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Dear Elloise

Submission – Resilience Principles Draft Guidance

1. INTRODUCTION

1. Orion welcomes this opportunity to provide feedback on the Commerce Commission's (Commission) consultation, *'Resilience Principles: Decision-making framework for critical infrastructure providers – Draft guidance document'*.
2. No part of this submission is confidential.
3. Orion owns and operates the electricity distribution infrastructure in Central Canterbury, including Ōtautahi Christchurch city and Selwyn district. Our network is both rural and urban and extends over 8,000 square kilometres from the Waimakariri River in the north, to the Rakaia River in the south; from the Canterbury coast to Arthur's Pass. We deliver electricity to more than 230,000 homes and businesses and are New Zealand's third largest Electricity Distribution Business (EDB).

2. SUPPORT

4. Orion supports the Commission's development of infrastructure resilience principles. We view the draft guidance document as a useful vehicle for starting the resilience conversation and introducing resilience into the Part 4 framework. The principles appear to be comprehensive and, in Orion's view, an infrastructure provider that can demonstrate substantial application of the principles is likely to be operating at an advanced level of resilience maturity.
5. Infrastructure resilience is vitally important as a means of helping to preserve economic and societal wellbeing, and it is appropriate that the Commission *"intends to take a greater role in resilience"*.¹ Infrastructure regulated by the Commission is substantially represented in the list of lifeline utilities, under which, electricity lines, telecommunications (including fibre), gas pipelines, airports and water all have a statutory duty to be able to operate to the fullest possible extent during and after an emergency (although this might be at reduced capacity).

¹ Commerce Commission. (2026). [Resilience Principles: Decision-making framework for critical infrastructure providers - Draft guidance document](#). Foreword, p2.

6. As guidance, however, Orion considers that there are material gaps and foresees that substantial sectoral and cross-sectoral work may be required before the guidance is practical and operable. We expand on this below.
7. While this is a cross-sector consultation, Orion's key concern is the implications of the draft guidance on the regulation of EDBs under Part 4 of the Commerce Act 1986. As such, we have not considered in any depth the nuances of regulations applying to other infrastructure providers and how the principles might integrate.

3. ALIGNMENT TO STATUTORY PURPOSE

8. Orion considers that the resilience principles are consistent with and support the Part 4 purpose set out in section 52A of the Commerce Act 1986 (the Act) by requiring infrastructure providers to:
 - 8.1. consider resilience investments in a manner that promotes the long-term benefit of consumers (general alignment);
 - 8.2. consider resilience impacts when investing in replacement, upgraded and new assets (limb a); and
 - 8.3. ensure that resilience investments are prudent, efficient, and support service delivery demands over the long-term (limb b).

4. INFRASTRUCTURE RESILIENCE DEFINITION

9. The Commission has chosen to define infrastructure resilience as:

"the timely and efficient prevention, absorption, recovery, adaptation and transformation of national infrastructure's essential structures, functions, and services, which have been, or will be, exposed to current and potential future hazards".²
10. The definition appears to be a slightly modified form of the definition of 'infrastructure resilience' given by the United Nations Office for Disaster Risk Reduction (UNDRR), with the material modification being the inclusion of the words 'or will be'.³
11. The adoption of/alignment to the UNDRR definition is arguably appropriate since, in 2015, New Zealand signalled its commitment to the UNDRR's Sendai Framework.^{4,5}
12. Orion would normally support this form of definitional alignment; however, we consider that the New Zealand context should be considered. There are a range of definitions of 'resilience' across government; however, the most frequently cited definition is taken from the Ministry of Civil Defence and Emergency Management's (CDEM) National Disaster Resilience Strategy:

"the ability to anticipate and resist the effects of a disruptive event, minimise adverse impacts, respond effectively, maintain or recover functionality, and adapt in a way that allows for learning and thriving"⁶

² [Ibid.](#) Paragraph 1.9, p5.

³ United Nations Office for Disaster Risk Reduction. (2022). [Principles for resilient infrastructure](#). Section 2.3, p16.

⁴ Ministry of Civil Defence & Emergency Management. (2019). [National Disaster Resilience Strategy](#). Section 3.7, p15.

⁵ United Nations Office for Disaster Risk Reduction. (2015). [Sendai Framework for Disaster Risk Reduction 2015 - 2030](#)

⁶ [Ibid.](#) Section 4.2, p18.

13. Both definitions carry common themes – preparation for disruption, withstanding impacts, response and recovery, adaptation, a future orientation and recognition that resilience is a process. Two key differentiations are that the Commission’s proposed definition incorporates the concepts of timeliness and efficiency, as well as prevention.
14. Orion recommends that the Commission adopt the general definition of resilience from the National Disaster Resilience Strategy instead of its proposed definition of *infrastructure* resilience, for the following reasons:
 - 14.1. Both definitions are thematically similar, to the extent that a separate definition addressing infrastructure is not warranted. Any guidance relating specifically to infrastructure can be provided alongside the definition.
 - 14.2. The concept of prevention in the Commission’s proposed definition is likely to be unachievable for some natural hazards (volcano, earthquake, tsunami), with the concept of resistance in the CDEM definition likely to be more appropriate.
 - 14.3. The concept of timeliness and efficiency is adequately covered, for EDBs, by the Expenditure Objective, although this should require the Expenditure Objective to be amended so it applies to both exempt and non-exempt EDBs, as we have previously recommended.⁷ We note that the Commission effectively paraphrases a material proportion of the Expenditure Objective definition in paragraph 1.15 of the draft guidance.
 - 14.4. There should, in Orion’s view, be clear consistency and alignment across New Zealand’s regulatory agencies and frameworks, when they intersect.
15. Relatedly, it would be useful for the draft guidance to demonstrate regulatory consistency and alignment by briefly describing how the principles relate to, are consistent with, and support the objectives of other government agencies, as opposed to simply providing links to those other agencies’ documents.

5. ISO STANDARDS

16. The Commission notes that its draft guidance is designed to “*complement*” ISO 22372:2025 and provides “*additional information and outlining what we consider ‘good looks like’ in practice when it comes to resilience investment decision making*”. An expectation is set that EDBs will work toward meeting the requirements of ISO 22372:2025 as their approach to resilience planning and investment matures.⁸ In Orion’s assessment, the draft guidance largely represents an investment decision-making layer under the ISO 22372:2025 framework.
17. We also note that there is an expectation that infrastructure providers will “*follow a risk assessment international standard approach such as ISO 31000*”.⁹

⁷ Orion. (2025). [Submission to Open Letter](#). Paragraphs 65-66, p14.

⁸ [Ibid.](#) Paragraph 1.7, p4.

⁹ [Ibid.](#) Paragraph 2.21, p16.

18. Climate change is cited as a resilience challenge throughout the draft guidance, and the Commission has cited a research report focussed on simplifying real options analysis for climate change adaptation.¹⁰ While academic research reports can provide valuable insights, a more practical and implementable framework is likely to be more valuable to infrastructure providers.
19. Orion Recommends that the Commission reviews ISO 14091:2021 '*Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment*' and considers adding that standard to the draft guidance as a practical and implementable framework for climate change adaptation.
20. Orion supports the incorporation, by reference, of relevant ISO standards into the regulatory framework. ISO standards tend to approach 'best practice' and are developed by technical committees comprising global subject matter experts, along with inputs from consumer associations, academia, non-government organisations and government.
21. However, the Commission's statements of expectation, in this and other publications, for meeting the requirements of various ISO standards tend to be somewhat muted. We would encourage the Commission to be more direct in stating its expectations, especially regarding timeframes. We consider that clear direction will provide a stimulus for infrastructure providers to advance their maturity in asset management practices.
22. Despite our preference for ISO standards, we acknowledge that some infrastructure providers may prefer to adopt an alternative framework. We don't think that regulatory settings should preclude this, but there should be a clear onus on the infrastructure provider to demonstrate that the alternative framework is materially equivalent to the relevant ISO standard.

6. RESILIENCE VERSUS RELIABILITY

23. Alongside its proposed definition of infrastructure resilience, the Commission explains that resilience is differentiated from reliability. We agree with the Commission; however, we consider that the draft guidance would benefit from a discussion of the relationship between resilience and reliability, as the two are inextricably linked.
24. The Australian Energy Regulator (AER) describes the relationship between network resilience and network reliability in its note on network resilience. The AER's definition of reliability, although constructed differently, is not inconsistent with the Commission's definition and the AER notes that "[t]here is a close relationship between resilience and reliability because resilience is an input that contributes to the achievement of reliability – the service level outcome."¹¹
25. The AER reiterated this relationship in its recently closed consultation on network resilience guidelines.¹²

7. REGULATORY APPLICATION

26. As noted above, the Commission has signalled its intention to take a greater role in resilience. While acknowledging that this is likely appropriate, we are interested to understand the form of the Commission's potential role, and the associated timeframes.

¹⁰ Guthrie, G. (2023). [Simplified real options analysis for climate change adaption](#).

¹¹ Australian Energy Regulator. (2022). [Network resilience: A note on key issues](#). Section 2.1, p6.

¹² Australian Energy Regulator. (2026). [Network resilience guidelines: Consultation paper](#). Section 2.1, p5.

27. We would also like to understand how the Commission intends to position the resilience principles within the Part 4 framework. For regulation of electricity lines services, this includes accommodating the current, two-tiered regulatory framework. For example, we foresee that price-quality regulated EDBs are likely to have to demonstrate a practical application of some or all of the principles in reopener applications, CPPs and, potentially, within asset management plans (voluntarily) in advance of the DPP5 reset. However, it is not clear how exempt EDBs will be expected to demonstrate application of the principles and whether alignment but not certification would be accepted. Contrasting the electricity distribution and water services information disclosure (ID) determinations indicates resilience is only lightly addressed in the EDB IDs, whereas the water services IDs appear more developed from a resilience perspective and align to several of the principles.^{13,14}
28. Further, the draft guidance could be clearer on proportionality. The draft guidance notes that the “*choice of framework will depend on the scale, materiality, uncertainty and maturity of the decision being advanced*”, but it doesn't provide any indication of where those thresholds sit. Our view is that some quantification of these considerations should be provided, potentially through worked examples linking the above parameters to the expected level of analysis.

8. SPECIFIC COMMENTS ON THE GUIDANCE.

8.1. Data Requirements and Data Sharing

29. As stated above, we consider that the proposed principles are comprehensive and, taken as a whole, they appear appropriate for a firm operating at the higher end of resilience maturity. We note that the principles have been adopted directly from the ResOrgs report, without modification.¹⁵
30. Principles 1 and 2 (‘multi-hazard risk awareness’ and ‘understanding risk at different scale’) will require EDBs to acquire extensive hazard data, to the extent that data exists and is accessible at reasonable cost, and incorporate into core business systems (for example, geographic information systems (GIS)). To progress maturity in resilience assessment and planning, EDBs will need to ensure that their systems are fit-for-purpose and that they are adequately funded to acquire and maintain access to the necessary datasets.
31. Principle 3 (‘accounting for interdependencies’) is likely to require infrastructure providers to exchange asset location information. EDBs are already required to publicly disclose information on their zone substations “*in a format commonly used by geographical, or equivalent, information systems mapping software*”; however, the data requirements for that disclosure are quite limited. Further, quantifying cascading impacts across sectors and assigning a dollar value to them is likely to be extremely difficult in practice. It would be useful if the guidance document was to provide worked examples of how the Commission expects this to be done.

¹³ Commerce Commission. (2024). [Electricity Distribution Information Disclosure \(amendments related to IM Review 2023\) Amendment Determination 2024 \[2024\] NZCC 31](#). Attachment A, clause 14, p94.

¹⁴ Commerce Commission. (2026). [Water Services Information Disclosure Determination 2026 \[2026\] NZCC 3](#). Schedule C, clause C14, p73.

¹⁵ Brown, C., McDonald G., Henning, T., Fairclough, R., Michela, L., McDonald, N., Mattea, S (2025). [Infrastructure Resilience: Key principles for regulating the performance of utilities. ResOrgs Report Prepared for Commerce Commission](#). Part B, section 1, pp27-42.

8.2. Guidance and Decision-making Frameworks

32. In Orion's view, the guidance aspects of the document are appropriate and should be effective in guiding infrastructure providers toward progressively incorporating the principles into resilience investment decision-making. The examples and statements of expectation against each principle in Chapter 2 are helpful, as are the indicators of 'what good looks like' in Chapter 3.
33. In terms of the decision-making frameworks and tools identified and linked within the draft guidance document, a number of these are utilised in EDBs' investment decision-making (for example, the value of lost load (VoLL) and cost-benefit analysis (CBA)). However, we note many of the less familiar decision-making frameworks and tools are heavily weighted toward academic literature (research papers, journal articles, etc.). This may be satisfactory from a policy perspective, but it is less helpful from an implementation/execution perspective, which is the arena that infrastructure providers operate in.
34. An example is provided by the discussion of principle 4 – 'consideration of distributional impacts'. The draft guidance explains what not to do; e.g., don't assume that willingness-to-pay aligns with need or assume self-provisioning is evidence of strong infrastructure resilience, but it doesn't explain how distributional impacts should be practically assessed and incorporated into cost-benefit analysis. Further, no related decision-making framework (practical or academic) is referenced in Chapter 4.
35. Our observation is that academic or conceptual frameworks generally need to be further developed into practical and implementable toolsets before they can be adopted by end-users. At this stage, the frameworks are often monetised and become proprietary. We consider that the step between academic concepts and useful tools is missing from the draft guidance in many instances. It is likely that significant sectoral and cross-sectoral work will be required to identify and potentially develop a useable resilience decision-making toolset, and Orion looks forward to working with the industry to achieve that.

8.3. Valuing Resilience

36. The ResOrgs report contains a section on VoLL as a means of monetising resilience risk; however, ResOrgs does qualify its discussion by stating that "*... one of the potential limitations of VoLL type metrics is that they may not adequately capture higher order impacts in the value estimation.*"¹⁶ Discussion of VoLL has not been carried forward to the draft guidance (even as a reference) which, in Orion's view, is an omission (while the draft guidance is designed to have cross-sector application, we consider it inevitable that some degree of sector-specific consideration will be required).
37. VoLL is not without its problems. The value of unserved energy stated in the Electricity Industry Participation Code (Code) is a uniform, national value that is extremely dated (Transpower asserts that it precedes the Code and dates to 2004).¹⁷ This limitation has required EDBs to either conduct bespoke surveys for their networks¹⁸ or adopt alternative approaches like taking the inflation adjusted VoLL value stated in other relevant documents and inflating further, as needed.^{19,20}

¹⁶ [Ibid.](#) Section 2.3.3, p57.

¹⁷ Transpower. (2018). [Value of Lost Load Study](#). Section 1.4, p9.

¹⁸ Powerco. (2017). [Customised Price-quality Path \(CPP\): Main Proposal](#). Section 5.5.3, p38

¹⁹ Aurora Energy. (2020). [Customised Price-quality Path: Application](#). Section L10.2, p236.

²⁰ GHD. (2026). [Orion's CPP verification report](#). Section 9.14.2, p218

38. VoLL is used as an investment-testing tool internationally. Australia uses the value of customer reliability (VCR) and, under the National Electricity Rules, the AER determines the VCR methodology^{21,22} and reviews it and the VCR values at intervals not exceeding 5 years.²³ The VCR methodology uses customers' preferences to avoid outages of up to 12 hours in duration.
39. At the request of Australia's Energy and Climate Change Ministerial Council, the AER has developed values of network resilience (VNR) that address longer-term outages.²⁴ The approach taken by the AER is to determine VNR by calculating multiples of VCR, with the VNR for residential customers capped at the equivalent value of alternative supply (generation) and an uncapped VNR for business customers. The AER has signalled that the VNR methodology is interim in nature and that it intends to develop a longer-term methodology.
40. Orion recommends that the Commission maintains an overview of the AER's approach to valuing network resilience and considers whether similar approaches can be developed for implementation in New Zealand.

8.4. Error Correction

41. We have noted a small error in the guidance that should be corrected. At paragraph 2.25, the decile system is referred to in the list of high criticality examples; however, the decile system was replaced by the equity index from 2023.²⁵ Further, the decile system and equity index are educational measures related to funding schools. The Commission should consider whether deprivation areas²⁶ would be a more appropriate reference.

9. CLOSING

42. Orion broadly supports the Commerce Commission's draft resilience principles and welcomes the Commission taking a more active role in infrastructure resilience. Orion considers that the principles are comprehensive and generally consistent with the purpose of Part 4 of the Commerce Act, recognising that resilient infrastructure is critical to maintaining economic and social wellbeing.
43. However, we consider that the guidance requires further development to ensure that the overall framework and associated toolsets are practical and proportionate to the business size and scale of any investments being considered. We would welcome the opportunity to work with the Commission and sector to ensure guidance is practical and operable.
44. Our submission recommends greater alignment with existing New Zealand resilience frameworks, including adoption of the resilience definition used in the National Disaster Resilience Strategy, stronger references to internationally recognised ISO standards, and more explicit expectations regarding implementation timeframes and regulatory application.

²¹ Australian Energy Regulator. (2024). [Values of customer reliability methodology: Final determination](#). August 2024.

²² Australian Energy Regulator. (2024). [Values of customer reliability: Statement of methodology](#). August 2024.

²³ Australian Energy Market Commission. (2026). [National Electricity Rules](#). Rule 8.12.

²⁴ Australian Energy Regulator. (2024). [Value of Network Resilience 2024: Final Decision](#). 30 September 2024.

²⁵ Ministry of Education. (2022). [Equity Index transition approach and other implementation matters](#).

²⁶ Statistics New Zealand. (2025). [New Zealand index of socioeconomic deprivation: 2023 Census](#).

45. Orion considers that there is a need to bridge the gap between high-level resilience concepts and practical decision-making tools. We have highlighted challenges associated with hazard data requirements, cross-sector data sharing, assessment of infrastructure interdependencies, and valuation of resilience benefits. We note that many of the frameworks referenced in the draft guidance are drawn from academic literature and may be difficult for infrastructure providers to implement without further development, worked examples, and sector-specific guidance.
46. Orion encourages the Commission to monitor and consider approaches being developed by the Australian Energy Regulator for valuing network resilience, to strengthen the practical tools available for assessing resilience investments and distributional impacts.
47. Thank you for the opportunity to provide our views on the draft guidance document. Please contact the undersigned if you require further information.

Yours sincerely



Alec Findlater
Regulatory Lead – Commerce Commission

APPENDIX A – CONSULTATION QUESTIONS

Is the draft guidance clear about its purpose and practical status, including the level of analysis and rigour the Commission expects for more material resilience expenditure proposals?

The draft guidance is reasonably clear, and Orion supports its role as a means of introducing resilience considerations into regulated investment decision-making. However, the draft guidance could provide greater clarity of the level of analysis and evidence expected for resilience expenditure proposals of differing materiality.

Is it clear how the draft guidance should be applied proportionately across sectors with different levels of maturity?

The principles are comprehensive and, if applied together, would be representative of business with a relatively advanced state of resilience maturity. While this provides a useful long-term direction, some sectors and organisations may require a staged pathway toward implementation. The draft guidance recognises that infrastructure sectors are at different stages of resilience maturity, but further guidance on how proportional application is expected to occur in practice would be beneficial.

Are there implementation barriers, overlaps, or accountability issues in the wider resilience and regulatory landscape that may affect how this guidance is applied in practice?

Potentially. For EDBs, a key consideration will be how the resilience principles are integrated into the existing Part 4 regulatory framework and how compliance or alignment is expected to be demonstrated across both price-quality regulated and exempt distributors.

What areas should the Commission prioritise in further work (for example, business case guidance, resilience measures, maturity assessment, interdependency information, or reporting)?

Orion considers the following areas should be prioritised - developing:

- resilience valuation methodologies, including approaches to assessing long-duration outages and broader societal impacts.
- practical guidance on assessing distributional impacts and incorporating them into decision-making.
- maturity assessment frameworks that allow organisations to progressively demonstrate improvement.
- worked examples and case studies demonstrating practical application of the principles.

These areas would help bridge the gap between establishing principles and practical implementation.

Which aspects of the draft guidance are most helpful for informing your investment decision making, and why?

The most helpful aspects of the guidance are the explanations and examples accompanying each principle in Chapter 2, and the indicators of ‘what good looks like’ provided in Chapter 3.

Which parts of the draft guidance are unclear, unnecessary, or could be improved? Please explain.

The need for improvement relates to additional or deeper clarity of guidance to aid practical implementation rather than the principles themselves. In particular:

- expectations regarding proportionality and analytical rigour could be more clearly articulated.
- greater guidance is needed on how to assess distributional impacts and incorporate them into investment evaluations.
- additional guidance is needed on how interdependencies and cascading impacts should be assessed and valued.

- many of the frameworks referenced are drawn from academic literature and may not yet be sufficiently developed into practical tools that infrastructure providers can readily adopt.
- greater clarity regarding regulatory application, implementation pathways, and expected timeframes would be beneficial.

Are any principles missing? Are there areas of overlap where the principles could be simplified or streamlined?

Orion considers that local government-driven climate change adaptation may impact on the principles and requires some additional guidance. As climate change impacts grow and compound, councils may be faced with making and implementing managed-retreat decisions. While the costs of associated infrastructure investments should be highlighted in local government consultation processes, regulated infrastructure providers are likely to find that their investment decision-making processes are somewhat curtailed because they will need to fall in line with, and support, the local government initiative. The Commission should consider how it would treat investment proposals under such circumstances and incorporate that into the draft guidance.

Are there any missing frameworks or evaluation tools that should be included or referenced?

Yes. Orion recommends that the Commission considers including ISO 14091:2021 (Adaptation to climate change - Guidelines on vulnerability, impacts and risk assessment) as a practical framework for climate adaptation planning and decision-making.

The draft guidance could also include greater discussion of resilience valuation methodologies, along the lines of Australian Energy Regulator's emerging Value of Network Resilience (VNR) frameworks.

More generally, the guidance would benefit from identifying and referencing practical implementation tools and methodologies, in addition to academic frameworks.

To what extent do you already apply these principles in your resilience-related decision-making processes? If not, what currently guides your resilience-related investment decisions?

Orion has applied several of the resilience principles in justifying resilience investments. We note that the extent to which some principles can be applied is contingent on the nature and location of specific proposed resilience investments. Further, some principles are new – for example, we are unaware of distributional impacts having been specifically considered under the Part 4 frameworks, prior to the publication of the draft guidance.

Do you have practical examples of applying these principles - in a specific sector, or cross-sector - that could be shared to support other users of the guidance?

Orion has included resilience-based investments in its CPP proposal (June 2026) and has applied several of the principles in justifying the resilience expenditure. Currently, however, that resilience expenditure is undergoing scrutiny by the Commission, and Orion considers that it would be premature to share any insights at this time.

How should the framework recognise and reflect iwi, hapū, and Māori perspectives, including capability, resources, and relationships that support resilience, particularly in smaller or more isolated communities?

Orion's view is that the draft guidance places an appropriate emphasis on considering iwi, hapū, and Māori perspectives.

Which cross-sector vulnerabilities and interdependencies should the framework place the greatest emphasis on, and expect infrastructure providers and the Commission to pay closest attention to?

Orion views it as unnecessary for the investment resilience framework to emphasise specific cross-sector vulnerabilities and interdependencies, as these are likely to be different for many infrastructure providers, depending on location. Focus should instead be placed on lifting resilience and risk management maturity so that regulated infrastructure providers adequately assess those issues.