6 October 2026

Connections Team
Electricity Authority
By email: connection.feedback@ea.govt.nz

Tēnā koe,

Supporting distributed generation connections while maintaining network quality

We welcome the opportunity to respond to the Electricity Authority (**Authority**)'s issues and consultation paper on plug-in generation, and Code improvements for export limits and connections processes.

Our summary observations are:

Plug-in generation offers more consumer choice	• We support regulations enabling plug-in generation to improve consumer choice. • The current Code is disproportionate for this type of distributed generation (DG) so the Authority needs to assess options that will support uptake while mitigating potential issues with network performance • Simple standards and monitoring should be adequate, at least initially until uptake and assessment provides more information over time.
Improvements to aspects of DG connection	• We support the intent of the Code improvements related to export limits and connection processes. Many of these reflect existing Powerco practice • A ban on smart inverters/dynamic limits has not been justified and should not proceed. EDB management of export limits, including through communicating inverters, would future-proof DG options for customers, provide for equity between existing and future DG customers, not materially constrain customer choice, while supporting efficient future system operation.

We comment on these observations in response to the Authority's questions in the attachment. This submission does not contain any confidential information. We are always keen to meet with the Authority to discuss and develop the ideas in our submissions. In the meantime, if you have any questions or would like to talk further on the points we have raised, please contact Irene Clarke ([redacted]).

Nāku noa, nā,

[redacted]

Emma Wilson
Head of Policy, Regulation and Markets
POWERCO

POWERCO

Powerco responses to consultation questions – Plug-in generation and Code improvements for export limits and connection processes

Questions	Comments
Plug-in generation	
Q1. Do you have any views on our characterisation of plug-in generation?	We agree that plug in generation could make home generation an option to more consumers. In principle, we support regulations providing for this option to improve consumer choice. The current Code requirements are not proportionate for this type of distributed generation (DG) so the Authority does need to assess options that will support uptake while mitigating potential issues with network performance.
Q2. What network performance requirements should apply to plug-in inverters in New Zealand, and why? Q3. What do you think of the Authority excluding plug-in generation standards from the Code?	Key aspects to assist with network performance will be: • A size limit, eg 800W • A number limit eg 1 per ICP • Inverter complying with a recognised (or potentially new) AS/NZS standard eg anti-islanding controls, power quality (e.g. harmonics and flicker limits), Volt-Watt mode (self-curtailment) • Updates to AS/NZS 3000 standard for wiring and safety We agree that requirements, including network performance requirements, are best addressed through the Electrical Safety Regulations and standards like AS/NZS 4763 which covers portable inverters rather than the Code for this type of device. The Code could usefully identify that this is where the requirements sit.
Q4. Do you agree that in the absence of a professional intermediary, it will be challenging to obtain a Part 6-type application from a plug-in generation consumer? Why, why not? Q5. For a consumer to connect plug-in generation to their premises, should some form of Part 6-type application process be required? Why, why not? Q6. If a form of Part 6-type application process should be implemented for plug-in generation, do you see that is a notification/registration, or an application that requires distributor approval? Why? Q7. What information should be required if a registration or application for a plug-in generation unit is to be implemented? Q8. Would participants benefit from a registry that captures information about plug-in generation? Why, why not?	We agree that the Part 6 requirements are not proportionate for plug-in generation, and are unlikely to be practical as professional installers are not involved. A simple registration process (such as through point-of-sale) could assist with retailers and distributors awareness about a device, and which device, is operating on an ICP. However, a registration system with an obligation on a purchaser to notify a retailer is unlikely to be successful, and therefore not proportionate to the issue: • Given the portability of plug-in generation, it would be difficult to keep information current • The costs of administering a registration system are likely to outweigh the benefits, as the system would not contain records of all the devices. Rather than relying on registration, our recommendation is that the Authority focus on requiring the devices to meet recognised standards, and limiting the size and number per ICP.

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Q9. Should the existing registry be used? Why, why not? Q10. Should entering information about plug-in generation be a requirement only after export has been identified at an ICP? Why, why not? Q11. Would the type of information able to be collected at point of sale be sufficient to meet industry needs? Why, why not?	
Q12. Should the MEPs reverse power indicator be leveraged in identifying potential plug-in generation export? Why, why not? Q13. Do you agree there is merit in considering whether retailers should be the primary customer interface for plug-in generation registration/ notification? Why, why not? Q14. Do you have any other suggestions on how consumers could be informed of Code requirements for plug-in generation?	We agree that existing mechanisms such as MEP's reverse power indicator could be leveraged to retrospectively identify presence of plug-in generation and estimate the device rating. Retailers should be the first point of contact for customers. It is the retailer that a customer has a direct relationship with rather than the EDB or MEP. Information about plug-in devices received by retailers should be available for all relevant participants, including EDBs. Retailers could receive this information from a point of sale process, or directly from their customer. As noted in the previous response, relying on customers to notify retailers is unlikely to provide complete records about these devices. Point of sale and/or retailer information about the size and number limit on devices per connection is recommended as the primary measure to manage consumer use of these devices.
Q15. Should an ability for plug-in generation consumers to receive payment for export be predicated by some form of Part 6 application and approval process? Why, why not? Q16. What measures could be implemented to inform consumers of electricity export at their ICP that is potentially associated with plug-in generation, and what information should this include? Q17. Should consumers be proactively informed of the potential for plug-in generation to export to a network. If so, which party is best placed to undertake this education role?	We recommend options are made simple for customers with plug-in generation, and that the Authority develop information or guidance on options and considerations for customers, including to export. Retailers are again best placed as the primary point of contact. Payment for export may be an option in a small number of cases with plug-in solar. As this would require appropriate metering and arrangement with the retailer, which could be a scale trigger for a Part 6 process.
Q18. What issues do you see with more UFE in the reconciliation system as a result of more export from plug-in generation? Q19. Do you agree with our view that plug-in generation export with no measurement enabled can be treated as UFE in reconciliation processes, with no	Powerco does not have a view on this.

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need for formal gifting documentation? Would your view change as plug-in generation increases? Q20. If gifting documentation were to be required by a plug-in generation consumer, how could this be facilitated?	
Q21. Are there other genuine issues identified by the reverse power indicator? Q22. Should the requirement on the MEP to notify the retailer via a reverse power indicator be reconsidered, if more plug-in generation is used? Why, why not? Q23. Is there a way for a MEP to filter out plug-in generation related reverse power indicators? Q24. Should Part 10 include an exclusion for requiring import/export metering for plug-in generation? Why, why not?	Powerco does not have a view on this.
Q25. Should Part 6 clarify requirements for a plug-in generation system being connected alongside approved permanently-fixed DG? Q26. Should the Code clarify limits on the amount of plug-in generation capacity that can be connected at an ICP (noting any standards developed may define limits)?	We agree that if a customer has existing fixed DG connected, and therefore has existing approvals and metering set up, then any additional plug-in generation at that ICP should be subject to the same total export limits for that ICP, eg 10kW total. This principle should also apply to other generator output such as batteries or vehicle to grid devices. Part 6 should be updated to clarify that default or approved limits are for all outputs at that ICP. The combination of fixed and plug-in generation, or multiple plug-in generation, or other generation output devices could impact power quality in some circumstances. A limit on the size of the plug-in system, and a limit on the number per ICP, is recommended to manage this.
Q27. What sources of information could the Authority use to monitor uptake of plug-in generation and/or any issues that may arise? Q28. Do you agree with our overall characterisation of the challenges of plug-in generation? Why, why not? Q29. Which of the challenges outlined in this paper present the most pressing issue for the Authority to address?	We agree that any Code changes related to plug-in generation should be proportionate, technology-neutral, interoperable with future consumer energy resources, represent a 'least regrets' approach, and avoid creating real or perceived barriers to plug-in generation uptake, while managing any current or future risk. Measures for plug-in generation should be developed now, ready to be implemented alongside the broader regulatory framework to allow plug-in generation. Initially, Code requirements could be light-touch, while the uptake and impact is monitored. While Powerco supports customer choice and uptake, there could be a risk for network quality. Monitoring will be important, alongside a willingness for the Authority to change Code requirements should closer management of these types of devices prove necessary.

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	The challenge will be to establish proportionate requirements that enable uptake while providing distributors an ability to respond to potential impact.
DG code change proposals	
Q30. Do you agree the Code should be amended so the 10kW default export limit also applies to Part 1 applications? Please explain your views.	Yes, Powerco supports this proposal. We already implement this approach with an objective for the default 10kW to be available to as many applicants as possible.
Q31. Do you agree the Code should be amended so that distributors cannot limit their approved inverter lists to only communicating smart inverters or use their COPS to mandate smart inverters or flexible/dynamic export limits? Please explain your views.	Powerco does not agree with this position. New Zealand's inverter market is closely aligned with Australia's. The Clean Energy Council (**CEC**) list of inverters that meet AS/NZS 4777 is referenced by many EDBs (including Powerco) for approved inverters under Part 6. Analysis of CEC's approved inverter list indicates that approximately 89%, also appear in the CEC's *Inverters Approved to CSIP-AUS* table. This suggests that smart inverter capability is already available across the vast majority of devices entering the New Zealand market and has become a reasonably standard feature. Australia is gradually moving to requiring smart inverters nationwide - most states already require this. While New Zealand may not be in the same position as Australian states to need smart inverters now, we will probably reach that point in the next few years. Preventing EDBs from specifying smart inverter capabilities could have the unintended consequence of encouraging deployment of a relatively small subset of lower capability devices, despite the broader market already moving toward enhanced functionality. Powerco supports Code provisions that will facilitate options for customers to connect small DG now and in the future. This means the Code needs options for both customers and distributors that are future-proofed, rather than targeted just for today's context for small DG. While congestion may not be widespread on the LV network now, once congestion occurs, it will be too late to require smart inverters tor dynamic limits to manage congestion and/or continue to enable DG connections. This is the same principle as utility scale DG having dynamic control installed – it is not used it unless needed. But it needs to be installed on commissioning or it will not happen and will be costly to install later Powerco is currently receiving up to 4,000 applications per year for DG connections up to 10kW. While congestion is not imminent on most urban LV systems, once it does occur, there will then be no practical and efficient means to retrospectively lower the export limits of any existing DG if they were approved under a static limit and/or have a non-communicating inverter. The static limit is for all practical purposes then a guaranteed firm capacity that inequitably reserves network capacity perpetually for existing DG, thereby excluding access to network export for their neighbours. A flexible or dynamic

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	limit will be of very little value to later adopters, as their minimum export limit will be close to zero (notably coinciding with peak capability). Prohibiting smart inverters as they are not required right now (as per the proposal), is accepting first mover advantage, and preventing any future-proofing of DG connections and network management. The consultation paper does not accurately reflect the costs and benefits of this proposal. For example, the marginal cost of requiring smart inverters is likely negligible, but the paper calls out this cost (while not quantifying it). The paper talks about consumer choice, but does not reflect that static inverters are a very small proportion of the approved inverter list and EDB discretion would not materially constrain consumer choice. The paper does not address the costs and benefits of first mover advantage, or of congestion management, or of retrofitting communications functionality if required in future by network constraints. We recommend the Authority not proceed with this proposal. Distributors must be enabled to manage export limits through their COPs, including communicating inverters and/or other mechanisms. This will enable both existing and future DG customers to take up the DG opportunity equitably, support efficient future system operation, and represents a proportionate regulatory option relative to the benefits for the growing residential solar sector.
Q32. Do you agree the Code should be amended to allow distributors to 'build in' an extra 10% DG penetration when doing a network study, that may lead to parts of networks qualifying for export limits below 10kW? Please explain your views.	Yes, Powerco supports this proposal. We agree that this should be an option rather than a requirement.
Q33. Do you agree that a 10% allowance (as an interim measure) reduces the need for frequent network assessment. If not, what alternative level of allowance or approach should the Authority consider and why?	Yes, we agree that a 10% allowance level is appropriate.
Q34. Do you agree the Code should be amended to explicitly require distributors to offer both Part 1A and Part 1 DG application processes? Please explain your views.	Yes, Powerco agrees with the intent of this proposal. The streamlined Part 1A option should be available where the relevant requirements are met. We currently have a streamlined (Part 1A) option as the default. If an application does not meet the requirements, it will then be pushed into a standard Part 1 process. Our applicants are usually aware that there is a more streamlined process when requirements are met but would not reference this to the alternative application pathways under Part 1A or Part 1, and do not necessarily have the right information to "elect" a Part 1A process. An expectation that an applicant elects to apply under either Part 1A

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	or Part 1 is not practicable in our experience. We recommend the Code amendment be adjusted to achieve the intent that a 1A process is available as a default, and/or that application information is clear about the options and link to Part 1/1A, rather than the applicant needing to specifically elect it. We recommend adjusting the wording in Schedule 6.1 as follows to require distributors offer a streamlined Part 1A process for applications that meet the requirements: **1D When application may be made under Part 1A** (1) A ~~**distributed generator may elect to apply to a**~~ distributor **must process an application** under Process 1A instead of Process 1 if the distributed generation to which the application relates— (a) is designed and installed in accordance with AS/NZS 4777.1:2016; and (b) incorporates an inverter that— (i) has been tested and issued a Declaration of Conformity with AS/NZS 4777.2:2020 by a laboratory with accreditation issued or recognised by International Accreditation New Zealand; and (ii) has settings that meet the distributor's connection and operation standards. … (3) A distributor must offer a distributed generator the opportunity to ~~**elect to**~~ apply to the distributor under Part 1A ~~**or Part 1**~~ and, if the ~~distributed generator makes an~~ application **meets the requirements in subclause (1) to be made** under Part 1A, the distributor must process the application in accordance with clauses 9A to 9H. …
Q35. Do you agree the Code should be amended to make it clear distributors cannot extend timeframes for Part 1A applications, but should not be penalised by the time taken by the applicant to remedy a deficient application? Please explain your views.	Yes, Powerco supports this proposal. The timeframes are appropriate for an application that has met all the requirements for Part 1A (with the ability to pause or reject for a deficient application or non-payment of fees).
Q36. Do you agree with the objectives of the proposed amendments? If not, why not?	
Q37. Do you agree the benefits of the proposed amendments outweigh their costs?	As outlined in our response to question 31, we do not agree with the assessment of costs and benefits for proposal 2 (smart inverters / dynamic limits).
Q38. Do you have any feedback on the Authority's assessment of the costs and benefits and the balancing of these as set out in this paper, including any	As outlined in our response to question 31, we do not agree with the assessment of costs and benefits for proposal 2 (smart inverters / dynamic limits).

Questions	Comments
evidence of quantified costs and benefits?	
Q39. Do you agree the proposed amendments are preferable to the 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.	
Q40. Do you agree the Authority's proposed amendments comply with section 32(1) of the Act?	As outlined in our response to question 31, we do not agree with the Authority's assessment that proposal 2 will support efficient operation of the electricity industry.
Q41. Do you have any comments on the drafting of the proposed amendments?	See our response to question 34.