

Submission by

Z Energy & Flick Electric



FLICK

to the

Electricity Authority

on the

The future operation of New Zealand's power system

11 April 2024

Introduction

Z Energy (Z) and Flick Electric (Flick) welcome the opportunity to submit on the Electricity Authority's (*the Authority*) assessment of the possible key challenges and opportunities with power system operation in Aotearoa New Zealand over the coming decade and beyond. Our responses to individual consultation questions can be found in Appendix A.

Z is one of New Zealand's largest transport energy companies and the owner of electricity retailer, Flick. Flick was established in 2014 as an independent electricity retailer offering consumers greater choice in where they get their electricity.

Z believes a core component of the transition to a low carbon economy is a scaled domestic EV charging network that enables accessible, affordable, convenient, and reliable charging solutions to meet the needs of drivers now and into the future. Key to achieving this is ensuring sufficient availability of renewable energy and the supporting infrastructure.

We are expanding our EV charging network and to date have installed over 100 charging bays located at 38 Z service stations. We are aiming to have a total of 150 charging bays in place by the end of the year.

We note the work already underway at the Authority to help ensure New Zealand's power system, at both the transmission and distribution level, remains secure and resilient as the country transitions towards a more accessible, clean energy and lower emissions economy.

As the Authority notes in its indicative work programme, "electrifying New Zealand and transitioning to net zero will require a material increase in renewables and distributed energy resource (DER), presenting new challenges to the operation of the electricity market and security of electricity supply."¹

Z and Flick believe the Authority has an opportunity to incentivise investment and behaviour that helps to ensure New Zealand's power system remains stable, secure and resilient to shocks as it evolves with technology and consumers over the coming decades.

We look forward to continuing to work constructively with the Authority and welcome the opportunity to hold a briefing session to go through our submission in more detail.

If there is any information that would be of use to the Authority, please do not hesitate to contact us.

¹ Source: Page 36 https://www.ea.govt.nz/documents/4333/Levy_consultation_paper.pdf

Appendix A: Z and Flick response to consultation questions

Consultation questions	
1.	Do you consider section 3 to be an accurate summary of the existing arrangements for power system operation in New Zealand? Please give reasons if you do not agree.
	<p>We appreciate the thorough summary set out in section 3. While we do not believe we are best placed to confirm whether the Authority's description of the existing arrangements for power system operation is an accurate summary, we agree with paragraph 3.71, which addresses what power system operation may require in the future.</p> <p>We would like to ensure that any assessment of future power system operation is not overly cautious, in particular, when it comes to new technologies. As consumers ultimately pay for the entire power system, they should be given the opportunity to trade-off reliability and cost.</p>
2.	Do you agree that we have captured the key drivers of change in New Zealand's power system operation? Please give reasons if you do not agree.
	<p>We agree with the key drivers identified by the Authority.</p> <p>While we acknowledge inverter-based technologies (IBRs) are becoming more prevalent for generating electricity, we believe the Authority should investigate the broader opportunities these technologies can make to power system coordination.</p> <p>For example, IBR technologies may enable consumers to be:</p> <ul style="list-style-type: none"> • less reliant on the entire supply chain with their own generation and storage; • enable quick response times, as seen in the solarZero/Ara Ake trial²; • offer opportunities to improve system operation by co-locating storage and generation to improve reliability; • offer a more dispersed energy supply system, increasing resilience. <p>We highlight that while New Zealand may be geographically isolated, the drivers of change identified by the Authority are impacting power systems globally. New Zealand has the opportunity to learn from overseas experiences and how 'issues' created by new technologies or change drivers have been and are being managed.</p>
3.	Do you have any feedback on our description of each key driver?
	<p>It would be worthwhile prioritising the drivers in terms of the level of importance and impact on power system operations. For example, this might involve consideration of whether generation technologies have a more significant and ongoing impact on power system operations compared with planning for extreme (unpredictable) weather events.</p> <p>We suggest the Authority use this work programme to try and simplify the Electricity Industry Participation Code (Code) and approach to power system operation, rather than adding more complexity. This is especially relevant to maximise the benefits from consumer-owned DERs.</p>
4.	What do you consider will be most helpful to increase coordination in system operation? Please provide reasons for your answer.

² https://www.araake.co.nz/assets/Winter-Peak-Innovation-Pilot_learnings-and-insights-report.pdf

	<p>As per previous submissions to the Authority, Flick has supported distributors having equal, easy access to consumption information that enables them to operate and manage their networks.³ We note that the Authority will undertake further consultation on this matter later this year and look forward to further discussions.</p> <p>We support initiatives to increase capacity utilisation of existing distribution assets and believe the publication of dynamic information about network capacity using Dynamic Operating Envelopes would be valuable to achieving this. We refer to work by the FlexForum on this topic.</p> <p>Flick agrees with the Authority's assessment that the "power system is evolving into a 'system of systems', with distribution networks providing a platform to utilise new operational technologies".⁴ Given this statement, we query whether the Authority's work programme should also include development of a market / platform to enable price discovery for the supply of these new operational technologies, for example, to incentivise consumer demand response.</p>
5.	Looking at overseas jurisdictions, what developments in future system operation are relevant and useful for New Zealand? Please provide reasons for your answer.
	<p>The detailed information in the Authority's consultation document regarding relevant overseas jurisdictions is very useful. This demonstrates there is the opportunity for New Zealand to avoid 'reinventing the wheel'. We suggest particularly relevant developments overseas include how the United Kingdom (UK) is actively using flexibility services to address power system coordination.</p> <p>We also continue to encourage the Authority to consider offshore regulatory settings which leverage effective system operation by driving competition, such as the non-discriminatory pricing regulations in the UK.</p>
6.	Do you consider existing power system obligations are compatible with the uptake of DER and IBR-based generation? Please provide reasons for your answer.
	<p>We agree with the Authority's description in paragraph 5.29. However, we suggest the Authority focus on simplifying and not adding further complexity to the Code.</p> <p>We believe uptake, exploration and innovation in DER and IBR-based generation is likely to be accelerated if regulatory settings generate confidence that the market is competitive.</p>
7.	Do you consider we need an increased level of coordination of network planning, investment and operations across the New Zealand power system? Please provide reasons for your answer.
	<p>We support an improvement in co-ordination of network planning to the extent that this facilitates and speeds up connection of new load, such as public EV Chargers.</p> <p>As per previous submissions, Z believes a core component of the transition to a low carbon economy is a scaled domestic EV charging network that enables accessible, affordable, convenient, and reliable charging solutions to meet the needs of drivers now and into the future. Key to achieving this is ensuring sufficient availability of renewable energy and the supporting infrastructure.</p>
8.	Do you think there are significant conflicts of interests for industry participants with concurrent roles in network ownership, network operation and network planning? Please provide reasons for your answer.

³ Discussed in paragraph 5.13

⁴ Paragraphs 4.32 – 4.34

	If it is considered that significant conflicts exist, our concern is to ensure that any resulting changes do not place additional costs on consumers.
9.	Do you have any further views on whether this is a good time for the Authority to assess future system operation in New Zealand, and whether there are other challenges or opportunities that we have not covered adequately in this paper? Please provide reasons for your answer.
	<p>Z and Flick agree it is a good time to review future system operation in New Zealand. We believe this assessment should:</p> <ul style="list-style-type: none"> • take into account consumers' expectations about cost versus reliability; • not be too conservative or cautious about new technologies; • have regard to the urgent imperative to connect new load and generation to distribution networks; and • identify opportunities to incentivise innovation and accelerate positive contributions from new technologies to power system operations.

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