



Draft Energy Strategy consultation
Ministry of Business, Innovation & Employment

2 November 2023

Re: Measures for transition to an expanded and highly renewable electricity system

To Whom It May Concern,

Thank you for the opportunity to input on the Draft Energy Strategy. Te Pane Matua Taiao Greater Wellington Regional Council (Greater Wellington) supports strong action to address climate change, and has adopted targets to reduce its organisational emissions, including those from operating public transport. As part of this, it is seeking to electrify buses, harbour ferries and expanded passenger train services for the Manawatu and Wairarapa. Furthermore, we have an interest in reducing regional emissions. We support the Wellington Regional Leadership Committee and its current work preparing a Regional Emissions Reduction Plan.

Greater Wellington is responding specifically to those questions about barriers to the rapid expansion and upgrade of electricity distribution networks, as we see that as the main bottleneck that the nation must pass through to electrify its currently-fossil fuelled energy use for surface transport and heating. Neither the availability of electric technologies such as EVs or heat pumps, nor the process for establishing renewable energy power stations pose as great an obstacle as this. The system for electricity distribution development and management, both in structure and its regulation, was designed to manage incremental, non-transformative growth and so is unsuited to the new phase the country is now in, where rapid electrification is required.

We urge the government to take action to remove barriers for the development of the electricity system in a way that enables more rapid electrification: regulatory barriers, financial barriers, and co-ordination barriers.

Bus electrification challenges

Greater Wellington's public transport arm Metlink currently does not currently 'see' the upfront connection costs to charge the electric bus fleet given the way that our contracts for public transport services are structured (operators are accountable for providing charging infrastructure). However, we do end up paying the costs for these through the contracts.

As we begin to implement our asset management strategy which involves Metlink directly owning and controlling bus depots, including charging infrastructure, the cost of upgrading electricity distribution network will become a significant barrier. We will be required to deal with the monopoly electric infrastructure providers in the Region and this will limit our ability to negotiate on pricing, timescales, and locations connecting for charging infrastructure.

Specifically, the Council has leased land to develop a major bus depot at Lyall Bay, which will have significant electricity capacity requirements to support an all-electric bus fleet based there. There is

sufficient electrical capacity for Stage One of the depot development (supported by a government grant); the key issue is that we need to ensure the future capacity requirements for Stage Two are in place prior to 2030, and this will require a capacity upgrade for the whole Southern Peninsula in Wellington.

The current framework for the development of the electricity network does not provide for prioritisation of mass transport capacity or take a long-term view of likely needs. Therefore, there is a significant risk that there will not be sufficient capacity at the right locations for Metlink's EV transition. The regulatory system also means that 'first movers' are unfairly required to pay the whole upfront costs of any distribution upgrades, without the ability for the distribution company to offset these costs across the wider network and other beneficiaries.

We note there is presently a significant difference between the costs of diesel buses and electric, which is a significant barrier in converting our bus fleet from diesel to electric vehicles. This also places pressure on rates as we are seeing in the current Long Term Plan development process.

Summary of our main points

- In relation to regulating the activities of transmission and distribution companies, the Electricity Authority and Commerce Commission should have a new statutory duty to facilitate the electrification of surface transport and heating. This should have equal priority to the existing objectives of fair pricing and reliability of supply – all parties involved should seek to achieve all three objectives simultaneously.
- The establishment of Renewable Energy Zones and Electrification Zones, where transmission and distribution upgrades are made in anticipation of demand, should be considered. This could be supported by Government-backed financial measures to lessen the 'first mover' disadvantage.
- The Government could lessen the financial barriers and risks for connecting EV chargers, electric process heating and solar farms to the electricity grid by providing funding for some or all the capital costs of the connection, then recover that investment via a targeted tariff on the users of that connection over an extended period.
- Electricity distribution companies do not presently have sufficient motivation or leeway in how they operate to implement the kind of transformative change that is needed. A combination of interventions is needed, led by the Government.
- We do not believe implementing a more regulated or centralised pricing system for network connection costs will be especially helpful.
- Major structural reforms of how the electricity transmission and distribution systems are owned and administered are unlikely to ensure rapid electrification given the uncertainty and consequent delay to investment this will create.

We trust you will take our input into consideration.

Ngā mihi,

Consultation document: [Measures for transition to an expanded and highly renewable electricity system | Ministry of Business, Innovation & Employment \(mbie.govt.nz\)](#)

Due date: Thursday 2 November 5pm

Answers to specific questions, Measures for transition to an expanded and highly renewable electricity system

Chapter 8

Question 29

Do you agree we have identified the biggest issues with existing regulation of electricity distribution networks?

Yes.

Question 34

If you think there are issues with the cost of connecting to distribution networks, how can government deliver solutions to these issues?

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Question 37

Are there different cost allocation models addressing first mover disadvantage (when connecting to distribution networks) which the Electricity Authority should explore, potentially in conjunction with the Commerce Commission?

The Government could provide capital to cover some of the cost of grid investment to reduce the first-mover disadvantage. It could then recover the capital over a period, say 30 years via a targeted tariff on the users of that additional grid capacity. The initial tariff could be set so the Government's entire cost would be recovered from the first-mover over 30 years. However, if more consumers connect and use that capacity, the target tariff could be spread between them all and possibly reduced. The targeted tariff would be removed once the full cost of the capital had been repaid. All of this could be laid out transparently for consumers and the public.

The criteria for Government capital investment could be for any electrification-specific investment, such as solar farms, process heat or EV charging. Investment in network capacity within renewable energy zones or 'electrification zones' (which would be like a REZ but for consumers and smaller distributed energy resources) designated by the Government or electricity distribution companies could also be a qualifying criterion.

This differs from the approach in the September 2022 open letter from the Electricity Authority, which suggested network companies provide a rebate to first-movers when others start using the capacity they initially paid for, in that it doesn't require the applicant to carry the debt. The Government will 'stay in business' come what may and eventually recover the capital that was paid for the increased capacity – it is better placed than a private business to manage the risk, given their investment horizons are much shorter.

Alternatively, the network companies could provide the upfront capital, rather than Central Government. However, the Government would need to make an amendment to the

Electricity Industry Participation Code 2010 to allow distribution businesses to allocate a risk premium to future customers.

Question 38

Should the Electricity Authority look at more prescriptive regulation of electricity distributors' pricing? What key things would need to be looked at and included in more prescriptive pricing regulation?

No. It would take too long to carry out a restructure of the sector of this kind, and while it occurred it would have a cooling effect on investment. It would not be possible to make up for the lost time.

Question 40

Will the existing statutory objectives of the Electricity Authority and Commerce Commission adequately support key objectives for the energy transition?

It seems unlikely.

Question 41

Should the Electricity Authority and/or the Commerce Commission have explicit objectives relating to emissions reduction targets and plans set out in law?

Yes, although in the case of electricity distribution and transmission companies, the objective should relate specifically to electrification of transport and heating, since they do not generate electricity themselves, and so the actual emissions-intensity of electricity is outside their sphere of responsibility.

If so,

- *should those objectives be required to have equal weight to their existing objectives set in law?*

Yes. It is possible to achieve all those objectives simultaneously, with the right support for demand flexibility measures and better means to share costs fairly across electricity system users.

- *Why and how might those objectives affect the regulators' activities?*

Regulators would need to examine whether electricity distribution and transmission companies' investment plans and actions are consistent with electrification goals, both proactively and reactively.

Question 43

Is there a case for central government to direct the Commerce Commission, when dealing with Electricity Distributors and Transpower, to take account of climate change objectives by amending the Commerce Act 1986 and/or through a Government Policy Statement (GPS)?

Yes there is. Regulated monopolies such as electricity distribution and transmission companies are naturally very conservative because they have guaranteed income, provided

they follow the rules closely. They cannot be expected to implement transformative change without Government direction to do so.

Question 44

If you answered yes to question 43, please explain why and indicate:

- *What measures should be used to provide direction to the Commerce Commission and what specific issues should be addressed?*

The objective should set the expectation that through their investment plans and actions they are supporting transition to a specific end-state for the electricity system (e.g. a specific level of electrification for transport, process heat and domestic heat). Applicants for connections that feel they are being 'blocked' unfairly by an electricity distributor could seek redress from or review by the Commerce Commission.

- *How would investment in electricity networks be impacted by a direction requiring more explicit consideration of climate change objectives? Please provide evidence.*

There is unlikely to be a radical difference without complementary measures to address the first mover disadvantage, assuming the Commerce Commission still has a low tolerance for existing customers paying for upgrades that they do not use. However, in concert with such measures, an electrification objective would be useful in driving change.

Chapter 11

Question 59

Are there significant advantages in adopting a REZ model, or a central planning model (like the NSW EnergyCo), to coordinate electricity transmission investment in New Zealand? Would a REZ model for local electricity distribution be an effective means of addressing first mover disadvantage with connecting to electricity distribution networks?

Establishing REZ's for generation, with clear signals about when and how much transmission capacity would be available would attract and accelerate investment by reducing uncertainty. It would work particularly well for wind power, where specific parts of the country have the best potential. For solar energy there should be other ways to support investment in addition to REZs, because there is a greater diversity of suitable sites around the country than for wind power.

For distribution investment, 'electrification zones' – where increases in network capacity planned are clearly signalled in advance – may be a way to promote investment in distributed energy resources, EV charging and electric heating. However, the difficulty could be determining which areas are more worthy of such priority treatment over others. A more organic approach, where certain types of projects can receive government support for their connection costs as we have described in question 37, regardless of their location, may work better. Either way, networks could also be required to publish maps of their networks that show where they are constrained, where they have spare capacity and where and when upstream upgrades are scheduled to occur.