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Dear Ms Lemire

Vector's response to draft Interim Report – National Climate Change Risk Assessment for Aotearoa New Zealand: Stage 1

Thank you for the opportunity to comment on New Zealand's first draft National Climate Change Risk Assessment (NCCRA). As we stated in our submission responding to the Climate Change Response (Zero Carbon) Amendment Act last year, we support the Government's commitment to undertake NCCRAs and to develop national adaptation plans (NAPs) to enable a coordinated and evidence based approach to strengthen New Zealand's climate resilience. This requires a strong partnership approach between Government and industry and we look forward to continuing to engage with the Ministry for the Environment, and AECOM, as New Zealand's national risk assessment and plan develops.

An increase in high wind speed events associated with climate change is a key driver of risk for electricity distribution and transmission networks, resulting from the risk of trees and third-party property falling on electricity lines

As a new energy solutions provider and New Zealand's largest distributor of electricity and gas, Vector has a key role to play supporting community resilience in the context of climate change. We have recent experience of the impact of severe weather events with the April 2018 storm impacting on the electricity network causing widespread outages. We acknowledge the inclusion of the risk to electricity distribution and transmission infrastructure in the draft NCCRA (B7) and emphasise the impact of increased wind as a driver of this risk.

Analysis commissioned by Vector to better understand the potential impacts of climate change out to 2050 indicates that we can expect more hours of sustained high wind. As revealed by our analysis of outage data, wind is a climate variable with an historically high impact on outages. The majority of these outages during a storm are caused by trees impacting on overhead lines either through fallen trees or branches falling onto the lines.

The current regulation to protect security of supply and health and safety from the risk of vegetation coming into contact with powerlines, does not appropriately mitigate this risk, only prescribing a narrow growth limit zone (GLZ) trees must be from lines, without addressing the risk of trees or branches falling onto network assets beyond the narrow cut-zone. All trees growing near the network are owned by third parties, and electricity distribution businesses (EDBs) have limited powers to manage vegetation preventively under current regulations.

We therefore consider the review of this regulation, which is currently being led by the Ministry of Business Innovation and Employment (MBIE), to have a key role in strengthening our climate change adaptation efforts. As supported by the developing Emissions Trading Scheme (ETS), trees have a key role to play in our climate change mitigation, and we support efforts at a central and local government level, as well as from industry, to ensure that the right tree is planted in the right place. This is particularly important as electricity is likely to play an increasingly important role as we transition our economy towards low emissions sources of power.

We suggest that the second sentence in B7 on page 47 of the NCCRA is amended to make it clear that it is the impact of third party damage on the network that is the issue, where high wind speed events are concerned. We recommend the sentence read:

“While design criteria likely allow for projected increases in wind to a certain extent, associated increases in outages caused by falling trees or branches (or other third-party property) will be more problematic for network owners as they currently have few controls to address these.”

The potential impact of climate-change related risk is amplified by our increasing reliance on electricity

In the description’s consideration of impacts, we recommend that our increasing reliance on electricity is more strongly reflected. As we move to reduce greenhouse gas emissions from transport, industrial processes, and wider public infrastructure, security of supply will be even more crucial for customers. This means that while we expect to see an increasing likelihood in the occurrence of risk, the potential impact will be amplified by the increasing reliance on electricity.

We suggest that this following sentence is added to this description of risk:

“While there is an increasing likelihood of these risks occurring over each future timeframe assessed the impact will be further amplified by the increasing reliance on electricity (to provide essential services such as water and wastewater, communications and transport).”

Decentralised energy services, enabled by new energy technology, has a key role to play in strengthening our climate adaptation

We appreciate that this draft NCCRA is a first step in the identification and evaluation of risks, and that further consideration will be given to priority risks in subsequent stages, with specific adaptation measures developed in the first NAP.

As this understanding is developed we emphasise the role of distributed energy resources (DER), in strengthening community resilience. The ability to generate, store and share energy is becoming increasingly accessible at utility, commercial and household level. By reducing consumers’ reliance on centralised sources of power and infrastructure, this technology can strengthen customer resilience in the case of an outage, as well as strengthen security of supply as we transition to more intermittent, climate dependent, sources of renewable generation. For example, if communities can generate their own solar energy, they are less vulnerable to the ‘dry year problem’ of how to meet demand peaks when national hydro dams are low.

The uptake of Electric Vehicles (EVs) also has the potential to support this future, as current technologies that enable vehicles to connect back into a building or the local network, evolve. For example, Vector is trialling vehicle to home (V2H) technology at Piha to enable customers to power home appliances from their EVs in the case of an outage. This is particularly important as Piha is connected to the network through a single feeder line.¹

As the priority risks from this first stage of work are considered further, and the NAP developed, we recommend that the uptake of DER is understood as a specific adaptation pathway. We note MBIE’s recently released *Discussion Document: Accelerating renewable energy and energy efficiency*, which considers the role of community energy projects in increasing renewable generation. Supporting this future can support both our climate change mitigation and adaptation efforts.

¹ <https://www.vector.co.nz/news/vector-to-explore-benefits-of-vehicle-to-home-tech>

We support the inclusion of ‘inadequate institutional arrangements’, including poor policy alignment, as an extreme risk

Climate change is transforming our energy system, and creating a new energy future which delivers better outcomes for customers and the environment requires a coordinated approach – between Government and industry; across industry; and, between different policy and regulatory bodies within Government. Ensuring that policy goals – such as national climate change adaptation – are realised, requires that regulatory settings are clearly aligned. This is highlighted by the role of vegetation management regulation in supporting our future adaptation. Given the role of DER and new energy technology in strengthening resilience, the goals of the NCCRA are also supported by regulation which enables the integration of new energy technology and innovation. We support a new Ministry for Energy as a way of strengthening this coordination and alignment, and note the review of policy and regulatory institutional arrangements, underway further to the Electricity Price Review (EPR). We believe that this process is an opportunity to strengthen outcomes across our energy sector in the context of climate change – including to help mitigate the risk identified by the NCCRA in G1.

Yours Sincerely



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