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Ministry of Business, Innovation & Employment
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Tēnā koutou

ELECTRICITY MEASURES FOR TRANSITION TO AN EXPANDED AND HIGHLY RENEWABLE ELECTRICITY SYSTEM

1. Unison Networks Limited (**Unison**) is an electricity distribution business (**EDB**) with networks in Hawke's Bay, Taupō and Rotorua, and is one of Aotearoa's larger EDBs. It is owned by the Hawke's Bay Power Consumers' Trust.[1] Centralines Limited is an EDB operating in Central Hawke's Bay (and is one of New Zealand's smallest EDBs), owned by Central Hawke's Bay Consumer Power Trust.

2. Thank you for the opportunity to submit on the electricity measures for transition to an expanded and highly renewable electricity system consultation paper. Unison and Centralines support the Electricity Networks Aotearoa's submission. We have provided targeted feedback in **Appendix One** in response to *Part 3: Networks for the Future*. Some answers are relevant to *Part 5: Whole of system considerations*.

3. There is no confidential information in this submission, and we are comfortable with it being published on MBIE's website. We are happy to provide further information about any matters raised.

[1] It is part of Unison Group, which includes Unison Contracting Services Limited, its contracting arm, Unison Fibre Limited and other subsidiaries which provide goods and services to the electricity industry.

Appendix One: Submission template

Part 3: Networks for the Future

27. Do you consider that the balance of risks between investing too late and too early in electricity transmission may have changed, compared to historically? If so, why?

Yes. Unison and Centralines support investment in the national grid at the pace and scale consumers need to electrify their energy use. With certain electricity use growth, naturally the risk of underinvestment increases as load materialises and capacity exceeded.

'Right-sized regulation' will lead to 'right-sized infrastructure'

There has been significant input into the numerous regulatory and policy consultations this year on the justified need of EDBs to proactively invest, compared to historical scenarios. There is no doubt that electrification of transport, process heat and household appliances must succeed to meet the 2050 net-zero target.

There is a growing concern that the regulatory settings for EDBs are shifting in all directions, at once, with an inability to assess the material impact of one change without certainty about another. Now, more than ever, there is a need for proportionate regulation, that considers priorities, risks, and harm – including the harm of over-regulation and additional burden on regulated entities. Consumers will not benefit from overdone regulation diverting or increasing EDB resourcing (people power and cash) and constraining innovation.

Evidence of the growing tolerance of underinvestment

The Commerce Commission's consultation period on the Draft Input Methodologies Decisions has recently closed. Unison's key concern, at this pivotal point in an essential energy transition, is why the regulator and central government are tolerating an increased risk of underinvestment in distribution networks. In our final cross submission relating to a novel proposed cost of debt wash-up mechanism, we repeated our concerns about the Commission's greater tolerance for the risk of underinvestment (available in the footnote).[2] The proposed mechanism will undermine price-quality regulated EDBs prudent treasury practices, cause cash volatility, and potentially lead to substantial under recovery of the prudent and efficient costs of business for extended periods.

In summary, Unison considers the use of the tools below demonstrate the Commission's greater tolerance for the risk of underinvestment:

a) continued indexation of Regulatory Asset Bases;
b) lowered Weighted Average Cost of Capital (**WACC**) percentile from the 67th to the 65th and the approach to several components of the WACC;
c) 'price limit' approach impacting the ability of large electricity businesses to "earn sufficient revenue to cover their prudent and efficient costs";
d) exclusion of financeability and equity issuance tests (or methodologies otherwise providing certainty about how the Commission may resolve those legitimate constraints to investment);
e) cost of debt wash-up with proposed amendments that will undermine prudent and efficient capital management; and
f) the continuation of financial penalties for exceeding allowances despite work relating to decarbonisation or resilience.

28. Are there any additional actions needed to ensure enough focus and investment on maintaining a resilient national grid?

What use is a resilient national grid when the electricity cannot reach the consumer and vice versa? The electricity system is being conveniently compartmentalised/siloed and then integrated when it suits. Efficiency and resilience in the system would flow from more integrated considerations.

[2] https://comcom.govt.nz/__data/assets/pdf_file/0035/332999/Unison-Cross-submission-on-specific-matters-for-the-IM-Review-2023-Cost-of-debt-27-October-2023.pdf.

Electricity lines services are critical infrastructure and information sharing is essential

DPMC consulted in August on its paper about Critical Infrastructure Resilience. With respect to distribution networks, Unison and Centralines submitted:

> One component of this is more advanced information sharing to support a resilient electricity system. This will enable EDBs to obtain more information on upcoming demand to understand and respond to likely constraints and vulnerabilities, in particular:
> - regional studies modelling the impacts of large-scale system-wide events (1-250 year floods etc.), commissioned and funded by central government;
> - proactive engagement between councils and critical infrastructure providers on planning intentions, scale, and likely constraints (while that may flow from the Natural and Built Environment and Spatial Planning Acts – shorter term solutions are needed, see examples at the end of Q7 above);
> - location and capacity of alternate energy sources (generation, battery storage etc.);
> - information from Electricity Engineers' Association Resilience Management Maturity Assessment Tool *"developed to cover the principles of emergency management preparedness and to provide a practical self-assessment tool…"*;[3]
> - EV vehicle information (registration and general location of EVs to understand where load is materialising);
> - smart EV chargers (that utilise capacity in the network rather than adding significant load at peak times), flexibility services will support demand-side management of the electricity system, but pragmatic short-term solutions will assist); and
> - understanding the levels of resilience of other critical infrastructure assets, communication, transport, and flood protection stopbanks to assess vulnerabilities of and plan responses for critical electricity distribution assets.

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

Yes. We also consider that we can better achieve collaboration and communication between regulators, with the industry, and within the industry. More collaborative regulatory processes are a must.

30. Are there pressing issues related to the electricity distribution system where you think new measures should be looked at, aside from those highlighted in this document? How would you prioritise resolving these issues to best enable the energy transition?

Adequate flexibility and funding of EDBs under the Commerce Act is crucial to price-quality regulated EDBs succeeding in 'right sized investment' at this critical time. Prioritising smart EV charging standards, access to data, and pulling back on the vast amount of Authority changes is also key.

The Electricity (Hazards from Trees) Regulations 2003 significantly impact and constrain EDBs and their ability to protect their assets from damage, and people and property from high-risks such as fire, and prolonged outages.

Under the existing Resource Management Act 1991, national direction does not adequately enable the electricity system to decarbonise, be resilient, and reduce prices for consumers. To resolve the barriers to investment at the pace and scale required to get to net-zero, Renewable Energy Zones can provide streamlined processes and certainty. There is potential for parties connecting in these zones to receive the benefits of cheaper costs to connect.

From an EDB perspective, a National Policy Statement - Electricity Distribution has the potential to close the loop on national direction for the sector (in addition to renewable energy generation and electricity transmission). Minimum requirements are:

- Protection of existing distribution infrastructure in accordance with:
  i. the New Zealand Electrical Code of Practice for Electrical Safe Distance (NZECP34:2001) and Electricity (Safety) Regulations 2010 minimising reverse sensitivity effects, including protecting the right to remove third party structures

[3] https://www.eea.co.nz/tools/products/details.aspx?SECT=publications&ITEM=3049.

and vegetation that impact on the safe distances from electricity infrastructure set by NZECP34:2001;

ii. section 23 of the Electricity Act 1993, ensuring consistent existing use rights across legislation and providing for work and upgrades to optimise assets over their useful life; and

iii. the rights attached to existing designations and resource consents.

- Provision for new distribution infrastructure necessary to meet growing demand, appropriately located in the context of environmental and cost constraints.
- Provision for emergency work and infrastructure responding to responsibilities as lifeline utilities under emergency legislation.
- As above, substantially improved powers to protect electricity distribution infrastructure from trees and prevent outages and unnecessary cost, and fairer allocation of responsibility.

31. Are the issues raised by electricity distributors in terms of how they are regulated real barriers to efficient network investment?

Please give reasons for your answer. Is there enough scope to address these issues with the current ways distributors are regulated? If not, what steps would you suggest to address these issues?

There is an unconstructive divergence between;

- how regulators consider they should respond to decarbonisation and resilience; and
- what EDBs consider would promote efficiency and innovation in the sector and achieve recovery of their prudent and efficient costs of business (providing electricity lines services) as we work toward net-zero.

Answers to questions above and below detail more constructive approaches.

32. Are there other regulatory or practical barriers to efficient network investment by electricity distributors that should be thought about for the future?

Flexible expenditure allowances

A common message is that price-quality regulated EDBs need to have sufficient flexibility in their expenditure allowances, and in the operational regulatory space, to enable innovation and testing of new options, and support prudent network and non-network decisions about what is most cost-efficient in the circumstances.

The concept of prudent asset management is inseparable from cost-efficiency. If there is evidence that a flexibility solution is more cost-efficient in the long-term, prudent EDBs will procure it. The Commerce Act regime monitors the prudency of EDBs.

Better access to data

What EDBs need urgently is better access to data to inform prudent flexibility or capex decisions. With adequate data sharing, third parties will be able to offer solutions to EDBs and increase competition in the market for the benefit of consumers. Examples are MEP data, EV registration information (to locate growing load), and household gas use (in particular, hot water and heat pumps).

The industry is developing tools to compare the cost of a flexibility solution vs a capex solution. This is a prudent response to network planning. For price-quality regulated EDBs that tool will likely be undermined if prudency is influenced by the 'bucket' of expenditure with room (operating or capital expenditure). Unison (alongside other EBDs) do not consider the right balance has been struck between over and underinvestment in the Commission's Input Methodologies Decisions (noting the Default-Price Quality Path Issues Paper has just been released and the final IMs decision is due in December).

Requiring large infrastructure could have adverse network planning impacts

Additional risk sits with prioritising types of infrastructure at the detriment of other work. EDBs plan carefully based on their customers' plans and asset renewal and maintenance needs. If one type of large infrastructure is prioritised, EDBs may need to sacrifice investment in other key areas of their work programmes, or their prudent asset renewal and maintenance

programmes (which are crucial to cost-efficiency and in the long-term benefit of consumers). Submitting to the Ministry of Transport about a proposal to require EV charging hubs on 'main highways' every 150km – 200km this year, we said:

> Policy targets need to enable flexible decisions to suit the four integrated parts of a successful EV charging network: use (consumer behaviour), roads, EV charges, and electricity. Cost-efficient charging infrastructure must follow the road (as opposed to roads being built for charging infrastructure). Electricity networks are similarly constrained by location and hosting capacity (the amount of demand that the size of the electricity infrastructure can accommodate). Use will not be the same in small rural areas as big urban centres. "Main highways" will need to be interpreted practically to exclude roads that infrequently or do not experience high use.
>
> Reliable supply is protected by balancing the hosting capacity of the network and consumer demand, especially through peak times. The goal is that Aotearoa's charging infrastructure:
>
> a. maximises utilising existing capacity of electricity networks;
> b. avoids exacerbating existing constraints; and
> c. encourages efficient upgrades in appropriate places at a scale that will match demand over time.
>
> Unison and Centralines support sharing hosting capacity information with stakeholders to enable coordinated planning. Depending on the number and voltage, fast DC chargers (over 50kW) are a significant new load and, if hosting capacity is constrained, requires upgrades at a significant cost to the beneficiary (EV charging company). Whereas, if capacity in the network already exists, connection will be comparatively cost-efficient (and installed faster and with less resource from the EDB). The cost of upgrading infrastructure will also be influenced by the distance of the 'hub' to key electricity network supply points. Prescriptive or narrow targets may result in requirements to implement the most expensive and resource intensive option rather than a pragmatic stakeholder led solution that will meet consumer demand.
>
> Optimising the existing networks should be the starting point. Stakeholders can collaborate on wider community plans to develop an integrated consumer friendly charging network. Requirements for fast charging around new subdivisions or large developments will easily be provided for, as opposed to upgrading older infrastructure.
>
> The worst long-term outcome for consumers would be highly prescriptive targets with minimal flexibility to optimise use of the hosting capacity of the existing network. This could lead to EDBs needing to re-prioritise current workplans that include process heat conversions and resilience work.

33. What are your views on the connection costs electricity distributors charge for accessing their networks? Are connection costs unnecessarily high and not reflective of underlying costs, or not? If they are, why do you think this is occurring?

Prior to substantial regulatory intervention, there needs to be confidence that, despite other changes in the regulatory regimes and the significant decarbonisation investment required, there is a problem to solve. Renewable Energy Zones (**REZ**) are discussed above. Connecting within REZ's may be able to come at reduced connection costs because of the certainty it will provide to upgrade capacity. Location near a GXP will reduce costs for the distribution customer.

Unison and Centralines charge fair and reasonable connection costs that reflect the underlying costs of connection. Like connecting any service dependent on physical infrastructure, the cost depends on the capacity and location of assets in place and need of the customer.

We appreciate there is an education and relationship piece that may assist customers with understanding the nature and constraints of EDBs when planning their networks. There can be more transparency of constraints on the network, and areas of capacity, for customers. Our customer teams advocate for the best outcomes for customers on the network. EDBs,

however, are entitled to, and must, recover their prudent and efficient costs from those benefiting from the investment. EDBs cannot substantially finance the decarbonisation of connecting medium and large loads (which would be inequitable to its broader consumer base).

As consumer shareholder owned EDBs, Unison and Centralines work within the Authority's pricing principles to allocate the cost of upgrades. We take seriously assisting our customers to deliver on their electrification plans and the benefits to them and our communities (given our significant industrial customer base). However, if EDBs were required to substantially finance customer upgrades, financeability would be more at risk for EDBs who have constrained access to debt; the risk of underinvestment in networks would increase.

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

We provide electricity lines services to many industrial customers. The GIDI fund has been utilised by our customers and assisted decarbonisation of process heat in our regions. If that is removed, we recommend Government work with industrial customers to continue progress for the electrification of industrial process heat. Green financing, and non-electricity system solutions exist.

35. Would applying the pricing principles in Part 6 of the Code to new load connections help with any connection challenges faced by public EV chargers and process heat customers? Are there other approaches that could be better?

No, these principles lack clarity and have not been effective with many generation connection arrangements struck outside of the regulated terms. Further work with the industry should address this issue following proposals. Impacts on EDBs must be considered carefully.

36. Are there any challenges with connecting distributed generation (rather than load customers) to distribution networks?

Large distribution infrastructure is required, and it is subsequently expensive. Delivery timeframes are affected by procurement and workforce. Covid-19 taught EDBs about how vulnerable their supply chains are and how important the healthcare system is to the welfare and availability of their workforce. MBIE is aware of the workforce challenges for infrastructure, and the electricity sector. As immigration settings have changed, costs have increased to bring the necessary workforce in.

From an environmental perspective, a National Policy Statement – Electricity Distribution (or enabling national direction in another form) will considerably assist with consenting requirements or restrictions, where relevant, and to protect the electricity system. There are technical and engineering constraints with connecting larger generation to existing distribution networks that are configured to supply power to load customers. These can take the form of voltages outside of limits, harmonics, and fault levels.

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?

No. We support the current mechanisms to support EDBs implementing reform of prices pragmatically based on their circumstances and consumers. The annual scorecard review provides a forum for the Authority to engage with an EDB on specific issues (including pace, where that is a concern) and areas of interest.

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. As said to the Authority in August this year, we support:

a) The electricity sector's core role in decarbonising Aotearoa and we recognise the importance of distribution pricing in promoting the long-term interests of consumers.
b) Continued distribution pricing reform cognisant of the constraints of LFC reform and retail price reflectivity.
c) Capital contributions policies promoting the Authority's pricing principles.

We were concerned that:

d) In most instances the pace of reform is limited by:
   - the regulated phase out of the Low User Fixed Charge;
   - inability of many retailers to submit ICP consumption on distributor Time of Use plans; and
   - the mitigation of price shocks and other adverse impacts for consumers.

e) The Authority's issues paper on pricing reform did not demonstrate why the current distribution pricing approaches or roadmaps are a barrier to decarbonisation or providing for consumers long-term interests.

f) In respect of the proposal to approve contractors, in many instances the most efficient connection outcomes are achieved through in-house, or sole source models. The Commission has oversight of the prudency and efficiency of network expenditure and related party transactions. EDBs models are reflective of their individual circumstances and their consumers, including regional limitations.

39. Do current arrangements support enough co-ordination between the Electricity Authority and the Commerce Commission when regulating electricity distributors? If not, what actions do you think should be taken to provide appropriate co-ordination?

There is no visibility or accountability for co-ordination. The last year has been fraught with overrunning consultations and proposals of significant regulatory change in all directions. The combined calendar between regulators demonstrates the breadth and scale of ongoing reform.[4]

It is considerably challenging for EDBs to materially assess the impact of one proposed regulatory change without time or information to consider the impact of another. EDBs are not only facing regulatory change by its two major regulators - there has also been greater policy change i.e., the Resource Management Act 1991 reforms, Emergency Management Bill, and Electricity (Hazard from Trees) Regulations 2003.

This pace of proposed change runs a higher risk of unintended and perverse consequences; and is contrary to a 'least regrets' approach. While some changes, such as updated Tree Regulations, regulating MEPs providing electricity distributors and flexibility traders data, achieving greater information sharing, and mandating EV charging standards are urgent; others such as major pricing reform and liability in the Default Distribution Agreement are not. The Commerce Commission similarly has not taken a pragmatic approach to its mandate.

Given the need for pace and scale, Unison and Centralines believe in minimum change for maximum output, consistent with a proven problem and justified policy intent.

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

The Commission relies heavily on the permissive consideration in s 5ZN of the Climate Change Response Act. It appears concerned that meaningfully considering and providing for decarbonisation may compromise the s 52A, Part 4 purposes.

This is not a path to decarbonisation in the long-term benefit of consumers. The Commission's recent decisions put achieving the net-zero target at higher risk, for example, its tolerance for the risk of underinvestment.

The Commerce Act does protect incentives in energy efficiency and mandates that disincentives in energy efficiency are avoided

As addressed in detail in Unison's submission on the Draft Input Methodologies Decision (available in the footnote),[5] we consider the Commission is required to meet the Part 4 outcomes consistent with s 54Q of the Commerce Act. Section 54Q requires the Commission

[4] https://www.ea.govt.nz/news/general-news/electricity-authority-and-commerce-commission-combined-work-programmes-202324/.

[5] Unison's submission on the Draft IM Decisions, 19 July 2023, paras [31] to [36]: https://comcom.govt.nz/__data/assets/pdf_file/0018/323811/Unison-Submission-on-IM-Review-2023-Draft-Decisions-19-July-2023.pdf.

to incentivise, and avoid disincentives in energy efficiency, demand-side management and reducing energy losses. 'Energy efficiency' must be interpreted consistent with the Energy Efficiency and Conservation Act 2000 (passed before s 54Q was inserted into the Commerce Act). That definition is:

> *Energy efficiency means a change to energy use that results in an increase in net benefits per unit of energy.*

It remains unclear to us how the Commission is providing a regulatory environment that will enable distributors to invest in energy efficiency (viewed appropriately as electrification of Aotearoa for the accepted net benefits of emissions reduction to society), demand-side management, and, as recently emphasised by the Commission, resilience, at the pace and scale that 'broadly matches' consumer demand.

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

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

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

Possibly, see below.

42. Should the Electricity Authority and/or the Commerce Commission have other new objectives set out in law and, if so, which and why?

Mandatory consideration of the net-zero target would provide a safeguard in the relevant Acts to balance regulation against the real-world impacts to Aotearoa's progress in emissions reduction.

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 and/or through a Government Policy Statement (GPS)?

Yes.

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?

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

There is potential for a GPS to rebalance recent decisions:

Commission

The Draft IM Decisions include inflexible and adverse tools with the adoption of a greater risk of underinvestment.

Particular benefits may be reconsideration of:

a) the relevance of the financeability of EDBs and decisions that will impact it, to ensure EDBs can finance the significant investment needed to electrify transport, process-heat and household appliances (including by procuring flexibility services);
b) safe harbours within the regulatory regime to remedy potential disincentives to invest, such as streamlined or guaranteed reopener processes and removing financial penalties;
c) the Weighted Average Cost of Capital to better address the risk of underinvestment (retaining the 67th percentile); and
d) addressing the price cap in the Default-Price Quality Path which will constrain EDBs recovery of prudent and efficient costs of business.

More broadly, the Commission has stated ownership is not relevant to its mandate (nor the ability to pay dividends through a period of investment). Unison and Centralines strongly support the value of consumer shareholding EDBs. During Cyclone Gabrielle, our commitment

to our communities was evident. We are committed to doing our best by our consumers and deliver for our communities (and owners). At an inherently risky period for the sector, working for and with your communities is empowering and can mitigate the risks of purely commercial drivers.

Authority

The major benefit may be a refocus on high-priority workstreams and better implementation of a "least regrets" approach to amendments. As with the Commission's regime, context is everything. EDBs are living in a world focussed on delivering on decarbonisation, while the Authority appear to be delivering on some less urgent previously fixed regulatory priorities (i.e. the DDA workstream regarding levels of service and the liability of EDBs). Adding layers of regulatory burden must be balanced carefully in the context.

EDBs do not expect a free rein, we are a monopoly with market power, we accept regulation serves an important purpose. However, we need flexibility to 'get on with it', improve efficiency, and innovate to act in the long-term benefit of our consumers. There may be non-regulatory mechanisms to work on trust and confidence in our industry so regulators can feel more comfortable to offer that flexibility.