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Submissions
Electricity Authority
Level 7, AON Centre
1 Willis Street
Wellington 6011

Via email: distribution.feedback@ea.govt.nz

SUBMISSION ON THE ISSUES PAPER: UPDATING THE REGULATORY SETTINGS FOR DISTRIBUTION NETWORKS

The Electricity Retailers' Association of New Zealand ('ERANZ') welcomes the opportunity to provide feedback on the Electricity Authority's issues paper 'Updating the Regulatory Settings for Distribution Networks' from December 2022.

ERANZ is the industry association representing companies that sell electricity to kiwi households and businesses. Our members supply almost 90 per cent of New Zealand's electricity. We work for a competitive, fair, and sustainable electricity market that benefits consumers.

Executive Summary

Transitioning our economy to zero emissions is one of New Zealand's primary challenges over the next 30 years. Achieving it will require focus and coordination across all sectors, including electricity. For distribution networks, it means ensuring customers have access to highly renewable electricity as they transition away from high-emissions fossil fuels. Fulfilling this task will take billions of dollars of investment and a fundamental shift in how distribution networks manage their assets.

ERANZ continues to agree with the Authority's potential concerns identified in previous work on distribution network regulations, namely:

- Distributors may favour network solutions when non-network solutions could be a more efficient option. This means opportunities might be missed to support climate targets and decrease distribution costs; and
- If distributors decide to invest in Distributed Energy Resources ('DER'), they may be more likely to favour in-house investment or use subsidiary firms rather than follow a competitive procurement process.

ERANZ appreciates the industry-led work which is developing practical ideas and solutions to progress DER, including the work of the FlexForum, the South Island Distribution Group, and the Electricity Network Association's ('ENA') Network Transformation Roadmap, as well as the Authority's Market Development Advisory Group ('MDAG').

The benefits of controllable DER to consumers, to take more control of their own energy environment, reduce their reliance on centrally supplied energy, and lower their total costs are compelling. However, the costs, complexity and technical knowledge required are currently formidable barriers. Yet, ERANZ sees all these barriers quickly reducing as the industry matures

and technology improves. The market environment created by the Authority, particularly for non-network solutions for distribution networks, is crucial to making DER a success for New Zealand.

ERANZ supports the Authority's staged approach to implementing DER and prioritising access to data for all industry participants. ERANZ recommends a guiding vision for a system with seamless access and real-time data exchange by authorised parties. ERANZ supports the Authority's aim to provide equal access to data to ensure a level playing field for all market participants. ERANZ encourages the Authority to improve the default Data Template to enhance its workability.

Retailers emphasise the importance of a market design that accommodates the development of different flexibility service product types. ERANZ supports the Authority's view that innovation to improve network efficiency could come from retailers, flexibility traders, or other market participants. However, facilitating data access should benefit networks and consumers through improved services and lower costs. Retailers agree with the Authority's objective to develop the emerging market for flexibility services through competitive procurement of non-network solutions.

Challenges for the distribution networks sector

There are several challenges distribution networks face to cater for delivering greater electricity capacity while keeping costs manageable for customers. These barriers include:

Physical constraints: Many parts of New Zealand have challenging terrain or are located in remote areas, making installing new infrastructure difficult and expensive. This can lead to bottlenecks in the distribution network, limiting the amount of electricity delivered to customers.

Financial regulations: Lines companies face financial barriers to delivering greater electricity capacity ranging from their cost of capital to the level of debt they are already carrying. These factors can limit the ability of lines companies to invest in new infrastructure and upgrade their networks. However, a key factor is the regulated nature of their revenue. The regulatory framework governing lines companies is designed to ensure that they operate efficiently and keep costs under control. However, this can make it difficult for companies to invest in new infrastructure, as distribution networks may not fully recover the costs of these investments through regulated prices.

Technical barriers: There may be technical barriers to delivering greater electricity capacity, including issues related to the integration of renewable energy sources, the need to upgrade aging infrastructure, or the need to implement new technologies to improve network efficiency. Addressing these technical challenges can require significant investment and expertise, which may be difficult for some lines companies to access.

Community opposition: In some cases, lines companies may face opposition from local communities when attempting to install new infrastructure. This can be due to concerns about the visual impact of new infrastructure or the potential for environmental harm. Community opposition combined with resource management consent challenges can make it difficult for lines companies to secure the necessary approvals to proceed with new investments in a timely and affordable manner.

The need for efficient distribution network upgrades is clear to ensure legacy infrastructure remains well-maintained and fit-for-purpose, to integrate new renewable electricity generation, and to implement network efficiencies through smart technologies. Given the size of investment in distribution networks that has been identified – the BCG 'Future is Electric' reports estimates

this investment at \$22 billion this decade – it is crucial that the most efficient solutions are brought forward in order to ensure electricity remains affordable for consumers.

Integrating renewable energy sources into the electricity grid can present technical barriers for electricity distribution companies. Renewable energy sources, such as solar and wind power, are intermittent and variable, leading to fluctuation in the electricity supply. This can create challenges for lines companies in managing the distribution network and maintaining a stable electricity supply. To address these challenges, lines companies may need new technologies, such as energy storage systems, to help balance supply and demand. The regulatory settings should be careful to not promote any particular ownership arrangement.

Much of the electricity infrastructure in New Zealand was built decades ago and is reaching the end of its useful life. As a result, lines companies may need to invest in upgrading and replacing this infrastructure to maintain the reliability and safety of the network. Upgrading aging infrastructure can be costly and may require significant capital investment. We strongly support the establishment of arrangements that ensure that non-wires alternatives are properly considered by EDBs when making decisions around additional investments and that these assessment occur on a level playing field with other potential providers. This may require arms-length arrangements to be established.

At the same time as needing to upgrade aging infrastructure, lines companies may need to implement new technologies to improve network efficiency. For example, using smart grid technologies can help lines companies monitor and control the flow of electricity in real-time, reducing the risk of outages and improving the overall reliability of the network. However, implementing new technologies can be complex and may require significant investment in research and development and in implementing new systems and processes. Active consideration of whether these services can be provided by alternative providers should also be encouraged.

The critical trade-off facing distribution networks is the balance between investing in these large-scale infrastructure upgrades required to help electrify New Zealand while keeping costs manageable for customers.

Priorities and timelines

The Authority's articulation of a staged approach to realising the benefits of DER and ranking of priorities is sound. ERANZ agrees that facilitating equal access to data for competing participants is essential to realising the public benefits of distribution-embedded DER.

Data

ERANZ recommends the Authority's ultimate guiding vision for data in New Zealand is to move to a digitised system with seamless access to and exchange of real-time data by authorised parties. This will ensure that all electricity industry participants have access to the data and information they need to make informed decisions supporting the transition to a low-emissions economy and providing long-term benefits to consumers.

The short-term priority until 2025 is facilitating ICP-level historical consumption and power quality data to inform decisions on whether and where to invest in non-network solutions ('NNS'). This data would provide visibility of DER on the low voltage network and is needed to indicate congestion on the network to optimise DER hosting.

ERANZ supports the central role the Authority sees for data access enabling a level playing field:

"Data is the key to efficient network planning, management, and pricing strategies. Providing equal access to data will ensure that any business can compete on a level playing field to develop and offer products and services that will maximise the value of DER for the long-term benefit of consumers."

Retailers support the Authority in making foundational policy decisions around regulating how and what kind of data MEPs provide to distributors and flexibility traders in the next twelve months.

The Authority is best placed to lead workable solutions for distributors securing access to data from MEPs. It is not the role of retailers to be a data repository for different parts of the sector. It is more efficient for market participants to get the data they need, such as on consumption and power quality, from its most appropriate source, providing data privacy and security measures are robust.

ERANZ supports improvements to the default Data Template to enhance its workability. Currently, retailers must undertake a legal review and check every time a variation to the template is used. This dramatically increases costs and delays the benefits the template regime was designed to unlock. The Authority should try to avoid this scenario of voluminous bespoke changes to a default template if developing a default template to facilitate access to ICP data held by MEPs.

ERANZ encourages the Authority to keep working with MBIE on potential consumer data right implications, given MBIE's workstream will not reach the energy sector until 2026 at the earliest. It would be regrettable if the electricity sector's leading work in consumer data rights was required to be redone to fit a differently designed legal regime.

Role of markets

There is a risk distribution networks favour network investments over equivalent non-network solutions or self-supply non-network solutions.

Looking ahead, retailers place great importance on the Authority facilitating a market design to accommodate the development of different flexibility service product types. We expect this market to develop as buyers and sellers rise, and bilateral contracts become inefficient. But, distribution networks must be required to consider commercial non-network solutions to encourage the market to develop and ensure least cost outcomes for consumers arise

Innovations in new technology for balancing and shifting electricity loads will come from many places. Market testing of the optimal way to solve distribution network challenges is crucial to achieving the best infrastructure investment outcomes at the lowest possible cost to consumers. Retailers acknowledge the Authority's desire to ensure open innovation:

"The Authority is mindful of its statutory objective, and in particular the competition limb, when considering distributors' ownership and operation of DER, and the available flexibility should not be limited to benefiting distribution networks. ... The development of the flexibility services market is still in its early stages in New Zealand. It is important to ensure the market settings are in place to promote, and not to hinder, the development and commercial establishment of flexibility traders."

Innovations to improve network efficiency could come from retailers, flexibility traders, or other market participants. None of these players are likely to have the same access to network congestion data or information on DER's location, size, and functionality as distribution networks.

Therefore, facilitating data access should benefit networks and consumers through improved services and lower costs.

ERANZ agrees with the Authority's overall objective that:

"The emerging market for flexibility services will develop faster if distributors choose NNS where they are the efficient option, and then use competitive procurement to obtain these services."

In-house or self-supplied non-network solutions risk limiting innovation in New Zealand, particularly with our existing challenges due to our small size. ERANZ agrees with the Authority's concerns that customers should come first, and that self-supply risks delaying or reducing the long-term benefits accruing from other market participants accessing the value stack. One immediate idea is to monitor and publish the use of competitive procurement to access innovative flexibility solutions. IPAG recommended requiring Board members to certify annually that they have considered alternatives; this is a good option to consider as a starting point.

There is a hypothetical, but realistic, concern that distributors could use their monopoly position in distribution to secure an advantage in what should be contestable flexibility markets. The objective should be for distributors to realise they are partners, not competitors, with third-party providers of non-network solutions, solar generation, batteries, and smart electric vehicle chargers. Distributors can share the benefits of all these services while encouraging their uptake for a low-emissions economy.

Skills

One of the major challenges facing the electricity sector is finding a skilled workforce to deal with the complex system of the future. Specifically distributors, without access to skilled personnel, may struggle to transform themselves quickly enough to support the integration of DER, infrastructure upgrades, and non-network solution projects required for growth. This capability and capacity issue is severe enough that the Authority may need to help alleviate it.

Ideally, the solution would be to increase the availability of skilled engineers and technicians by increasing the number of graduates or encouraging immigration into New Zealand. However, the reality is that the opposite is happening. The number of relevant personnel in younger demographics is merely replacing those in older demographics who will soon retire. Additionally, New Zealand is struggling to prevent skilled people from emigrating to other markets, let alone attract new talent to immigrate. This makes it increasingly challenging for electricity distribution companies to find the skilled workforce they need to operate effectively in the future.

Consumer desire for DER

Consumer appetite for DER is currently in the 'early adopter' phase of market development. Some highly motivated and enthusiastic consumers are pursuing DER opportunities suited to their own personal circumstances. However, market development, particularly of user-friendly tools, will allow many more consumers to unlock DER opportunities and realise cash savings.

Some consumers do not want to think about their electricity consumption in detailed ways, and it is the market's role to come up with extremely simple and low friction ways of allowing customers to reap the benefits.

This is supported by the Authority's cited example of a trial to shift electric vehicle charging times in the United Kingdom showed that to access the desired flexibility of controllable DER it is best to make the process simple and automated for consumers.

Smart appliances

ERANZ supports moving to smart applications and appliances in order to build future capability into our system. For example, requiring items like electric vehicle chargers to be remote controllable and able to communicate in order to provide flexibility services will unlock enormous benefits. ERANZ supports EECA's recent green paper on this issue.

Consultation questions

Questions	Answers
<p>Question 1</p> <p>Do you see value in the Authority commissioning two separate reviews to look into the merit and practicalities of implementing the recommendations of the UK's Energy Data Taskforce around unlocking the value of customer actions and assets and setting up a "digital spine" in a New Zealand setting. The Authority will consult on the findings and recommendations of the reviews as appropriate.</p>	Yes.
<p>Question 4</p> <p>Does this capture the key data needs for flexibility traders for them to make informed business decisions that will unlock the potential of DER for the long-term benefit of consumers? If not, what is missing and what would the data be used for?</p>	Yes.
<p>Question 5</p> <p>Do you agree with the prioritisation of the key data needs for flexibility traders? If not, why not?</p>	Yes.
<p>Question 6</p> <p>Do you agree that the Authority should amend the Data Template to address the above issues to improve its workability? If not, why not?</p>	Yes.
<p>Question 8</p> <p>Do you agree that this is an issue? If not, why not?</p>	Yes.
<p>Question 9</p> <p>Should the Authority amend the Code to clarify that MEPs must contract directly with distributors and</p>	Yes.

flexibility traders to provide ICP data for permitted purposes? If not, why not?	
Question 10 Should the DDA Data Template be updated to include Power Quality Data? If not, why not?	Yes.
Question 28 Do you agree that model privacy disclosure terms are appropriate? If not, why not?	Yes, model privacy disclosure terms would be useful, especially to smaller retailers, but should not be mandatory. Many retailers already have comprehensive terms and conditions and are well equipped to amend these as required.
Question 31 What are your views on the three options presented above, to deal with Issue 1 (that distributors might prefer network investments to NNS)? What alternative option/s would you favour, if any?	Options around education and funded trials appear similar with activity already underway. For the Authority to make additional progress, it should consider option three's requirement for distributors to show whether non-network solutions could work.
Question 37 Do you agree with the proposed approach to monitor progress between Transpower and distributors in developing standard offer forms for procuring NNS, and monitor whether issues associated with operating agreements for flexibility services are developing, and prioritise resource to progressing the other chapters? If not, why not?	Yes.

Conclusion

ERANZ would like to thank the Authority for its ongoing work on this issue. We are happy to provide any further information on this submission as required.

Yours sincerely



Kenny Clark
Policy Consultant