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National Emergency Management Agency

By email: EmergencyManagementBill@nema.govt.nz

Vector submission: Strengthening New Zealand's emergency management legislation

Summary

1. Vector Limited ("**Vector**") is New Zealand's largest distributor of electricity, supplying more than 629,000 electricity connections and 1.7m New Zealanders between Papakura and Wellsford.
2. We welcome the opportunity to submit on *Strengthening New Zealand's emergency management legislation* ("**the discussion document**") from the National Emergency Management Agency ("**NEMA**")
3. Electricity distribution businesses ("**EDBs**") operate lifeline utilities critical to New Zealand's emergency response before, during and after a disaster.
4. Vector supports the intent of this reform to strengthen disaster resilience and emergency management in New Zealand and welcomes the opportunity to contribute to a system that is better coordinated and more resilient.
5. Unplanned electricity network outages are unfortunately an inevitability and can be caused by any number of events, from a car hitting a power pole, through to a storm, wildfire, or flooding emergency.
6. As climate change causes more frequent extreme weather events, we expect unplanned outages to increase in regularity and scale. In order to minimise disruption to people and communities, we encourage Government to consider:
    a. The need to balance lifting the preparedness of New Zealand with the cost of imposing additional compliance and reporting obligations on organisations like Vector which are already subject to significant regulation and regulatory oversight;
    b. Clarity over what precisely is appropriate and cost-effective resilience investment by EDBs and other essential service providers, many of which provide services that are interconnected. We want to discuss resilience options with customers and stakeholders with appropriate transparency around trade-offs and costs;
    c. Affordability considerations of resilience investment, or any new planning obligations, the cost of which will ultimately be passed on to customers;
    d. The value in designating EDB field staff and contractors as essential responders with powers to act in an emergency prior to an event;
    e. The opportunities that data and AI can provide in preparing for, responding to, and recovering from, an emergency.

Aimee Gulliver
GM Public Policy and Government Relations

Vector's context

- As the discussion document notes, price-quality regulation already sets minimum service quality standards for entities including Vector.
- Our overarching principle is to avoid capital expenditure that is highly uncertain, such as around appropriate resilience standards, because this ultimately flows through to customer pricing. This is particularly acute given the New Zealand's existing challenges with energy affordability and broader cost of living considerations.
- The consideration of affordability in preparing for, responding to, and recovering from, an emergency, means considering the use of lower-cost, non-wire alternatives where it is economic to do so.

Recognising the opportunities Data and AI can provide

- Vector uses digital platforms to be able to coordinate, manage and utilise our existing infrastructure in a much smarter way.
- One example of this is Vector's partnership with Google X, where we have deployed GridAware on our network to use images from drones and helicopters alongside advanced AI to assess the condition of power poles on our network.
- Following a damaging weather event like Cyclone Gabrielle, aerial imagery can be collected from areas where access is difficult for line patrols, and assessed quickly to speed up repairs, leading to better outcomes for customers.

Drone surveying captures precision images of power pole conditions

Pole conditions are annotated so an AI can learn how to do network inspections automatically

- Vector has been sharing the vision for these tools with Transpower and EDBs. In November 2024 we hosted a workshop with X, EDBs and the Commerce Commission to demonstrate the capability and benefits of the tools.
- Vector has been among the first in the world to adopt these AI-led inspections of our network, and there is a real opportunity for others in the industry, and across other sectors, to harness opportunities like this through data and machine learning. We have helped introduce GridAware Light – a consortium-based approach that allows multiple EDBs in New Zealand to leverage the platform and benefit from shared resources and collective learning. Already, six major electricity distribution businesses - Orion, Well Networks, Unison, Northpower, Power Net, and Aurora - have committed to joining the consortium.

Discussion document

Objective 1: Strengthening community and iwi Maori participation

Impact on communities

Medically dependent customers – special consideration required

1. We acknowledge, as provided for in the discussion document, that people have diverse needs. Among the most vulnerable needs are those of our medically dependent customers. These 5000 or so customers within the Vector supply network are dependent on mains electricity for critical medical support. A loss of electricity supply could lead to serious consequences for them, including loss of life. Whilst distributors, like Vector, and retailers do their best to inform customers with as much forewarning as possible about outages (both planned and unplanned), ultimately it is only a communication responsibility.
2. The main and best course of action for a medically dependent consumer is to have a back-up plan for when the power goes out. Together with their health care practitioner, a medically dependent customer should devise a plan to keep them safe for if and when the power goes out.
3. However, it has become increasingly apparent to us that many medically dependent customers do not have back-up plans and many do not know what one is. This is concerning given the expectation of increasing natural disasters, and associated power outages. However resilient we might make our network; outages unfortunately are bound to happen and medically dependent customers must have a plan to keep them safe. Such a plan might include a recommendation to have a portable generator (or have one issued to them), to move to a place where there is power, or to have other equipment, such as batteries. More information on these plans can be found at: https://www.eranz.org.nz/assets/Medically-dependent+consumers+emergency+plan.pdf. The customer's health care provider is best placed to advise the safest course of action for them, having regard to their individual circumstances.
4. We urge NEMA to consider this further and to liaise with relevant bodies including Civil Defence and the health sector to ensure there is coordination and an overall clear direction on how to safeguard medically dependent consumers in emergency situations.

Customers vulnerable to impacts of climate change

5. We note that the discussion document refers to the risk of disaster increasing, in part due to climate change. We are also aware that some customers on our network are more exposed to the effects of climate change than others, which may be due to factors including the remoteness of where they live, or the particular configuration of the electricity network in their area such as being fed by electricity lines that run through significant foliage, for example.

6. Resilience is the second most important energy factor for NZ residential customers behind affordability,[1] while NZ businesses rate it as on par or above affordability as their activity depends on having a reliable and resilient energy supply.
7. The remoteness of parts of our network or network configuration can mean that some customers on our network are disproportionately affected by restoration times. In a storm or emergency our restoration priority is high voltage ("**HV**"), because that can have the biggest impact for the greatest number of people. On our low voltage ("**LV**") network, some areas can be difficult to access, meaning power can be off for days following a major event.
8. Vector is proactively developing a framework on the trade-off between investment options and resilience outcomes, and we have engaged with officials from NEMA and the Infrastructure Commission already on this. In developing this framework, we are engaging with customers and communities vulnerable to climate change impacts to better understand their priorities, options available and potential solutions to strengthen resilience. We believe it is important to discuss resilience options with customers with appropriate transparency around trade-offs and costs. We plan to further engage with Government and regulators to propose financial and investment criteria on how Vector (and other EDBs) should consider resilience investment in the future

Objective 2: Stronger direction and accountability

9. We support clearer definition of roles during emergencies, especially between lifeline utilities and emergency management authorities, and controllers and hazard specific agencies. We recommend utility representatives are included in local/regional coordination executive groups to ensure operational realities inform decisions.
10. We note in considering the question of who acts as Control agency that skills and expertise required will often be highly sector specific – for example, EDBs will inevitably know more about electricity network issues than a civil defence controller.

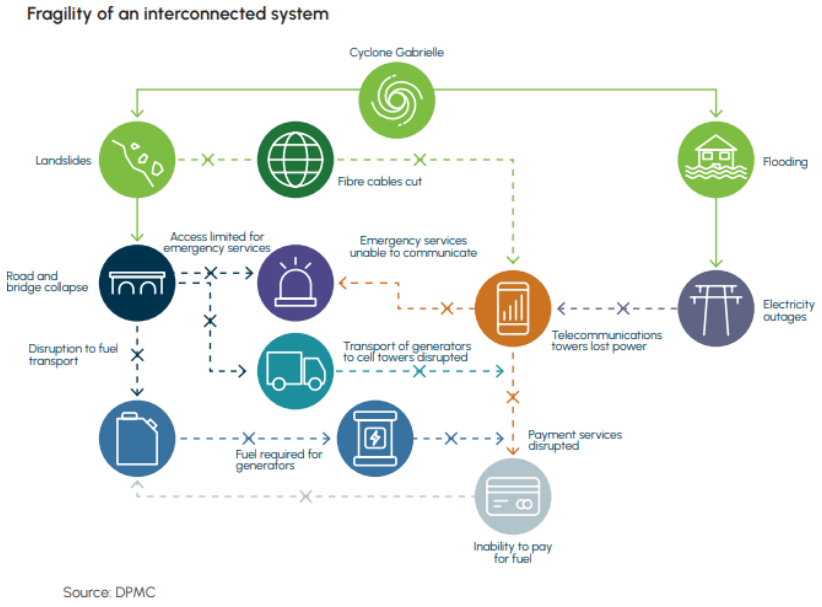
Objective 3: Improved Risk and Hazard Management

11. As with any new obligations, consideration should be carefully given to a balance being struck between an uplift in performance and the costs and time that would be required to adhere to arbitrary new standards.
12. Local and national bodies providing clear guidance on their risk and hazard management would be helpful (i.e. what the risks are and what actions are being taken on them). This would enable the "system" to work together and better prepare.
13. We see benefit if agencies and councils across regions had an uplift in their "risk maturity" such that they could provide risk registers so companies like Vector could use this information to assist in planning and investment decisions. We want acceptable levels of risk to inform good risk practices, but we oppose CDEM or legislation dictating "risk levels" that companies like Vector must comply with.

[1] Consumer Advocacy Council sentiment survey, 2023.

Objective 4: Minimising disruptions to essential services.

14. We note the discussion document's reference to interconnectivity of essential services, and where an outage in one sector can create knock-on disruption to other essential infrastructure.



15. For Vector's electrical assets, repair is often reliant on the resilience of the roading network, which can be cut off in an emergency.
16. As part of the infrastructure investment resilience work we are undertaking we are connecting with telecommunications providers, including the NZ Telecommunications Forum, with a view to understanding their needs in a storm or emergency.
17. We note that the discussion document considers financial penalties and prescribed business continuity plan standards. For business continuity management to be effective, companies' plans need to be relevant to their operations, be accurate and kept up to date. While proposals could see significant advancements across lifeline utilities, careful consideration would be required to ensure these obligations add value and do not simply impose a compliance burden. Vector, for example, already produces a comprehensive Asset Management Plan in compliance with the Electricity Distribution Information Disclosure Determination 2012, as well as business continuity plans. Imposing any standards should take into consideration what other reporting obligations lifeline services are subject to, in order to avoid duplication and burdening organisations unnecessarily.
18. We note the discussion document contemplates development of data standards or penalties for non-compliance in emergencies, including sharing outage information and restoration times. While we acknowledge the importance of information sharing as part of a cooperative approach under the CDEM Act,, we note that for information Vector holds:
    - Outage details are very dynamic in a storm or major event. A few quick actions can impact a high number of customers, and our numbers can move around very quickly, making earlier updates outdated; and

- There are sensitivities in sharing some information widely due to over the security, including cyber security and the uncertainty robustness of third parties' systems.

Objective 5: Operational integration and coordination

19. We support more structured coordination frameworks for emergencies, including ongoing joint planning with NEMA, Councils, and other lifeline utilities.
20. We propose:
    a. automatic designation of EDBs as essential responders with standing powers to act safely in recovery efforts.
    b. a process for accredited workers to be identified ahead of an emergency, as the Government inquiry into the response to the North Island Severe Weather Events.
    c. clarification around authorities and responsibilities during access restrictions – for example, entering red zones to restore power.
    d. emergency status for lines vehicles, including flashing lights and sirens.
    e. measures to protect Vector employees/contractors from liability when responding quickly to restore essential services under emergency conditions.