AUSTRALIAN ENERGY MARKET COMMISSION

RULE

Consultation paper

National Electricity Amendment (Including distribution network resilience in the national electricity rules) Rule

Proponent

Honourable Lily D'Ambrosio MP, Victorian Minister for Energy and Resources

3 October 2024

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About the AEMC

The AEMC reports to the energy ministers. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the energy ministers.

Acknowledgement of Country

The AEMC acknowledges and shows respect for the traditional custodians of the many different lands across Australia on which we all live and work. We pay respect to all Elders past and present and the continuing connection of Aboriginal and Torres Strait Islander peoples to Country. The AEMC office is located on the land traditionally owned by the Gadigal people of the Eora nation.

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Summary

1 Severe weather events in recent years have resulted in widespread long-duration outages in the National Electricity Market (NEM). Floods, bushfires and severe storms have impacted electricity networks, leaving thousands of customers without electricity supply for prolonged periods of time and consumers bearing the costs and risks of these events.

2 Climate change is expected to increase the frequency of severe weather events, increasing the likelihood of long-duration outages in future. Other hazards may also lead to catastrophic events that result in long-duration outages. This has increased the focus on the resilience of electricity distribution networks to prepare for, manage during, and recover from, severe events that may result in long-duration outages.

3 There has also been a focus on whether the lack of a formal framework for electricity distribution network resilience creates regulatory uncertainty for Distribution Network Service Providers (DNSPs) and the Australian Energy Regulator (AER) around how to efficiently spend on network resilience for long-duration outages.

4 The Victorian Government established two expert public reviews into electricity distribution network resilience for long-duration outages in the last three years. The first of these reviews was the Electricity distribution network resilience review expert panel, which in May 2022 recommended including resilience in the national electricity rules (NER) for DNSPs.

5 The Honourable Lily D'Ambrosio MP, Victorian Minister for Energy and Resources (Minister or proponent), submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission) to include resilience in the NER to improve how distribution network resilience is accounted for in the economic regulatory framework on 23 August 2024.

6 The AEMC has commenced its consideration of this rule change request, and this consultation paper is the first stage. We are seeking your feedback on:

- the problem, and the materiality of the problem raised in the rule change request
- the solution proposed in the rule change request
- how we propose to assess the request to determine whether it would promote the long-term interests of consumers.

We are seeking your views on the proposal to include a formal framework for distribution network resilience expenditure

7 The Minister considers that the following issues impact DNSPs' ability to prepare for, manage during, and recover from severe events, resulting in consumers bearing the costs and risks of long-duration outages:

- the lack of a formal framework for distribution network resilience creates regulatory uncertainty for DNSPs and the AER around how to efficiently spend on network resilience for long-duration outages
- climate change and other hazards are expected to increase the frequency of long-duration outages
- current regulatory arrangements place insufficient focus on consumer outcomes for long-duration outages.

8 The rule change request proposes to introduce a formal framework for distribution network resilience expenditure by:

- including resilience expenditure factors for DNSPs in the NER, and
- requiring that the AER develops and publishes distribution network resilience guidelines (guidelines).

9 The Minister considers that the proposal to introduce a formal framework for distribution network resilience expenditure may benefit DNSPs and consumers:

- DNSPs may benefit through greater clarity and predictability over how distribution network resilience expenditure would be assessed by the AER
- Consumers may benefit from:
  - improved distribution network resilience, which may reduce the frequency or duration of outages and costs consumers incur related to long-duration outages
  - the lowest cost approach being selected out of feasible options for expenditure before versus after a long-duration outage event.

10 We are seeking stakeholder views on:

- whether the proposed solution to introduce a formal framework for distribution network resilience expenditure would resolve the problem raised in the rule change request
- how the proposed solution may be implemented
- potential alternative solutions.

We propose four assessment criteria for this rule change

11 Considering the NEO[1] and the issues raised in the rule change request, the Commission proposes to assess the rule change request against four assessment criteria.

12 Please provide feedback on our proposal to assess the request against:

- **Outcomes for consumers:** Would the rule change support outcomes for consumers by improving distribution network resilience to extreme events, at a cost that consumers are willing to pay?
- **Safety, security and reliability:** Would this enable reliable, secure and safe provision of energy at efficient cost to consumers? Would the rule change take into account the likely impacts of climate change on safety, security and reliability outcomes?
- **Principles of efficiency:** Would the rule change deliver allocative efficiency across investment and planning timeframes?
- **Principles of good regulatory practice:** Would the rule change promote predictability, stability and transparency for DNSPs, the AER and consumers regarding how distribution network resilience expenditure will be assessed in the economic regulatory framework?

Submissions are due by 7 November with other engagement opportunities to follow

13 There are multiple options to provide your feedback throughout the rule change process.

14 Written submissions responding to this consultation paper must be lodged with Commission by 7 November 2024 via the Commission's website, www.aemc.gov.au.

15 There are other opportunities for you to engage with us, such as one-on-one discussions or industry briefing sessions. See the section of this paper about "How to engage with us" for further

1 Section 7 of the NEL

instructions and contact details for the project leader.

Full list of consultation questions

Question 1: Does the current framework for distribution network resilience create regulatory uncertainty for DNSPs and the AER around efficient expenditure for long-duration outages? Should the framework be amended to provide clarity?

Question 2: How material is the lack of clarity in the rules around network resilience?

(a) Do you consider the issue with the NER raised by the proponent to be a substantive problem? If so, why?

(b) Are there any other programs or energy sector reforms that may partially or fully address the problem raised by the proponent?

Question 3: Do you agree with the proposed solution to include resilience expenditure factors in the NER?

(a) Is including resilience as expenditure factors in the NER an appropriate solution? Is there are a more preferable way to incorporate distribution network resilience into the NER?

(b) Do you have any comments on the proposed drafting of the resilience expenditure factors? Should they be drafted in the same way for capital and operating expenditure?

(c) Should the resilience expenditure factors cover severe weather events and other catastrophic events that may result in long-duration outages?

Question 4: Do you agree with the proposed solution to require the AER to develop resilience guidelines?

(a) Do you agree that requiring the AER to develop binding resilience guidelines will address the issue?

(b)What level of prescription should the NER include relating to the AER's guidelines? Should the NER include content requirements for the AER guidelines?

(c) Do you agree that both including resilience as capital and operating expenditure factors in the NER and an AER binding guideline are required to address the issue?

Question 5: What are your views of the costs and benefits of the proposed solution?

(a) What do you consider will be the benefits and costs of the proposed solution?

(b) Do you consider the proposal appropriately allocates risk between DNSPs and consumers?

(c) Is there anything the Commission could do in designing the rule that would help to minimise the costs and maximise the benefits?

Question 6: What transitional arrangements would be required to implement the proposed rule?

Question 7: Are there any interactions with the VNR that should be taken into account in the NER?

Question 8: Are there alternative solutions to those proposed in the rule change request?

(a) Do you consider that more preferable solutions exist to address the identified issue?

(b) Should the rule change clarify the role of DNSPs in relation to providing resilience?

(c) To what extent would the VNR, alongside the AER's existing guidance note, resolve the issue raised in the rule change request?

Question 9: Assessment framework

Do you agree with the proposed assessment criteria? Are there additional criteria that the Commission should consider or criteria included here that are not relevant?

How to make a submission

We encourage you to make a submission

Stakeholders can help shape the solutions by participating in the rule change process. Engaging with stakeholders helps us understand the potential impacts of our decisions and, in so doing, contributes to well-informed, high quality rule changes.

We have included questions in each chapter to guide feedback, and the full list of questions is above. However, you are welcome to provide feedback on any additional matters that may assist the Commission in making its decision.

How to make a written submission

Due date: Written submissions responding to this consultation paper must be lodged with Commission by 7 November 2024.

How to make a submission: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code ERC0400.[2]

You may, but are not required to, use the stakeholder submission form published with this consultation paper.

Tips for making submissions are available on our website.[3]

Publication: The Commission publishes submissions on its website. However, we will not publish parts of a submission that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).[4]

Other opportunities for engagement

There are other opportunities to engage with us, such as one-on-one discussions or industry briefing sessions. Please contact the project leader for more information.

For more information, you can contact us

Please contact the project leader with questions or feedback at any stage.

Project leader:	Andrew Pirie
Email:	andrew.pirie@aemc.gov.au

2 If you are not able to lodge a submission online, please contact us and we will provide instructions for alternative methods to lodge the submission.

3 See: https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/submission-tips

4 Further information is available here: https://www.aemc.gov.au/contact-us/lodge-submission

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1 The context for this rule change request

This consultation paper seeks stakeholder feedback on the rule change request submitted by the Honourable Lily D'Ambrosio, Victorian Minister for Energy and Resources, to improve how electricity distribution network resilience is accounted for in the economic regulatory framework.

Severe weather events in recent years have resulted in widespread long-duration outages in the national electricity market (NEM). Climate change is expected to increase the frequency of severe weather events, increasing the likelihood of long-duration outages in future. Other hazards such as cyber-security and terrorism attacks may also lead to catastrophic events that result in long-duration outages. This has increased the focus on the resilience of electricity distribution networks to prepare for, manage during, and recover from, severe events that may result in long-duration outages.

1.1 The Victorian Minister has proposed the rules be changed to improve how DNSPs and the AER account for distribution network resilience

The Victorian Minister for Energy and Resources submitted a rule change request on 23 August 2024 seeking to improve how distribution network resilience is accounted for in the economic regulatory framework. This in the context of the increasing risk of extreme events, for example severe weather events due to climate change.[5]

The rule change request raised the following issues with the current arrangements:

- the lack of a formal framework for distribution network resilience creates regulatory uncertainty for DNSPs and the AER around how to efficiently spend on network resilience for long-duration outages
- regulatory arrangements place insufficient focus on consumer outcomes related to long-duration outages
- climate change and other hazards are expected to increase the likelihood of long-duration outages.

The proponent considers that these issues impact DNSPs' ability to prepare for, manage during, and recover from severe events, which results in consumers bearing the costs and risks of long-duration outages.

The proposal seeks to address the issues raised by clarifying how distribution network resilience is accounted for in the economic regulatory framework by:

- including resilience in the NER in the form of DNSP expenditure factors for capital and operating expenditure, and
- requiring the AER to publish formal guidelines on how it will assess DNSPs' proposals for expenditure on distribution network resilience.

1.2 The rule change is part of a larger program of work to improve electricity distribution network resilience

The rule change is part of a larger program of work to improve electricity distribution network resilience, including the work outlined below.

5 Honourable Lily D'Ambrosio, Victorian Minister for Energy and Resources, *Rule change request to account for resilience in the National Electricity Rules capital and operating expenditure factors (Rule change request)*, 23 August 2024.

- The Victorian Government established two expert public reviews into electricity network resilience following widespread long-duration outages in Victoria.
- The AER recently established a Value of Network Resilience (VNR) for long-duration outages.[6]

In addition, actions to increase the resilience of the energy system to external disruptions, specifically cyber security issues, are being considered through our rule change on *Cyber security roles and responsibilities*.[7]

1.2.1 The Victorian Government established two expert public reviews into electricity network resilience related to long-duration outages

The Victorian Government established two expert public reviews into electricity distribution network resilience for long-duration outages in the last three years. These were the:

- 2022 electricity distribution network resilience review[8], and
- Independent review of transmission and distribution businesses operational response to the February 2024 storm and power outage event in Victoria (2024 network outage review)[9]

The 2022 electricity distribution network resilience review recommended a rule change

The Victorian Government initiated this review in response to severe weather events in Victoria in 2021 that resulted in widespread long-duration outages. Following severe storms in:[10]

- June 2021 - 68,000 customers were without electricity after 72 hours, and 9,000 customers were still without electricity after seven days.
- October 2021 - 23,983 customers were without electricity after 72 hours, and around 2,500 customers were still without electricity after seven days.

The Expert Panel published and provided to the Victorian Minister for Energy, Environment and Climate Change its final recommendations for the Electricity Distribution Network Resilience Review on 6 May 2022. The Expert Panel made eight recommendations for reforms to reduce the likelihood and impact of long-duration outages.[11] The Victorian Government supported the vast majority of the Expert Panel's recommendations to boost network and community resilience.[12]

The Victorian Government's rule change request proposes to include resilience in the NER, however in a different way from that recommended by the Expert Panel. The Expert Panel recommended including resilience through the capital expenditure objectives in clause 6.5.7 of the NER, [13] while in this rule change request the Victorian Government proposes to include resilience through the capital and operating expenditure factors in clauses 6.5.6(e) and 6.5.7(e) of the NER.[14]

6 AER, *Value of Network Resilience 2024 - Final decision*, 30 September 2024

7 Further information is available on our website, under project code ERC0388.

8 Expert Panel, *Electricity Distribution Network Resilience Review - Final recommendations report*, May 2022. https://www.energy.vic.gov.au/about-energy/legislation/regulatory-reviews/electricity-distribution-network-resilience-review#:~:text=The%20Expert%20Panel%20recommended%20that,of%20larger%20portable%20generators%20in

9 Network outage review expert panel, *Independent review of transmission and distribution businesses operational response - February 2024 storm and power outage event - Final report*, September 2024.

10 Expert Panel, *Electricity Distribution Network Resilience Review - Final recommendations report*, May 2022, p. vi.

11 Ibid, p. 9.

12 Victorian Government, *Response to Electricity Distribution Resilience Review*, September 2023, pp. 6-8.

13 2022 electricity distribution network resilience review, Expert Panel Final recommendations report, p. 14.

14 Rule change request, p. 9.

The 2024 network outage review made 19 recommendations to improve network's responses

The Victorian Minister for Energy and Resources commissioned an independent expert panel to carry out the 2024 network outage review in response to severe storms on 13 February 2024.[15]

The 13 February 2024 storm caused significant damage to Victoria's electricity transmission and distribution network, including impacts on around 12,000 kilometres of electricity distribution lines. This severe weather event resulted in around 30,000 customers losing electricity supply for more than 72 hours and more than 3,000 customers losing electricity supply for more than one week.[16]

The Expert Panel concluded that the response of Network Service Providers (NSPs) needs to reflect the new climate reality with cost-effective strategies built-in to deliver a core essential service to the community and provide a more resilient system.[17]

The Expert Panel made 19 recommendations and 12 observations for how NSPs could improve their operational response to long-duration outages, including (but not limited to):

- improving planning, coordination and accountability by clarifying roles and responsibilities in relation to emergency management
- recommending a new financial support mechanism, the Extended Loss of Supply Support payment, to support customers impacted by outages and put the onus on DNSPs to reduce restoration times for long-duration outages
- improve communication with customers by strengthening customer contact processes
- provide backup temporary generation within communities to support critical services and support a more reactive presence on the ground.

The Victorian Government is currently considering the Network Outage Review report and its recommendations.[18]

1.2.2 The AER recently established a VNR for long-duration outages

The rule change proposal may interact with the AER's recent reform to establish a VNR for outages longer than 12 hours in duration. There is also a Value of Customer Reliability (VCR) which will continue to apply for outages shorter than 12 hours in duration. The VCR and VNR are explained below.

The VCR will continue to be an input into the economic regulatory framework for 'standard' outages less than 12 hours

The AER is required to develop and publish values of customer reliability at least every five years under clause 8.12(g) of the NER. In the AER's final determination of the VCR published on 30 August 2024, the AER decided to apply a VCR for standard outages only, which the AER defined as unplanned outages of up to 12 hours in duration.[19]

The VCR estimates the value various types of customers place on reliable electricity supply under different conditions, which the AER expresses in dollars per kilowatt hour ($/kWh) of unserved

15 Network Outage Review Expert Panel, *Independent review of transmission and distribution businesses operational response - February 2024 storm and power outage event - Final report*, September 2024, p. 4. https://www.energy.vic.gov.au/about-energy/safety/network-outage-review

16 Subsequently, the Victorian and Australian Governments introduced a prolonged power outage payment to support the more than 3,000 consumers who were without electricity supply for at least one week.

17 2024 network outage review, p. 4

18 Victorian Government, *Network outage review*, website viewed 16 September 2024: https://www.energy.vic.gov.au/about-energy/safety/network-outage-review

19 AER, *Values of customer reliability methodology - Final determination*, August 2024, p. 1

energy.[20] The VCR plays an important role in providing that customers pay no more than necessary for reliable energy, helping NSPs identify the right level of investment to deliver reliable energy services to customers.[21] The AER is required to review the VCR methodology and update the VCR at least once every five years.[22]

The VNR is a new input into the economic regulatory framework for outages longer than 12 hours in duration

The Energy and Climate Change Ministerial Council (ECMC) asked the AER to extend its current review of the VCR to establish a VNR for long-duration outages on 1 March 2024.[23]

The AER completed the Value of Network Resilience 2024 review and published a final decision on 30 September 2024. The AER noted that the purpose of this review was to establish an initial VNR that:[24]

- is attributable to the benefit network customers receive from a resilient network, either in reduced outage probability and/or duration from an extreme hazard event that is likely to lead to a long-duration outage
- supports network investments driven by a network's ability to:
  - withstand events: for example hardening investments (e.g. composite poles, undergrounding), design standards and Stand Alone Power Systems (SAPS)
  - recover from events: for example mobile substations and generators, contingency standby crews, network automation and communications with customers before and during outages.

Table 1.1 below sets out the AER's final decision to apply a VNR that is a simple tiered multiple of the VCR, and that differs between residential and business customers.

20 AER, *Values of customer reliability methodology - Final determination*, p. 1

21 AER, *Value of Customer Reliability Methodology, Final determination*, 30 August 2024, p. 1

22 Rule 8.12 of the NER.

23 The ECMC described this as a value of consumer resilience in the meeting communique published on 1 March 2024, p.1: https://www.energy.gov.au/energy-and-climate-change-ministerial-council/meetings-and-communiques. The AER has subsequently described it as a Value of Network Resilience (VNR).

24 AER, Value of network resilience 2024 - Final decision, 30 September 2024, p. 1.

Table 1.1: Values of network resilience for residential and business consumers

Residential consumers	Business consumers
Standard VCR applying for the first 12 hours of a prolonged outage followed by: • a multiple of 2x the standard VCR applying for the period of 12-24 hours and • a multiple of 1.5x the standard VCR applying for the duration of the outage that extends beyond 24 hours, until the upper bound is reached. The upper bound: • is $3,500 per residential customer • for embedded networks is based on the number of residential customers a DNSP estimates are served by that embedded network.	Standard VCR applying for the first 12 hours of a prolonged outage followed by: • a multiple of 1.5x the standard VCR applying for the period of 12-24 hours and • a multiple of 1x the standard VCR applying for the period of 24-72 hours and • a multiple of 0.5x the standard VCR applying for the duration of the outage that extends beyond 24 hours. The VNR does not include an upper bound for business customers. The AER instead applied the above multiples of VCR which the AER consider reflect that business customers may also take steps to mitigate the impacts of a long-duration outage.

Source: AER, *Value of Network Resilience 2024 - Final decision*, 30 September 2024

The AER noted that:

- the AER took a pragmatic approach to develop the initial VNR within the required timeframe in 2024 and it will work on a longer-term VNR methodology in 2025[25]
- the AER expects the VNR to complement the AER's existing network resilience guidance note (AER guidance note)[26] and assist DNSPs in assessing options to invest in resilience solutions for parts of their network identified as subject to increased risk of extreme hazard events.

Given that the VNR is now in place it can be applied by the Victorian, South Australian and Queensland DNSPs in their upcoming revenue determination processes. See section 3.3 for discussion on how the VNR may interact with this rule change proposal.

1.3 We have started the rule change process

This paper is the first stage of our consultation process. The key dates for this process are outlined below.

Figure 1.1: Key dates for this rule change process

Source: AEMC

25 AER, *Value of Network Resilience 2024 - Final decision*, 30 September 2024, p. 2.

26 AER, *Network resilience - A note on key issues*, April 2022. https://www.aer.gov.au/system/files/Network%20resilience%20-%20note%20on%20key%20issues.pdf

For this project, we will use the standard rule change process, which includes the following formal stages:

- the proponent submits a rule change request (completed)
- the Commission commences the rule change process by publishing a consultation paper and seeking stakeholder feedback (this paper)
- stakeholders lodge submissions on the consultation paper and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a draft determination and draft rule (if relevant)
- stakeholders lodge submissions on the draft determination and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a final determination and final rule (if relevant).

We seek stakeholder feedback on the problems and their materiality, whether the proposed solution will promote the long term interests of consumers, whether there are better alternatives, and on our assessment criteria.

Information on how to provide your submission and other opportunities for engagement is set out at the front of this document.

You can find more information on the rule change process on our website.[27]

27 See our website: https://www.aemc.gov.au/our-work/changing-energy-rules

2 The problem raised in the rule change request

This section seeks stakeholder feedback on the problem identified in the rule change request and the materiality of this problem.

2.1 The regulatory framework does not focus on distribution network resilience, which impacts consumer outcomes in long-duration outages

This section sets out the problem raised in the rule change request. This covers the proponent's views on how:

- the lack of a formal framework for distribution network resilience creates regulatory uncertainty for DNSPs and the AER around how to efficiently spend on network resilience for long-duration outages
- climate change and other hazards are expected to increase the frequency of long-duration outages
- current regulatory arrangements place insufficient focus on consumer outcomes for long-duration outages.

The proponent considers that these issues impact DNSPs' ability to prepare for, manage during, and recover from severe events, which results in consumers bearing increased costs and risks of long-duration outages.

2.1.1 The proponent considers that the lack of a formal framework for distribution network resilience creates regulatory uncertainty

This proponent considers that the lack of a formal framework for network resilience expenditure creates regulatory uncertainty for DNSPs and the AER around how to efficiently spend to support network resilience to reduce the risk of severe events that may result in long-duration outages. This is explained further below.

There is no formal regulatory framework for distribution network resilience expenditure

Under the current arrangements:

- there is no explicit requirement in the NER for DNSPs and the AER to take into account network resilience
- there are no binding guidelines on how DNSPs may propose, and how the AER may assess, expenditure to improve network resilience, however the AER has published a guidance note.

The AER's guidance note[28] outlines how network resilience expenditure may be proposed by DNSPs and assessed by the AER. The proponent considers that the AER's guidance note is not sufficient as:

- it is informal and non-binding, meaning it is a consideration when the AER assesses network resilience expenditure proposals by individual DNSPs, but the AER is not required to follow it [29]
- it is principles-based and does not set out the specific threshold of evidence required from DNSPs to demonstrate a causal relationship between the expected likelihood of extreme weather events and proposed distribution network resilience expenditure[30]

28 AER, *Network resilience - A note on key issues*, April 2022
29 Rule change request, p. 8.
30 Ibid, pp. 8 and 9.

Appendix A provides more information on the existing AER guidance note and compares this against the characteristics of the proposed AER guidelines. This is discussed further in section 3.1.2.

The proponent considers that regulatory uncertainty under the current arrangements has made it challenging for DNSPs to demonstrate that forecast expenditure to support network resilience (ex ante basis), to reduce the risk of long-duration outages, is prudent and efficient. In recent revenue determinations, the AER's decisions on DNSP network resilience expenditure were to:[31]

- approve a portion of expenditure proposed by Ausgrid and Essential Energy
- approve all of the expenditure proposed by Endeavour Energy and TasNetworks

The rule change proponent stated that the AER's concerns in relation to network resilience expenditure proposals included that:[32]

- these proposals were based on customers' lived experiences from recent weather events rather than predictive modelling
- DNSPs did not adequately link the identified need to an expected increase in extreme weather events
- there was an overstatement of the benefits of specific locational investments.

Appendix B provides more information on network resilience expenditure proposed by DNSPs and approved by the AER in recent revenue determinations.

The primary focus for DNSPs under the current arrangements has been to pass through costs from long-duration outages

The proponent considers that there has been an over-reliance on ex post cost pass through applications, which are made after a long-duration event.[33] A cost pass through provides that a DNSP can recover the costs it incurs (e.g. from damage to assets and Guaranteed Service Level (GSL) payments to customers), however customers may not be able to fully recover the costs they incur, as explained below.

The proponent considers that there has been limited focus on ex ante (upfront) investment to improve DNSPs' ability to prepare for, manage during, and recover from severe events that may result in long-duration outages.[34] The proponent considers that the lack of a formal framework to demonstrate the efficiency of ex ante versus ex post expenditure has made it difficult for DNSPs to demonstrate how prudent and efficient ex ante resilience expenditure will be. This does not result in efficient ex ante network resilience expenditure and results in consumers bearing the costs of long-duration outages.

Question 1: Does the current framework for distribution network resilience create regulatory uncertainty for DNSPs and the AER around efficient expenditure for long-duration outages? Should the framework be amended to provide clarity?

31 Rule change request, pp. 8-9.
32 Rule change request, p. 9.
33 Rule change request, p. 2.
34 Rule change proposal, p. 4.

2.1.2 Climate change and other hazards are expected to increase the likelihood of long-duration outages

The proponent expects the likelihood of long-duration outages will increase in future due to the increasing risk of severe weather events (driven by climate change) and other catastrophic events (e.g. cyber-attacks and terrorist events).[35]

The proponent notes that climate change is increasing the risk of severe weather events such as bushfires, floods, tropical cyclones and geomagnetic storms. In recent years severe weather events have caused widespread long-duration outages, including the bushfires in 2019-20 and severe windstorms in Victoria in June and October 2021.[36] For example in the June 2021 event in Victoria:

- residential urban customers experienced an average outage of 49 hours, with 5% of experiencing an outage of 6.7 days or longer
- residential rural short feeder customers experienced an average outage of 53 hours, with 5% experiencing an outage of 10.1 days or greater.[37]

The proponent considers that historical data on the frequency and severity of extreme weather events is likely to understate the future risk, so this should be considered by DNSPs and the AER when developing and assessing network resilience expenditure proposals.[38]

We note that DNSPs currently have specific requirements to manage the risk of cyber-security attacks and systems in place to address the risk of terrorism attacks. For more information, refer to section 3.3.

2.1.3 The proponent considers that current regulatory arrangements place insufficient focus on consumer outcomes for long-duration outages

The proponent considers that existing regulatory arrangements (including in the NER, AER programs under the NER, and jurisdictional programs) place insufficient focus on consumer outcomes related to long-duration outages, contributing to sub-optimal outcomes for consumers. The proponent's issues with these regulatory arrangements are outlined below.[39]

- The Service Target Performance Incentive Scheme (STPIS) does not incentivise DNSPs to minimise the impact of long-duration outages
- DNSP network investments have only been supported by a VCR for outages up to 12 hours up until the recent reform to implement a VNR for outages over 12 hours
- GSL payments may not fully compensate consumers for the costs they incur in long-duration outages, which the proponent notes is a jurisdictional matter that is outside the scope of the rule change request.
- The NER does not require DNSPs to consider network resilience.

These matters are explained in further detail in Appendix C. We note that the focus of this rule change is on how the NER does not require DNSPs to consider network resilience.

35 Rule change request, p. 3.
36 Rule change request, p. 2
37 Rule change request, p. 5
38 Rule change request, p. 4.
39 Rule change request, pp. 3-4 and p. 7.

2.2 How material is the problem raised in the rule change request?

The proponent suggests that the gap in regulatory arrangements for network resilience has resulted in the following issues:

- consumers bearing unacceptable costs and risks associated with long-duration outages
- regulatory uncertainty for DNSPs around how to demonstrate whether upfront expenditure to support network resilience is prudent and efficient
- inefficient regulatory determination processes for DNSPs and the AER in proposing and assessing ex ante network resilience expenditure.

The proponent suggests that, given increasing risks associated with severe weather and other catastrophic hazards, these problems are likely to become more material in the future.

We seek stakeholder views on the materiality of the problem and the extent to which the problem may be resolved through other energy sector reforms. For example, the extent to which the problem may be addressed by the VNR, which the AER published after this rule change request was submitted, and now applies for DNSPs, or through changes to STPIS or to jurisdictional GSL schemes.

Question 2: How material is the lack of clarity in the rules around network resilience?

(a) Do you consider the issue with the NER raised by the proponent to be a substantive problem? If so, why?

(b) Are there any other programs or energy sector reforms that may partially or fully address the problem raised by the proponent?

3 The proposed solution and implementation

This chapter seeks feedback on:

- the suitability of the proposed solution to resolve the problem raised in the rule change request
- the costs and benefits of the proposed solution
- how the proposed solution may be implemented
- other potential alternative solutions.

3.1 Would the proposal to include a formal framework for distribution network resilience expenditure resolve the problem?

To address the problem raised in the rule change request, the proponent proposes to introduce a formal framework for DNSP expenditure on distribution network resilience by:

- including resilience expenditure factors for DNSPs in the NER, and
- requiring that the AER develops and publishes distribution network resilience guidelines (guidelines).

The proposal is detailed in sections 3.1.1 and 3.1.2 below.

3.1.1 The proposal would include resilience as expenditure factors for DNSPs in the NER

The Minister proposes to include resilience expenditure factors for DNSPs in the NER. The proposal would require that the AER must have regard to the resilience expenditure factors for capital and operating expenditure when deciding whether or not to accept a DNSP's forecast of capital or operating expenditure for a regulatory control period.[40]

Under the current NER, the AER is required to have regard to a set of expenditure factors when deciding whether or not to accept a DNSP's forecast of capital or operating expenditure for a regulatory control period, as explained in Box 1 below.

Box 1: Existing capital and operating expenditure factors for DNSPs in the NER

For DNSPs, the capital expenditure factors are set out in clause 6.5.7(e) of the NER and the operating expenditure factors are set out in clause 6.5.6(e) of the NER. The expenditure factors are drafted in the same way for capital and operating expenditure, however they include different references to other clauses in the NER.

The existing capital expenditure factors for DNSPs are set out below.

In deciding whether or not the AER is satisfied ...[that a DNSP's forecast of capital expenditure for a regulatory control period reasonably reflects the capital expenditure criteria under clause 6.5.7(c)], *the AER must have regard to the following (the capital expenditure factors):* ...

(4) the most recent annual benchmarking report that has been published under rule 6.27 and the benchmark capital expenditure that would be incurred by an efficient [DNSP] *over the relevant regulatory control period;*

(5) the actual and expected capital expenditure of the [DNSP] *during any preceding regulatory control periods;*

40 Rule change request, p. 10.

(5A) the extent to which the capital expenditure forecast includes expenditure to address the concerns of distribution service end users as identified by the [DNSP] *in the course of its engagement with distribution service end users or groups representing them;*

(6) the relative prices of operating and capital inputs;

(7) the substitution possibilities between operating and capital expenditure;

(8) whether the capital expenditure forecast is consistent with any incentive scheme or schemes that apply to the [DNSP] *under clauses 6.5.8A or 6.6.2 to 6.6.4;*

(9) the extent the capital expenditure forecast is referable to arrangements with a person other than the [DNSP] *that, in the opinion of the AER, do not reflect arm's length terms;*

(9A) whether the capital expenditure forecast includes an amount relating to a project that should more appropriately be included as a contingent project under clause 6.6A.1(b);

(10) the extent the [DNSP] *has considered, and made provision for, efficient and prudent non-network options or SAPS options;*

(11) any relevant final project assessment report published under clause 5.17.4(o), (p) or (s); and

(12) any other factor the AER considers relevant and which the AER has notified the [DNSP] *in writing, prior to the submission of its revised regulatory proposal under clause 6.10.3, is a capital expenditure factor.*

Source: NER clauses 6.5.6 and 6.5.7.

The Minister proposes adding new resilience expenditure factors to the list of existing expenditure factors detailed in Box 1 above. The proposed drafting of the resilience capital expenditure factor to be included in NER clause 6.5.7(e) is:[41]

> The extent to which the capital expenditure relates to the distribution network service provider's ability to prepare efficiently to resist, manage during, or recover from catastrophic events and severe weather events, which may lead to prolonged power outages, considering:
>
> - the benefits and costs of providing the expenditure as part of forecast capital expenditure or as a cost pass-through, and
> - the likelihood and impact of the potential catastrophic events and severe weather events.

The Minister proposes that the resilience operating expenditure factor to be included in NER clause 6.5.6(e) would be drafted in the same way as the resilience capital expenditure factor, however it would refer to operating expenditure, instead of capital expenditure.[42]

We note the following key points relating to the proposed resilience expenditure factors.

The proposal would place obligations on DNSPs and the AER to have regard to network resilience expenditure when proposing and assessing expenditure

The proposal would place obligations on:

- DNSPs to have regard to the proposed network resilience expenditure factors when proposing forecast capital and operating expenditure programs to support resilience, and

41 Rule change request, p. 12.
42 Rule change request, p. 11.

- the AER to have regard to the proposed network resilience expenditure factors when assessing forecast capital and operating expenditure proposals to support resilience.

Under the structure of NER clauses 6.5.6 and 6.5.7, the capital and operating expenditure factors are linked to the capital and operating expenditure criteria, which in turn are linked to the capital and operating expenditure objectives.[43] This means that, if we make the proposed rule, the AER would be required to have regard to the resilience expenditure factors when deciding whether or not the AER is satisfied that a DNSP's forecast expenditure reasonably reflects the expenditure criteria.[44]

The proposal would require DNSPs and the AER to compare the efficiency of upfront expenditure versus cost pass throughs

The proposal is intended to require that DNSPs and the AER compare the benefits and costs of feasible options for ex ante versus ex post expenditure related to long-duration outages.[45]

We will consider whether the rule change proposal is likely to support an efficient allocation between expenditure on an:

- ex ante basis, to address risks from severe weather and catastrophic events by improving network and community resilience before a long-duration outage; versus
- ex post basis, to repair networks and restore power after a long-duration outage.

Table 3.1 below compares ex ante and ex post expenditure[46] in terms of purpose, treatment under the economic regulatory framework and examples of types of expenditure.

Table 3.1: Comparison of forecast expenditure versus cost pass throughs related to long-duration outages, as described in the rule change request

	Forecast expenditure (ex ante)	Cost pass through (ex post)
Purpose	Reduce the risk of a long-duration outage. The proponent suggests that forecast expenditure may improve network and community resilience by supporting a DNSP's ability to prepare for, manage during and recover from long-duration outages.	Allow DNSPs to apply to the AER to recover the costs the DNSP incurred in managing during, and recovering from, a long-duration outage.
How expenditure is treated in the economic regulatory framework	Forecast expenditure to support resilience is included in five-year revenue determinations.	Cost pass through application after a severe event that results in a long-duration outage.
Examples of types of expenditure include, but are not limited to:	• Reinforcing options such as reinforcing power poles with concrete •	• Emergency management and response activities • Replacing and repairing damaged network assets

43 NER clauses 6.5.6(a), (c) and (e), and 6.5.7(a), (c) and (e).
44 NER clauses 6.5.6(e) and 6.5.7(e).
45 Rule change request, p. 10.
46 As described in the rule change request.

	Forecast expenditure (ex ante)	Cost pass through (ex post)
	• Under-grounding network assets to reduce bushfire risk • Relocating substations or depots that are currently in high flood risk areas • Installing stand-alone power systems (SAPS) and islandable micro-grids • Purchasing mobile substations and mobile generators • Emergency preparation activities, including co-ordination with relevant emergency, government or community organisations.	• GSL payments to customers impacted by extreme outage events.

Source: Rule change request, p. 7.

Should resilience expenditure factors be drafted in the same way for capital and operating expenditure?

The proponent proposes that resilience expenditure factors should be drafted in the same way for capital and operating expenditure, to be consistent with the drafting of the existing expenditure factors for DNSPs in the NER. The existing expenditure factors are drafted in the same way for capital and operating expenditure, with different links to other relevant clauses that relate to capital and operating expenditure.[47]

Should the proposal cover severe weather events and catastrophic events that may result in long-duration outages?

The proponent proposes that the rule change should cover the following risks which may result in long-duration outages:[48]

- severe weather events (e.g. bushfires, floods, severe windstorms), which may occur more frequently due to climate change
- other catastrophic events such as cyber-security events and terrorist attacks on critical infrastructure.

We note the following related to the current arrangements.

- **Severe weather events:** DNSPs have previously proposed, and the AER has approved, expenditure to reduce the risk of severe weather events. However the proponent considers that climate change is increasing the likelihood of these events and there is regulatory uncertainty around how to demonstrate this expenditure is prudent and efficient.[49] DNSPs may

47 Rule change request, p. 11.
48 Rule change request, p. 2.
49 Rule change request, p. 4.

apply for a cost pass through to recover costs from responding to and resolving long duration outages caused by severe weather events.

- **Cyber-security events:** DNSPs must comply with cyber-security legislative and licence conditions. For example, for the 2024-29 regulatory control period Ausgrid proposed expenditure, that was partially approved, to comply with various conditions including, but not limited to:
  - legislative conditions related to cyber-security[50]
  - Ausgrid's licence conditions under the *Electricity Supply Act 1995* (NSW).[51]
- **Terrorist events:** DNSPs may currently address the risk of terrorism on an ex ante and ex post basis. For example, Endeavour Energy noted that while it has systems in place to mitigate the risk of a terrorist event occurring, Endeavour Energy cannot completely eliminate the risk of such an event occurring.[52] Endeavour Energy nominated a terrorist event as a pass through event for the 2024-29 regulatory control period as Endeavour Energy considered that it represented the most prudent and efficient means for managing a risk of this nature, and the AER accepted this.[53]

Question 3: Do you agree with the proposed solution to include resilience expenditure factors in the NER?

(a) Is including resilience as expenditure factors in the NER an appropriate solution? Is there are a more preferable way to incorporate distribution network resilience into the NER?

(b) Do you have any comments on the proposed drafting of the resilience expenditure factors? Should they be drafted in the same way for capital and operating expenditure?

(c) Should the resilience expenditure factors cover severe weather events and other catastrophic events that may result in long-duration outages?

3.1.2 The proposal would require the AER to develop and publish distribution network resilience guidelines

The Minister proposes to replace the existing non-binding AER guidance note with new AER guidelines, which would be binding on DNSPs and which must comply with requirements that are outlined in the NER.[54] The proponent considers that this would:

- address the issues raised with the current arrangements (set out in section 2.1.3) in that it would replace the informal and non-binding AER guidance note with formal and binding AER guidelines[55]
- make it easier for DNSPs to demonstrate that ex ante network resilience investments are prudent and efficient.[56]

50 For example: *Security of Critical Infrastructure Act 2018* (Cth); *Privacy Legislation Amendment (Enforcement and Other Measures) Act 2022* (Cth); the *Electricity Supply Act 1995* (NSW).

51 Ausgrid licence conditions 9, 10 and 11 under the *Electricity Supply Act 1995* (NSW) acknowledge that Ausgrid's assets may constitute "critical infrastructure" which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact the security, social or economic well-being of NSW and interconnected regions.

52 Endeavour Energy, *Pass through events - 2024-29 Regulatory Proposal*, p. 18.

53 AER, *Final decision - Endeavour Energy Electricity Distribution Determination 2024 to 2029, Attachment 15 - Pass through events*, p. 1.

54 Rule change request, p. 10.

55 Rule change request, p. 10

56 Rule change request, p. 8.

The Minister proposes that the NER would set out the following requirements for the AER to include in the guidelines.[57]

- Set out a non-exhaustive list of the types of events or circumstances that could be included as a catastrophic event and severe weather event.
- Identify the evidence the AER expects to support capital and operating expenditure proposals, including:
  - the expected level of customer involvement and consultation;
  - suitable methods, models, and data that DNSPs can use to justify the need for the forecast expenditure;
  - suitable methods, models, and data that DNSPs can use to justify their preferred projects and programs to address the identified risk; and
  - any other evidentiary matters deemed significant by the AER for assessing the expenditure forecast.
- Explain how the expenditure is expected to interact with incentive schemes.
- Identify examples of the types of projects, programs and/or expenditure the AER considers are relevant for the expenditure factor.
- Describe any reporting requirements that the AER considers are necessary.
- Include any other matters the AER considers relevant.

The existing AER guidance note and proposed AER guidelines have a similar purpose, which is to:

- support understanding amongst consumer groups, advocates and other stakeholders of how ex ante network resilience expenditure would be treated under the NER[58]
- support DNSPs in developing ex ante network resilience expenditure proposals.[59]

We note that the existing AER guidance note and proposed AER guidelines appear to differ on the matters outlined below.

- **Types of methods, models and data:** The existing guidance note does not specify the types of methods, models and data DNSPs should use to demonstrate the need for ex ante network resilience expenditure. The proponent proposes that the guidelines would require the AER to identify the types of methods, models and data that the AER considers would be appropriate to rely upon when proposing resilience expenditure. The proponent does not propose that the AER prescribe a single approach, but identify several options DNSPs could apply depending on their specific circumstances.[60]
- **Reporting requirements:** The existing guidance note does not include reporting requirements on DNSPs. For transparency and accountability, the rule change proposes that AER guidelines establish reporting requirements on DNSPs to highlight whether DNSPs are allocating expenditure and resources to resilience projects that have been funded.[61]
- **Incentive schemes:** The existing guidance note does not set out how resilience expenditure may interact with incentive schemes. It is proposed that AER guidelines must clarify how

57 Rule change request, pp. 10-11.

58 AER, *Network resilience - a note on key issues*, p. 4.

59 Rule change request, p. 8.

60 The proponent considers that this would be similar to the AER's Expenditure Forecast Assessment Guideline as it would be a non-binding set of possible methods, models and data that DNSPs could use to support a resilience expenditure proposal. Rule change request, p. 11.

61 Rule change request, p. 11.

forecast resilience expenditure would interact with incentive schemes (e.g. STPIS, Capital Expenditure Sharing Scheme (CESS) and Efficiency Benefit Sharing Scheme (EBSS)).[62]

- **SAPs and non-traditional network options:** The existing guidance note set out how the AER expects DNSPs to test different options available to address risks to resilience. This includes alternatives to traditional poles and wires supply, such as investments in SAPS and other non-traditional network options like community batteries. We note that rule change proposal refers to SAPS as an option to improve distribution network resilience, however does not propose to require that the AER guidelines include a requirement for DNSPs to test different options.[63]

Appendix A provides a more detailed comparison of the existing AER guidance note and proposed AER guidelines.

We seek stakeholder views on the matters outlined below.

Should the guidelines be principles-based or prescriptive?

We are interested in stakeholder views on whether, in relation to the AER's guidelines, the NER should be:

- principles-based to provide a level of flexibility
- prescriptive in setting out a list of requirements that the AER must include in its guidelines, or
- a combination of principles-based and prescriptive.

The proponent proposes that the NER would set out a list of requirements that the AER must include in AER guidelines. We seek stakeholder views on any matters the NER should require the AER to include in guidelines and what level of prescription is appropriate.

Refer to section 3.1 and Appendix A for a list of information that the proponent proposes to include in the AER guidelines and how this compares against the existing AER guidance note.

For example, we note that the proponent has proposed that the NER should require the AER guidelines to include reporting requirements on DNSPs. This is proposed for transparency and accountability, to highlight whether DNSPs are implementing the resilience expenditure programs approved by the AER. This proposal is a move away from the current focus on the AER approving efficient forecast expenditure and allowing DNSPs to delay or avoid spending on specific approved programs. We are keen for stakeholder views on this, noting that DNSPs are not currently subject to STPIS incentives for long-duration outages, as explained in Appendix C.

We note that information asymmetry between DNSPs and the AER make may it difficult for the AER to compare feasible options and determine efficient network resilience expenditure programs. We are also interested in stakeholder views on whether there are any information asymmetry issues and, if so, how these could be addressed.

Question 4: Do you agree with the proposed solution to require the AER to develop resilience guidelines?

(a) Do you agree that requiring the AER to develop binding resilience guidelines will address the issue?

(b)What level of prescription should the NER include relating to the AER's guidelines? Should the NER include content requirements for the AER guidelines?

62 Rule change request, p. 11.
63 Rule change request, p. 11.

(c) Do you agree that both including resilience as capital and operating expenditure factors in the NER and an AER binding guideline are required to address the issue?

3.2 What are the costs and benefits of the proposed solution?

The proponent has identified the following potential costs and benefits associated with the proposal to introduce a formal framework for distribution network resilience expenditure.

Costs: the proponent considers the costs are not likely to be material

The proponent considers that the costs associated with the rule change proposal are not likely to be material and may include costs for DNSPs, the AER and consumers, as outlined below.[64]

- The AER would incur one-off administrative costs to undertake a consultation process to develop and publish a guideline.
- DNSPs would need to incorporate the new resilience expenditure factors and AER guidelines into their planning processes.
- The AER and DNSPs would need to take into account the new resilience expenditure factors and AER guidelines in revenue determination processes.
- The proposed rule may encourage DNSPs to consider resilience expenditure, which if approved by the AER, would flow through to consumers through distribution network costs. We note that DNSPs can already propose, and the AER has approved, network resilience expenditure, but the proposed rule would clarify how this is to occur. The proponent considers that network resilience costs would only occur where the benefits for consumers are expected to exceed the costs (noting the role of the AER to review this expenditure).

We note that an important consideration is how to create a stable and predictable regulatory framework for distribution network resilience, that balances supporting consumer outcomes related to long-duration outages against the risk of increasing costs through over-investment.

Benefits: the proponent considers that the rule change may benefit DNSPs and consumers

The proponent considers that the rule change proposal may benefit DNSPs and consumers as outlined below.[65]

- DNSPs may benefit from greater clarity and predictability over how network resilience expenditure would be assessed by the AER, increasing the efficiency of revenue determination processes
- Consumers may benefit from:
  - improved distribution network resilience, which may reduce the frequency or duration of severe outages and the costs consumers incur related to long-duration outages.
  - the shift in focus to the lowest cost approach out of feasible options for ex ante or ex post expenditure.
  - more efficient revenue determination processes which may reduce DNSP costs in developing and revising their expenditure proposals, reducing associated costs flowing through to consumers.

64 Rule change request, p. 13.
65 Ibid.

Question 5: What are your views of the costs and benefits of the proposed solution?

(a) What do you consider will be the benefits and costs of the proposed solution?

(b) Do you consider the proposal appropriately allocates risk between DNSPs and consumers?

(c) Is there anything the Commission could do in designing the rule that would help to minimise the costs and maximise the benefits?

3.3 What implementation issues might there be?

If the Commission were to make a rule change based on the proposed solution in the rule change request, as described in section 3.1 above, it must then consider how that rule is to be implemented. These considerations include:

- if transitional arrangements are needed
- how the proposed rule may interact with the VNR.

3.3.1 Are any transitional arrangements needed?

Transitional arrangements may be needed to support the effective implementation of a rule. For example, transitional arrangements may be required for the AER to develop guidelines if they are included in the final rule.

We also seek stakeholder feedback on how a rule (if made) may operate if it commences before the AER has published guidelines, and how the guidelines should operate if they are published partway through a revenue determination process. For example, if we made a rule that commences operation around May 2025 (the current indicative timeline to complete this rule change process), which requires the AER to publish guidance in early 2026, should the new rule and guidelines apply to:

- the Victorian DNSPs in relation to network resilience expenditure programs they may propose as part of their 2026-31 revised revenue proposals, that are due to be submitted to the AER in December 2025?
- the AER in making its final decisions on the Victorian DNSPs' 2026-31 revenue determinations, which are due to be published in April 2026?

Question 6: What transitional arrangements would be required to implement the proposed rule?

3.3.2 How may the proposed rule interact with the VNR?

As noted in section 1.2, the AER established a VNR in September 2024, which is now an input into the economic regulatory framework for DNSPs. We seek stakeholder views on whether there are any interactions between the proposed rule and VNR that should be considered in implementing this rule change.

Question 7: Are there any interactions with the VNR that should be taken into account in the NER?

3.4 Can the problem be resolved in a different or more efficient way?

We are interested in stakeholders' views on whether there are alternative ways to support distribution network resilience related to long-duration outages to support the long term interests of energy consumers.

Possible alternatives may include, but are not limited to:

- including resilience in the NER in a different way from rule change proposal
- the AER amending the STPIS to include an incentive mechanism for long-duration outages[66]
- the AER's guidelines clarifying the distinction between the way in which resilience may be supported by:
  - DNSPs under the economic regulatory framework, versus
  - other organisations or individuals (e.g. state governments, local councils and community groups) outside the economic regulatory framework.[67]
- other solutions outside the economic regulatory framework.

We also seek feedback from stakeholders on the extent to which the new VNR may resolve the issue raised in the rule change request, without the need for rule changes.

Question 8: Are there alternative solutions to those proposed in the rule change request?

(a) Do you consider that more preferable solutions exist to address the identified issue?

(b) Should the rule change clarify the role of DNSPs in relation to providing resilience?

(c) To what extent would the VNR, alongside the AER's existing guidance note, resolve the issue raised in the rule change request?

66 The NER provides scope for the AER to consider applying STPIS incentives for long-duration outages, so this is a matter that the AER has the ability to consider under the current arrangements.

67 For example, the Victorian Government has invested in 26 powered community hubs to provide emergency support and safety during power outages caused by severe weather. These hubs will provide space for customers impacts by outages to cook meals, charge devices and access information during a long-duration outage. https://www.premier.vic.gov.au/bolstering-energy-resilience-during-extreme-weather

4 Making our decision

When considering a rule change proposal, the Commission considers a range of factors.

This chapter outlines:

- issues the Commission must take into account
- the proposed assessment framework
- decisions the Commission can make
- rule-making for the Northern Territory.

We would like your feedback on the proposed assessment framework.

4.1 The Commission must act in the long-term interests of consumers

The Commission is bound by the National Electricity Law (NEL) to only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).[68]

The NEO is:[69]

> to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system; and
>
> (c) the achievement of targets set by a participating jurisdiction—
>
> (i) for reducing Australia's greenhouse gas emissions; or
>
> (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

The targets statement, available on the AEMC website, lists the emissions reduction targets to be considered, as a minimum, in having regard to the NEO.[70]

4.2 We must also take these factors into account

The Commission must also take into account the revenue and pricing principles set out in section 7A of the NEL in making certain rules, including rules relating to distribution system revenue and pricing and regulatory economic methodologies.[71] As the proposed rule relates to these issues, we will take the revenue and pricing principles into account.

The Commission considers that the following revenue and pricing principles are the most relevant to this rule change request:

- A regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in — (a) providing direct control network

68 Section 88 of the NEL.
69 Section 7 of the NEL.
70 Section 32A(5) of the NEL.
71 Section 88B of the NEL, referring to the subject matters for rules set out in items 25 to 26J of Schedule 1 of the NEL.

services; and (b) complying with a regulatory obligation or requirement or making a regulatory payment.[72]

- A regulated network service provider should be provided with effective incentives in order to promote economic efficiency with respect to direct control network services the operator provides. The economic efficiency that should be promoted includes—(a) efficient investment in a distribution system or transmission system with which the operator provides direct control network services; and (b) the efficient provision of electricity network services.[73]
- Regard should be had to the economic costs and risks of the potential for under and over investment by a regulated network service provider in, as the case requires, a distribution system or transmission system with which the operator provides direct control network services.[74]

4.3 We propose to assess the rule change using four criteria

4.3.1 Our regulatory impact analysis methodology

Considering the NEO and the issues raised in the rule change request, the Commission proposes to assess this rule change request against the set of criteria outlined below. These assessment criteria reflect the key potential impacts – costs and benefits – of the rule change request. We consider these impacts within the framework of the NEO.

The Commission's regulatory impact analysis may use qualitative and/or quantitative methodologies. The depth of analysis will be commensurate with the potential impacts of the proposed rule change. We may refine the regulatory impact analysis methodology as this rule change progresses, including in response to stakeholder submissions.

Consistent with good regulatory practice, we also assess other viable policy options - including not making the proposed rule (a business-as-usual scenario) and making a more preferable rule - using the same set of assessment criteria and impact analysis methodology where feasible.

4.3.2 Assessment criteria

The proposed assessment criteria are as follows:

- **Outcomes for consumers:** Would the rule change support outcomes for consumers by improving distribution network resilience to extreme events, at a cost that consumers are willing to pay?
- **Safety, security and reliability:** Would this enable reliable, secure and safe provision of energy at efficient cost to consumers? Would the proposal take into account the likely impacts of climate change on safety, security and reliability outcomes?
- **Principles of efficiency:** Would the rule change proposal deliver allocative efficiency across investment and planning timeframes? Would the proposal efficiently balance forecast ex ante expenditure to improve distribution network resilience against forecast ex post expenditure related to long-duration outages?
- **Principles of good regulatory practice:** Would the rule change proposal promote predictability and stability for DNSPs, the AER and consumers regarding how distribution network resilience expenditure will be assessed in the economic regulatory framework? Would this promote

72 Section 7A(2) of the NEL.
73 Section 7A(3) of the NEL.
74 Section 7A(6) of the NEL.

transparency for stakeholders and provide clarity over the treatment of distribution network resilience expenditure?

Question 9: Assessment framework

Do you agree with the proposed assessment criteria? Are there additional criteria that the Commission should consider or criteria included here that are not relevant?

4.4 We have three options when making our decision

After using the assessment framework to consider the rule change request, the Commission may decide:

- to make the rule as proposed by the proponent[75]
- to make a rule that is different to the proposed rule (a more preferable rule), as discussed below, or
- not to make a rule.

The Commission may make a more preferable rule (which may be materially different to the proposed rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule is likely to better contribute to the achievement of the NEO.[76]

4.5 We may make a different rule to apply in the Northern Territory

Parts of the NER, as amended from time to time, apply in the Northern Territory, subject to modifications set out in regulations made under the Northern Territory legislation adopting the NEL.[77]

The proposed rule would apply in the Northern Territory, as it amends provisions in NER chapter 6 that apply in the Northern Territory.[78]

The Commission will therefore assess the proposed rule against additional elements required by Northern Territory legislation:

- *Should the NEO test include the Northern Territory electricity systems?* For this rule change request, the Commission will determine whether the reference to the "national electricity system" in the NEO includes the local electricity systems in the Northern Territory, or just the national electricity system, having regard to the nature, scope or operation of the proposed rule.[79]
- *Should the rule be different in the Northern Territory?* The Commission will consider whether a uniform or differential rule should apply to the Northern Territory, taking into account whether the different physical characteristics of the Northern Territory's network would affect the operation of the rule in such a way that a differential rule would better contribute to the NEO.[80]

75 The proponent describes its proposed rule on pages 9-11 of its rule change request.

76 Section 91A of the NEL.

77 National Electricity (Northern Territory) (National Uniform Legislation) Act 2015 (**NT Act**). The regulations under the NT Act are the National Electricity (Northern Territory) (National Uniform Legislation) (Modification) Regulations 2016.

78 Under the NT Act and its regulations, only certain parts of the NER have been adopted in the Northern Territory. The version of the NER that applies in the Northern Territory is available on the AEMC website at: https://energy-rules.aemc.gov.au/ntner.

79 Clause 14A of Schedule 1 to the NT Act, inserting section 88(2a) into the NEL as it applies in the Northern Territory.

80 Clause 14B of Schedule 1 to the NT Act, inserting section 88AA into the NEL as it applies in the Northern Territory.

Abbreviations and defined terms

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CESS	Capital expenditure sharing scheme
Commission	See AEMC
DNSP	Distribution network service provider
EBSS	Efficiency benefit sharing scheme
ECMC	Energy and Climate Change Ministerial Council
GSL	Guaranteed Service Level
HV	High voltage
MED	Major event days
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NSP	Network Service Providers (including DNSPs and TNSPs)
NSW	New South Wales
Proponent	The proponent of the rule change request, the Honourable Lily D'Ambrosio MP, Victorian Minister for Energy and Resources
STPIS	Service Target Performance Incentive Scheme
TNSP	Transmission network service provider
VCR	Value of Customer Reliability
VNR	Value of Network Resilience

A Comparison of existing AER guidance note and proposed AER guideline on network resilience

Section 3.1.2 highlights the differences between the existing AER guidance note and proposed AER guidelines on network resilience. This appendix provides additional detail on the characteristics of the existing AER guidance note and proposed AER guideline.

Table A.1: Comparison of the characteristics of the existing AER guidance note and the proponent's proposed AER guideline

	Existing AER guidance note	Proposed AER guideline
NER requirements	The AER developed this note on its own initiative. The NER does not require the AER to develop a guidance note on network resilience.	The proponent proposes that the NER would require: • that the AER develops and publishes a guideline on network resilience • that the AER include specific requirements in the guideline, as detailed below.
Formality and binding nature	It is informal and non-binding, meaning that the AER may change the evidence required when assessing resilience projects or change the definition of network resilience, when assessing individual DNSP proposals. The non-binding nature of the guidance note means that, if a DNSP did not comply with the guidance note, the AER could still approve its expenditure proposals, and would not be able to take enforcement action against the DNSP for a breach of the NER. However, DNSPs have an incentive to comply with the AER guidance note as this may assist in the AER approving network resilience expenditure proposed by DNSPs.	Formal and binding. The binding nature of the proposed guideline would mean that a breach of the guideline would constitute a breach of the NER, for which the AER could take enforcement action. More pertinently, the AER would not approve DNSP expenditure proposals that do not comply with the proposed guideline.
Purpose	• Support stakeholders in understanding how network resilience expenditure is treated under the NER. • Support DNSPs in developing ex ante network resilience expenditure proposals.	A similar purpose to the existing AER guidance note.
Scope	• Primarily focuses on severe weather events.	The AER would be required to set out a non-exhaustive list of the types of

	Existing AER guidance note	Proposed AER guideline
	• Notes that network resilience may be impacted by cyber security and other risks.	events or circumstances that could be included as a: • severe weather event, or • catastrophic event.
Evidence to demonstrate that network resilience expenditure is prudent and efficient	The AER expects DNSPs to provide evidence to demonstrate that: • there is a causal relationship between the proposed resilience expenditure and the expected increase in extreme weather events • the proposed expenditure is required to maintain service levels and is based on the option that likely achieves the greatest net benefit of the feasible options considered • consumers have been fully informed of different resilience expenditure options, including the implications stemming from these options, and that they are supportive of the proposed expenditure. To demonstrate a causal relationship between the proposed resilience expenditure and the expected increase in extreme weather events, the AER expects DNSPs to provide evidence that: • extreme weather events are expected to affect the network, including an assessment of probability of the event, which parts of the network are most likely to be impacted, the likelihood of the consequences and cost of consequences on the network • its proposed resilience-related expenditure will limit the cost of damage from extreme weather events •	The proponent proposes that the AER would identify in the guideline the evidence DNSPs would be expected to provide to support capital and operating expenditure proposals, including the evidence outlined below. • The expected level of customer involvement and consultation. • The types of methods, models, and data that would be suitable for DNSPs to rely upon when making proposals for resilience expenditure. The proponent does not intend that the AER prescribe a single approach, but identify several options that DNSPs could adopt, which would be a non-binding list of possible methods, models and data. • Any other evidentiary matters deemed significant by the AER for assessing the expenditure forecast.

	Existing AER guidance note	Proposed AER guideline
	• ex-ante expenditure is more efficient than ex-post expenditure, having sufficient regard to the inherent uncertainties in forecasting the timing, location and scale of the impacts of extreme weather events.	
Incentive schemes	The AER notes that: • the current STPIS does not incentivise DNSPs to manage the impact of long-duration outages • the NER provides scope for the AER to consider applying STPIS incentives for long-duration outages, so this is a matter that the AER has the ability to consider under the current arrangements (for more information, see Appendix C).	The proponent proposes that the AER guideline must explain how resilience expenditure is expected to interact with incentive schemes.
Reporting requirements	Not included.	The proponent proposes that the AER guideline must establish reporting requirements, in addition to any existing obligations, for transparency and accountability in relation to DNSP expenditure on resilience. The reporting requirements may highlight whether DNSPs are implementing resilience programs that have been approved by the AER.
Network resilience and community resilience	The AER defines network resilience as *"a performance characteristic of a network and its supporting systems (e.g. emergency response processes, etc.). It is the network's ability to continue to adequately provide network services and recover from those services when subjected to disruptive events."* The AER considers that network resilience and community resilience are different but related concepts. The AER considers that DNSPs have an important role in the provision of essential services to communities in	The proponent does not propose that the AER guideline would: • define network resilience or any distinction between network and community resilience • any distinction between the roles of DNSPs and other organisations that may contribute to community resilience.

	Existing AER guidance note	Proposed AER guideline
	the lead up to, during, and after a severe weather event. The AER notes that the AER will consider the delineation of roles that different entities have in supporting resilience when assessing proposed resilience-related funding for the community.	
Other	The AER expects that, in testing different options, DNSPs consider investment in SAPs and other non-traditional network options like community batteries.	Proposes that the AER guideline identify examples of the types of projects, programs and expenditure that the AER considers are relevant for the resilience expenditure factors.

Source: AER, *Network resilience - A note on key issues*, April 2022, pp. 4-5 and pp. 11-12.; and Rule change request, pp. 10-11.

B Network resilience expenditure proposed and approved in recent revenue determinations

This appendix summarises the amounts of network resilience expenditure proposed by the NSW and Tasmanian DNSPs, and approved by the AER, for the 2024-29 regulatory control period.

The NSW and Tasmanian DNSPs proposed the following resilience expenditure for the 2024-29 regulatory control period:

- **Ausgrid's** proposed climate resilience expenditure of $119.6 million for projects on network resilience, bushfire resilience, extreme heat resilience, community resilience and response effectiveness.[81]
- **Endeavour Energy** proposed expenditure of $28 million to:
  - replace high voltage overhead conductor linear assets with covered conductor in high bushfire risk areas[82] and
  - improve network resilience to flood events by reconstructing high voltage and transmission overhead conductor spans identified as being at risk of flood impact and installing automated switches across the network.[83]
- **Essential Energy:** proposed expenditure of $204 million to address bushfire risk, flood risk and windstorm risk. This included a range of different resilience programs, including:
  - risk-based pole replacement[84]
  - undergrounding high risk locations[85]
  - community resilience through investments in domestic and industrial grade generators, portable SAPS, portable solar streetlights, a portable depot and a communications van/hub.[86]
- **TasNetworks** proposed $17.4 million for a bushfire risk mitigation plan.[87]

Table B.1 below shows that:

- the AER approved around 34% to 100% of network resilience expenditure proposed, which varied by DNSP
- the majority of approved network resilience expenditure was capital expenditure (around 92% to 100%), with operating expenditure making up a smaller component (none or around 8%).

81 Ausgrid, *2024-29 Revised Proposal - Attachment 5.1: Revised Capital Expenditure*, 30 November 2023, pp. 26-27.
82 Endeavour Energy, *HV distribution network resilience and bushfire ignition risk mitigation - Case for investment FY23-FY29*, August 2022, p. 4.
83 Endeavour Energy, Flood resilience of high voltage overhead conductor and switchgear, Case for investment FY23-FY29, August 2022, p.
84 Essential Energy, *10.06.01 Resilience risk based pole replacement investment case*, November 2022.
85 Essential Energy, *10.06.02 Resilience undergrounding high risk locations investment case*, November 2022
86 Essential Energy, *10.06.11 Community Resilience Investment Case*, January 2023, p. 3.
87 AER, *Draft decision - TasNetworks Electricity distribution determination 2024 to 2029 (1 July 2024 to 30 June 2029) - Attachment 5 Capital expenditure*, p. 12.

Table B.1: Network resilience expenditure proposed by NSW and Tasmanian DNSPs and approved by the AER in the 2024-29 revenue determination

DNSP	Expenditure proposed by DNSP	Expenditure approved by AER	% of proposed expenditure that was approved	% of total approved expenditure that is capital expenditure
Ausgrid	$119.6 million	$41 million	34%	92%
Endeavour Energy	$28 million	$28 million	100%	100%
Essential Energy	$204 million	$121 million	59%	100%
TasNetworks	$17.4 million	$17.4 million	100%	100%

Source: AER, *Final decision - Ausgrid Electricity distribution determination 2024 to 2029 (1 July 2024 to 30 June 2029) - Attachment 5 – Capital expenditure* p. 18; AER, *Final decision - Endeavour energy Electricity distribution determination 2024 to 2029 (1 July 2024 to 30 June 2029) - Overview*, p. 16; AER, *Final decision - Essential energy Electricity distribution determination 2024 to 2029 (1 July 2024 to 30 June 2029) - Overview*, p. 18; AER, *Draft decision - TasNetworks Electricity distribution determination 2024 to 2029 (1 July 2024 to 30 June 2029) - Attachment 5 Capital expenditure*, p. 12.

C Other issues raised by the proponent with regulatory arrangements for long-duration outages

This appendix explains how the proponent considers that current regulatory arrangements place insufficient focus on consumer outcomes related to long-duration outages, resulting in sub-optimal outcomes for consumers.

This appendix provides additional information to that in section 2.1.3. As noted in section 2.1.3 these issues are not the focus of the rule change request, but provide context to the other regulatory arrangements in relation to long-duration outages.

C.1 Service target performance incentives do not incentivise DNSPs to minimise the impact of long-duration outages on consumers

The STPIS provides DNSPs with financial incentives to maintain and improve reliability of supply.[88] The STPIS applies a reward or penalty to DNSPs' regulated maximum allowed revenues each year, depending on whether they have over- or under-performed a benchmark level of reliability.[89]

The rules around the STPIS in the NER are principles-based, providing the AER with flexibility around how to develop and amend the STPIS.[90] The NER provides scope for the AER to consider applying STPIS incentives for long-duration outages, so this is a matter that the AER has the ability to consider under the current arrangements.

The AER's current STPIS does not provide financial incentives for DNSPs to minimise the impact of long-duration outages on consumers. The AER's current STPIS calculates the reward and penalty:

- based on standard outages less than 12 hours in duration
- excluding outages more than 12 hours in duration, which are known as major event days (MEDs)[91]

The proponent has not proposed to amend the STPIS in the rule change request as it considers that it is appropriate that the STPIS does not include financial incentives for DNSPs for long-duration outages. The proponent considers that, given the volatility around the frequency and impact of long-duration outages, it would be challenging to set benchmark targets for long-duration outages, and material variances from the targets may expose DNSPs and consumers to significant windfall gains and losses.[92]

The AER notes that if weather events are becoming more volatile and result in more adverse outcomes, the STPIS is likely to gradually and partially incorporate the effect of these events through a feedback loop[93] The AER notes that the feedback loop would be partial as the current STPIS only takes into account the change in the mean for standard outages and not long-duration outages.[94]

88 The STPIS is intended to balance incentives in the Efficiency Benefit Sharing Scheme (EBSS) and Capital expenditure sharing scheme (CESS) to reduce expenditure, so that DNSPs are incentivised to maintain and improve network performance at the lowest possible cost. AER, *Review of incentive schemes for networks - Final decision*, April 2023, p. 23

89 AER, *Network resilience - A note on key issues*, April 2022, p.8.

90 NER clause 6.6.2.

91 AER, *Electricity distribution network service providers - Service target performance incentive scheme*, Version 2.0, November 2018, p. 14.

92 Rule change request, p. 4.

93 The AER noted that the feedback loop is because the reliability target is based on previous performance. If there is more volatility of adverse outcomes, this may move the mean towards the direction of the volatility. The AER considers that the feedback loop is partial and gradual because there is a cut off for MEDs which are excluded from STPIS incentives. AER, *Network Resilience - A note on key issues*, April 2022, p. 8.

94 AER, *Network resilience - A note on key issues*, April 2022, p. 8.

C.2 GSL payments are not designed to cover the cost of outages for consumers and are a jurisdictional matter outside the rule change request

Under jurisdictional frameworks, DNSPs are required to make GSL payments to customers who receive a level of service worse than a specific threshold or level. For example in Victoria, GSL payments currently range from $40 to $380 depending on a range of factors, so may not fully recover the costs incurred by customers impacted by long-duration outages.[95] The Commission agrees with the proponent's comments that the size of these payments, and the extent to which they compensate for the costs incurred by customers, is a matter for individual jurisdictions.[96]

We also note that the Victorian and Australian governments provided a one-off Prolonged Power Outage payment in response to the severe storms in Victoria in February 2024.[97]

95 Essential Services Commission, Guaranteed service level payments for energy outages, https://www.esc.vic.gov.au/electricity-and-gas/information-for-electricity-and-gas-consumers/guaranteed-service-level-payments-energy-outages

96 Rule change request, p. 5.

97 For more information, see: Victorian Government, Guidelines - Prolonged power outage for residential customers.