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27 March 2025

Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

Submitted online

Dear AEMC,

ERC0400 - Draft Determination: Integrating Resilience Measures into the National Electricity Rule

Essential Energy welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) Draft Determination on integrating resilience into the National Electricity Rules (NER). As the operator of one of Australia's largest electricity distribution networks, Essential Energy serves over 900,000 customers across 95% of New South Wales and parts of southern Queensland, spanning diverse landscapes from coastal plains to rugged hinterlands and arid outback.

Climate change is driving an increase in the frequency and severity of severe weather events, profoundly impacting the network's resilience and the wellbeing of our regional, rural, and remote communities. Two recent examples underscore this urgency:

- 2019-2020 Black Summer Bushfires:** During the 2019-2020 Black Summer bushfires, the Essential Energy network endured widespread destruction across regional NSW. Fires ravaged infrastructure, including poles and lines, disrupting supply to thousands of customers. In areas including the NSW South Coast and Northern Rivers hinterlands, Essential Energy deployed surge crews and collaborated with local resilience groups to restore supply amidst active fire fronts and smoke hazards. Beyond restoration, Essential Energy supported community resilience by maintaining critical power to evacuation centres and coordinating with emergency services to ensure safe access. These efforts reinforced community capacity to recover, yet exposed vulnerabilities in Essential Energy's network to escalating climate-driven threats.
- In late February to early March 2022, unprecedented flooding devastated the Northern Rivers, including Lismore, where the Wilsons River reached a record 14.4 meters. Essential Energy's Lismore depot and South Lismore Zone Substation were completely submerged, and the entire underground network in the Lismore CBD was underwater for days. This event, labelled a 'one-in-1,000-year' flood, affected 69,603 customers across the network from Tweed Heads to Coffs Harbour, with many in Lismore facing multi-day outages. Essential Energy crews, supported by community volunteers who provided storage, accommodation, and food, worked tirelessly to restore power. For instance, residents in Upper Wilsons Creek dug the hole, for a new pole delivered by helicopter, to enable repairs. Despite temporary fixes restoring supply within days at key sites like East Lismore, permanent repairs to infrastructure like the South Lismore Zone Substation took over

12 months, highlighting the scale of resilience challenges Essential Energy faces in delivering distribution services to its customers.

These events, and most recently the impacts of Tropical Cyclone Alfred, demonstrate that without a formal resilience framework in the NER, Essential Energy's ability to proactively invest in network hardening and community support remains constrained. Essential Energy commends the AEMC's draft rule for addressing these gaps and offer feedback to ensure it delivers practical, customer-focused outcomes.

Support for Resilience in the National Electricity Rules

Essential Energy strongly supports the AEMC's more preferable draft rule to embed resilience measures into the National Electricity Rules (NER), recognising the need to address the growing threat of climate-driven severe weather events to networks and electricity customers. Essential Energy welcomes the draft rule's three main features:

1. the introduction of new resilience expenditure factors;
2. the requirement for the AER to develop Network Resilience Guidelines; and
3. enhanced reporting obligations from 2028.

These elements provide a foundational step toward a consistent framework for resilience expenditure proposals and assessments, enabling us to better safeguard Essential Energy's 900,000+ customers in regional, rural, and remote communities.

Essential Energy agrees with the AEMC's decision to limit the scope of the draft rule to power outages caused by severe weather events, given existing NER obligations for cyber-security and safety hazards. The proposed language in the new expenditure factors – requiring the AER to consider how expenditure “would efficiently reduce the risk and impact on consumers” – supports longer-term investment strategies that enhance allocative efficiency and mitigate the disproportionate impacts of climate change on vulnerable regional customers. This aligns with Essential Energy's experiences, such as the 2019-2020 bushfires and 2022 Lismore floods, where proactive resilience measures could have reduced outage durations and community disruption.

Essential Energy notes that the focus on the term “maintain” in the existing capital and operating expenditure objectives in NER clauses 6.5.6(3) and 6.5.7(3) – to “maintain the quality, reliability, and security of supply” – poses a significant barrier to approving efficient resilience investments. In Essential Energy's regulatory engagements, the AER's strict application of “maintain” has limited funding for forward-looking projects to address escalating climate risks, such as asset hardening or flood and fire-resistant infrastructure. The hierarchical structure of Chapter 6.5, where expenditure factors are subordinate to these objectives, risks undermining the intent of the new resilience factors. To address this, the AEMC should either elevate the proposed expenditure factors into the capital and operating expenditure objectives or, at a minimum, include detailed explanatory text in the final determination. This text should clarify how the objectives and new factors can be applied complementarily, ensuring DNSPs can deliver the proactive resilience outcomes sought by the Victorian Minister's rule change request.

Need for Prescription and Defined Terms

Essential Energy acknowledges the AEMC's effort in the more preferable draft rule to balance regulatory clarity with flexibility for the AER in addressing resilience. However, Essential Energy considers that the

draft rule lacks sufficient prescription to provide DNSPs with certainty about how resilience expenditure will be assessed by the AER or assurance of consistent treatment across proposals. As highlighted in Essential Energy's experience in the 2019-2020 bushfires and 2022 Lismore floods, shows that the current informal framework leads to inconsistencies and confusion, hampering proactive investments. Greater prescription in the NER is therefore justified to deliver on the rule change objectives for a robust resilience framework.

One critical element of the draft rule is the concept of a 'severe weather event'. Despite using the phrase throughout the draft rule and draft definition, no definition is provided. The term is also not defined in the National Energy Rules (NER). Essential Energy considers that "severe weather event" should be a defined term within the NER to provide guidance to the AER for the development of its Guideline and inform resilience-related planning and investment by DNSPs.

In the face of increasingly dynamic, compounding and wide-ranging impacts of weather events, previous definitions of related concepts, may no longer be relevant or useful in long-term climate risk planning. This was highlighted in the Electricity Sector Climate Information (ESCI) project, developed by the Australian Energy Market Operator (AEMO), the CSIRO and the Bureau of Meteorology. It found that analysis of historical climate risk should be supplemented by additional analysis of future climate risk that considers how small shifts in some factors (e.g. mean temperatures) can result in a large shift in natural phenomena (e.g. the frequency of higher than usual temperatures) that pose a hazard for electricity infrastructure.¹

With this in mind, the Final Rule should define severe weather events sufficiently broadly, taking into account the network and customer impacts, to enable DNSPs to plan and invest for the resilience of their assets over the long term. Leveraging existing concepts such as 'major event days', as defined in NSW DNSPs jurisdictional operating licences, may not be appropriate for this purpose, as historically low-impact events (such as heatwaves or periods of low rainfall) become increasingly likely to accumulate into events that pose significant risks to electricity infrastructure, consumers and communities.

DNSPs already take a risk-based approach to asset planning, investment and maintenance activities. Extreme weather and climate risks form a key component of broader probabilistic analysis of risk over the long term. In utilising a definition of severe weather events in its Guideline, the AER should consider how this can enable – rather than restrict or redirect – the development of capital and operating expenditure proposals by DNSPs to enhance the resilience of their networks over the long term. The definition should be in line with the intent of the rule change request and the stated objectives of the draft rule to 'improve clarity, flexibility and accountability' as outlined in the draft determination.

Similarly, the AER's Network Resilience Guidelines should define "preparedness" to include proactive measures like asset hardening, vegetation management, and contingency planning. This clarity would align expectations for DNSPs operating in varied conditions – from coastal flood zones to fire-prone hinterlands – ensuring regulatory proposals reflect both network and community resilience needs. Without these definitions, the draft rule risks ambiguity, undermining its goal of improving clarity, flexibility, and accountability.

¹ See CSIRO and Bureau of Meteorology, Climate Change in Australia website, <http://www.climatechangeinaustralia.gov.au/>.

Essential Energy welcomes the AEMC’s proposal for the Australian Energy Regulator (AER) to develop a guideline for assessing resilience business cases, but it must provide clear, specific standards—not just broad guidance or case studies. Given the complexity of resilience investments, DNSPs need certainty to balance costs and benefits effectively. A well-defined guideline will ensure revenue proposals align with regulatory expectations, fostering consistent, transparent outcomes across diverse networks.

Data Reporting

Essential Energy broadly supports including resilience data in Distribution Annual Planning Reports (DAPRs), as it can highlight vulnerabilities and strategies. However, Essential Energy believes a manageable scope to preserve operational focus. Essential Energy views the Regulatory Investment Objectives (RIOs) framework as appropriate for reporting actual resilience outcomes, leveraging existing systems for efficient accountability.

Networks’ Dual Resilience Role

Essential Energy sees networks as integral to both network and community resilience. Hardening assets, like reinforcing poles or using composite poles, reduces outages and supports community recovery, while collaboration with local groups enhances preparedness. Poor network resilience, however, can erode community strength and worsen impacts. Essential Energy’s customers, – spread across diverse geographic landscapes and social demographics, expect investment in both, fortifying infrastructure and bolstering community capacity, a demand Essential Energy strives to meet.

Conclusion

Essential Energy strongly supports the efforts of the AEMC in advancing resilience in the NER and supports the Draft Determination with the adjustments noted. Essential Energy champions resilience measures, a clear AER Guideline, and practical reporting via DAPRs and RIOs. Defining “severe weather event” and “preparedness” will sharpen this framework. Essential Energy’s experiences across regional and remote communities within NSW, highlights the need for multi-level action. Essential Energy looks forward to collaborating with the AEMC and AER to ensure a resilient energy future for network communities.

If you have any questions in relation to this submission, please contact me on 0419 818 115 or via email at hilary.priest@essentialenergy.com.au or Adam Young, Regulatory Strategy Manager on 0414 926 406 or via adam.young@essentialenergy.com.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Hilary Priest".

Hilary Priest
Head of Regulatory Affairs