement), and choose from credible options and solutions it considers will achieve the operating and capital expenditure objectives, and that it can satisfy us will reasonably reflect the expenditure criteria."[5]

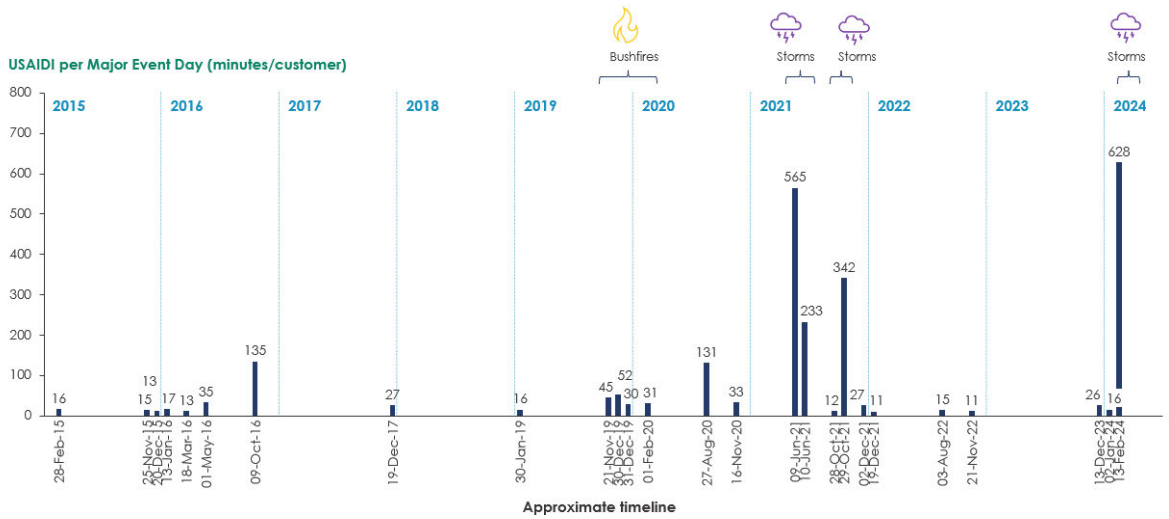
While the AER has indicated it intends to undertake a holistic review of the VCR and VNR as part of the next review of the VCR methodology, this presupposes that the VNR will be derived from VCR, in line with the 2024 VNR approach. While we acknowledge the link between the reliability and resilience, the most appropriate methodology and sources of evidence to derive VNRs should be established through a dedicated, timely VNR review. The potential benefits and synergies of developing new VCR and VNR values concurrently in 2029 do not warrant the protracted VNR review timelines proposed by the AER.

How to reconcile future climate risk to historical data

AusNet supports the recognition in the draft guidelines that forecast climate and probabilistic modelling can help inform the evidence base for resilience investments. Yet the draft guidelines also emphasised the need for a comparison to historical outage data which may misrepresent the future risk profile under changing conditions. An historical sample period may not include severe weather events, or high-impact, low probability (**HILP**) events, yet this is increasingly the reality across many parts of the world. For example, if we had proposed a resilience program in our 2021-26 EDPR and was required to reconcile forecast climate risk to historical outage data over 2015 to 2020 then the historical outage data would have incorrectly contradicted forecast climate risk over the 2021-26 period, which actually included a number of severe weather events and prolonged outages. The chart below shows very minor prolonged outages between 2015 and 2020, followed by one bushfire and three major storms between 2020 and 2024. Two other severe weather events – a major storm and bushfire in September 2024 and January 2026 respectively – are not shown on the chart.

Conversely, sole reliance on a historical period that includes multiple severe weather events also has the potential to mispresent future risk profile under changing conditions. Clear guidance on how to incorporate probabilities and reconcile to historical data would help networks to develop consistent resilience plans in line with the AER's objectives and consumer interests. For example, this could include explicit weightings to use when incorporating forward-looking climate projections, guidance on constructing relevant scenario analysis and an approach to considering HILP events.

[5] AER 2026, Network resilience guidelines, Explanatory statement to the draft guidelines, September, p.22.



Guidance on other modelling assumptions

The draft guideline sets out the AER's high-level expectations of how networks' resilience proposals may satisfy the principles of prudency and efficiency.

However, additional AER guidance on key assumptions underpinning resilience investment proposals would improve the consistency and transparency of expenditure assessments, reduce information gaps between DNSPs and the AER, and support more efficient regulatory outcomes. In particular, further guidance on effectiveness assumptions would be helpful given the importance of effectiveness to quantifying resilience benefits and the potential for a wide range of values. Accurate input assumptions are important for the development of optimal resilience investments that deliver consumer benefits.

The AER's Final Decision – with respect to AusNet's 2026-31 Revised Proposal – reduced the implied effectiveness of covered conductors from 57.7% to 12.1% which is a substantial reduction that was not explained in the final decision. The AER's stated:

"AusNet's modelling overestimates the percentage of windstorm related outages that covered conductors could reasonably be expected to improve. AusNet states that 70% of its outages are windstorm related and that of these outages, covered conductors could be expected to improve all of them with an effectiveness of 77%. AusNet stated that the effectiveness of covered conductors in preventing windstorm related outages was 50% in its initial proposal. This value was increased to 77% in its revised proposal without sufficient justification. This is higher than what we have observed in other determinations. This results in an overestimation of the effectiveness of covered conductors and, in turn, an overestimation of the benefits that could be achieved in AusNet's modelling…
adjusting the implied effectiveness of covered conductors from 57.7.% to 12.1% for all outages[6]

Therefore, clarity on appropriate data sources for effectiveness assumptions (as an example of a key modelling input) would promote consistency and set clearer expectations in approach for distribution network businesses when preparing resilience proposals.

The AER currently provides detailed guidance for other categories of expenditure such as replacement expenditure, consumer energy resource integration and information and communication technology investments. Providing guidance on key inputs, assumptions and modelling approaches to resilience proposals in a similar format and level of detail would assist networks embed a consistent approach to

[6] AER 2026, AusNet Services electricity distribution determination 2026-31, Final Decision, Attachment 2 – Capital expenditure, May, p.33.

resilience modelling ahead of a major reset and avoid significant revisions to key assumptions and forecasts within the compressed timeframes of a determination.

This is particularly important in the Victorian context because the Network Resilience Plans framework requires Victorian DNSPs to deliver resilience investments consistent with the AER's final determination. This framework is expected to be most workable when key assumptions are closely aligned – and clear guidance is available - so that changes between networks' proposals and the AER's final determinations are relatively minor. An AER final determination that is substantially different to an DNSP's proposed resilience plans presents a problem in that the network will be accountable for delivering a program that may differ materially in some respects from what it had proposed.

Expenditure with multiple benefits

Network resilience is often embedded within broader infrastructure investment and maintenance programs. For example, upgrading from wooden to concrete poles at the end of life (instead of like-for-life replacement), or a proactive wood-to-concrete poles accelerated replacement program, are underpinned by both reliability and resilience drivers. The guidelines should clarify when resilience is the primary driver of an investment where multiple benefits have been identified. Worked examples or case studies that cover shared costs and joint benefits may be helpful.

Where case studies are provided, the final guidelines should clearly identify the specific proposals and decisions from which they originate to allow the reader to undertake further research and potentially replicate the approach.

Template and information collection

AusNet supports an efficient approach to information collection that retains sufficient flexibility to include relevant evidence. Requirements should minimise duplication between resilience planning, Annual Information Orders and Victorian Network Resilience Plans annual compliance reporting. Template requirements should be proportionate, flexible and accommodate the different circumstances of networks.

Incentive arrangements

AusNet supports the decision not to introduce a separate resilience incentive scheme.

Please do not hesitate to contact Richard Adams, Regulatory Economist [redacted] regarding this submission.

Sincerely,

[redacted]

Rob Ball

Manager, Regulation (Distribution)

AusNet