

Strengthening the resilience
of Aotearoa New Zealand's
critical infrastructure system

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Submission and contact details






Consultation	Strengthening the resilience of Aotearoa New Zealand’s critical infrastructure system - Discussion Document
Submitted to	Department of the Prime Minister and Cabinet
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Wellington Electricity Lines Limited (WELL) welcomes the opportunity to provide feedback on the ‘Strengthening the resilience of Aotearoa New Zealand’s critical infrastructure system Discussion Document’ (**The Paper**).

We would also appreciate the opportunity to discuss this submission in person.

This submission contains no confidential information and can be publicly disclosed.

Wellington Electricity Lines Limited (WELL) owns and operates the electricity distribution network in the Wellington region. We manage the poles, wires and equipment that provide electricity to approximately 400,000 consumers in the Wellington, Porirua, Lower Hutt and Upper Hutt areas. We will be investing \$162m between April 2021 to March 2025 (the current regulatory period) on the network to maintain a modern network and to build new capacity to meet Wellingtons growing electricity use.

				
<p>We are investing around \$162m in infrastructure on the Wellington network</p>	<p>We provide electricity to over 173,000 households & premises and to over 400,000 people</p>	<p>Our total network is around 6,700 km in length with over 4,200 km of it being underground cables.</p>	<p>We have around 4,000 substations and 40,000 poles.</p>	<p>There are about 9,900 electric vehicles connected to our network, 3,800 more than last year.</p>

The Christchurch, Kaikoura and Seddon earthquakes and the recent cyclones have all highlighted the importance of resilience and the part infrastructure can play in this. New Zealand's Emissions Reduction Plan (ERP) will transition fossil fuel energy use onto the electricity system (transportation and gas use), increasing New Zealand's dependence on electricity infrastructure as our single primary energy supply and reducing diversity from other fossil fuels. Resilience and improvements in infrastructure along with reduction, readiness, response and recovery mechanisms will become even more important as we become more reliant on key assets.

We note and agree with the paper's description of the new megatrends that are increasing the risk and consequences of infrastructure failure. We also note that the primary risk in New Zealand is still earthquakes, however, climate change will also test existing standards as the scale of events increases beyond their current built capability. While other risks are increasing in their frequency and impact, seismic risks will still remain our greatest vulnerability.

While the Paper identifies a number of risks and weaknesses with our current approach to resilience the summary is superficial and fails to recognise limitations on resilience are wider than the four barriers highlighted suggests. We have already undertaken studies and modelling with other lifelines utilities to assess an infrastructure asset criticality along with steps required to invest to improve outcomes and benefits. However, Government funding has not been forthcoming from Central Government to invest in these infrastructure changes.

We don't believe the addition of a further agency with the primary accountability for overseeing any threats to critical infrastructure is warranted. However, we do believe there is work to improve community resilience while infrastructure is returned to service.

There are agencies accountable for a specific sector's performance (like the Electricity Authority for the electricity sector). However, we need to "join the dots" as this agency does not manage economic regulation for the funding required for infrastructure resilience improvement, resulting in initiatives "falling through the gaps" created by separate and uncoordinated ministerial decision-making. An extra agency will do little to address this current problem. This issue was highlighted following the Kaikoura earthquake where Wellington Electricity was required to seek a Government Policy Statement (GPS) from the Minister of Energy to allow the Commerce Commission to consider the requirements of the Civil Defence Emergency Management (CDEM) Act when considering an application for earthquake readiness improvements identified from earlier lifelines vulnerability assessments. Part 4 did not have the ability to fund the CDEM requirements under the Price-Quality

Default Price Path regulation without the intervention of a GPS so the two ministries could coordinate outcomes for the community.

In the case of the electricity sector, this would include the Electricity Authority which is responsible for maintaining a secure electricity supply, and the Commerce Commission which is responsible for setting the allowances and quality targets for electricity transmission and distribution being aware of the Infrastructure Commission and National Emergency Management Agency recommendations. I am unsure if an additional agency would benefit expediency in the delivery of infrastructure resilience improvement.

We think it's important to recognise that accountability is a coordination problem rather than a leadership problem.

There is also a cost to serve regarding additional investment required for resilience. When we survey our customers regarding paying more for greater reliability they decline the extra cost. This presupposes that there is a welfare mechanism underlying society to "see them through" a severe disruption that allows a return to normal while they continue to receive shelter food and warmth from existing agencies. This plays to the consideration of community resilience and how we manage welfare during a disruption that allows an affordable state of infrastructure for the community to be serviced from.

We don't think there needs to be compliance and enforcement mechanisms (e.g. mandatory reporting, penalties or offences) to ensure critical infrastructure operators as it is difficult to define a minimum standard unless the funding mechanism and cost to the end user is well defined and accepted.

It is very rare to require a complete response across all sectors and should this occur, relocation of the community rather than resilience in infrastructure is possibly a better outcome for ongoing societal risk and disruption.

There is a requirement to better align existing legislation to improve resilience away from the narrow focus of individual ministries focused on price pressures which invariably avoid additional resilience investment above the business-as-usual approach that excludes shock events. For example, in the electricity sector:

1. Part 4 of the Commerce Act 1986 and associated Input Methodologies and Information Disclosure which set allowances, quality targets and reporting requirements for electricity distribution and transmission may need to be amended to ensure electricity networks had the

funding to implement resilience mitigations. Changes may also be needed to ensure networks effectively identify and mitigate risks to reliance. This has been achieved through a GPS directing the Commerce Commission to consider the requirements of the CDEM Act when resilience applications are submitted (2018).

2. The Electricity Industry Act 2010 and the associated Electricity Code which sets the rules for ensuring a stable and reliance electricity supply would need to be adjusted to reflect any new reliance accountabilities.
3. The Infrastructure Commission has outlined requirements for infrastructure performance and investment which do not have any legislative alignment with the Commerce Act or the Electricity Participation Code.
4. National Emergency Management Agency (NEMA) have an overview but no funding mechanism to ensure reduction and readiness activities are demonstrably funded to be effective ahead of the current infrastructure performance levels accepted by the community and prices regulated by Part 4 of the Commerce Act.

We support the New Zealand Government's review to ensure a consistent response to the increasing risk to New Zealand's core infrastructure and the coordination required across existing agencies to ensure this takes place.

There are already reports which outline investments to improve infrastructure resilience that have not been approved by Central Government. These need to be reviewed ahead of starting again with a clean piece of paper through a new Government Agency.

As an electricity distribution network, we have been frustrated in the past with our inability to improve our readiness for natural disasters under the current regulatory framework. We had to seek direct Ministerial intervention to allow us to invest to strengthen core electricity assets and to purchase spare equipment that allows us to improve readiness to respond to an earthquake event. While the Commerce Commission is making changes to better support resilience, resilience is a multi-ministry responsibility and needs better coordination to become more effective. This may not be achieved by adding an additional ministry.

The NEMA already leads the government's emergency management response, including the resilience of lifeline utilities (a subset of the critical infrastructure identified in the Paper). Improved coordination from NEMA through existing Ministries appears to be a better place to start an improvement process than creating another separate Ministry.