SUBMISSION ON THE NETWORK RESILIENCE GUIDELINES CONSULTATION PAPER

Submission by:
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EXECUTIVE SUMMARY

ParamCo welcomes the opportunity to provide further feedback to the Australian Energy Regulator (**AER**) on its Draft Network Resilience Guidelines (**Draft Guidelines**).

This submission follows ParamCo's submission of 28 June 2026 in response to the AER's initial consultation paper.

In that submission, ParamCo supported the development of a principles-based framework that provides greater regulatory certainty while retaining sufficient flexibility to accommodate different network circumstances, emerging technologies and evolving climate risks. ParamCo also emphasised the importance of proactive resilience investment, technology-neutral assessment, proportionate evidentiary requirements, community resilience, meaningful consumer engagement, a whole-of-system perspective and alignment between resilience and Australia's broader energy transition.

ParamCo welcomes the extent to which these themes are reflected in the Draft Guidelines and Explanatory Statement.

In particular, ParamCo supports:

- the principles-based structure adopted by the AER;
- the clearer distinction between resilience and reliability;
- recognition of both network and community resilience;
- the focus on prudency, efficiency and consumer outcomes;
- technology and solution neutrality;
- consideration of non-network solutions;
- recognition that evidentiary requirements should be proportionate to the nature and scale of proposed expenditure;
- flexibility regarding climate modelling;
- the recognition of transmission resilience through potential application of the principles to TNSPs; and
- the integration of resilience planning into broader asset management and investment governance.

The Draft Guidelines therefore represent a substantial and constructive development from the consultation paper.

There remain, however, several areas where ParamCo considers the final Guidelines could be strengthened. In particular, the Guidelines should:

1. make clearer that resilience assessment should facilitate proactive and preventative investment, rather than primarily responding to demonstrated historical outages;
2. avoid allowing the indicative 12-hour outage threshold to become a de facto eligibility threshold;

3. provide stronger recognition of distributed energy resources, storage, microgrids and other flexible non-network solutions;
4. maintain a genuinely proportionate approach to evidentiary and quantitative assessment requirements;
5. strengthen the connection between resilience investment and Australia's broader energy transition;
6. further develop the whole-of-system perspective, including transmission and critical infrastructure interdependencies; and
7. ensure reporting requirements generate decision-useful information rather than additional regulatory burden.

Overall, ParamCo supports the direction of the Draft Guidelines and considers that relatively targeted refinements would materially strengthen the final framework.

1. PRINCIPLES-BASED FRAMEWORK

ParamCo's original submission recommended that the Guidelines adopt a principles-based approach providing regulatory clarity while retaining flexibility across different network environments and resilience challenges.

ParamCo therefore supports the AER's decision to structure the Draft Guidelines around six overarching principles.

This approach appropriately recognises that resilience risks vary materially between networks according to geography, network configuration, customer characteristics, climate exposure and existing infrastructure.

The AER also recognises that resilience is an evolving area and that its guidelines may need to evolve over time. This is important given the pace of technological and system change occurring across the National Electricity Market.

ParamCo considers that the final Guidelines should preserve this approach and resist unnecessary prescription as experience with resilience investment develops.

Key point: ParamCo supports the principles-based framework adopted in the Draft Guidelines. Flexibility should remain a central feature of the final Guidelines.

2. DEFINITION OF NETWORK RESILIENCE AND THE 12-HOUR THRESHOLD

ParamCo's original submission generally supported the AER's definition of network resilience but sought clearer differentiation between resilience and reliability.

The Draft Guidelines respond constructively to this issue by defining network resilience by reference to the ability to continue providing and recover network services from prolonged outages caused by severe weather events. The AER has expressly acknowledged ParamCo among the stakeholders seeking greater clarity between reliability and resilience.

ParamCo supports this clarification.

The Draft Guidelines also describe prolonged outages as typically more than 12 hours, while stating that the threshold is a guide and will be assessed case-by-case.

ParamCo supports the AER retaining flexibility around this threshold.

However, the final Guidelines should make particularly clear that 12 hours is not an eligibility threshold for resilience expenditure.

A severe weather event may have significant consumer and community consequences before an outage reaches 12 hours. This may be particularly relevant where outages affect

vulnerable consumers, telecommunications, health facilities, emergency services, water infrastructure or isolated communities.

Similarly, prudent preventative investment may be designed precisely to ensure that an outage never reaches 12 hours.

The Guidelines should therefore focus on the nature, scale and consequences of the risk, rather than outage duration alone.

Key point: The 12-hour threshold should remain indicative only and should not become a barrier to prudent investment addressing material resilience risks.

3. PROACTIVE AND PREVENTATIVE RESILIENCE INVESTMENT

A central theme of ParamCo's original submission was that the regulatory framework should support efficient preventative resilience investment, rather than waiting for significant weather events to expose network vulnerabilities.

The Draft Guidelines move in this direction.

Principle 3 requires evidence that proposed expenditure is needed to reduce the risk and impact on consumers of outages caused by severe weather events in the forecast period. The supporting framework also allows quantitative assessment of increasing future risks and, where appropriate, climate risk modelling.

ParamCo supports this approach.

However, some of the evidentiary expectations continue to place substantial emphasis on historical outage data, historical revealed risk and previous network experience.

Historical information is useful, but resilience is inherently forward-looking.

Climate conditions, network utilisation, electrification and consumer dependence on electricity are changing. Historical network performance will therefore not always be a reliable indicator of future resilience requirements.

The final Guidelines should expressly recognise that a lack of historical failure or prolonged outage does not, by itself, demonstrate that preventative expenditure is unnecessary.

Credible forward-looking evidence should be capable of establishing prudency even where the particular risk has not previously materialised.

Key point: Historical experience should inform resilience assessment, but it should not prevent prudent forward-looking investment designed to avoid future failures.

4. TECHNOLOGY-NEUTRAL AND NON-NETWORK SOLUTIONS

ParamCo previously submitted that resilience should be assessed according to the outcomes delivered to consumers rather than the particular infrastructure deployed.

In particular, ParamCo identified distributed energy resources, community batteries, microgrids, backup generation and localised energy solutions as potentially important resilience tools.

The Draft Guidelines make useful progress in this area.

Principle 4 expressly requires DNSPs to test preferred investments against feasible alternatives, including non-network solutions, and the Guidelines recognise both capital and operating expenditure. The practical examples also include mobile generation used to support consumers during prolonged outages.

ParamCo supports these developments.

However, the final Guidelines could go further by expressly identifying storage, community batteries, microgrids, distributed energy resources, demand-side measures and islandable/local supply solutions as examples of potential resilience responses.

This would not favour those technologies. Rather, it would reinforce the AER's stated technology-neutral approach and signal that resilience need not equate to conventional network augmentation or asset hardening.

This is increasingly important as consumer energy resources and storage become more integrated into the electricity system.

Key point: The final Guidelines should expressly recognise a broader range of distributed, storage and flexible solutions as potential resilience investments.

5. PROPORTIONALITY OF EVIDENTIARY REQUIREMENTS

ParamCo's original submission emphasised that supporting information requirements should be practical, proportionate and focused on decision-useful evidence.

The AER has expressly acknowledged this issue. Its Explanatory Statement notes stakeholder concerns that the cost of detailed climate modelling and cost-benefit analysis may become disproportionate for smaller investments, and states that supporting evidence should be proportionate to the size and type of investment.

ParamCo strongly supports that position.

There is, however, some tension between this stated objective and Principle 4, which requires feasible options to be tested through a quantitative cost-benefit analysis based on reasonable and verifiable assumptions.

For significant capital programs, rigorous quantitative assessment is appropriate.

For smaller initiatives, trials, community resilience measures, information-sharing programs or innovative solutions, a comprehensive quantitative cost-benefit analysis may itself impose costs disproportionate to the expenditure being assessed.

The final Guidelines should therefore expressly establish a scaled or proportionate evidentiary approach, under which the sophistication and cost of analysis expected increases with the scale, risk and complexity of the proposal.

This would be consistent with both regulatory efficiency and the AER's stated intention.

Key point: The final Guidelines should expressly state that evidentiary requirements, including quantitative cost-benefit analysis, will be proportionate to the size, complexity and risk of the proposed expenditure.

6. COMMUNITY RESILIENCE AND CONSUMER OUTCOMES

ParamCo's original submission supported a community-centred approach to resilience and emphasised that consumers experience resilience primarily through continuity of service and recovery outcomes, rather than through individual network assets.

ParamCo therefore welcomes Principle 2, which defines community resilience as the ability of communities to prepare for, withstand and recover from prolonged outages caused by severe weather events.

The express inclusion of preparedness is particularly important.

ParamCo also supports the Draft Guidelines' recognition that meaningful consumer engagement should be integrated into the development of resilience proposals rather than treated merely as a procedural requirement.

The final Guidelines should retain sufficient flexibility for engagement to reflect different communities and circumstances. Regional, remote and vulnerable communities may have materially different resilience needs from metropolitan consumers.

Consumer engagement should therefore focus on understanding outcomes - including acceptable outage risk, restoration priorities, critical local services and community needs - rather than simply seeking endorsement of a predetermined investment.

Key point: Consumer engagement should remain outcome-focused, proportionate and tailored to the communities affected by resilience risks.

7. TRANSMISSION AND A WHOLE-OF-SYSTEM APPROACH

ParamCo's original submission argued that resilience should ultimately be considered holistically across the electricity supply chain rather than in isolated network segments. It supported principles capable of application to transmission businesses where relevant, while recognising that the underlying rule change was directed principally at distribution.

The AER expressly records ParamCo as one of the stakeholders supporting broader application of the principles.

ParamCo therefore welcomes the statement in the Draft Guidelines that, although developed for DNSPs, transmission networks may refer to the principles when preparing resilience expenditure proposals.

This is a sensible compromise.

As Renewable Energy Zones, new transmission corridors, interconnectors and large-scale storage become increasingly important to the operation of the NEM, the consequences of transmission outages may extend across regions and affect generation, storage, distribution networks and consumers simultaneously.

ParamCo therefore encourages the AER to retain the transmission reference in the final Guidelines and, as regulatory experience develops, consider whether more specific transmission resilience guidance would be beneficial.

Key point: ParamCo supports retaining the ability for the Guidelines' principles to inform transmission resilience proposals and encourages continued development of a whole-of-system approach.

8. RESILIENCE AND THE ENERGY TRANSITION

ParamCo's original submission emphasised that resilience and energy transition objectives should be complementary rather than competing priorities.

The Draft Guidelines appropriately focus on the expenditure framework established by the NER. However, the final Guidelines could more clearly recognise the rapidly changing environment in which resilience investment decisions are being made.

Australia's electricity system is undergoing substantial structural change through:

- Renewable Energy Zone development;
- major transmission expansion;
- increasing penetration of variable renewable generation;
- rapid growth in storage;
- consumer energy resources;
- electrification; and
- changing patterns of electricity demand.

These developments may create new resilience risks but also new resilience solutions.

For example, storage or distributed resources deployed principally for other purposes may also provide resilience benefits. Conversely, resilience investments may improve network flexibility and facilitate the efficient integration of renewable generation and storage.

The final Guidelines should recognise these interactions while maintaining the requirement that expenditure satisfy the relevant NER expenditure objectives and criteria.

Key point: Resilience assessment should recognise the changing architecture of the electricity system and opportunities for investments to deliver both resilience and broader system benefits.

9. CLIMATE MODELLING AND UNCERTAINTY

ParamCo previously submitted that climate change considerations should be practical and evidence-based without requiring unrealistic forecasting precision.

The AER has adopted a balanced position.

The Explanatory Statement recognises the usefulness of established and recent climate risk models but does not make sophisticated climate modelling mandatory in every resilience proposal.

ParamCo supports this approach.

Climate modelling necessarily involves uncertainty, particularly when translating broad climate projections into the probability, timing and location of specific network impacts.

The appropriate regulatory question should therefore be whether the information available provides a reasonable evidentiary basis for the proposed investment, rather than whether future events can be forecast with precision.

The final Guidelines should retain this pragmatic approach and allow different forms of evidence depending on the particular risk, network and investment.

Key point: Climate risk should be assessed using credible evidence, but uncertainty should not create either an unrealistic evidentiary hurdle or a barrier to prudent preventative investment.

10. REPORTING AND REGULATORY BURDEN

ParamCo's original submission cautioned against creating reporting obligations that increase regulatory cost without materially improving decision-making.

The AER has acknowledged this concern and the need to minimise duplication with existing reporting requirements. The Draft Guidelines also recognise that the existing Distribution Annual Planning Report framework will transition to the new Distribution Network Development Plan (**DNDP**) framework.

ParamCo supports the proposed integration of resilience reporting into existing planning frameworks rather than establishing a separate reporting regime.

ParamCo also notes that Principle 6 requires reporting on both actual and planned resilience expenditure.

As noted in ParamCo's original submission, expenditure data alone may provide limited insight into whether resilience outcomes are improving. The AER itself records ParamCo's concern that actual expenditure reporting may not provide meaningful insights and may add regulatory burden.

Accordingly, reporting should focus not merely on how much was spent, but on what the expenditure was intended to achieve, what risks it addressed and, where reasonably measurable, what outcomes resulted.

The transition to the DNDP provides an opportunity to develop a more integrated and useful approach to this reporting.

Key point: Resilience reporting should focus on decision-useful information and outcomes, avoid duplication and be integrated into existing network planning frameworks.

KEY RECOMMENDATIONS

Building on ParamCo's June 2026 submission and the progress reflected in the Draft Guidelines, ParamCo recommends that the AER:

Recommendation 1 – Retain the Principles-Based Framework

Retain the flexible, principles-based structure adopted in the Draft Guidelines.

Recommendation 2 – Clarify the 12-Hour Threshold

Expressly confirm that the 12-hour reference is indicative only and is not an eligibility threshold for resilience expenditure.

Recommendation 3 – Strengthen Forward-Looking Assessment

Clarify that credible forward-looking evidence can support preventative resilience expenditure even where the relevant risk has not previously resulted in a prolonged outage.

Recommendation 4 – Broaden Examples of Resilience Solutions

Expressly recognise storage, community batteries, distributed energy resources, microgrids and other flexible or non-network solutions as potential resilience measures.

Recommendation 5 – Embed Proportionality

Expressly provide that evidentiary requirements, including quantitative cost-benefit analysis, should be proportionate to the size, complexity and risk of the proposal.

Recommendation 6 – Maintain Community and Consumer Focus

Retain an outcome-focused approach to community resilience and require consumer engagement to be appropriate to the particular communities affected.

Recommendation 7 – Retain the Transmission Link

Retain the ability for TNSPs to use the principles as guidance and continue developing a whole-of-system approach to resilience.

Recommendation 8 – Recognise Energy Transition Interactions

Recognise that resilience investment increasingly interacts with transmission expansion, Renewable Energy Zones, storage, consumer energy resources and broader energy transition infrastructure.

Recommendation 9 – Maintain a Practical Approach to Climate Evidence

Avoid requiring unrealistic precision in climate modelling and permit credible evidence appropriate to the particular risk and proposed investment.

Recommendation 10 – Keep Reporting Decision-Useful

Ensure resilience reporting focuses on risks, investment rationale and outcomes and avoids unnecessary duplication or administrative burden.

CONCLUSION

ParamCo welcomes the Draft Network Resilience Guidelines and considers that they respond constructively to many of the matters raised in ParamCo's June 2026 submission.

In particular, the principles-based framework, clearer distinction between resilience and reliability, recognition of community resilience, consideration of non-network solutions, emphasis on consumer engagement and proportionate approach to evidence represent positive developments.

The remaining task should be to ensure that the final Guidelines do not inadvertently create barriers to the very resilience investment they are intended to facilitate.

The framework should enable prudent, forward-looking and innovative investment, while maintaining rigorous assessment of efficiency, affordability and consumer benefit.

As Australia's electricity system becomes more decentralised, interconnected and dependent on renewable generation, storage and new transmission infrastructure, resilience should increasingly be considered as part of the broader challenge of delivering a secure, reliable, affordable and adaptable electricity system.

ParamCo appreciates the opportunity to provide further feedback and supports the AER's continued development of a practical and enduring resilience framework.

Yours faithfully,

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