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7 November 2024

Andrew Pirie
Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Dear Mr Pirie

ERC04000 - Including distribution network resilience in the national electricity rules

Essential Energy welcomes the opportunity to respond to the Australian Energy Market Commission (AEMC or the Commission) on the consultation paper for the inclusion of distribution network resilience in the National Electricity Rules (NER or the Rules). In doing so we support, and echo, many of the views expressed by the Energy Networks Australia (ENA) in its submission.

The rule change as proposed, would provide much needed clarity to distribution network service providers (DNSPs) with regard to regulatory proposals for resilience expenditure, which are developed in consultation with customers and their representatives. While it is important to note the efforts of the Australian Energy Regulator (AER) recently, including the resilience expenditure guidance note and establishing a Value of Network Reliability (VNR), these initiatives fall short of a binding and clear approach for the assessment of resilience-related expenditure.

Essential Energy also supports the rule change proposal for excluding a specific definition of resilience in the Rules or in the AER's Guideline. Instead, a non-exhaustive list describing the types of events or circumstances to be included as a catastrophic or severe weather events, would provide both clarity and flexibility. This can be supplemented with examples of evidence the AER expects to support capital expenditure (capex) and operating expenditure (opex), to mitigate the effects on the network of those events.

Flexibility recognises differences between DNSPs related to the uniqueness of individual networks, the types of conditions and events which impacts networks, and considers existing and required preparedness for extreme weather events into the future. Clarity regarding the methods, models and data DNSPs can use to justify expenditure will assist DNSPs to propose expenditure and undertake customer engagement in line with the AER's expectations.

Support for a binding guideline

In the latest regulatory determination, the AER's final decision approved Essential Energy's proposed forecast capex, which included $204.8 million in proposed resilience-related expenditure. The justification for the AER's approval was on the basis that the total forecast "*reasonably reflects prudent*

and efficient costs to maintain the safety, reliability and security of the network"[1]. However, the AER expressed some concerns regarding individual capex categories including the proposed resilience expenditure. Specifically, the AER found that aspects of Essential Energy's climate resilience expenditure forecast was "*inconsistent with prudent and efficient decision-making*"[2]. The AER also requested additional justification regarding Essential Energy's Stand-alone Power Systems (SAPS) program[3] designed to increase reliability for fringe of network customers which are often impacted by climate related events. Were it not for the top-down approval of the total expenditure forecast, rather than the AER's alternative estimate, Essential Energy would have faced a $83 million shortfall, which would represent a potential 40% cut to its proposed resilience-related expenditure. A rule mandating the AER publish a binding guideline that outlines the standard of evidence required from DNSPs for the approval of resilience-related expenditure in the ex-ante assessment process would provide DNSPs the clarity and certainty needed to prepare revenue proposals.

In developing these standards, we note that while it is important that climate science modelling regarding the risk and probability, frequency and severity of weather-related events is used to inform decisions, it is the impact of events that directly affects customers. Impacts to communities of a weather-related event are often not spread evenly. An event with the same severity rating can have different impacts on different communities, or parts of a network, depending on the individual characteristics of the area affected. For example, if a community experiences poor reliability, or a low level of preparedness for an extreme weather event due to geographic or socio-economic factors, the impact to that community might be worse than for a community with higher levels of resilience/ redundancy provisions built in.

Essential Energy's network covers a vast area and has the lowest customer density in the National Electricity Market. Unlike our urban counterparts, the most efficient network configuration is necessarily radial, rather than a meshed network. This also means that this type of network is more susceptible to long duration outages. Our recent experiences with loss of a transmission line into the Broken Hill area due to weather related events impacted communities immensely, where the trauma and financial impacts experienced by customers will take some time to recover from. These communities are used to lower levels of reliability, but there are compounding impacts and costs when electricity supply is impacted for longer periods. Vulnerable customers, mines, and small business are examples of customers who bear additional costs when these high impact, low probability events occur.

For communities at risk of being more severely impacted by extreme weather events it may be prudent and efficient to build back better, rather than focus on maintaining existing poor reliability levels as discussed in Figure 1 below.

[1] AER, Draft decision, Essential Energy Electricity Distribution Determination 2024-29, Attachment 5: Capital Expenditure, September 2023, p. 3.
[2] AER, Draft decision, Essential Energy Electricity Distribution Determination 2024-29, Attachment 5: Capital Expenditure, September 2023, p. 14.
[3] AER, Draft decision, Essential Energy Electricity Distribution Determination 2024-29, Attachment 5: Capital Expenditure, September 2023, pp. 3, 22.

Figure 1: The resilience expenditure offset.

Source: Minderoo Foundation Fire and Flood Resilience Blueprint 2020, p.15.

As a result, Essential Energy considers that a consistent approach for modelling the impacts of weather will provide clarity for DNSPs and communities in identifying the need for resilience expenditure. The modelling approach should use climate profiles which accounts for differences in existing resilience profiles between communities. Essential Energy looks forward to working with the AER during its consultation process to draft its guideline, taking into account the expectations of consumers for DNSPs to increase resilience to more frequent and severe climate-related events.

Linkage to incentive schemes

Given the above, Essential Energy supports an explicit link between resilience expenditure and incentive schemes. Networks should be incentivised, or penalised, for outcomes related to resilience expenditure. The current STPIS framework, with its underlying focus on maintain, rather than improve, is not fit for purpose. Part of the reason is that Major Event Days (MEDs) are excluded from the STPIS calculation, relying on past performance to set the calculation. While it is true that through the partial feedback loop, a sustained increase in the frequency and severity of extreme weather events through MEDs will be incorporated in STPIS targets over time, the design of the STPIS is to incentivise reliability improvements under standard conditions.[4] Standard conditions exclude MEDs, while the focus of resilience expenditure is to reduce the impact of MEDs. Potential solutions could include:

- Incentivising expenditure that either reduces the proportion of minutes lost from MEDs
- Adjusting the MED definition (limited), thus reducing the number of excluded days to ensure major events are reflected more within STPIS
- Investigating a separate MED incentive scheme, although the expected increase in MEDs (from climate related weather events) would have to be normalised for, and excluded, so that the underlying (anticipated) improvement in resilience can be captured
- Adjusting STPIS to include MEDs that are weather related, again with some trend captured within targets for expected increase in climate-related events.

[4] AER, Network resilience note, April 2022, p. 8.

Overall, we recommend further investigation and consultation of potential incentives, and the use of paper trials. The current removal of MEDs from STPIS and the reliance on the cost pass through mechanisms to capture network costs, is perhaps not the most appropriate approach for the future as the frequency and severity of MEDs are expected to increase.

Applying the correct balance between expenditure on resilience and better counter-factual reliability in the future is not an easily resolved issue, but what is important is ensuring we keep the impact on customers and communities firmly front of mind throughout this consultation.

Other barriers within the Rules

The ex-ante forecast capex and opex framework for the development of regulatory proposals, exhibits restrictions on the inclusion of forecast expenditure on projects designed to improve energy resilience. In particular, in the absence of a specific jurisdictional obligation or requirement[5] to increase resilience – Clauses 6.5.6(3)(iii) and (iv) for opex and 6.5.7(3)(iii) and (iv) for capex, focuses on the term "maintain" rather than improve. While the term maintain is relevant for the AER's assessment of forecast expenditure to ensure expenditures are prudent, efficient and to protect against overinvestment in network assets, as discussed above, for the future there will be times when it becomes prudent and efficient to invest in increasing the resilience of certain parts of the network. Essential Energy considers that the current wording of the capex and opex objectives acts as a barrier to the assessment of resilience expenditure in the long-term interests of consumers. Consideration should be given to how the capex and opex objectives might reasonably include resilience outcomes within the objectives set out in the Rules.

In summary, Essential Energy supports the rule change proposal for the inclusion of additional factors to place a positive obligation on the AER to consider resilience in its assessment of regulatory proposals. In particular, we support a review into proposed new capex and opex factors to ensure resilience is adequately and appropriately captured in the Rules. We also support the inclusion of these factors into a new Resilience Expenditure Guideline, that outlines the standards of evidence required from DNSPs for the approval of new resilience-related expenditure. We consider that doing so will provide the appropriate balance for the need for prudent and efficient investments to increase resilience, while meeting the expectations of communities.

If you have any queries regarding this submission, please contact our Regulatory Strategy Manager, Adam Young on 0414 926 406 or via adam.young@essentialenergy.com.au.

Yours sincerely

Hilary Priest
Head of Regulatory Affairs

[5] NER, cll. 6.5.6(3) & 6.5.7(3)