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Electricity Authority
Te Mana Hiko
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Tēnā koutou

ISSUES PAPER—REVIEW OF COMMON QUALITY REQUIREMENTS IN PART 8 OF THE CODE

Unison Networks Ltd (Unison) operates electricity distribution networks in Hawke's Bay, Taūpo and Rotorua, and Centralines Limited (Centralines) operates the electricity distribution network in Central Hawke's Bay.

Unison and Centralines support the Authority's work addressing increasing issues with the common quality requirements in Part 8 of the Code to ensure security, resilience, and reliability of the power system. This submission provides high-level answers to questions 2, 4, 5, 6 and 8 of Appendix B. Unison's engineering team is happy to provide examples and technical information to the Authority directly if that would assist.

Q2. Do you agree with the description of the second common quality issue (ie, first voltage-related issue) and that addressing it should be a high priority? If you disagree, please provide your reasons.

Unison and Centralines agree with the description and support standards-based solutions such as the Volt-Var control mode in AS/NZS 4777.2-2020 as a mitigation at the distribution level. Further industry studies may support additional measures. Adequate evidence should be collated and tested within the industry to establish fit-for-purpose regulatory intervention.

Q4. Do you agree with the description of the fourth common quality issue (ie, third voltage-related issue) and that addressing it should be a high priority? If you disagree, please provide your reasons.

Unison and Centralines agree. However, the Authority says:

As with the frequency-related obligations in Part 8, the Authority could direct generating stations exporting less than 30 MW to a network to comply with the fault ride through obligations in Part 8, if the Authority considered there was a benefit to the public. However, doing this on a station-by-station basis would be expected to have relatively high transaction costs.

Voltage swings are currently studied for major plants under 'the Process for obtaining approval' contained in Schedule 6.1.¹ Unison and Centralines support the development of standards and settings applicable to inverters, to mitigate these risks, and create a consistent and efficient process for stakeholders. However, extending all fault-ride obligations in Part 8 may not continue the existing incentives to connect that scale of generation. It would be unfortunate to add an overly prescriptive or restrictive set of requirements that act as a disincentive to medium plants. Unison and Centralines support a middle ground that will serve all stakeholders.

It would be beneficial to test within the industry what consistent and appropriately balanced parameters (set by standards) could apply to generation stations less than 30MW. Further industry studies may establish what is 'appropriate' at each scale to ensure adequate regulation and promotion of renewable generation.

Unison and Centralines support the following outcomes:

- consistent requirements for generators to understand and expect from all distributors;
- simple requirements for distributors to ensure administrative and cost efficiencies; and
- encouraging efficient location (through advantageous pricing or standards) for medium plants that can assist distributors to address network constraints (adding supply at the right place to serve increasing demand) or access resilience benefits (through creating the ability to create a mini-grid in an emergency situation).

Q5. Do you agree with the description of the fifth common quality issue and that addressing it should be a high priority? If you disagree, please provide your reasons.

Unison and Centralines agree with the problem and support modernised best practice harmonics standards to suit new and existing technologies. Consultation on proposed updates should test the suitability of those standards to existing and anticipated future use of the grid.

¹ Electricity Industry Participation Code 2010, Part 6 Connection of distributed generation'.

Q6. If you are a distributor, what is your experience of asset owners sharing information with you for network operation purposes?

Obtaining the information required in a consistent and timely manner to support planning and management of the network to ensure security and reliability along with enable efficient connection of DER is difficult for the range of reasons identified in the problem description. Unison or Centralines have had difficulty obtaining fault and status data for impact fault studies. Solutions to standardise and streamline the availability of this information would assist with addressing this problem including from Small Scale Distributed Generation.

Q8. Do you agree with the description of the seventh common quality issue and that addressing it should be a high priority? If you disagree, please provide your reasons.

Unison and Centralines agree and support the Authority revising Part 8 of the Code and ensuring the terminology and requirements are fit-for-purpose and facilitate a dynamic energy future.

Ngā mihi,

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