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Dear Kimberley

Electricity Authority / Commerce Commission Joint Project

Thank you for the opportunity to participate in the workshop convened by the Electricity Authority (the EA) and the Commerce Commission (the Commission) on 28 May 2019, to discuss electricity distributors' (EDBs') participation in markets for contestable electricity services.

This is Vector's response to the invitation to provide supplementary information regarding issues raised in the workshop. It may be publicly disclosed. Vector's contact for this submission is:

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Background

As outlined in our response to the draft Terms of Reference (ToR), the emergence of new energy technologies is changing the way customers use the distribution system – from a traditional passive 'one-way' consumption model to a much more active 'prosumer' role. New technologies are also blurring the boundaries between 'monopoly' and 'competitive' elements of the electricity supply chain. For instance, battery storage can serve both as an embedded part of a monopoly and provide competitive services such as wholesale market demand response.

Emerging technologies offer potentially transformative benefits for both networks and electricity users. For example, electrification of the transport system will be critical to enabling the transition to a zero-carbon economy, while demand-side response can be used to flatten peak demand and reduce the need for costly network upgrades. However, by its nature the trajectory of future technological development is subject to considerable uncertainty, which creates risks for both consumers and network companies.

In the context of rapid technological change, regulators should avoid imposing onerous restrictions on EDBs that are likely to have a chilling effect on investment and/or limit opportunities for efficient coordination across different layers of the supply chain. This is particularly important in the New Zealand context, given our small size and limited number of players in the market. Enabling the industry to meet the challenges of the new energy future requires a regulatory framework which is

proportionate and considers opportunities for coordination and innovation alongside a traditional focus on competition.

Comments on Workshop

The workshop on 28 May reinforced our view that there is no clear evidence of a problem that needs to be addressed. The case studies presented were purely hypothetical and not based on any real-world evidence.

Although some non-EDB suppliers at the workshop did express concerns regarding potential risks to competition arising from EDB participation in contestable services, in most cases these concerns were alleviated once participants understood the regulations that are already in place to ensure a level-playing field between EDBs and other suppliers. For example, the Commission's cost allocation rules ensure that only costs that are genuinely attributable to the regulated service can be allocated to the Regulated Asset Base (RAB) and recovered through lines charges. Furthermore, the related party transactions rules ensure that EDBs do not unfairly favour related businesses over independent service providers.

Our discussions at the workshop indicated that some participants were unaware of these rules, which suggests there is a need for better communication with unregulated suppliers regarding the regulatory framework around EDB participation in contestable services.

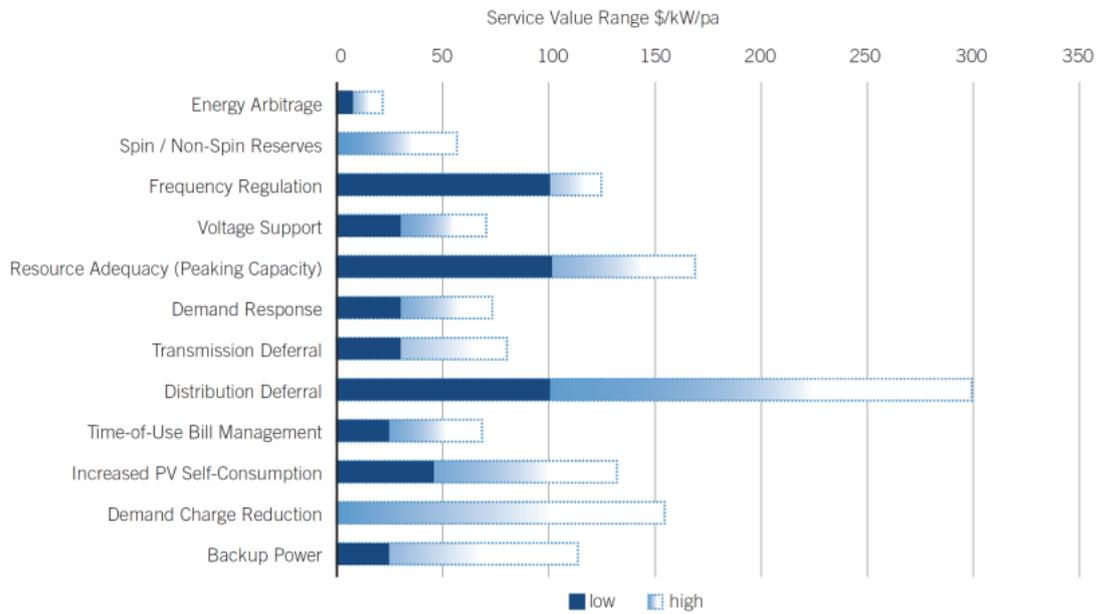
Participants at the workshop also acknowledged that in the early stages of development of a new technology, there can be benefits to all parties from having more players in the market. For example, in the case of electric vehicles (EVs), limited availability of charging stations can create 'range anxiety' which presents a barrier to EV uptake. Having more providers in the market enables faster roll-out of charging infrastructure, which in turn incentivises greater EV uptake – benefiting all charging station operators.

Other important benefits of allowing EDBs to participate in markets for emerging technologies include:

- Ownership of assets by EDBs can help to overcome contracting challenges, strengthen accountability, and provide additional flexibility. For example, grid-scale batteries may need to be redeployed across the network in response to locational constraints, which is challenging under a third-party contracting model
- Lines companies are uniquely placed to manage peak demand on the distribution network and have strong incentives to do so. As shown in Figure 1 below, analysis by Transpower suggests that deferral of distribution investment is by far the biggest potential benefit that a battery can provide. Furthermore, we estimate that the benefits from battery investment are a significantly higher under a distributor-led versus retailer-led scenario, as summarised in Table 1 below
- The majority of EDBs are consumer-owned and have strong ongoing relationships with the local community, making them well-placed to invest in community-level projects involving emerging technologies. For example, Vector's Vehicle-to-Home (V2H) trial in Piha is exploring the potential network and resiliency benefits of V2H technology in areas that are more remote from the main distribution grid. Similarly, our Kupe Street trial demonstrated

how a future community energy solution might operate by installing solar and battery storage in each home.

Figure 1: Value of battery benefits



Source: Transpower

Table 1: Estimated battery benefits under retailer vs distribution-led scenarios

Scenario	Annual Benefit (\$M)	10 year NPV benefit (\$M)
Retailer-led scenario	165	\$1,015
Distributor-led 50%	413	\$2,535
Distributor-led 80%	660	\$4,055

Source: Castalia analysis based on Transpower estimates/assumptions

In summary, the discussion at the workshop has reinforced our view that any risks to competition arising from EDB investment in contestable services are small, and are already well-regulated under the existing framework. By contrast, the potential benefits from EDB investment are large, for networks, consumers, and in many cases independent suppliers.

Yours sincerely



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