



9 May 2022

Submissions
Electricity Authority
Level 7, Harbour Tower
2 Hunter Street
Wellington

Via email fsr@ea.govt.nz

Tēnā koutou,

Consultation Paper - Opportunities and challenges to the future security and resilience of the New Zealand power system

Powerco welcomes the opportunity to submit on the Electricity Authority's (EA) Phase 2 Roadmap. The roadmap aims to identify the work required to address the challenges and opportunities identified in Phase 1 in relation to maintaining security, stability, and resilience at the transmission system level.

Although focused on the transmission system level, we believe some of the initiatives outlined will have an impact at a distribution system level. To help inform phase 3 (studies and solutions), we make the following comments:

- Some of the initiatives will have an impact to the security, stability, and resilience at the distribution system level, so can't be looked at solely from a system operator perspective. Of the activities to address the opportunities and challenges, there may be a requirement for significant change of distributors as processes and systems are transformed to facilitate the required information. A co-design process that incorporates stakeholders, not just at a transmission system level is vital to ensure correct and representative functionality is developed.
- The roadmap will benefit from more clarity about the roles and responsibilities of the SO and market participants to enable DER services. Functionally and operability of DER services on distribution networks varies significantly between generation location and sizes. For example, large scale distributed generation such as a solar farm connected to a HV network has different control and visibility than small scale distributed generation such as domestic rooftop solar. Delivering initiatives in this space will require a cohesive approach across a range of parties and dimensions (eg Electricity Authority, Commerce Commission, distributors, Transpower, DER providers) so that data and network systems support a successful implementation.
- The roadmap illustrates that centralised dispatch of DER is the most efficient outcome for the New Zealand electricity system. Wholesale market outcomes are indeed one source of value for DER owners, but there are other sources of value such as DER providing services to distribution networks.



- To enable real-time DER dispatch when it's connected to a distribution network, the provider, system operator, and distribution network operators to account for network constraints. The system operator does not have visibility of these and there may be alternative means for coordinating supply and demand in the market and system. For example distributors could have an operator role to dispatch DER accounting to maintain the security, stability, and resilience at the distribution system level.
- We encourage the team to provide more information, even if qualitative, about the factors affecting the timing and cost/benefit of the different initiatives.

If you have any questions regarding this submission or would like to talk further on the points we have raised above, please contact David Hendry (David.hendry@powerco.co.nz).

Nāku noa, nā,

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