



11 July 2022

Commerce Commission
2023 Input Methodologies review

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To whom it may concern,

1. Executive Summary

1.1. The Consumer Advocacy Council (the Council) recommends:

1. The introduction of a cost benefit analysis that takes a whole of life approach to network investment, allowing for the long-term benefit of a well-planned and managed electricity supply system, including:
 - a. investment to meet decarbonisation as technology and consumer energy demands change;
 - b. network resilience with timely access to data particularly on low voltage networks; and
 - c. allowing capacity for growth.
2. The Electricity Authority control the average revenue allocation requirements.
3. More transparency requirements on constrained sections of networks be included, including:
 - a. under or over voltage;
 - b. the number of premises that could not inject electricity into the network, this includes publication of "maximum export power"¹ for domestic consumers on section of the network;
 - c. the number of applications to connect distributed generation that were refused; and
 - d. the sections of network that exceeded 75% of its rated capacity.
4. More requirements that allow for technological advancements and flexibility that ensures networks are keeping pace with change, and includes:
 - a. meeting our climate change requirements;
 - b. allowing more flexibility for 'embedded networks'; and
 - c. meeting future demand.

¹ As defined in Part 1 of the Electricity Industry Participation Code 2010

2. Background

- 2.1. The Council is the independent advocate for residential and small business electricity consumers (consumers) in Aotearoa New Zealand. Our role is to advocate on behalf of consumers and protect their interests in relation to electricity. We represent approximately 5 million residential consumers and 530,000 small businesses.
- 2.2. It is timely to review the network arrangements to ensure they are future proofed to allow for a reliable and cost-effective supply of electricity to consumers.
- 2.3. Although this consultation is on electricity distribution networks (EDBs) Input Methodologies (IMs), it is a small part of New Zealand's path to decarbonisation and needs to be integrated with all market processes and systems. The electricity industry will be very different as it evolves towards our 2030 climate change goals.
- 2.4. Electricity is important to support consumers' health and wellbeing, as well as supporting commerce, and industry. EDBs provide essential infrastructure.
- 2.5. In this submission, we have confined our comments to the issues that impact consumers.

3. Increasing electricity consumption

- 3.1. With the anticipated increase in electricity consumption, EDBs need to prepare network designs that can meet the demands of consumers and systems to better manage electricity demand and power quality. The low carbon economy requirements are only going to exacerbate this need.
- 3.2. The Commerce Commission needs to ensure that:
 - IMs include sufficient information that allows determination that networks meet the needs of consumers rather than focussing only on the current economic demands on the networks, ie ensuring that there is sufficient capacity for consumers, for example addition of decarbonisation load for EV charging, transitions from gas, and greater reliance on heat pumps; and
 - EDBs can invest in their networks to support future consumption growth and connection of distributed generation.

4. Requirements for decarbonisation and resilience of the network

- 4.1. New Zealand needs a resilient network to meet its growing challenges. The electricity network needs to be future proofed for the decarbonisation requirements needed to meet the 2030 climate change goals.
- 4.2. Consideration is required because:
- investment is needed to meet our decarbonisation needs;
 - distributors need timely access to relevant information on the performance of their low voltage networks from metering installations to enable network resilience; and
 - network resilience is needed to allow for the large amounts of increasingly intermittent distributed generation connecting to the network, such as an increasing number of uncontrolled electric vehicle charging connections to the network. Apart from data from AMI metering installations, distributors have no means of gaining transparency of increasing load at consumer locations on their networks. More transparency in this area could allow better load management.
- 4.3. These issues are pushing networks beyond their design parameters. Adapting networks to meet the demands of the energy transition requirements may result in increasing costs to consumers in the short term, but provided appropriate investment is made, could lower costs in the future.
- 4.4. Some capacity and capability design requirements for distribution businesses investing now in their networks may not be suitable in the future. This means that investments made now that are constrained by the current price efficiency measures may not necessarily be in the long-term interest of consumers.
- 4.5. We suggest better cost benefit analysis needs to be included, taking a more whole of life approach to network investment.

Recommendation:

1. **Introduce a cost benefit analysis that takes a whole of life approach to network investment, and includes considerations:**
 - a. the investment required to meet decarbonisation as technology and consumer energy demands change; and
 - b. timely access to data and network resilience on low voltage networks.

5. **Paragraph 4.17 - "The way that Part 4 has been implemented, interpreted and understood to date means that consumers ultimately bear most risks over the long term".**

- 5.1. We agree and suggest consumers should receive the long-term benefit of a well-planned and managed electricity supply system. Consumers, including large consumers, pay all the costs associated with electricity generation, transmission, EDBs and retailers. Future proofing a well-managed system will lessen this burden for consumers.

Recommendation:

- 2. Considerations be included that allow for the long-term benefit of a well-planned and managed electricity supply system.**

- 6. Paragraph 4.15.3 Quality – To better understand quality generally, we ask whether there are dimensions of quality which are not currently measured but should be”.**

- 6.1. A measure of quality must include consumer opinion and expectations. For instance, consumers may decide to pay higher line charges in return for the increased capability to export distributed generation into a network, or for charging electric vehicles at home, or in the future using the electric vehicle battery as a source of electricity.
- 6.2. We understand from EDBs that in some cases there may be insufficient capacity within low voltage networks to allow uncontrolled electric vehicle charging. While management of distributed generation and electric vehicle chargers may prevent overloaded sections of networks from failing, there is a consumer, and not a network cost that is imposed by controlling demand. This includes the cost of control mechanisms as well as the cost of EDB investment. This could be avoidable if networks invested at a higher level when reconductoring or connecting new customers to its network.
- 6.3. We suggest sufficient capacity for growth should be allowed, recognising that there is a cost.

Recommendation:

- 3. Considerations be included to allow for capacity for growth.**

- 7. Paragraph 5.24 "average revenue per customer or per kWh will depend on suppliers pricing practices-over which the Electricity Authority has responsibility-and the volumes of electricity consumed. The latter are expected to increase with electrification, which would tend to moderate increases in price (when defined as revenue per kWh)".**

- 7.1. Two regulators controlling different elements of pricing is causing confusion and contributing to cost increases. The Commerce Commission controls the overall network revenue, and the Electricity Authority specifies the pricing methodology to allocate those

costs onto consumers. Not all retailers pass on distributor price signals to consumers, leading to higher costs, as EDBs may not achieve the demand reduction they require.

- 7.2. We suggest clarification and only one regulator be involved, and that price signals are passed to consumers. Consumers could make more informed decisions on their usage if they were given the pricing information. The Electricity Authority should have greater control in this area. Many distributors' costs are fixed and capacity related, however the price signals consumers receive is often at a variable rate. At the very least we suggest the Commerce Commission work with the Electricity Authority on a solution that meets consumers' needs.

Recommendation:

- 4. Electricity Authority control the average revenue requirements and retailers pass network price signals onto consumers.**

8. Price Quality

- 8.1. The current measures to determine price quality are set by System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) referenced to the 11kV level. However, we suggest that the capability of the networks to deliver electricity for consumers should be on power quality, including outages, network capacity and voltage that are experienced at the 400V level.
- 8.2. We recommend some disclosure reporting to provide transparency on constrained sections of their networks needs to be included:
- a) under or over voltage;
 - b) the number of premises that could not inject electricity into the network;
 - c) the number of applications to connect distributed generation that were refused; and
 - d) the sections of network that exceeded 75% of its rated capacity.

Recommendation:

- 5. More transparency requirements on constrained sections of networks including:**
- a. under or over voltage;
 - b. the number of premises that could not inject electricity into the network;
 - c. the number of applications to connect distributed generation that were refused; and
 - d. the sections of network that exceeded 75% of its rated capacity.

9. Climate Change

9.1. The Climate Change Commission's *He Pou a Rangi 'Ināia tonu nei: a low emissions future for Aotearoa'* notes that:

- *"The regulatory regime must be able to deliver the services needed to electrify the vehicle fleet, buildings and industry (Section 15.1.3); and*
- *Traditional ways of operating may not deliver the most efficient solutions at the pace required for the transition. The capacity and capability of electricity distribution businesses (EDBs) or lines companies will be important (Paragraph 64)."*

9.2. We agree there is a need for more solutions. A more integrated approach is required amongst transmission, distributors, generators, the system operator, and retailers to achieve our targets.

9.3. For distributors, this will include how they need to invest in their assets to allow future capability. However, flexibility is also needed to ensure investment in future technologies, for example "non-network alternatives" and "distribution system operator".

9.4. It is critical to allow distributors the ability to invest in pilots, trials, and their networks to support decarbonisation and energy transition requirements. Pilots and trials can be relatively expensive, and there should be sufficient allowance in network cost recovery to facilitate these, and some for extended periods. Investing in network capacity when initially building or replacing network assets potentially lowers long term costs to consumers rather than the need to replace assets in the future as demand for electricity builds.

Recommendation:

- 6. More requirements that allow for technological advancements and flexibility the ensures we meet our climate change goals.**

10. Embedded Networks

10.1. Section 54C(f)-(h) precludes embedded networks from being regulated under the Commerce Act, unless the embedded network is owned by a supplier that is defined as providing electricity lines services. Embedded networks are monopoly providers of line services and consumers within these networks do not have choice of network supplier.

10.2. However, we suggest these are likely to grow in the future as demand increases. A disclosure will be needed in the future to ensure these embedded networks are treated appropriately and that consumers are protected.

Recommendation:

- 7. More requirements that allow for technological advancements and flexibility to ensure we allow for changing networks including 'embedded networks'.**

11. General Comment

- 11.1. In this time of rapid technological advancement, we note that the IMs are not keeping pace with the increasing speed of change.
- 11.2. We suggest that EDBs are encouraged to develop their networks to meet future demand requirements, which includes greater connection capability of renewable distributed generation.

Recommendation:

- 8. Facilitate EDBs adapting their networks to meet future demand.**

12. Conclusion

- 12.1. We wish to thank the Commerce Commission for the opportunity to submit on the 2023 Input Methodologies review.
- 12.2. If you have any further queries regarding the submission do not hesitate to contact Jane Budge – Principal Advisor Consumer Advocacy Council, on either jane.budge@cac.org.nz or [REDACTED]

Yours sincerely,

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Chair – Consumer Advocacy Council