ENA submission to discussion document on strengthening the resilience of Aotearoa New Zealand's critical infrastructure system

Submission to the Department of Prime Minister and Cabinet

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1 Introduction

Electricity Networks Aotearoa (ENA) appreciates the opportunity to make a submission to the discussion document on strengthening the resilience of Aotearoa New Zealand's critical infrastructure system (the discussion document).

ENA is the industry membership body that represents the 27 electricity distribution businesses (EDBs, sometimes called lines companies) that take power from the national grid and deliver it to homes and businesses. See Appendix A of this submission for a list of ENA member companies.

ENA harnesses the collective expertise of members to promote safe, reliable and affordable power for our members' customers.

ENA's primary role is to guide the development of policy for the electricity distribution sector, to engage with government agencies on the sector's behalf and to co-ordinate communications and other activities on behalf of our members. In carrying out its tasks, ENA carries out extensive and independently facilitated consumer and stakeholder engagement.

2 Executive Summary

As recent experiences of significant weather events have shown us, New Zealand homes, businesses and communities have a critical reliance on a safe, secure and affordable supply of electricity for their health and wellbeing. In addition to directly powering communities, electricity is also critical to the operation of many other essential services, such as telecommunications and water reticulation. Exacerbating this critical reliance is the increasing importance of electricity to New Zealand's transition to a de-carbonised energy system, where even public and private transport will be reliant on a secure electricity supply.

As owners and operators of critical national infrastructure (CNI), EDBs recognise the importance of appropriate resilience standards and an enabling regulatory environment. ENA's submission on the discussion document seeks to balance this importance against the additional burden that could be imposed on the sector by poorly conceived or overly bureaucratic requirements, that are not commensurate with the resilience improvements they seek to achieve. Equally important is the need to appropriately reflect consumers' willingness to pay for heightened levels of resilience in any new standards and outcomes sought.

We are concerned that the timing of this consultation and the proposals contained therein appears to overlap with the changes being made via the Emergency Management Bill, which is currently the subject of an inquiry at the Governance and Administration Select Committee. The details and practical implementation of some of the new requirements in the Emergency Management Bill, such as Planned Emergency Levels of Service (PELOS), are still very unclear to CNI operators. Nevertheless, this consultation appears to contemplate further requirements of this sort, which may overlap, conflict with or duplicate the requirements of the Emergency Management Bill, before that new legislation is even enacted, let alone the practical effects of its passage known and understood.

We therefore urge government, in considering the submissions on this consultation, to give a great deal of thought as to how any new requirements would work coherently with both the imminent Emergency Management Act and existing extensive regulatory requirements placed on EDBs.

3 Prelude: Objectives for and principles underpinning this work programme

3.1 Q1. Does more need to be done to improve the resilience of New Zealand's critical infrastructure system?

ENA believes that, with respect to the electricity distribution sector, there is a robust and mature approach to resilience planning and emergency management. There are, of course, lessons to be learned and improvements that can be made, but on the whole the distribution sector performs well in terms of resilience, under the existing regulatory regime.

However, Cyclone Gabrielle has highlighted the interconnected nature of our current CNI-based services and the extent which all these services are required for communities and businesses to be able to function in a normal way. It is apparent that the ultimate outcome communities are seeking – the continuance and, when interrupted, swift restoration of the services they value – can only be effectively delivered when the CNI chain is operating to an appropriate level of resilience. For this reason, it is desirable for government to consider the CNI as a system and explore where gaps can be addressed and performance – in particular, consistency of performance – can be improved.

In addition to interdependency issues, the recently completed 'lessons learned' independent review of the distribution sector's response to Cyclone Gabrielle highlights the following three key priorities for the sector:

> **1. Remove hazards.** This involves addressing the risk posed by out-of-zone trees, upgrading some specific critical assets that are vulnerable to hazards, and incrementally hardening the network as assets are renewed. This activity will take time and investment, and the investments will need to be appropriately tested for alternatives and affordability.
>
> **2. Continuously improve resourcing and access.** Improvements to resourcing and contingency plans to deal with access will help shorten the restoration "tail".
>
> **3. Develop secure community hubs.** Due to our topography, vulnerabilities in the roading networks, and the types of damage that can occur, there will always be some hard-to-restore customers. For these customers and communities, having community hubs with a secure standalone supply of electricity and communication will provide support while restoration or alternatives can be brought online. Community hubs will be an important safety net while hazard reduction and other improvements are made.

This demonstrates that the distribution sector is capable of assessing its own strengths and weaknesses with respect to resilience, and acting to address these. It is therefore important that any new systems government introduces do not conflict with or inhibit the ability of CNI operators to proactively manage and improve their own resilience.

3.2 Q2. Have you had direct experience of critical infrastructure failures, and if so, how has this affected you?

This question is not applicable to ENA.

3.3 Q3. How would you expect a resilient critical infrastructure system to perform during adverse events?

This question is not applicable to ENA.

3.4 Q4. Would you be willing to pay higher prices for a more resilient and reliable critical infrastructure system?

From the point of view of a heavily price-quality regulated sector, the question is not so much whether the CNI operator is willing to pay higher prices for a more resilient and reliable critical infrastructure system but whether they are permitted to recover the cost of such a system as a regulated entity under the Commerce Act 1986, and whether consumers are prepared to pay for it.

3.5 Q5. The work programme's objective is to enhance the resilience of New Zealand's critical infrastructure system to all hazards and threats, with the intent of protecting New Zealand's wellbeing, and supporting sustainable and inclusive growth. Do you agree with these objectives? If not, what changes would you propose?

ENA supports these objectives.

3.6 Q6. Do you agreed with the proposed criteria for assessing reform options? If not, what changes you would propose?

ENA agrees with the proposed criteria for assession reform options.

4 Section 1: Background and context

4.1 Q7. The paper discussed four mega trends: i) climate change, ii) a more complex geopolitical and national security environment, iii) economic fragmentation, and iv) the advent and rapid uptake of new technologies. Do you think these pose significant threats to infrastructure resilience?

For EDBs, the most significant mega-trends that pose a threat to the resilience of their infrastructure are i) climate change and iv) the advent and rapid uptake of new technologies. In the case of iv) however, it is notable that the sector considers that these new technologies are both a threat and a significant opportunity to enhance resilience of services for consumers.

4.2 Q8 - Are there additional megatrends that are also important that we haven't mentioned? If so, please provide details.

EDBs, like many sectors, are grappling with challenges associated with recruiting and retaining the diverse and capable workforce that will be required to help electricity and decarbonise the country. Ensuring access to the workforce necessary to ensure a resilient service is a significant and ongoing challenge for the distribution sector.

4.3 Q9 - Do you think we have described the financial implications of enhancing resilience accurately? If not, what have we missed?

We encourage DPMC to look more closely at this issue in the context of regulated CNI operating businesses such as the EDBs and airports. The Commerce Commission is making decisions now about what the appropriate settings (input methodologies) should be for some critical building blocks of the price control process they administer. Once those decisions are made, the scope to materially change the expenditure of these businesses on resilience activities will be very limited for most of the coming decade. Increasing expectations from central government, stakeholders and customers about the desired level of resilience expenditure for CNI operators needs to be matched with a regulatory regime that can accommodate changes in these preferences.

5 Section 2: Potential barriers to infrastructure resilience

5.1 Q10. How important do you think it is for the resilience of New Zealand's infrastructure system to have a greater shared understanding of hazards and threats?

It is important that different CNI operators or sectors have a consistent view of the hazards and threats they face, particularly where those are common across different sectors. If the assessment of these hazards is materially different across interdependent CNI sectors, this could give rise to an inefficient allocation of resource to enhancing resilience against a particular hazard in one sector that is not matched by another. In the event that that hazard materialises, one sector might still be effectively impacted because it's enhanced resilience against that hazard is not matched in another sector that it has a dependency upon.

5.2 Q11. If you are a critical infrastructure owner or operator, what additional information do you think would best support you to improve your resilience?

For EDBs, natural hazards are probably the most significant source of risk for their infrastructure. As such, any additional information or guidance that central government can provide on the likelihood or impact of such hazards would assist in maintaining appropriate levels of resilience.

ENA was pleased to see that the government's Climate Adaptation Plan includes a actions 3.1 and 3.2 to "Provide access to the latest climate projections data" and "Design and develop risk and resilience and climate adaptation information portals". This is an example of Govt taking the lead on ensuring that high quality, authoritative and nationally consistent information is made available to the country as a whole to enable sectors and communities to assess and respond to changing natural hazards. Capturing all significant natural hazards (e.g. storms and severe weather events, flooding – pluvial, fluvial, etc -, landslides, etc) would provide valuable information to the CNI sector to enable a consistent and proportionate response to be put in place.

In addition, for heavily regulated sectors such as the EDBs, having these single authoritative sources of hazard data will make subsequent conversations with the regulator easier.

Access to smart metering data, and particularly in this context operational smart meter data (e.g. last gasp, first breath, supply status, etc), would be a valuable tool in helping EDBs to respond to severe weather events. Currently most EDBs have only relatively ad-hoc access to this data, and then usually only consumption data, which is useful for network planning purposes but does not support an operational response to emergency events. ENA and EDBs have advocated for improved access to smart meter data to the Electricity Authority for many years, but progress is very slow and practical and useful access to this valuable information for EDBs is still very far from secured.

5.3 Q12. What do you think the government should do to enable greater information sharing with, and between, critical infrastructure owners and operators?

There will need to be robust rules around the sharing and use of the information.

Information provided by CNI owners may be commercial in confidence or sensitive information relating to specific security procedures or systems used by the asset owner. Potentially it could also include personal information.

There will need to be guarantees that the information is held securely and not shared beyond the authorised members of a sharing group. There will also need to be clear statutory provisions about the use of the information.

information shared for resilience purposes should not be used by regulatory agencies for compliance or enforcement action.

Separate to the concerns above, there is also potentially issues with sharing information of the sort described in the Emergency Management Bill as Planned Emergency Levels of Service (PELOS). While still unclear, there is a risk these requirements might mean information about areas of network weakness or criticality (or information from which these can be inferred) is placed in the public domain. This clearly introduces a potential risk for hostile parties to exploit to disrupt CNI services. For these reasons great caution should be exercised when considering what greater information should be shared between CNI operators (if any), and how that is done safely and securely.

5.4 Q13. Would you support the government having the ability to set, and enforce, minimum resilience standards across the entire infrastructure system?

If so:

– what type of standard would you support (eg. requirement to adhere to a specific process or satisfy a set of principles)?

– do you have a view on how potential minimum resilience standards could best complement existing approaches to risk management?

If any minimum resilience standard is to be imposed, we would prefer principles or risk management based approach.

5.5 Q14. Would you support the government investing in a model to assess the significance of a critical infrastructure asset, and using that as the basis for imposing more stringent resilience requirements?

If so:

– what options would you like the government to consider for delivering on this objective?

- What criteria would you use to determine a critical infrastructure asset's importance??

We are unsure whether a government-developed and operated model would be able to accurately and usefully assess the significance of a critical infrastructure asset, in a way that the owner/operator of that asset could not. The need for such a model would suggest that the government is not confident that the owner/operator of that asset is not capable of carrying out this assessment themselves, and/or unwilling to act on the results if the need for an uplift in resilience is required.

ENA is confident that, for the distribution sector at least, the owners and operators of CNI are entirely capable of assessing the significance of their assets and taking appropriate steps to improve resilience where that is required. For example, the recently completed 'lessons learned' independent review of the distribution sector's response to Cyclone Gabrielle states:

> *Our assessment indicated that hazard identification is generally robust for typical hazards (snow, tsunami, volcanic activity, wind), but work is at an earlier stage in relation to flooding, geotechnical hazards, and assessing how hazards may alter with climate change. The latter three issues have emerged more recently due to recent weather trends. Identifying assets vulnerable to hazards and preparing mitigation plans is also generally robust for typical hazards but still forming for flooding and geotechnical hazards.*

We therefore see no value in government duplicating these processes.

5.6 Q16. Do you think there is a need for the government to have greater powers to provide direction or intervene in the management of significant national security threats against a critical infrastructure?

In the event of a significant national security threat (where that term is defined in a statute), and as a matter of last resort, the Government could have some additional powers to intervene and provide direction to the entity responsible for the critical infrastructure. However, correspondingly, entities carrying out Ministerial directions in good faith must have protection from liability.

If so

- what type of powers should the government consider?

Powers similar to those in Australia, but with further refinement and adaptation to New Zealand conditions.

– what protections would you like to see around the use of such powers to ensure that they were only used as a last resort, where necessary?

There must be the ability to bring judicial review proceedings regarding the exercise of the power.

5.7 Q17. Do you think there is a need for a government agency or agencies to have clear responsibility for the resilience of New Zealand's critical infrastructure system?

If so

– do you consider that new regulatory functions should be the responsibility of separate agencies, or a single agency?

– do you consider that an existing entity should assume these functions or that they should be vested in a new entity?

– how do you see the role of a potential system regulator relative to sectoral regulators?

It is important that whoever determines and monitors the regulatory requirements for resilience also has the ability to influence allowable revenues in regulated sectors so that these standards can be achieved. It would therefore be most appropriate that the Commerce Commission, who already plays the lead role in assessing and approving EDB price-quality trade-offs on behalf of consumers, has responsibility for the resilience of the sectors they regulate. This is already a fundamental element of their role now.

5.8 Q18. Do you think there is a need for compliance and enforcement mechanisms (eg. mandatory reporting, penalties, offences) to ensure that critical infrastructure operators are meeting potential minimum standards?

If so:

– do you consider that these should be applied to the entity, to the entity's directors/executive leadership, or a mix of the two, and why?

Given EDBs are already subject to price-quality regulation, and sanctions are available for not meeting those performance expectations, ENA sees little value in adding an additional penalty regime. In addition, many EDBs are owned by their communities and have direct governance roles for community representation, so there are already strong democratic accountability mechanisms in place if EDBs are seen to underperform in this way.

6 Summary and conclusion

ENA shares and supports the aspirations of the government that Aotearoa New Zealand has a system for ensuring the CNI consumers, communities and businesses rely upon is secure and resilient. We encourage the government to design any new regulatory systems or requirements so that they enhance and integrate well with existing legislation– particularly Part 4 of the Commerce Act – and avoid unnecessary or conflicting duplication of requirements or bureaucracy.

ENA and its members look forward to working closely with the government on determining and delivering an appropriate level of resilient CNI that meets the needs of consumers and communities, both now and in to the future.

If there is any further assistance ENA or its members can provide to DPMC in further developing their policy programme around resilience for CNI, please don't hesitate to contact Richard Le Gros (richard@electricity.org.nz), Policy and Innovation Manager at ENA, in the first instance.

7 Appendix A - ENA Members

The Electricity Networks Association makes this submission along with the support of its members, listed below.

Alpine Energy

Aurora Energy

Buller Electricity

Centralines

Counties Energy

Electra

EA Networks

Firstlight Network

Horizon Energy Distribution

Mainpower NZ

Marlborough Lines

Nelson Electricity

Network Tasman

Network Waitaki

Northpower

Orion New Zealand

Powerco

PowerNet

Scanpower

The Lines Company

Top Energy

Unison Networks

Vector

Waipa Networks

WEL Networks

Wellington Electricity Lines

Westpower