Submission on behalf of MainPower New Zealand Limited, Network Waitaki Limited, Buller Electricity Limited, Westpower Limited and Electra Limited

Introduction

1. We welcome the opportunity to respond to the Electricity Authority's (Authority's) Discussion Paper '*Updating the Regulatory Settings for Distribution Networks: Improving competition and supporting a low emissions economy*', July 2021.

2. This submission is made on behalf of Buller Electricity Limited, Electra Limited, Mainpower New Zealand Limited, Network Waitaki Limited and Westpower Limited and focusses on particular statements made in Chapter 8 of the Discussion Paper on the capability and capacity of distributors. We also support the submission prepared by the ENA.

3. This submission is also supported by Marlborough Lines Limited.

4. We attended the September workshop with Authority staff and ENA members on the Discussion Paper which we found to be a useful forum for sharing the views of interested parties. We support further workshops as the Authority proceeds with its work programme on promoting competition and access to distribution networks to support the transition to a low emissions future.

The challenge for distributors

5. The Discussion Paper (at paragraph 8.2) explains that increasing volumes of Distributed Energy Resources (DER) and increased load from electrification of transport and process heat will require distribution networks to scale up and adjust to more complex network operations, such as the flexibility of DER.

6. It is suggested that, because distributors range in size, skills and capability, some distributors may not adapt quickly enough. This may lead to some consumers missing out on benefits, such as access to flexibility services, or incurring higher costs due to inefficient investments in upgrading networks. The Discussion Paper suggests that this risk is heightened because the distribution sector is not structured efficiently, focussing on the number of distributors, widespread community ownership and regulatory exemptions.

7. The Discussion Paper (at paragraphs 8.9 to 8.14) refers to a number of studies to support these views. However, in our view the evidence provided is not compelling and does not support a conclusion that there is a problem which requires regulatory intervention. Specifically:

    - The Authority's investigation[1] into how distributors were adapting to technology-driven change indicated that distributors were intending to adapt in measured ways. The ENA's network transformation roadmap (NTR) project supports these findings. While the study noted that a rapid change in technology uptake, either over entire networks or in clusters, would require more accelerated responses from distributors, our experience is that distributors are responding in ways which reflect the characteristics of their networks.

        - Some distributors are concentrating their efforts on electrification of industrial processes, particularly rural networks with large industrial loads such as process heat decarbonisation (eg: Network Waitaki and Westpower).

        - Other distributors are more advanced in preparing for accelerated electric vehicle (EV) uptake in urban areas or solar PV uptake (eg: Electra).

    - The Discussion Paper points to the IEA's study[2] which raised questions about the distribution sector's capacity to effectively harness efficiencies from economies of scale, to effectively respond to sector transformation, and the strength of organizational governance. The Discussion Paper

[1] Electricity Authority: Review of Distributor's Capacity to Respond to Changing Technology, 2019
[2] Energy Policy of IEA Countries: New Zealand Review, 2017

omitted the IEA's conclusion: '*However, no official empirical analysis has been undertaken on economies of scale in New Zealand's distribution businesses, and there is little evidence that small firms are less innovative or perform less well than large ones'.*

- We note that Professor Yarrow for ETNZ[3] countered the IEA paper, suggesting that there is no conclusive evidence of significant economies of scale in electricity distribution. We address this point further below.

- The IEA study also highlighted investments in non-core assets by community and local authority owned distributors. The suggestion is that these may expose distributors to business risks which they may not be able to manage, and that this may impede the progress of network transformation. We disagree. We suggest that managing business risk is consistent with network transformation as flexibility services will reduce operating and investment certainty for distributors.

    i. We note that the Delta Utility example quoted in the Discussion Paper is misleading as Delta is not a business unit of Aurora Energy. Both entities are owned by the Dunedin City Council, but Delta's investments are independent of Aurora Energy.

    ii. The Discussion Paper also fails to recognise that distributors make investments in non-core assets which complement their core network businesses and enable network transformation. For example:

        - ElectroNet, owned by Westpower, has developed significant electrical contracting, engineering and technology capability servicing electricity distribution and transmission grids. ElectroNet Technology develops products and technologies to solve problems on traditional network infrastructure relevant to network transformation. For example, PowerPilot, an IoT based low voltage management device which provides real-time network data transmitted using wireless technology

        - Electra has invested in an IoT long range, wide area gateway communications network to improve low voltage network monitoring

        - Buller Electricity is a shareholder in Pulse Energy, which is a community owned energy retailer providing gas, energy and solar to customers throughout New Zealand.

        - Electro Services Limited is a wholly owned subsidiary of Buller Electricity Limited. It has expertise in all areas of electrical work including, domestic/ commercial/ industrial wiring systems, refrigeration and heat pump specialists, generator sales, hire and installation, electrical inspections, urgent on-call after hours repair service and industrial power control systems.

- The Discussion Paper also refers to the EPR[4] which commented on distributor operating costs and observed that smaller distributors have higher opex. The EPR noted that this is not uniform, and distributor opex is impacted by density and terrain.

8. We disagree with the suggestion that smaller distributors are necessarily less efficient. Our analysis shows that smaller distributors are able to match the operating costs per connection of larger distributors and that network density is a significant driver of cost.

9. Figure 1 overleaf shows that those distributors with the lowest operating costs (less than $300/ICP per year) include small, medium and large distributors. Distributors across the size range fall into the middle

[3] G. Yarrow: The International Energy Agency's 2017 Review of New Zealand, 2018
[4] Ministry of Business, Innovation & Employment: Electricity Price Review, 2018

cost category, and the larger distributors are at the bottom end of this range. The highest operating cost category (above $600/ICP per year) includes only 2 small distributors.

10. Figure 2 shows that distributor operating costs per connection are correlated with network density. There are no distributors supplying low density networks with low operating costs per connection. In addition, there are no distributors supplying high density networks with high operating costs per connection.

Figure 1 - Average annual total opex per ICP by business size (2013-2020)

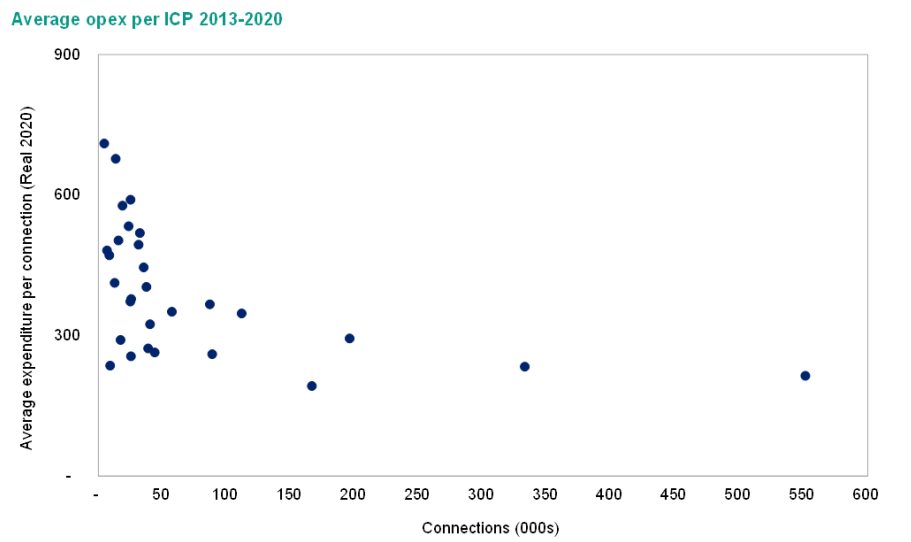
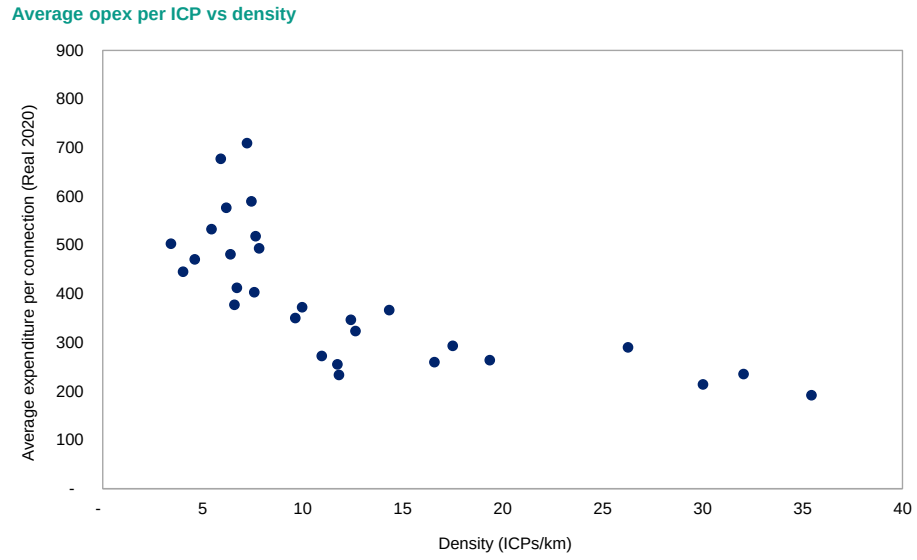


Figure 2 - Average annual total opex per ICP by connection density (2013-2020)



11. We acknowledge that the number of distributors adds complexity to sector transformation. However, it also enables a phased response, allowing for different rates of change across geographies and customer segments and for information sharing between distributors as industry practice evolves. We support standardised solutions where appropriate and note that as distributors are not competing against each other. The sector collaborates, including through ENA initiatives such as the NTR, and sharing the results of investments in innovation and new technologies.

12. Examples of innovation by consumer owned distributors to manage increased demand and flexibility include:

- trialling and applying LV monitoring technologies such as low-voltage power quality meters
- investigating EV supply equipment management, undertaking rapid charger monitoring and EV user engagement, making investments in rapid chargers and contributing to EV working groups
- investing in smart grid technology to improve asset utilisation, monitoring, power quality and reliability
- trialling DER control equipment and establishing an electricity networks IoT forum and working group
- involvement in trials to deploy solar and batteries on dairy farms to understand requirements and how storage can be utilised
- development of a smart campus trial to gain insight into the future of demand side management.

Part 4 Regulation

13. The Discussion Paper (at paragraph 8.17) suggests that as customer-owned distributors are exempt from price-quality (PQ) regulation under Part 4 of the Commerce Act, they may be reluctant to innovate. This suggestion is not supported with any evidence, and we strongly challenge it. Community and consumer owned businesses have strong incentives to manage costs and innovate because they are directly accountable to their communities and customers for service levels and prices.

14. The Trust governance model ensures consumer representatives set expectations for distributor performance, through the Statement of Corporate Intent and AMP, and appoint Directors to deliver to these expectations. Five yearly ownership reviews involve widespread consultation with consumers and local communities about the performance of the distributor and consideration of ownership options. The outcomes of this consultation determine the ownership model and therefore which trust owned businesses are exempt from PQ regulation. Exempt status is only granted where consumers have sufficient control over a distributor. This is why only a subset of consumer owned businesses are exempt.

15. In addition, exempt businesses are regulated under the Part 4 information disclosure (ID) regime. It is this regulation which shines the light on distributor costs, investment plans, innovation and target service levels. The purpose of the ID regime is to assess the performance of distributors against the Commerce Act, Part 4 s52A statutory purpose, which includes incentives for distributors to innovate.

16. Our analysis shows that there has been no clear difference in performance between exempt and non-exempt businesses since the Part 4 regulatory regime was implemented, as illustrated in Figures 3 to 6 below. Accordingly, we reject the proposition that exempt businesses are less prepared, and less capable of innovating and adapting to industry transformation.

Figure 3 – Average annual rate of change in opex per ICP (2013-2020)

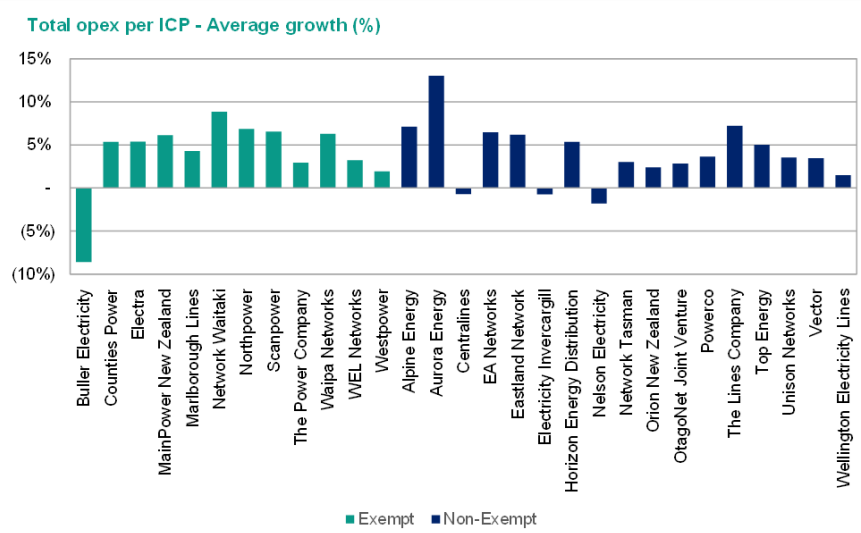


Figure 4 – Average annual rate of change in capex per ICP (2013-2020)

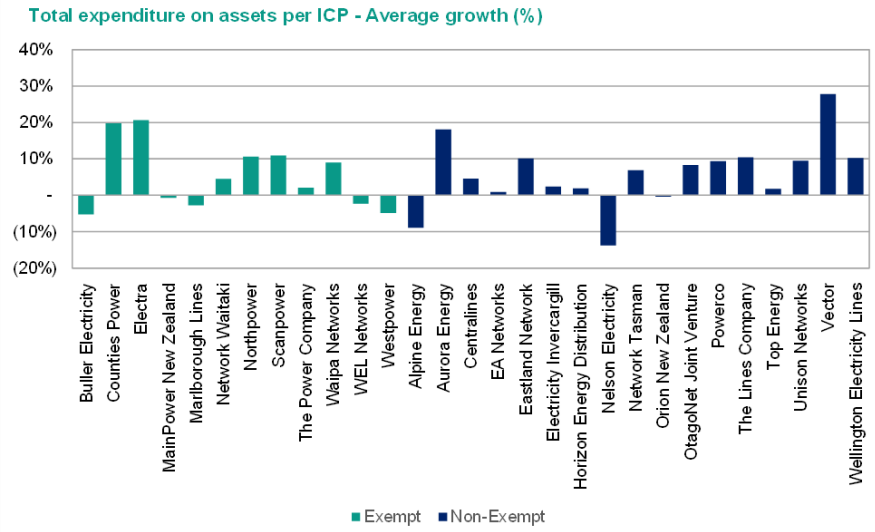


Figure 5 – Average annual rate of change in normalised SAIDI (2013-2020)

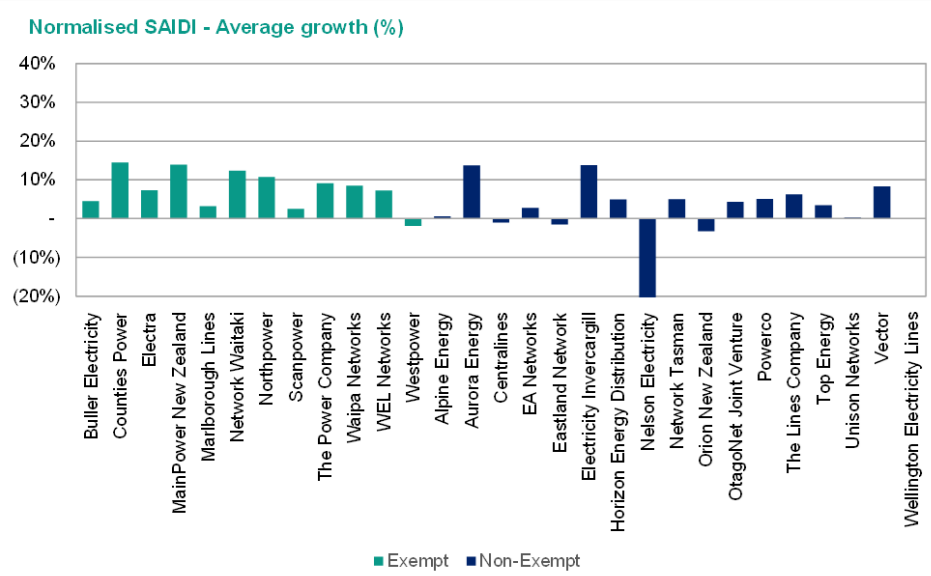
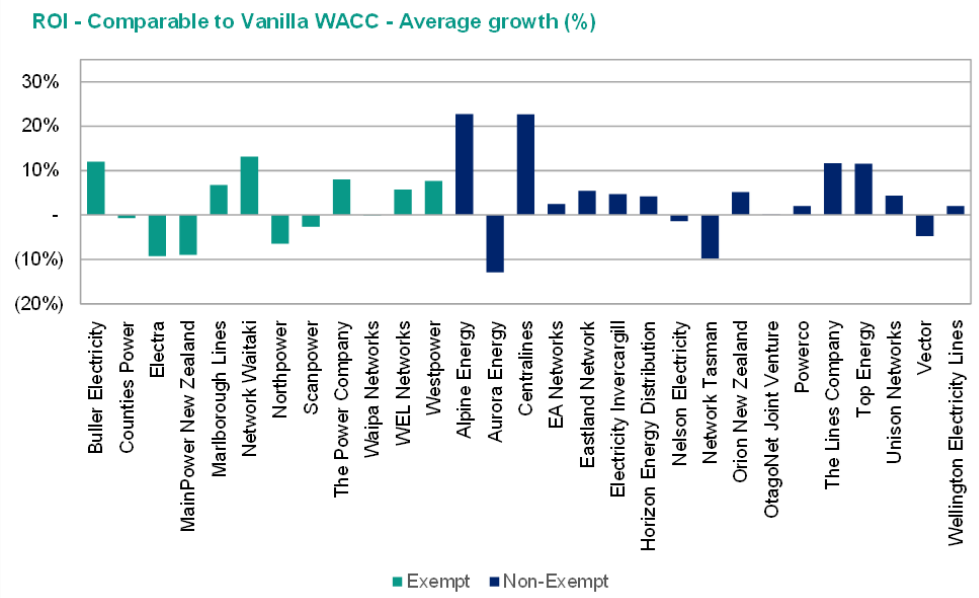


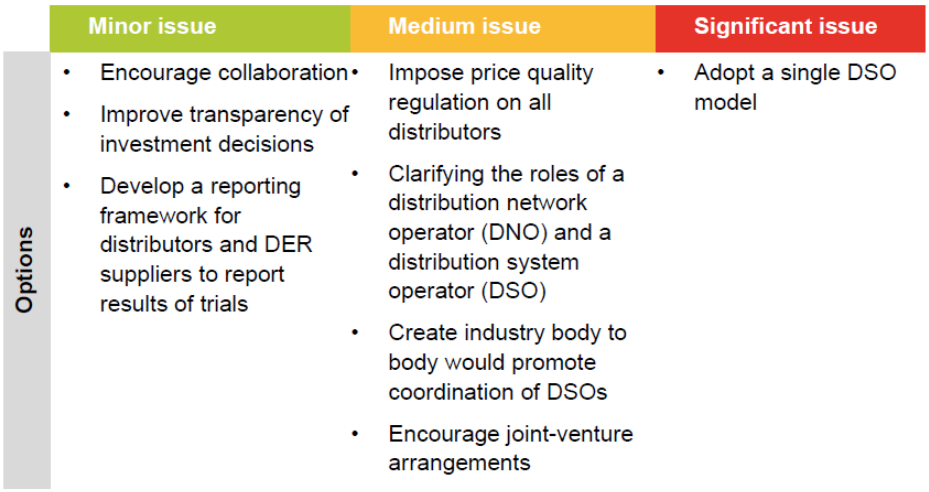
Figure 6 – Average annual rate of change in ROI (2013-2020)



Potential options

17. The Discussion Paper (at paragraph 8.20) puts forward a number of regulatory options to address distributor capability and capacity, which are summarised in the graphic reproduced below. The options range from less to more regulatory intervention, based on whether the distributor capability issue is minor, medium or significant. The options are described in paragraphs 8.21 to 8.27 of the Discussion Paper, and the discussion concludes with a high-level assessment of the pros and cons of each level of intervention.

Figure 7 – Options to address distributor capability and capacity (from the Discussion Paper)



18. We respond to the proposals for each level of intervention in the table below.

Minor issue	Medium issue	Significant issue
Encourage collaboration There is significant collaboration between distributors, although this may not be widely understood. A regulatory intervention to force more collaboration is unlikely to be successful. Clear communication of regulator expectations for industry collaboration is a reasonable response. The industry is capable and has a track record of developing and implementing industry standards. Agencies such as the ENA and EEA are able to facilitate these. The Authority should support industry led solutions.	**PQ regulation for all distributors** The Discussion Paper does not explain why extending PQ regulation to all distributors would address a distributor capability issue. PQ regulation currently imposes revenue caps and reliability standards on non-exempt distributors, with reference to each distributor's historical performance. It does not ratify investment plans[5] or address in any way readiness for DER or investment sufficiency. In practice it may hinder innovation because of the short-term nature of the expenditure allowances. ID regulation is the mechanism for assessing distributor performance and capability. All distributors are subject to the same disclosure requirements, including reliability performance and targets, and future investment plans including non-network solutions. The Authority does not have jurisdiction over Part 4 regulation.	**Adopt a single DSO** A single DSO model would involve significant regulatory intervention to separate operators from asset owners. This would be a costly and resource intensive process. It would require significant structural change, adding undue complexity during a period of increased distribution investment and transformation. The Discussion Paper suggests that stronger incentives to operate more efficiently could lead to voluntary outsourcing of network operations. As stated earlier, distributors already outsource services where commercially and operationally justified, and it is expected that this practice will continue. The opportunity for more collaboration is expected to increase as distributors adapt to the challenges of sector transformation.
Investment decision transparency Additional transparency for investment decisions by community owned distributors is a poorly targeted response because the investment plans of all distributors are currently subject to consistent regulatory scrutiny.	**Clarify roles of DSOs and DNOs and promote co-ordination of DSOs** It is expected that the roles of distribution network operators (DNO) and distribution system operators (DSO) will evolve as networks become smarter and more flexible in response to DER.	

[5] Other than in response to a customised price-quality path proposal.

Minor issue	Medium issue	Significant issue
Community ownership is not an indicator of reluctance for investment or innovation. The Authority does not have jurisdiction over Part 4 regulation.	We expect these roles will be informed by international experience and regulatory developments. Engagement between the regulators and distributors will be essential to ensure that the roles of DSO and DNO reflect the particular requirements of the New Zealand situation as well as drawing on overseas experience. The nature of flexibility services is also expected to evolve, which will require regulatory flexibility.	
Reporting framework for trials Sharing information about DER trials is consistent with current industry practice. This occurs through formal and informal forums. The Authority may not have full visibility of this.	**Encourage joint ventures** Distributors already participate in joint ventures or contract services from other distributors, where commercially and operationally justified. A regulatory intervention to force more joint commercial arrangements is likely to disrupt the sector at a time when distributors are focussed on the challenges ahead. Clear communication of regulator expectations for industry collaboration is a reasonable response.	

Closing

19. We thank you for the opportunity to participate in this consultation and look forward to working with the Authority as this work programme progresses.

20. If you have any questions about this submission please do not hesitate to contact Sarah Barnes at MainPower New Zealand Limited (sarah.barnes@mainpower.co.nz; telephone 03 311 8553).

21. Nothing in this submission is considered to be confidential.

Sarah Barnes

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