

The Electricity Authority
via email fsr@ea.govt.nz

15 July 2025

Consultation Paper – Promoting reliable electricity supply – a voltage related Code amendment

Thank you for the opportunity to comment on this proposed Code amendment.

Mercury broadly supports the proposed amendments however we have the following concerns around how they sit within the wider context of the electricity system:

1. Power factor requirements under the Benchmark Agreement

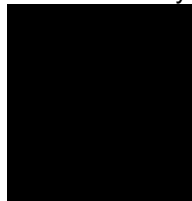
The requirement for embedded generators to be in voltage mode and provide reactive support in Part 8 of the Code is incompatible with the requirements to maintain power factor at the GXP under the Benchmark Agreement. It is our strong view that power factor requirements under the Benchmark Agreement should be addressed in tandem with the proposed changes for voltage support from embedded generators.

2. Coordination of control systems and settings

If voltage control is required of embedded generators, the control systems and settings will need to be co-ordinated between generators, the distributor and Transpower so that the control systems do not “fight” each other. This is likely to require additional studies and discussion. While larger EDBs may have the capability to manage this inhouse, smaller EDBs may struggle with this aspect due to limited resources. Failure to do so may well result in a worse outcome than embedded generation not providing voltage support at all.

We urge the Authority to undertake additional measures to ensure that the above inconsistencies are addressed.

Yours sincerely



Jo Christie
Regulatory Strategist

Appendix: Mercury Submission

Question	Comment
Q1. Do you agree the issues identified by the Authority are worthy of attention?	Yes.
Q2. Do you agree with the objective of the proposed amendment? If not, why not?	Yes.
Q3. Do you agree we have correctly identified the benefits and costs of the proposed amendment?	Mercury disagrees that the incremental costs associated with new electricity generation technology having fault ride through capacity are negligible and that additional fault ride through studies won't be required. Our experience is that the System Operator requires a significantly larger number of scenarios to be studied. These studies come with considerable time and cost, would be onerous for smaller generators to complete, and further tax the limited specialist resources required to carry out such studies. We suggest it would be appropriate and adequate to have simplified arrangements for generating stations with an output of less than 30 MW. Such arrangements could include a supplier statement that technology complies with "no trip zone" settings.
Q4. Do you agree the benefits of the proposed amendment outweigh its costs?	Yes.
Q5. Do you agree the proposed amendment is preferable to other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	Yes.
Q6. Do you agree the proposed amendment complies with sections 17(1) and 32(1) of the Act?	Yes.
Q7. Do you have any comments on the drafting of the proposed	We have the following comments on the drafting of the proposed amendments:



amendment?	<ul style="list-style-type: none"> i. We note that grid connected generation is only required to provide capability when synchronised, whereas under Schedule 8.3, Part 5, clause 2C embedded generators must provide capability when “electrically connected”. This could imply that embedded generators are required to provide capability 24/7 regardless of whether generating or not (i.e. STATCOM mode). Some generating technologies only have capability to provide reactive support when generating (e.g. Doubly Fed Induction Generators). We recommend that the capability should only be required of embedded generators when the embedded generating station is generating, in alignment with grid connected generation and plant capability. ii. In our view the date 1 July 2026 specified at clauses 2B(d) and 2D(b) is too close for an exemption. The lead in time on plant design means that commitments will already have been made on plant that will be commissioned after this date. We recommend an additional 12- 18 months would be more appropriate for the exemption, for example making the date 1 January 2028.
------------	---