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Alex Burk
Assistant Director
Networks | Networks | Value of Network Resilience

By e-mail only: vnr2024@aer.gov.au

Dear Mr Burk

Value of Network Resilience 2024 Draft Decision

Power and Water Corporation (**Power and Water**) appreciates the opportunity to provide a submission to the Australian Energy Regulator's (**AER's**) value of network resilience review draft decision.

Power and Water supports the AER's objective which is to develop a value of network resilience (**VNR**). There is value and long-term benefit to customers in network businesses applying a value to their investments that are attributable to the benefits network consumers receive from a resilient network.

Power and Water supports the AER's draft decision to adopt an interim VNR. It is appropriate to adopt a simple approach and a multiple of the value of customer reliability (**VCR**) with an upper bound approach to determine the interim VNR. Additionally, we support ensuring that the VNR maintains a comparable level of detail to the VCR, particularly concerning geographic segmentation by climate zone and remoteness.

The AER indicated it will conduct a longer-term VNR review in 2025 with a view to establishing an enduring VNR methodology and value. Power and Water considers this longer-term VNR review should:

- Include a higher multiplier for climate-impacted networks. The 2020 Climate Change in the Northern Territory Report prepared by the CSIRO for the Northern Territory Government, found that climate change will result in more intense cyclones, more high fire risk days, and a higher risk of flood events over the next 30 years relative to other networks.[1]

[1] Climate Change in the Northern Territory – State of the science and climate change impacts

- Consider VNR alongside the value of emissions reduction and add as a market benefit in the regulatory investment tests (**RITs**). This is because climate change adaptation and resilience go hand in hand with emission reductions.
- Consider providing resilience guidance in RIT guidelines on how market benefits should be assessed for less densely populated networks, where economies of scale and infrastructure support are less favourable.
- Consider revisiting the use of the Wide Area Long Duration Outages (**WALDO**) methodology.

Further information on these matters is in Attachment 1.

Please do not hesitate to contact me If you would like any clarification regarding our response, by email [redacted].

Yours sincerely

[redacted]

Taryn Maroney
General Manager
Regulation Economics and Pricing
Customer Strategy and Regulation

29 August 2024

Attachment 1 - Power and Water Submission to the Value of Network Resilience 2024 Draft Decision

Power and Water supports the AER's draft decision to adopt an interim VNR. It is appropriate to adopt a simple approach and a multiple of the VCR with an upper bound approach to determine the interim VNR. Additionally, we support ensuring that the VNR maintains a comparable level of detail to the VCR, particularly concerning geographic segmentation by climate zone and remoteness.

The VNR will provide a value that networks can use to justify investment based on the benefits customers gain from more resilient infrastructure. Power and Water considers this to be an important development in the regulatory framework, especially for networks in regions like the Northern Territory (**NT**) that are heavily impacted by climate conditions. In the NT, weather-related events are a major cause of electricity outages and often result in reliability and resilience issues. Forecasts predict more intense cyclones, an increase in high fire risk days and more frequent flood events[2] making investment to address these risks particularly important.

Power and Water's approach to resilience will be based on its unique climate change impacts and the need for expenditure on resilience and reliability in the NT.

Power and Water support the AER's plan to conduct a longer-term VNR review in 2025, aimed at establishing a sustainable VNR methodology and value. In our view, if this review continues to utilise the VCR, it should apply a higher multiplier of the VCR for climate-impact networks. Power and Water's network is unique in Australia, consisting of three physically separate networks spread across a vast geographical area with a low population density, regularly encountering diverse extreme weather conditions. Additionally, in comparison to any electricity network in the National Electricity Market (NEM), the NT electricity networks are smaller with fewer customers, energy volumes, and peak demand and is more spread out, which results in a higher cost to serve each customer. The AER recognises this, and it continues to be informed by these differences when it assesses Power and Water's regulatory proposal and other regulatory requirements.[3]

Power and Water does not consider the VCR is a sufficient measure to value the VNR as it does not cover outages larger than 12 hours duration. Furthermore, the AER is not proposing to amend the VCR that has been in place since 2019.

In 2020, the AER developed a WALDO methodology for its original VCR review, which did not progress due to stakeholder concerns over how the draft WALDO model estimated social costs. Power and Water

[2] ibid

[3] https://www.aer.gov.au/system/files/2023-10/AER%20-%20Draft%20Decision%20Overview%20-%20Power%20and%20Water%20Corporation%20-%202024-29%20Distribution%20revenue%20proposal%20-%20September%202023.pdf

consider this model should be further investigated and would appreciate the opportunity to work with the AER on how WALDO could be used for climate-resilient modelling, estimating social costs and the future VNR review.

The VNR should be considered alongside the value of emissions reduction.

The Australian Energy Market Commission's (**AEMC's**) harmonising the national energy rules with the updated energy objectives rule includes changes in Australia's greenhouse gas emissions as a class of market benefit for the purposes of regulatory investment tests for distribution and transmission (**RITs**).[4] This allows network service providers (**NSPs**) to propose expenditures for activities that contribute to achieving emissions reduction targets. In a separate consultation on the value of emissions reduction (**VER**), the AER confirmed it will use a single VER, $70 per tonne, to apply to the market benefits used in RITs . While the VER is prescribed for the AER and not subject to consultation, the AER is interested in stakeholder views on alternative approaches or other issues it should consider for the RITs.

Power and Water considers the VNR should be a class of benefit for the RITs. NT NER clause 5.17.1(c)(4)(ix) allows the AER to consider any other class of market benefit determined to be relevant by the AER. The AER should consider providing guidance in its RIT guidelines on how VNR market benefits should be assessed for less densely populated networks, where economies of scale and infrastructure support are less favourable This is because climate change adaptation and resilience go hand in hand with emission reductions. For example, expenditure on photovoltaic (**PV**) and battery-powered standalone power systems (**SAPs**) to help communities withstand extreme weather events will also be compatible with emissions reduction.

Power and Water plans to submit RIT projects for improved resilience.

Power and Water are exploring options for our network to withstand events particularly for customers in remote areas of the network, on long radial lines that are prone to service interruptions. This includes installing automatic reclosers to clear faults quickly, installing remote controlled switches to isolate faults leading to quicker restoration for customers, undergrounding lines, and installing covered conductors. SAPs are also being considered. SAPs typically comprise solar panels, batteries, and back-up generators, and include both microgrids and individual power systems. They are used in remote communities out of reach of existing power lines and have also been built for communities that have lost access to the network because of line breaks caused by cyclones or other natural disasters.

[4] Harmonising the national energy rules with the updated national energy objectives (electricity) | AEMC