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John Rampton
General Manager Market Design
Electricity Authority

By email: submissions@ea.govt.nz

Dear John

Enabling mass participation in the electricity market

We appreciate the opportunity to provide feedback to the Authority's consultation paper on *Enabling mass participation in the electricity market*, published 30 May 2017.

This submission covers our views on:

- a need for problem definition development for network access;
- third party provision of network services; and
- participant definitions: what obligations should apply to who?

We respond to the questions raised in the consultation paper in the Appendix.

Problem definition development needed

We support the Authority's consideration of the impact of potential new and disruptive technology, and whether the existing rule-book facilitates or impedes such developments.

The Authority outlines several programmes of work that focus on removing regulatory barriers and enabling mass participation, and asks whether there are 'gaps' in that programme and what further work needs to occur.¹ We consider work underway from some of the existing programmes, for example multiple trading relationships at Installation Control Points (ICPs)², will be informative for exploring competition and innovation opportunities. For other areas, we think more work is needed to develop problem definitions to assist the Authority in progressing a whole of market approach. The assessment of the potential problems with the current regulatory settings are only partly developed in the paper, before suggesting possible recourse to regulatory intervention.

On network access, for example, we consider evidence of problems is needed to underpin the statement that the "changing environment questions whether the existing open access arrangements are sufficient to support a level playing field."³ Our view is that emerging technology has the potential to reduce the market power of regulated suppliers, as network access by third parties could be encouraged via negotiation of mutually beneficial solutions.

¹ Page ii

² Described at page 36

³ Page 24

If the objective of promoting innovation and competition underpins any evolution of the Code to enhance participation, opportunities to reduce complexity and compliance costs should be considered. We agree with the Authority's view that "we want to make sure that the uptake of both technology and innovation in the electricity industry are not blocked."⁴ The role for the Authority could focus on ensuring the Code does not impede new and disruptive technological development, as well as seeking to be pre-emptive in facilitating it.

Third party provision of network services

We agree with the Authority that "...it is now feasible for other parties to provide aspects of the network service. In particular, it is now possible for third parties to help maintain and enhance network reliability by using batteries or demand response."⁵ However, the discussion neglects the legitimate role for suppliers to enhance delivery of their regulated service through the adoption of emerging technology.

In 2016, Transpower published *Transmission Tomorrow* to identify "challenges and changes ahead and how we will respond to these – new technologies are emerging; the electricity sector is evolving and society is changing around us."⁶ We describe "in our long-term horizon, battery or other storage technologies installed within homes and businesses, vehicles, distribution networks and grid substations could fundamentally alter our business by covering short-term imbalances in supply and demand."⁷

Since that publication, Transpower has been collaborating with a range of stakeholders to investigate how battery storage might fit into the sector in the future. We are anticipating releasing a battery report, later in 2017. This report is unique to the NZ context and has benefited from stakeholder input (generators, MEUG, and several EDBs). The research objective was to investigate how the value of battery storage technology differed between transmission, distribution or behind-the-meter of end consumers.

The regulatory environment created by the Commerce Commission and the Electricity Authority in the emerging technology space should align and be conducive to regulated suppliers taking up new and emerging technology where it would improve efficiency (lower cost and better service quality) and enable innovation. The regulation should be agnostic about whether cost and quality outcomes are best achieved through third-party, self-supply or a mix of the two.

We are encouraged by the announcement of the recently formed energy regulators council⁸ as support for sharing regulatory objectives and developments including in the emerging technology policy area.

Reviewing participant definitions under new technology use

The Authority states that "technology is providing different ways to supply electricity and enabling parties to interact with electricity markets in different ways. One effect is more parties are becoming participants without realising it. This raises the question of whether these parties should be subject to none, some, or all, of the provisions of the rulebook."⁹ We agree.

⁴ Page 7

⁵ Page iii

⁶ *Transmission Tomorrow*, page 2, available at www.transpower.co.nz

⁷ *Ibid* page 23

⁸ Carl Hansen, speaking at Regulatory Mangers and Consumer meeting 20 June 2017; the council comprises: Ministry of Business Innovation and Employment, the Electricity Authority, Commerce Commission and Gas Industry Council.

⁹ Section 7.11

The following examples highlight the importance of thorough analysis of the current state:

- the recent legislative change for secondary networks¹⁰ that applies all the rules of distributors to secondary network owners, risks creating many instances of unknowable (by secondary network owners) non-compliance;
- the early conclusion by the Authority that “a person who owns a battery can be treated as a generator participant and required to comply with the relevant obligations in the Code”, may conflict with a premise of removing regulatory barriers to technology uptake; and
- Technical codes are written from the perspective of traditional technologies, and compliance requirements may not suit modern technologies.

The analysis could include outlining the rationale for the obligations on different participant types, and what (if any) obligations are amenable for transposition to a new market structure.

Finally, we support the Authority’s view described in its recently published work programme: “wherever possible we seek voluntary market facilitation measures rather than Code amendments. We are mindful of the burden that extra Code provisions can impose on market participants and the value from evolving market arrangements overtime rather than fixing them in the Code.”¹¹

Please contact me in the first instance if you have any questions about this submission.

Yours sincerely



Catherine Jones

Regulatory Affairs and Pricing Manager

¹⁰ Energy Innovation (Electric Vehicles and Other Matters) Amendment Act 2017

¹¹ Electricity Authority’s 2017/18 work programme, published 11 July available at <http://www.ea.govt.nz/dmsdocument/22305>

Appendix – response to questions

Question	Response
Q1. What is your view of the potential competition, reliability and efficiency benefits of more participation?	<p>We define 'participation' to mean active or passive participation, where active participation includes being engaged and choosing to respond to price signals and / or small-scale injection (consumer with PV on roof).</p> <p>We consider there would be more producers / sellers in the electricity market and new ways to transact/buy from them.</p> <p>We anticipate there could be significant gross benefits, but net benefits would depend on the costs of increased participation by more producers/sellers of electricity.</p>
Q2. What is your view of the opportunities to promote competition and more participation in the electricity industry?	<p>We anticipate there is likely to be benefit from reducing the complexity of current market entry for retailers (sellers) and producers.</p> <p>The aim of any regulation should be to encourage consumers to connect to networks as efficiently as possible.</p>
Q3. What other issues might inhibit efficient mass participation? Please provide your reasons.	<p>Efficient mass participation may be inhibited by small participants being subject to many obligations i.e. a high cost of participation, and potential for misunderstanding the role of price signals.</p> <p>In addition, accurate forecasting of mass participation will be important for development of effective price signals.</p>
Q4. What is your view of the opportunities for network businesses to obtain external help to provide aspects of the network service using competition or market mechanisms?	<p>The opportunities are good. Under our demand response program, parties respond to a price signal we send during an "offer window". Parties can offer a price at or below the Event Price. When the offer window is closed, the cheapest offers are selected that meet requirements. The process creates downward pressure on price and ensures Transpower receives competitive offers from the market.</p>
Q5. What do you think are the main challenges to be dealt with to increase the use of competition in supplying network services? What are your reasons?	<p>We consider the driver for use of third party provision is a function of the incentives for EDBs and Transpower to reduce costs through innovation and efficiency improvements i.e. how effectively economic regulation under Part 4 is operating.</p>
Q6. What is your view on whether open access is required and what would be the elements for an effective open access framework?	<p>Further work on problem definition is required to answer this question, especially for distributors. Residential level technologies such as batteries, photovoltaics and electric vehicles may generate at different times of the day, and self-dispatch needs to be facilitated.</p> <p>For Transpower, we consider network access is not an issue that is specific to or particularly related to new technology. Access to the grid for generation is managed through market offers; and</p>

	for connection, via the connection code ¹² and other asset performance obligations under Part 8. Anti-competitive behaviour would be a matter for the Commerce Commission. ¹³
Q7. How effective are the existing arrangements for open access? What are the problems?	See response to Q6.
Q8. What type of distributor behaviours and outcomes should the Authority focus on to understand whether changes are required to support open access?	See response to Q6.
Q9. What changes to existing arrangements might be required to enable peer-to- peer electricity exchange?	<p>We consider the existing programme for multiple trading relationships could be informative for any change to arrangements.</p> <p>If Peer-to-peer trading is a financial overlay rather than a physical market, then trading could be assisted by a consumer's right to allow third party access to their meter data.</p>
Q10. What are the costs and the benefits of enabling peer-to peer electricity exchange?	We consider the existing programme for multiple trading relationships could elicit some information about costs and benefits.
Q11. What is your view of the possibility for, and impact of, any current or future blurring of participant type? What are your reasons?	<p>A structural change in to a broader market could necessitate review of who to classify as 'participants' and what obligations participants should be subject to.</p> <p>The review could include seeking opportunities to reduce complexity and cost to promote market participation, although cognisant of the rationales for existing technical and service obligations.</p>
Q12. What types of participation are or might be prevented because the party is not recognised as a participant? What are the potential impacts?	Greater participation may be deterred if there are too many rules to comply with (cost to participate is high).
Q13. What challenges might new forms of generation, such as virtual power plants, or small and dispersed generators, face in entering the market?	<p>We consider there are two ways to consider this question:</p> <ul style="list-style-type: none"> • What evidence is available now of the challenges being faced by small-scale generation entry? • What future challenges may small and dispersed, or virtual, generation face to enter the market?

¹² EIPC Part 12 Benchmark Agreement Schedule 8 Connection Code

¹³The Commerce Commission outlines its role in the electricity industry
<http://www.comcom.govt.nz/regulated-industries/electricity/electricity-role/>

	Other participants (current or potential) may be better placed to outline their experience and or future risks they are considering.
Q14. What changes might be required to the rule book to facilitate the emergence of virtual power plants or demand response?	We note that contracting for demand response does not require counterparties to be participants.
Q15. Would the functioning of the market for hedges and PPAs and the availability of finance be improved if there were greater transparency of long-term prices and greater standardisation of terms and conditions for long-term contracts?	Although we consider the Authority has improved the functioning of the hedge market, we are unclear how this level of pricing risk management would apply to mass participation of small scale sellers and buyers. We consider more work on the problem definition is needed.