



10 April 2024

To whom it may concern,

Rewiring Aotearoa submission on ‘The future operation of New Zealand's power system’ consultation paper.

Rewiring Aotearoa is a non-partisan non-profit organisation that believes electrification has major economic and environmental benefits. Our mission is to rapidly reduce New Zealand's emissions, improve affordability, and increase our resilience by electrifying the millions of small fossil fuel machines in our homes, communities, small businesses and on our farms.

The key points we would like to make with regard to the future energy system consultation paper are as follows:

1. **We are concerned that as it stands the future operation of the NZ power system thinking is biased towards the supply side** and neglects to anticipate that customer energy resources (CER) will become a significant part of the system's ‘infrastructure’.

The challenge is that the regulatory arrangements of the energy system have evolved around supply-side entities. As a result, “consumer participation” is typically seen as a problem to solve¹, rather than a central feature of the future system that will solve problems.

An example here is the frequency with which the Authority's consultation paper quotes future supply-side investment figures from the Boston Consulting Group report, without any consideration of the role that CER and cost-reflective tariffs would have on these estimates². Rewiring Aotearoa feels that there has been a lack of interrogation of this report by regulators (and its assumptions, including failing to account for large ongoing decreases in the costs of CER), despite using its figures.

We are transitioning into an era where pricing and incentives (and the innovation it will trigger) are even more critical than ever. For decades a key assumption in our market and regulatory designs has been that electricity costs are a mixture of fixed and variable. Looking forward, this fundamentally changes. All of the costs we will incur in the electricity system are going to be fixed because both poles and wires, and renewable energy generation are long-term high capital cost assets paid back over time. Once they are built, the customer pays. Therefore the only way we can reduce costs for the customer is to **efficiently** defer or avoid those investments (dynamic **efficiency**).

¹ See e.g., 5.12-5.14

² Para 4.49, 5.30

The entire driving force of customer pricing should be to deliver the **efficient** deferral or avoidance of supply-side investment through enabling **competition** between CER and supply side. **If it does not deliver a level playing field, we have failed the customer.**

Rewiring Aotearoa's view is that today the tariffs faced by customers are neither fair nor cost reflective. There is an absence of determination to deliver cost reflective pricing for demand side or CER solutions and that needs to be addressed by the EA before future energy systems recommendations can be made to Ministers.

What is needed is the accelerated adoption of modern, cost-reflective two-way electricity tariffs to provide a commercial incentive to customers who can support the electricity system (and lower infrastructure build requirements), and the implementation of the frameworks and incentives required to modernise New Zealand's electricity market and prepare it for a saturation of distributed energy resources. Incentivising homes, businesses and farms to contribute to the grid will create new and resilient revenue streams for homes and farms and reduce the extent of expensive, taxpayer-funded, infrastructure upgrades during New Zealand's energy transition.

2. The implication of this supply-side bias is that **the Electricity Authority is at risk of failing to meet its statutory obligation (as outlined below).**

The statutory objective of the EA (Section 15, of the Electricity Industry Act 2010) is "to promote **competition** in, reliable supply by, and the **efficient** operation of, the electricity industry for the **long-term benefit of consumers**".

An additional objective is "**to protect the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers**".

One of the key challenges for the Electricity Authority (EA), as we see it, is to overcome this supply-side bias. The critical point here is that **a battery in a consumer garage (or on a farm) is a competitor to supply-side infrastructure**, therefore both the EA and Commerce Commission are compelled by statutory objectives to level the playing field for competition. By presenting the future of the power system from a supply-side perspective, the consultation paper effectively reinforces the status quo.

3. **The consultation paper is that increased interrogation of distributor investment proposals will be costly for the Commerce Commission³, but the question we raise is: compared to what?**

There is real opportunity to develop smart regulations (while removing red tape) to **promote competition** (so the energy market works better, and doesn't penalise customers), operates **efficiently**, creates **long-term benefit to consumers** and "**protects the interests of domestic consumers and small business consumers in relation to the supply of electricity to those consumers**".

³ Para A.94

If we view the regulatory arrangements from the perspective of the customer, we may pause before proclaiming that changing the Part 4 regime would be 'costly'. This is an incomplete assertion, as it doesn't claim what it is 'costly' relative to. What if these costly changes to Part 4 saved billions of dollars for the consumer, by regulators helping efficiently avoid or defer network infrastructure? What's the 'size of the prize'?

The EA has the ability to take a leadership role in the energy transition on behalf of electricity consumers. Network pricing gives consumers agency in the development of the electricity system. When consumer agency is stifled, they will likely have significantly worse financial outcomes through higher bills, and the overall system will likely be more expensive than it needs to be.

Many of the necessary changes have been demonstrated already locally or overseas, and the remaining question is not if the changes are possible but if we as a nation have the courage to implement them on the timeline required to drive better energy outcomes for the New Zealand people (refer submission attached).

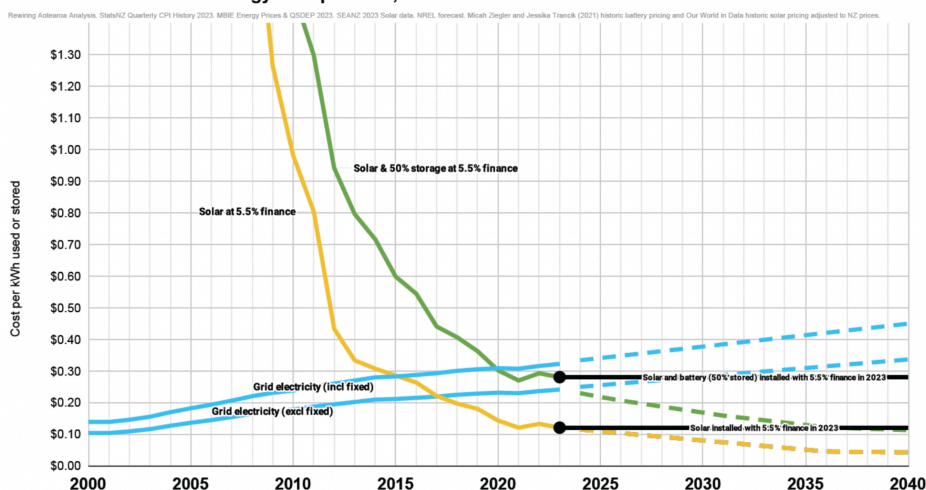
4. The end game needs to be a future system where all customers electrify as effortlessly and affordably as possible.

What is needed is for the EA to create a level playing field that is non-discriminatory amongst customer groups.

As we see it there are two primary pathways to our future energy system. One is centred on massive expansion of large-scale generation and high-capacity network infrastructure and it will come at a high cost to consumers and offer low resilience. The other is centred around customers, with distributed energy systems and demand flexibility, a strong grid backbone affordable for customers and increased resilience. We are losing focus on the most beneficial pathway to the New Zealand people.

Time is running out. We must remain cognisant of the closing window of opportunity to create the distribution network environment that can significantly improve our energy system trajectory and likely save us billions in transition costs. **Flexibility won't matter unless it comes before the network upgrades it will offset. If it comes after, customers will be left facing the cost of unnecessary - and potentially stranded - assets.**

New Zealand delivered energy cost per kWh, historic and forecast.



This chart is from the Electric Homes Report (March 2024), demonstrating the rapidly falling costs of consumer energy resources in New Zealand, now below average grid prices.

For the avoidance of doubt, we are not asking for CER to be favoured in the regulatory regime. We are arguing that, today, CER is disfavoured - the playing field is not level. The longer this persists, the greater the risk that an optimal uptake of CER will not be realised in time to defer or avoid network (and generation) investment.

As raised in our submission to the EA on Targeted reform of distribution pricing:

- Two-way tariffs are needed. Peak tariffs should symmetrically reflect both consumption and flexible contribution. E.g. if business consumption is priced at 20c/kWh during congestion, a -20c/kWh tariff should be provided for export/contribution. For residential, we should provide peak export tariffs similar to the ones being deployed in Australia e.g 26 cents per kWh at peak.
- Support EDB and consumer pilot projects that will rapidly develop necessary knowledge and pathways to a lowest cost, highest resilience energy system.
- Support EDB finance pilots to develop new ways for consumers (especially renters) to finance energy infrastructure that will support the nation. Ensure EDBs have the ability to integrate such processes.

5. Democratising customer data.

The NZ electricity industry has argued for well over 15 years about data ownership and access; yet the regulatory provisions remain cumbersome and slow. To develop innovative services and products that help customers electrify, innovators need access to real customer data in order to refine and trial their offerings. The Electricity Authority is pursuing changes to the current system, but they need to occur quicker. This needs to ensure mandatory open data, aggregated to a level where privacy is no concern. This is entirely feasible on a near-immediate time frame, and its delay is both disappointing and likely to be causing negative outcomes for consumers of the electricity system.

We are happy to meet to discuss this submission.

Thank you for your time,



Mike Casey

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