



Crombie Lockwood Tower
Level 16, 191 Queen Street
PO Box 7244
Wellesley Street
Auckland 1141
New Zealand

Phone: +64 9 377 5570
Email: info@infrastructure.org.nz

31 August 2018

Transpower
RCP3 Consultation Document

Per email: RCP3@transpower.co.nz

Infrastructure New Zealand is the peak industry body for the infrastructure sector and promotes best practice in national infrastructure development through research, advocacy and public and private sector collaboration. Infrastructure New Zealand members come from diverse sectors across New Zealand and include infrastructure service providers, investors and operators.

This submission represents the views of Infrastructure New Zealand as a collective whole and may not necessarily represent the views of individual member organisations.

Infrastructure New Zealand feedback on Transpower's third Regulatory Control Period Consultation Document

Infrastructure NZ supports the proposal set out in the RCP3 consultation document (the Proposal).

We consider the revenue and expenditure forecasts to be consistent with standing sector expectations and in line with our own expectations of the investment necessary to support a resilient, efficient and effective national electricity system.

We note a very modest increase in operational expenditure from RCP2 of 2.5 per cent. We commend efforts to contain costs, but equally do not desire to see the flexibility or resilience of the national electricity system compromised by an excessive focus on cost minimisation.

We do not have an opinion as to whether the Proposal adequately provides for these two priority strategic issues – flexibility and resilience – but we do wish to highlight in our feedback their growing criticality.

Flexibility

New Zealand's electricity and wider infrastructure system is in the early stages of a major technological transformation.

This transformation is broad-based and multi-faceted. It includes technologies which reduce reliance on fossil fuels and human labour, and which may radically reduce the costs of some services and activities, carrying proportionate impacts on electricity demands.

Battery-charged vehicles, for example, are currently predicted to become more affordable to buy than conventionally powered automobiles within the lifecycle of RCP3.

If New Zealanders embrace the capital and much lower operating cost advantages of electric vehicles, this is likely to have a major impact on the demands and performance of the grid.

Equally, the New Zealand vehicle fleet is around 14 years old currently and has been getting older over time. It could be that vehicle owners only replace conventionally powered vehicles as and when their existing vehicle becomes unusable.

On the other hand, such a gradual transition may not be consistent with a more ambitious Government agenda to reduce carbon emissions, so regulation or incentivisation could be used to speed the process.

Looking forward into RCP4, it is not in fact clear whether batteries will become the dominant power source for transport. It is possible that hydrogen rapidly emerges as more sustainable, affordable and flexible fuel source.

Each of these factors is highly uncertain and each could have a major impact on Transpower.

Layering the transport question on top of more advanced transformation across residential, agricultural and commercial electricity demand, creates a picture of high uncertainty, some of which will be realised over the term of RCP3.

Transpower can anticipate, but only respond to these transformations once further information becomes available.

It is critical that Transpower has the flexibility and ability to respond within any regulatory control period should new technology or market developments emerge quickly.

It is not clear that regulatory processes provide this degree of flexibility.

We seek assurance that the RCP process, Transpower and the regulator have the tools and ability to adapt to changes which occur faster than regulatory processes.

Resilience

Secondly, we emphasise the importance of resilience.

We are confident that Transpower investments in recent times have sufficiently accounted for traditional concerns around network resilience – recovery from natural disasters, etc.

Our principal concern is with “non-traditional” resilience. Specifically, the grid and system operator must be able to resist cyber threats wherever possible and recover the system should a cyber-attack be successful.

We note there is no reference to cyber-crime in the Proposal.

We would anticipate that Transpower’s investment in cyber-protection is rising rapidly in line with the threat posed by cyber-crime.

In a recent report, the World Economic Forum estimated that cyber-crime would cost businesses over \$8 trillion globally over just the next five years.¹ This is many orders of magnitude more than the cost incurred by natural disasters.

Threats are, furthermore, increasingly state-sponsored and increasingly targeted at critical infrastructure, most notably electrical systems.

It is of the highest importance that Transpower is aware of the risks posed by cyber-criminals to the national grid and is adequately resourcing its response.

This includes investment in the necessary defences to protect the national grid from cyber-incursions, but also includes recognition that electrical systems in New Zealand will at some point in the future fail because of criminal cyber activities.

Transpower must have a rapid and well-coordinated response.

On the basis that this risk has been accounted for by Transpower and is sufficiently resourced through RCP3, we support the Proposal.

We thank Transpower for this opportunity to submit.

¹ World Economic Forum, The Global Risks Report 2018.