

Ara Ake submission to Electricity Authority regarding issues paper: *Updating the Regulatory Settings for Distribution Networks*

1. Ara Ake¹ wishes to comment on the 2022 issues paper presented by the Electricity Authority (the Authority): *“Updating the Regulatory Settings for Distribution Networks.”*
2. In the issues paper, the Authority makes clear its intent to prioritise a programme of work regarding the regulatory settings for distribution networks based on feedback from submitters. To this end, Ara Ake has commented on the issue within its immediate sphere of focus – Multiple Trading Relationships, (paragraphs 5.63 - 5.72 and Box 3 on page 57).
3. Ara Ake recommends that the Authority supports Multiple Trading Relationships trials by granting regulatory exemptions in a timely manner to enable those pilots to be deployed. Through these pilots, evidence will be gathered to enable Multiple Trading Relationships to be included in the Electricity Industry Participation Code 2010.

Multiple Trading Relationships (MTR)

4. The issues paper frames MTR as an imperfect solution to a narrowly defined problem: *“that distributors prefer to self-supply non-network solutions (NNS) rather than use competitive procurement”*. However, from a consumer’s perspective, the potential and benefits of enabling MTR are broader than this. MTR is an opportunity to enable innovation and realise significant consumer benefits. MTR can help to provide consumers (households, businesses, community groups) with more choice regarding electricity services; to make investment in DER more economic; encourage innovative new flexibility business models to emerge; increase competition to supply DER and purchase its flexibility; and alleviate energy hardship – when deployed effectively.² This squares with the Authority’s vision for distribution networks in paragraph 2.7: *“Our vision for distribution networks is to support innovation, promote competition and consumer choice in contestable markets such as flexibility services, and maintain reliability and security of supply.”*
5. Paragraph 5.69-70 describe how MTR might be difficult to implement and in paragraphs 5.71-2 the Authority states that *“There is a risk that if consumer uptake is slow, the benefits might not materialise or could be outweighed by the implementation costs, which would be recovered from consumers.”* and that *“While more competition should drive down the costs of flexibility services being offered to distributors (and other buyers of flexibility), the impact on monthly consumer electricity bills of having more than one retailer is not yet clear.”*

Since Ara Ake took a leadership role in developing MTR trials, we have seen a significantly large number of consumers wishing to trial MTR. For them, the concept and benefits of MTR are clear but they have been unable to access that service from their mainstream retailers. We are aware of a draft cost-benefit analyses of MTR conducted internally by the Authority in 2018 (within the ACCES workstream) and we would recommend that the Authority publicly releases it so that we can build on that substantial piece of work and further quantify the benefits of MTR through our trials.

¹ Ara Ake, Aotearoa’s future energy centre, focuses on accelerating the deployment of energy innovation in Aotearoa.

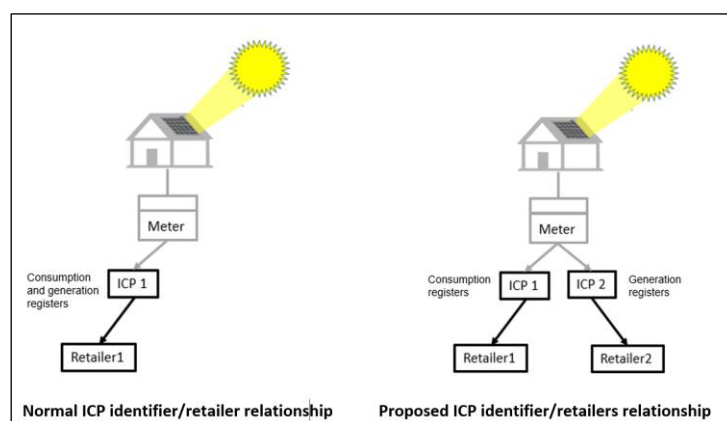
² KPMG analysis for the Australian Energy Market Commission on New Energy Services and Multiple Trading Relationships from 2015: <https://www.aemc.gov.au/sites/default/files/content/0299bffe-193c-4c82-b8d3-36930f578fc6/Report-to-AEMC-KPMG-New-Energy-Services.PDF>

As part of setting up a number of MTR trials, Ara Ake engaged Jade Software to develop a platform to enable MTR transactions. As part of that exercise we also asked for an estimate of the full production costs of a fully operational MTR platform. Ara Ake would be happy to share its findings on expected costs for adjusting the register or metering and retailing software, with the Authority.

Further, to address the Authority’s concerns, enabling innovation trials would be a low-risk way to learn how to best implement MTR affordably and effectively, and gather further evidence that the consumer and system benefits outweigh the costs.

Ara Ake / Kāinga Ora energy sharing trial

- Currently, Ara Ake and Kāinga Ora are jointly developing a MTR trial in Lower Hutt and Porirua that aims to reduce energy hardship for social housing tenants (Kāinga Ora customers). The Government’s Māori and Public Housing Renewable Energy Fund provided Kāinga Ora with the funds to invest in and install the solar assets at almost 200 homes in the area. However, a number of homes were/are not suitable for solar, so they cannot benefit from the associated reduction in electricity bills as those homes with solar installed do. The trial aims to demonstrate a means to redistribute this benefit more broadly amongst Kāinga Ora customers. It also seeks to maximise the value of the Government’s investment in solar and demonstrate how the potential for energy hardship reduction from solar installations is greater than the current regulatory settings allow.
- The proposed concept within the trial includes the separation of the import and export registers at selected ICPs (where solar exists on social housing), so that Kāinga Ora, as the solar asset-owner, can monetise the exported electricity and use these funds to benefit other customers in energy hardship. See diagram below.



- During the trial, the Kāinga Ora customer with solar on their roof can continue to buy their electricity from the retailer of their choice, while the exported electricity would be managed by a retailer contracted to Kāinga Ora. Contracting with one retailer to purchase all of the exported electricity will allow Kāinga Ora to seek the best market price, maximising the benefit of this investment in solar.³ Such an arrangement is not currently permitted in the Code, as each ICP must be registered to just one retailer (and MEP). The import and export registers at an ICP cannot be split and contracted out to two

³ The only other way to achieve such an outcome under current regulatory settings, would be for Kāinga Ora to convince all customers with solar to switch to one retailer willing to offset exported generation against the bills of selected customers that do not have solar (that must also switch to this retailer). Attempting to dictate a customer’s choice of retailer would be contrary to the Kāinga Ora operating principle that requires us to support customers to lead lives with dignity and the greatest degree of independence possible.

different retailers. To address this regulatory barrier Ara Ake and Kāinga Ora have requested regulatory exemptions from the Authority, under the Code, to move ahead with the trial.

Ara Ake and Kāinga Ora first approached the Authority in 2022 to discuss setting up this trial. We were greatly encouraged by a response from the Authority early in 2023, that the Authority will consider our applications for regulatory exemptions (required for each industry participant in the trial) once they have been received and aiming to progress approval process quickly, considering the following:

“The Authority supports the work of other government agencies in implementing wider Government policies, where those policies align with our statutory objectives.”

“The Government has been clear that one of its key priorities is addressing New Zealanders’ concerns about cost-of-living pressures. We understand that the purpose of the trial is to develop a process which will ultimately enable the cost pressures faced by Kāinga Ora tenants to be reduced.”

The final package of exemptions from industry participants in the trial is due to be delivered to the Authority in March 2023. There is an expectation that the Authority will then move quickly through its review process to take a decision paper to its May 2023 Compliance Committee meeting. Ara Ake understands the Authority’s Compliance Committee is responsible for reviewing and approving the request.

9. In a recent independent report titled ‘Enabling Decentralised Energy Innovation’⁴, some energy thought leaders in the UK, namely Jeffrey Hardy, Jessica Britton and Laura Sandys, highlight the barriers and offer solutions that will enable decentralised energy to play a full role in decarbonisation, innovation, and delivering positive outcomes for citizens and communities.

According to this report, one of the barriers to innovation in the UK retail market, including for decentralised energy, is the current supplier hub model, which places energy suppliers as the primary interface between consumers and the energy system. Anyone who wishes to engage with consumers must do so by being a licensed supplier or partnering with one.

The report concludes that the supplier hub model in the UK is a barrier to decentralised energy and that there's a benefit to enabling meter-splitting, allowing consumers to have multiple suppliers at a single meter. This could unlock specialist tariffs, such as those dedicated to local energy, electric vehicles and energy flexibility.

The recommendation from this independent report is identical to the proposal presented by Ara Ake and Kāinga Ora trial to address energy hardship in Aotearoa New Zealand.

Unlocking the value of solar for households, businesses and community groups

10. In addition to reducing energy hardship and addressing a barrier to Kāinga Ora contracting with a different retailer from its customers, the MTR trial helps to unlock more value from solar. This is an important consideration given the number of Aotearoa consumers, including households, businesses and community groups, that have a *strong interest in investing in solar*, or who have already done so.
11. The solar buyback rate (for excess generation injected back into the grid) varies significantly between electricity retailers⁵. Enabling MTR through the unbundling of import/export registers at an ICP could

⁴ https://www.energyfuture.uk/files/ugd/48302b_150ef893bca44712b1bb06f670a1dd70.pdf

⁵ Assessment based on information provided on electricity retailers’ website, as at 09/02/2023.

see a proliferation of competitive offers for solar buyback. This would enable more attractive peer-to-peer trading models, so that those with solar installed could sell, gift or donate their excess generation.

12. A significant number of community groups are interested in owning and operating renewable energy installations, with the goal for benefitting the local community. For example, a Council-owned property, a marae or a school (or group thereof) that would like to make use of their land or roof-space to install solar and share that generation locally. Maximising the possible return on investment, by making solar buy-back rates a more competitive retail market, would help such community groups finance their projects and increase the benefits that are redistributed within their community.

Other MTR use cases

13. Ara Ake has recently launched or in the process of setting-up, other MTR trials to demonstrate some other applications, which could be enabled by MTR. These include:

Maximising the value of a 50kW solar facility installed to power seasonal irrigation pumps at a Hawke’s Bay farm. Irrigation is a significant source of daytime power demand in summer, which is covered by the installed solar. The farmer also has an 8kW array on his home and aims to share the excess solar generation from both his PV installations with others in his community, who have different retailers, and across the five on-farm ICPs. Our Energy and Flick Electric are collaborating to optimise the excess solar generation across ICPs.⁶

Enabling off-peak EV charging with Thundergrid. Participants are offered a discounted smart EV charger, the costs of which are recovered via Thundergrid’s service over time. EV charging is to be managed separate from participants’ grid-fed household electricity consumption.

Provision of flexibility services to the local distribution network across 12 ICPs. This includes 6 eVs, total solar generation of 85kW and total battery storage of 17.5kW. SolarCorp, Cortexo and Our Energy are collaborating in this trial in Canterbury.

These three trials show how MTR is an enabler of technologies other than solar, including more “smart” and controllable DER, which can help manage the drawbacks of solar and optimise its usage – for both the asset owner and the wider energy system.

14. No regulatory exemptions for these trials have been sought yet, so business-to-business collaboration is required to make them happen. Ara Ake has found that relying on business-to-business collaboration to facilitate these MTR trials, in the absence of regulatory exemptions, is challenging. Some retailers are reluctant to participate in such trials, because enabling MTR could erode their customer base, as customers are tempted by other service offers. Such competition is however in the interests of consumers.
15. This is also a source of difficulty for distributors seeking to procure flexibility from the market (rather than self-supply), as per the issues set out in Chapter 5. Due to the one-to-one relationship between a retailer/MEP and consumer at each ICP, retailers are effectively the bottleneck to distributors accessing more consumer-owned DER. If retailers have not developed sufficiently appealing and innovative flexibility offerings (on behalf of their customers that own DER), then MTR is a clear mechanism to challenge retailers to innovate and compete with newcomers.

⁶ <https://www.araake.co.nz/news-and-events/news/mtr-launch/>

Enabling Multiple Trading Relationships in the Electricity Industry Participation Code

16. We are encouraged that the Electricity Industry Amendment Act that passed in August 2022⁷, provides the Authority with new regulatory powers to grant Code exemptions upon request⁸ and enable innovation trials.
17. The Authority should make use of these new powers to encourage and foster innovation, enabling the MTR trial with Kāinga Ora as the first of many. It is however difficult to set up many trials at scale without an agile and timely process to gain regulatory exemptions. We hope to continue our positive working relationship with the Authority to set up more trials in a timely manner.
18. Trials based on regulatory exemptions to given clauses in the Code can help to gather evidence of consumer benefits to justify Code changes and subsequently enable the benefits demonstrated in trial environments to be realised by more consumers. Trials would also allow the Authority and electricity industry participants to find ways to manage or mitigate any costs or harms that might result from such a Code change. Repeated requests for exemptions for the same or related clauses in the Code would suggest that a regulatory barrier exists and should be addressed as a priority.
19. Ara Ake's long-term aim with the MTR trials programme is to deliver enough evidence of consumer benefits to make a request for a Code change.
20. We understand that enabling MTR in the Code would not be a small task, as the one-to-one relationship between customer (ICP) and retailer/MEP is deeply embedded throughout the Code, but also in operating systems, hedging strategies and market participants' offerings (e.g., retail offerings) etc.
21. Nevertheless, Ara Ake and its MTR partners hold the view that enabling MTR has very high potential to unlock and enable DER uptake and flexibility services innovation across Aotearoa.⁹ Other electricity markets, such as the Australian Energy Market Commission (AEMC), are currently considering such a change.¹⁰

⁷https://www.parliament.nz/en/pb/bills-and-laws/bills-proposed-laws/document/BILL_115788/electricity-industry-amendment-bill

⁸ With appropriate terms and conditions in place, as the Authority sees fit.

⁹ Further support for this perspective can be found in Innovate UK, Sustainable Energy Futures' 2023 independent study on *Enabling decentralised energy innovation*: <https://www.ukri.org/publications/enabling-decentralised-energy-innovation/>

¹⁰ <https://www.aemc.gov.au/rule-changes/unlocking-CER-benefits-through-flexible-trading>