

Andy Burgess
Head of Energy, Airports, and Dairy Regulation
Commerce Commission
regulation.branch@comcom.govt.nz

Cc: nick.russ@comcom.govt.nz

27 May 2021

Dear Andy

Re: Feedback on fit for purpose regulation

On behalf of the Energy Efficiency and Conservation Authority (EECA), I would like to thank you for the opportunity to share our views on the emerging issues for electricity and gas networks as they relate to the Commerce Commission's responsibilities under Part 4 of the Commerce Act 1986 (Part 4) and how these issues should be prioritised when planning your work programme.

EECA's purpose and statutory functions interact with and are affected by energy network regulations

EECA's purpose and statutory functions mean we have an important role as the authority, regulator, and delivery agency for many of the government's climate change and energy policies. Our current work programme supports the adoption of innovative solutions for affordable and renewable energy. We also work closely with many large energy users and play a key role in promoting and demonstrating new energy technologies.

We look forward to continuing working with you on identifying new, fit-for-purpose regulatory approaches to support the Government's ambitious emission reduction and electrification targets. We have outlined several issues below that could be relevant in the current review process.

Regulatory frameworks should seek to account for climate change risks and costs

We welcome and support the Commission proactively identifying the key issues that will impact electricity and gas networks in the near future. As noted in your letter, responding to climate change will involve substantial disruption to the energy sector, particularly for businesses based

on fossil fuels. We strongly endorse a strategic approach to regulation that avoids stranded assets in gas distribution infrastructure.

One approach to this could be to explicitly include an assessment of climate risk in the input methodologies and related regulations. The government applies a Climate Implications of Policy Assessment (CIPA) to an increasing range of initiatives, and many listed corporates are reporting climate risks based on the approach outlined by the Task force on Climate Disclosure (TCFD). A fit-for-purpose approach to assessing climate risk for energy distribution networks could address the stranded-asset risk by ensuring that current and future carbon prices and other climate risks are appropriately considered in the decision-making process.

Asset-based cost recovery models may not be fit-for-purpose in a decarbonising economy

Ensuring the electricity system can support the electrification of transport and industry while keeping electricity affordable is a significant challenge for the decarbonisation of the economy. It will be crucial to support network suppliers to innovate and adopt new technologies, platforms and business models.

The current regulatory mechanisms under Part 4 are based on valuing fixed assets and limiting regulated suppliers from extracting excessive profits. This framework incentivises network suppliers to maintain traditional business models and may restrict investment to poles and wires. Maintaining this regulatory structure could potentially discourage network suppliers from adopting solutions that support affordable low carbon energy supply, such as end use energy efficiency; reducing losses; implementation of demand-side management or other non-wires alternatives; platform innovation; and the connection of distributed energy resources.

Overseas regulators are increasingly reorienting to a service-based approach to encourage innovation and keep pace with a rapidly evolving market. EECA suggests it may be necessary to adopt such an approach in Part 4 that requires network suppliers to actively seek the most cost-effective means of providing the network distribution service.

The demand-side regulatory framework is fragmented

EECA has a range of existing policies that contribute to optimising electricity as an affordable service, including energy product regulations under the trans-Tasman Equipment Energy Efficiency (E3) Programme. In response to the recent growth in so-called ‘smart appliances,’ we are in the process of developing proposals to update the scope and role of the energy product regulations to ensure our regulatory settings enable and encourage the integration of innovative technologies and services like demand response programmes and demand flexibility systems. EECA believes the smart appliances should be regulated to ensure they remain inter-connectable and interoperable.

As devices become more interactive with surrounding market elements, there will be a greater need for coordinated regulatory frameworks that facilitate a systems approach to electricity regulation. To address this we have initiated a cross-agency work programme that includes the Commerce Commission, MBIE, the Electricity Authority, Standards New Zealand and Worksafe to assess the respective roles of each regulator and develop suitable regulatory settings to enable organic development of demand response programmes and demand flexibility systems. EECA is developing a proposal for an all-of-government demand response/flexibility roadmap which will support the transition to a network that is more flexible and dynamic. As part of this work it will be important to understand the role of Part 4 and input methodologies as they interact with the demand side activities.

Electric vehicle charging is a key example of a demand side technology interacting with energy distribution network regulations

Electric vehicles have the potential to deliver substantial decarbonisation of our transport system. Significant uptake of EVs could pose both risks and opportunities to electricity network stability and security. Which of these eventuates is heavily dependent on customer charging behaviour:

- If “default charging” (plugging in and charging immediately upon arriving home) becomes the norm, then peak loads will greatly increase and networks will require significant expansion.
- If “smart charging” (charging times and rates are shifted/adjusted to avoid peaks) becomes the norm, then the networks may require very little capacity expansion, while delivering more energy overall.

EECA has supported several pilots and trials to explore smart charging ecosystems, however none have progressed to full-scale implementation. Further, many of these trials have been outside of the regulated network activities. As such it appears the regulatory settings are not enabling development and deployment of smart charging systems.

Wellington Electricity have developed a smart charging roadmap as part of the EECA co-funded EV connect work programme, which may form a useful input into any smart charging regulatory design process.

The current regulatory system is not preserving existing demand side response capabilities

EECA’s September 2020 report *Ripple control of hot water in New Zealand*¹ found that hot water load control for managing network peaks loads was declining. This was due to several factors weakening specific incentives to manage load. Electricity Distribution Businesses attributed the decline to changes to the transmission pricing methodology (TPM) that replaced Regional

¹ <https://www.eeca.govt.nz/our-work/research/research-papers-and-guides/ripple-control-of-hot-water-in-new-zealand/>

Coincident Peak Demand (RCPD) charges with anytime maximum demand (AMD), and the application of Default use of system agreements.

The ongoing availability of ripple control for hot water is uncertain as much of the existing load control is maintained on principle, rather than being incentivised by the regulatory framework. While ripple control is essentially a ‘first generation’ demand response technology that we would expect to be replaced by newer technologies over time, its early decline is a concern given replacement technologies are not yet being actively deployed.

Current regulations appear to create a first-mover disadvantage for transmission and distribution investments

EECA works with many of New Zealand’s largest emitters, many of whom have investigated electrification as a decarbonisation option. A common concern is the apparent cost and complexity of upgrading transmission and distribution connections, and in particular the risk that the first customer may be required to pay for the full cost of an asset which will eventually serve multiple customers. We suggest the Commission actively considers whether this issue can be included in its current review process.

Thanks again for the opportunity to provide input at this early stage. EECA values its close relationship with the Commission and welcomes the opportunity to work together on these issues as the electricity network plays an increasingly critical role in delivering a low-carbon energy system.

Yours sincerely,



Andrew Caseley
Chief Executive