
Erratum - Consultation on plug-in generation and DG Code improvements

From Laydan Mortensen [REDACTED]
Date Thu 2026-10-08 9:59 AM
To Connection Feedback <connection.feedback@ea.govt.nz>

Kia ora,

I am writing to provide a brief erratum to my submission, relating to my response to Question 33.

In that response, I stated that clause 6.3(2)(db) of the Electricity Industry Participation Code had been revoked on 11 May 2026 by clause 14 of the Electricity Industry Participation Code (Export Limits) Amendment 2026. This statement also appeared in footnote 6.

The statement was based on the consolidated version of the Code published on the Electricity Authority's website at the time. After identifying a potential inconsistency in the legislative history, I contacted the Authority's compliance team on 6 October to confirm the position. I have since been advised that the consolidated version was incorrect and that clause 6.3(2)(db) had not been revoked. The consolidated Code has since been corrected.

Accordingly, in my response to Question 33, the reference to "restoring the mandatory disclosure of forecast constraints removed by the May 2026 Code amendments" and the statement in footnote 6 that clause 6.3(2)(db) had been revoked should be disregarded. Clause 6.3(2)(db) remains in force.

I would be grateful if this erratum could be noted against my submission.

Ngâ mihi,
Laydan Mortensen

Submission form (Plug-in generation)

Please email your submission to: connection.feedback@ea.govt.nz by 5pm, Tuesday 6 October 2026

Name	Laydan Mortensen
Organisation	N/A (individual submission)

Questions on issues regarding plug-in generation

Questions	Comments
Q1. Do you have any views on our characterisation of plug-in generation?	I broadly agree with the Authority's characterisation. However, I suggest describing plug-in generation as "relocatable" rather than "portable". "Portable" may imply relatively small equipment intended to be readily moved in normal use. In practice, plug-in generation can be physically substantial. For example, a 460W plug-in solar system available in the UK uses a panel measuring 1.76m by 1.13m and weighing 25.5kg, excluding its ground stand and ballast.¹ Such equipment can be disconnected and moved to another premises but would generally remain in one place while in use. "Relocatable" therefore better describes this characteristic without implying that it is small, easily carried or routinely moved.
Q2. What network performance requirements should apply to plug-in inverters in New Zealand, and why?	I consider that the relevant network-protection and performance requirements of section 4 of AS/NZS 4777.2 should be carried across to plug-in inverters, including active and passive anti-islanding,² sustained-operation limits, and connection and reconnection requirements. Appropriate volt-watt response should also be required so that output is progressively curtailed as voltage rises. Plug-in generation will be connected to socket-outlet circuits rather than the dedicated

¹ Alastair Jennings & Alistair Charlton (24 September 2026). *Early reviews of the best plug-in solar panels in the UK*. The Independent. <https://www.independent.co.uk/extras/indybest/house-garden/best-plug-in-solar-panel-kits-uk-b3039720.html>.

² Passive anti-islanding disconnects the inverter in response to the grid voltage and/or frequency falling outside normal parameters. Active anti-islanding checks the grid's stability to verify the inverter is connected to the actual grid (which is inherently stable) and not an electrical island (which is inherently unstable).

	circuits used for fixed DG. ³ The resulting circuit impedance may be higher, and consumers may also connect equipment through extension leads or multiboards, further increasing impedance. ⁴ The voltage-response requirements should account for these foreseeable connection arrangements.
Q3. What do you think of the Authority excluding plug-in generation standards from the Code?	I do not have enough information at this stage to form a view on whether plug-in generation standards should be excluded from the Code.
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?	Yes. A process designed around professional installers is unlikely to work well for consumer-installed equipment. Any process for plug-in generation should be designed on the assumption that the consumer will complete it themselves.
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?	I support a simple registration requirement rather than the normal Part 6 application process. Registration would provide visibility of plug-in generation without imposing a disproportionate application process on small, consumer-installed generation.
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?	I favour registration rather than distributor approval, provided the equipment complies with the applicable technical requirements. I suggest allowing one month after connection or relocation for the consumer to register the system or update its registered location. After that period, continued non-registration could proceed to an appropriate enforcement process. This provides a reasonable opportunity to comply while still giving the registration requirement practical effect.
Q7. What information should be required if a registration or application for a plug-in generation unit is to be implemented?	Only information with a genuine network or administrative use should be required. I suggest recording the ICP, generation capacity, fuel/energy source, and whether storage is present and its capacity. The information requirement should remain proportionate to the nature and scale of plug-in generation.
Q8. Would participants benefit from a registry that captures information about plug-in generation? Why, why not?	Yes. A registry would provide visibility of the location and capacity of plug-in generation and allow its uptake and aggregate network effects to be monitored. Its usefulness will depend on keeping the information reasonably current, particularly because plug-in

³ Section 3.2.1, AS/NZS 4777.1 *Grid connection of energy systems via inverters Part 1: Installation requirements*

⁴ Higher circuit impedance means that exporting electricity causes a greater increase in voltage at the inverter. This could push the voltage at the inverter outside the permitted voltage range (230 V $\pm$ 10% under the Electricity (Safety) Regulations 2010).

	generation is relocatable. The Authority itself identifies the risk of registry information becoming outdated when systems are moved.
Q9. Should the existing registry be used? Why, why not?	Yes. Plug-in generation should be recorded against the ICP in the existing registry rather than creating a separate register. The information requirements should, however, be tailored to plug-in generation rather than simply applying all the existing DG fields.
Q10. Should entering information about plug-in generation be a requirement only after export has been identified at an ICP? Why, why not?	No. Registration should be triggered by connection of the plug-in generation, not by subsequent detection of export. A reverse-power indication may provide evidence that generation could be present, but its absence does not establish that there is no plug-in generation. Generation may be entirely consumed behind the meter.
Q11. Would the type of information able to be collected at point of sale be sufficient to meet industry needs? Why, why not?	No. Point-of-sale information cannot reliably establish the ICP at which the equipment is connected and will become incorrect if the equipment is subsequently relocated. Point-of-sale information could be used to facilitate registration—for example, by providing product information that the consumer does not then need to enter manually—but it should not replace ICP-based registration.
Q12. Should the MEPs reverse power indicator be leveraged in identifying potential plug-in generation export? Why, why not?	Yes, but only as an indicator that plug-in generation may be present. A reverse power indicator could trigger an enquiry or reminder to register but should not itself be treated as evidence of non-compliance, as reverse power can have other causes. Conversely, the absence of a reverse power indicator does not establish that plug-in generation is not present, as its output may be entirely consumed behind the meter.
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?	Yes. Retailers already have an established relationship with the consumer and are therefore a logical primary interface for registration and notification. A change of retailer would also provide a useful opportunity to ask the consumer to confirm whether any registered plug-in generation information remains current.
Q14. Do you have any other suggestions on how consumers could be informed of Code requirements for plug-in generation?	The requirements should be clearly communicated at the point of sale and in the product documentation, including the requirement to register after connection and to update the registration following relocation. I would also consider a simple reminder when an occupier changes or a consumer switches retailer.

	This would provide an opportunity to keep registry information current without requiring frequent standalone confirmation.
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?	Yes. If a consumer wishes to receive payment for exported electricity, I consider it reasonable that they complete the applicable Part 6 application and approval process, including any associated metering requirements. A consumer who does not seek payment should only need to comply with the plug-in generation registration requirement, with any incidental export effectively gifted to the market.
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?	Where a reverse power indicator suggests that export may be occurring, the retailer could notify the consumer. The notification should explain that reverse power has been detected, that plug-in generation may be the cause, and the options available if the consumer wishes to receive payment for export. It should also remind the consumer of the requirement to register any plug-in generation at the ICP and the consequences of continued non-registration after being notified of that requirement, including the possibility of enforcement action.
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?	Yes. Consumers should be informed at the point of sale that plug-in generation may export electricity when generation exceeds consumption. The supplier is best placed to provide this initial information. Retailers can then provide information about export payment and metering arrangements where relevant.
Q18. What issues do you see with more UFE in the reconciliation system as a result of more export from plug-in generation?	I am not in a position to comment on the potential reconciliation impacts of increased UFE 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 need for formal gifting documentation? Would your view change as plug-in generation increases?	I am not in a position to comment on the appropriate treatment of unmeasured plug-in generation export within the reconciliation process.
Q20. If gifting documentation were to be required by a plug-in generation consumer, how could this be facilitated?	If gifting documentation is required, it should form part of the registration process rather than requiring a separate process.
Q21. Are there other genuine issues identified by the reverse power indicator?	I am not aware of any additional issues beyond those identified in the consultation paper. A reverse power indicator should continue to be treated as an indication requiring investigation rather than evidence of a particular cause.
Q22. Should the requirement on the MEP to notify the retailer via a reverse power indicator	No, at least initially. The notification remains useful, including for identifying potentially unregistered plug-

be reconsidered, if more plug-in generation is used? Why, why not?	in generation and providing the consumer with information about registration and export. If increasing volumes of plug-in generation result in an unmanageable number of notifications, the requirement could be reconsidered based on that experience.
Q23. Is there a way for a MEP to filter out plug-in generation related reverse power indicators?	I am not in a position to comment on whether MEPs can reliably distinguish reverse power caused by plug-in generation from other causes.
Q24. Should Part 10 include an exclusion for requiring import/export metering for plug-in generation? Why, why not?	Yes, where the consumer does not seek payment for export. Requiring import/export metering would impose additional cost for incidental export from a system primarily intended for self-consumption. Where the consumer wishes to receive payment for export, the normal metering requirements should apply.
Q25. Should Part 6 clarify requirements for a plug-in generation system being connected alongside approved permanently-fixed DG?	Yes. Part 6 should clarify whether plug-in generation may be connected at an ICP that already has approved permanently-fixed DG, and how it is treated in relation to the capacity of the existing generation system and any agreed export limit. In particular, it should be clear whether the permitted plug-in generation capacity is additional to the existing approved generation and export arrangements, or whether it must be accommodated within those arrangements. Consumers should be able to determine this before connecting plug-in generation.
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)?	The applicable technical standard should specify the maximum plug-in generation capacity that may be connected at an ICP. The Code should, however, make clear how that limit applies where other generation is already connected at the ICP, including whether existing generation capacity or an agreed export limit affects the amount of plug-in generation that may be connected. The registration process should record the aggregate plug-in generation capacity connected at an ICP, providing a basis for identifying where multiple plug-in units collectively exceed the permitted limit.
Q27. What sources of information could the Authority use to monitor uptake of plug-in generation and/or any issues that may arise?	The proposed registration information should be the primary source for monitoring uptake, supplemented by reverse power indicators and information from distributors, retailers and MEPs. The Authority could also use open-source intelligence, including retailer and importer offerings, online

	marketplaces, social media, user forums, advertising and other publicly available information. This could help identify emerging products, actual consumer practices, potential compliance issues and trends that may not be apparent from registration data alone.
Q28. Do you agree with our overall characterisation of the challenges of plug-in generation? Why, why not?	Broadly, yes. However, the regulatory response should remain proportionate to the capacity and risks of plug-in generation and should not simply apply processes developed for permanently-fixed DG. The framework should also recognise that plug-in generation is relocatable consumer equipment, which creates different practical issues around registration and keeping information current.
Q29. Which of the challenges outlined in this paper present the most pressing issue for the Authority to address?	The most pressing issue is establishing a clear and proportionate regulatory pathway before plug-in generation becomes widely available. In particular, consumers need a simple registration process, clear technical requirements, and certainty about the distinction between connecting compliant plug-in generation and the additional requirements that apply if they wish to receive payment for export.

Submission form (DG-related Code changes)

Please email your submission to: connection.feedback@ea.govt.nz by 5pm, Tuesday 6 October 2026

Name	Laydan Mortensen
Organisation	N/A (individual submission)

Questions on distributed generation-related Code change proposals

Questions	Comments
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.	No comment.
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.	The proposed amendment should recognise how approved inverter lists operate in practice. Most distributors, including all but one of the “Big Six” distributors,¹ use or recognise the Australian Clean Energy Council (CEC) approved-product list, which contains more than 3,800 inverter models.² By comparison, EECA’s New Zealand approved solar products list contains 20 inverter models.³ While distributors can maintain their own lists, replicating the breadth of the CEC list would involve considerable cost and duplication for little apparent benefit. The proposal should distinguish between a distributor requiring communications capability or flexible/dynamic export as a condition of connection, and the range of non-communicating inverters available through its normal approval pathway. The former is within a distributor’s control; the latter is substantially determined by manufacturers and the wider Australasian market. This distinction is increasingly important as communicating inverter requirements are introduced across Australia. New South Wales, Victoria, South Australia and the ACT have introduced or are introducing requirements for communicating inverters.⁴ Given the scale of these markets, those requirements may greatly

¹ Aurora, Orion, Powerco, Unison and Vector refer applicants to the Clean Energy Council approved inverter list on their respective distributed-generation webpages or connection requirements. No equivalent reference was identified for Wellington Electricity.

² Clean Energy Council. *Approved Inverters*. <https://cleanenergycouncil.org.au/industry-programs/products-program/inverters> (accessed 4 October 2026)

³ EECA. *Solar products approved list*. <https://www.eeca.govt.nz/for-homes/solar-for-homes/learn-about-solar-technology/solar-products-approved-list/> (accessed 4 October 2026)

⁴ CSIP-AUS, *About CSIP-AUS*, <https://www.csipaus.org/about> (accessed 4 October 2026)

	influence which products manufacturers choose to certify and continue supplying across Australasia. If non-communicating models become less available as a result, New Zealand distributors should not be required to create and maintain separate lists simply to preserve a “reasonable range” of products that the wider market may no longer support.
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.	I have concerns about a fixed 10% allowance. The consultation does not establish why 10% is the appropriate figure or how long that allowance is expected to avoid reassessment. For context, residential solar capacity increased by 29.6% nationally in the year to 30 June 2026. Over just the two months to 31 August 2026, residential solar capacity increased by approximately 10.9% in Powerco's Whanganui region, 12.3% on Westpower's network, and 21.6% on Network Waitaki's network.⁵ These historical growth rates are not forecasts. However, they demonstrate that a 10% allowance could be consumed very quickly in some areas. A fixed 10% therefore represents very different periods between reassessments depending on the distributor, feeder and stage of DG uptake. I consider the Authority should establish the evidential basis for the 10% figure and the period of stability it is intended to provide before incorporating it into the Code.
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?	A 10% allowance should reduce the frequency of reassessment, but I do not consider a fixed percentage is the best approach. Its effectiveness will vary between feeders. On a low-growth feeder, 10% may represent a substantial period of growth; on a high-growth feeder, it may be consumed relatively quickly. As noted in my response to Q32, recent growth rates suggest this could occur within a relatively short period in some areas. As an alternative, a network study could assess both current DG penetration and a prudent estimate of DG penetration 6–12 months ahead, based on recent growth in the relevant feeder or network area. This would provide the same practical benefit sought from the 10% allowance—reducing the need for frequent reassessment—but would relate the allowance to expected growth rather than applying the same percentage to every network. The Authority should also consider restoring the mandatory disclosure of forecast constraints removed by

⁵ Electricity Authority. *Installed distributed generation trends*. <https://www.emi.ea.govt.nz/Retail/Reports/GUEHMT> (accessed 4 October 2026)

	the May 2026 Code amendments.⁶ The current approach is effectively binary: either the 10kW default export limit is available or a lower limit applies. A consumer could therefore plan an installation based on a 10kW export limit, only to find that the limit has changed by the time they apply to connect. The forward assessment proposed above could provide a simple warning stage without requiring an additional network study. Published information could distinguish between areas where the 10kW limit is expected to remain available over the forecast period; areas where the 10kW limit remains available but the forward assessment indicates that a lower limit may be required within 6–12 months; and areas where a lower limit already applies. Any forecast should be informational only. It should not reduce the current 10kW entitlement, reserve or guarantee future capacity, or confer priority on a future application.
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.	No comment.
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. I support the proposed clock-stop approach, provided requests for additional information cannot become de facto extensions of the processing timeframe. I support retaining the 10-business-day timeframe for Part 1A applications rather than shortening it. Although the Authority’s monitoring shows a median Part 1A processing time of approximately two business days,⁷ a median is not an appropriate statutory maximum. A two-business-day limit would leave little resilience for genuinely exceptional events, such as major earthquakes, cyclones, significant cyberattacks or major infrastructure failures, and could require additional exceptions or clock-stop provisions. The Authority should also clarify which provincial anniversary day applies when a distributor operates across areas observing different anniversary days.⁸ The Part 6 definition of “business day” refers to public holidays under the Holidays Act 2003, so this issue potentially affects the calculation of timeframes. It is particularly important for Part 1A, where an incorrect calculation could result in the applicant and distributor disagreeing over whether deemed

⁶ Former clause 6.3(2)(db) of the Code required distributors to publish “a list of all locations on its distribution network that the distributor expects to become subject to export congestion within the next 12 months”. Clause 6.3(2)(db) was revoked on 11 May 2026 by clause 14 of the Electricity Industry Participation Code (Export Limits) Amendment 2026.

⁷ Electricity Authority (September 2026). *Monitoring distributors’ performance processing distributed generation connection applications*. https://www.ea.govt.nz/documents/10966/Monitoring_distributors_performance_processing_distributed_generations_connect_0JaF5P6.pdf

⁸ For example, Powerco is based in New Plymouth (Taranaki Anniversary Day), but its network includes areas observing Auckland Anniversary Day (e.g. Tauranga) and Wellington Anniversary Day (e.g. Palmerston North). Its recent acquisition of Firstlight Network may introduce a fourth relevant anniversary day through Wairoa (Hawke’s Bay Anniversary Day).

	approval has occurred and whether the distributed generation may be connected.
Q36. Do you agree with the objectives of the proposed amendments? If not, why not?	Yes. I broadly agree with the objectives of the proposed amendments, subject to my comments above on how those objectives should be implemented.
Q37. Do you agree the benefits of the proposed amendments outweigh their costs?	I broadly agree. The proposed amendments should improve clarity and consistency in connection processes, although the benefits and costs will depend on the final drafting and implementation.
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 evidence of quantified costs and benefits?	No comment.
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.	Broadly, yes, subject to my comments above. In particular, I consider some aspects of the proposed amendments should be modified rather than adopting a materially different regulatory approach.
Q40. Do you agree the Authority's proposed amendments comply with section 32(1) of the Act?	I broadly agree, but have reservations about the section 32(1) assessment of the proposed amendment concerning communicating smart inverters. The assessment assumes that protecting consumer choice between communicating and non-communicating inverters promotes the efficient operation of the electricity industry. As noted in my response to Q31, distributors may rely on external approved-product lists and do not control which compliant inverter models manufacturers make available in the Australasian market. I consider the efficiency objective would be better served by preventing distributors from unreasonably excluding reasonably available compliant non-communicating inverters, rather than requiring them to preserve a category of inverter that may become less readily available as the market develops.
Q41. Do you have any comments on the drafting of the proposed amendments?	Yes. In proposed clause 6.3(2)(f), I suggest deleting the proposed additional text requiring the approved inverter list to include a reasonable range of both communicating and non-communicating inverters. Distributors do not necessarily control which compliant inverter models are commercially available, particularly where they rely on external approved-product lists. Requiring them to maintain a "reasonable range" of both types could therefore become impractical as the Australasian inverter market develops. The existing requirement to publish a list of approved makes and models, together with the proposed clause

	6.3(4)(a) preventing connection and operation standards from requiring a communicating inverter, is sufficient to address the issue without imposing an obligation on distributors to maintain a particular product mix.
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