TCF Submission to the Environment Committee Inquiry into Climate Adaptation
1 November 2023

Introduction

1. Thank you for the opportunity to make a submission to the [Environment Committee Inquiry into Climate Adaptation](). This submission is provided by the New Zealand Telecommunications Forum (TCF). The TCF is the telecommunications sector's industry body which plays a vital role in bringing together the telecommunications industry and key stakeholders to resolve regulatory, technical and policy issues for the benefit of the sector and consumers. TCF member companies represent 95 percent of New Zealand telecommunications customers.

2. In this submission we start by offering some context on how telecommunications is affected by climate related risks, and the issues that arise for our sector (and the people who rely on our services) when considering adaptation policies.

3. Our submission also touches on the following matters in the inquiry terms of reference:

   a. lessons learned from severe weather events and natural disasters in Aotearoa New Zealand for climate adaptation

   b. the role of the private sector in managing climate risk

   c. alignment and integration with existing legislation and regulatory framework

   d. funding sources, access to them and principles and criteria for cost sharing

   e. targets or indicators for assessing progress to more resilient communities and infrastructure.

Telecommunications and climate change

2. Like other critical infrastructure, telecommunications is a sector affected by natural hazards caused by climate change. Our networks need to traverse and locate in areas subject to natural hazards, because the people who live in these places depend on access to the services we provide.

Climate hazards and resilience of critical infrastructure

3. The resilience of telecommunications infrastructure to natural hazards caused by climate change has become an issue of increased focus following recent severe weather events. For example, during Cyclone Gabrielle, fibre optic cables were damaged when roads and bridges were washed out, and mobile calling was affected when power and fibre was cut to cell towers. Our members faced significant challenges in being able to restore affected services. These included not being considered critical enough to get access to affected areas to make repairs, and the challenges that come with the interdependency of critical infrastructure. We needed electricity to run our networks and fuel for backup generators, and other sectors needed telecommunications. Further information is available in the Cyclone Gabrielle Post Incident Report.

4. We expect more of these severe weather events to come our way. This requires us to think about how we make our infrastructure more resilient to natural hazards. It also means we need to think carefully about where that infrastructure is located. To do this we need access to quality data and modelling to ensure we make the right network and structural design decisions. Government has a role in ensuring that information exists and is freely available for everyone.

Retreat and telecommunications

5. Community led or managed retreat raises issues for telecommunications. On the one hand, in a future where temperatures continue to rise, infrastructure may not be able to be maintained in some locations subject to regular severe weather events. If houses and businesses remain in these areas the expectation that telecommunication services will be available may need to be reconsidered. Work on community lead retreat will be important to avoid a possible (worse case) future where we may have houses without utilities.

6. On the other hand, community led or managed retreat could affect our ability to provide services in an economically viable way. For example:

   a. The cost of connectivity increases as population decreases, and the distance between communities increases.

b. There will be significant costs in moving network out of at risk areas, to other locations, especially if whole communities are being relocated.

c. If decisions are made to not maintain access to certain roads (due to retreat or continued weather damage) and those roads are relied on as corridors for telecommunications and other infrastructure.

7. It is therefore important that telecommunications, and all critical infrastructure, is engaged in adaptation discussions (and modelling), at a local, regional and national level. This is essential for our network design and planning, and for the communities who depend on our services.

The role of the private sector in climate adaptation

8. The Committee has asked about the role of the private sector in climate adaptation. Telecommunications infrastructure is largely privately owned in Aotearoa New Zealand. As a sector we are taking responsibility, by continuing to invest significantly in the resilience of our infrastructure. For example, our members are building more diversity into the core networks that connect cities and towns, investing in satellite backup for mobile calling, improving network capacity through 5G, exploring alternative pathways to bridges for fibre river crossings, auditing and investing in backup power requirements, doing risk assessments, and real-time monitoring of power outages and generators.

9. The sector is also adopting new tools, such as climate change scenario analysis, to help us better understand the future impacts of climate change. This will guide decisions about the placement of critical infrastructure and investments in climate friendly technology.

10. We also need certainty, consistency and support from central and local government (discussed below).

What we need from central and local government

11. Climate adaptation will require a joined up effort from communities, central and local government, and critical infrastructure. The support we need from central and local government includes:

a. Being recognised as critical infrastructure and invited to take part in national and regional conversations about adaptation and retreat, and to discuss how telecommunications can continue to be provided in the face of natural hazards and climate change.

b. Regulatory certainty with nationally consistent risk standards for natural hazards, and standardised rules for adaptation planning. We think legislation

is needed to achieve this. Our experience is that local government does not engage with telecommunications companies in the development of rules for natural hazards, and that their consent processes for natural hazards usually do not add value.

c. Access to quality and up to date data and modelling to ensure we make the right network and structural design decisions.

d. Co-funding when critical infrastructure needs to be moved due to natural hazards or decisions about retreat.

Funding sources

Government

12. As noted above, the telecommunications sector is investing significantly in resilience and adaptation to climate change. But there is also a role for central or local government to co-invest and support initiatives where further resilience improvements (in response to climate change impacts) would be uneconomic.

13. Investment becomes uneconomic in areas where there are low population numbers or complex geography, infrastructure is more at risk from severe weather events, and where consumers are not willing to pay for more resilient services. Investment, or even upgrading of existing services, will become uneconomic in areas where retreat occurs. If whole communities move, we will need funding support to move networks.

14. Government funding is also important for resilience of power supply in natural hazard areas. We believe that an uncoordinated approach, with individual businesses investing in individual energy backup solutions, is unlikely to be the most economically or environmentally efficient solution, nor the most effective.

Developers

15. Infrastructure generally follows development, as there is a community expectation that all essential utilities will be provided - and telecommunications is now considered one of those. We need to think about how to fund telecommunications network resilience for developments in more risky areas and how to share the cost more equitably.

16. Cost sharing with developers (who make the decisions to build in risky areas) can bolster resilience in these areas. The other possibility to consider is that infrastructure such as telecommunications does not automatically follow developments in such cases.

Regulatory issues

17. There are three sets of regulatory issues we would like to mention: the need for some new national standards, telecommunications standards under the RMA, and a lack of coherence across various regulatory initiatives focused on resilience of critical infrastructure.

National standards are needed

18. Communities and critical infrastructure need certainty about how natural hazards and retreat will be handled. This can be achieved through the development and adoption of nationally consistent risk standards for natural hazards, and standardised rules for adaptation planning.

The National Standards for Telecommunications Facilities

19. The telecommunications industry needs to engage with the resource management system in order to be able to install, maintain and upgrade the network infrastructure (such as fibre optic cables, cell towers, poles and antennas) needed to get connectivity around the motu.

20. Network operators rely on the National Standards for Telecommunications Facilities (NESTF) - delegated legislation under the Resource Management Act. The problem is that the NESTF has not kept up to date with changes in the built environment and technological developments that improve resilience[1].

21. Without NESTF updates it is difficult for telecommunications network operators to make necessary upgrades and move infrastructure.

Coherence

22. There is a lack of coherence across the various regulatory initiatives being progressed to address resilience of critical infrastructure. With this comes the risk of duplication and overlap, standards and requirements at odds with each other, and regulatory confusion. Overlapping regimes are likely to result in contradictory oversight and reporting requirements, and cost increases for consumers with little additional resilience as a result.

23. See, for example, the Emergency Management Bill, the proposed National Policy Statement for Natural Hazard Decision Making, and policy work by the Department of Prime Minister and Cabinet to lift the resilience of New Zealand's critical

---

[1] For example, we use roadside cabinets to store telecommunications equipment and keep it safe from the elements. This includes equipment such as batteries which provide back up when power fails. The size of the Cabinet (currently limited by the outdated NESTF standards) dictates the amount of equipment that can be stored and consequently the capacity to enhance performance and resilience.

infrastructure. All of these address the issue of minimum standards for resilience in some way.

24. The Committee can help address the lack of coherence in two ways. First, by thinking carefully before recommending another regulatory initiative to go into the already complicated mix. Second, by calling on the Government to bring coherence to the work on resilience of critical infrastructure. Doing this requires a stocktake of what is already on the go and some form of overarching plan.

We are happy to discuss further

7. The TCF is happy to answer any questions the Commission might have on the views set out in this submission. Please contact kim.connolly-stone@tcf.org.nz in the first instance.