

Submission form (Plug -in generation)

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

Name	Jesse Card
Organisation	

Questions on issues regarding plug-in generation

Questions	Comments
Q1. Do you have any views on our characterisation of plug-in generation?	The overall characterisation is reasonable, but I think an important distinction should be made between plug-in generation that can export and a compliant product configured so that it cannot export. A non-exporting device should not require distributor notification merely because it is connected within a grid-connected premises. Product and electrical safety should be handled through the relevant standards, while network regulation should follow actual network impact.
Q2. What network performance requirements should apply to plug-in inverters in New Zealand, and why?	At minimum, plug-in inverters should meet appropriate anti-islanding, voltage, frequency, and other network-protection requirements through an approved product standard. Where an established international standard provides those protections and is technically compatible with the New Zealand grid, it should generally be recognised rather than requiring a separate New Zealand-specific standard. A distinct local requirement should only be added where there is a genuine difference in our grid, electrical-safety environment, or operating conditions that creates a material hazard or network issue. An 800 W maximum AC inverter or export class appears to be a reasonable starting point based on international practice. DC module capacity, voltage, wiring, and other product-side design requirements should be left to the product and electrical-safety standards rather than duplicated in the Code.
Q3. What do you think of the Authority excluding plug-in generation standards from the Code?	I support keeping detailed plug-in product and electrical-safety requirements outside the Code where they are already mandatory through the relevant safety regulations and product standards. New Zealand should also avoid creating a bespoke technical standard where a widely used international plug-in generation standard already provides equivalent safety and network protections and is suitable for our grid. Any New Zealand-specific deviation should be justified by a genuine local electrical, safety, or network distinction. Duplicating technical requirements across regulatory instruments risks inconsistency and unnecessary complexity. The Code should focus on network-facing outcomes and obligations.
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 conventional Part 6 application process is likely to be disproportionate for a small consumer-installed product and, without an installer acting as intermediary, may also achieve poor compliance. The process should be designed around how consumers will actually buy, activate, move, and use these devices.

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?	Not for a compliant system that cannot export. Safety should be addressed through product and electrical-safety standards, and there is little network purpose in requiring notification for equipment with no network injection. For export-capable plug-in generation within a defined small-device limit, I also favour avoiding prior distributor approval. A lightweight registration should only become necessary where the consumer wants to receive payment for export.
Q6. If a form of Part 6-type application process should be implemented for plug-in generation, do you see that as a notification/registration, or an application that requires distributor approval? Why?	If any process is required, it should be notification or registration rather than distributor approval. It should be as lightweight as possible and, where practical, captured automatically at point of sale or device activation. Because these products are portable, the framework should not assume that a device will remain permanently associated with one socket, address, or ICP.
Q7. What information should be required if a registration or application for a plug-in generation unit is to be implemented?	Only information needed for safety, basic system visibility, or payment should be collected. This could include the product model or identifier, confirmation of compliance with the relevant product standard, and maximum AC output or export capability. ICP or address information should only be required where it is actually relevant, for example when a consumer wants to be paid for export.
Q8. Would participants benefit from a registry that captures information about plug-in generation? Why, why not?	There may be value in visibility of export-capable devices at an aggregate level, but the benefit is much weaker for non-exporting equipment. A registry also becomes less reliable where a product is portable and may move between sockets, homes, or off-grid use. Any registry should therefore be deliberately minimal.
Q9. Should the existing registry be used? Why, why not?	Only if the existing registry can support a genuinely lightweight process without turning a portable consumer device into a permanent property record. If it cannot, a simpler national device registration mechanism would be preferable, if needed at all.
Q10. Should entering information about plug-in generation be a requirement only after export has been identified at an ICP? Why, why not?	No. I do not think registration should be triggered simply because reverse flow is detected. For compliant plug-in generation within the defined capacity limit, incidental export should be permitted without registration if the consumer is not seeking payment. Registration should primarily be associated with a consumer choosing to receive payment for export.
Q11. Would the type of information able to be collected at point of sale be sufficient to meet industry needs? Why, why not?	For the device itself, point-of-sale or app-activation information should be sufficient to capture the important characteristics such as model, certification, and maximum AC output. Location-specific ICP information should only become necessary where the consumer seeks an export payment arrangement or where there is another demonstrated network need.
Q12. Should the MEPs reverse power indicator be leveraged in identifying potential plug-in generation export? Why, why not?	The reverse power indicator may be useful as an aggregate monitoring or consumer-information signal, but it should not become an enforcement trigger for otherwise lawful, compliant plug-in generation. Small incidental reverse flow should be expected within the plug-in generation class.
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, particularly where a consumer wants to receive payment for export. Consumers already have a direct relationship with their electricity retailer, whereas most have little direct interaction with their distributor. That makes the retailer a more practical customer interface for any export-payment registration or metering process.

Q14. Do you have any other suggestions on how consumers could be informed of Code requirements for plug-in generation?	Requirements should be communicated through the channels consumers actually use: packaging, instructions, point-of-sale material, and any companion app or activation process. A simple national page explaining the rules would also be preferable to expecting consumers to interpret different distributor processes.
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?	Payment for export can reasonably be conditional on a lightweight registration and appropriate metering arrangement, but I do not think this needs to be a full Part 6 approval process. There should be a clear distinction between permission for a compliant small device to operate and the additional administrative steps needed if the consumer wants to be paid for export.
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?	Information should be simple and practical: whether the device can export, its maximum AC export capacity, whether the existing meter can record export, and what steps are required if the consumer wants to receive payment. This could be provided through the product app, retailer communications, or both.
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 clearly informed at the point of sale or device activation that the product may export electricity, whether payment is available, and what they need to do if they want to receive payment. Product suppliers or manufacturers are best placed to provide the initial information, with electricity retailers taking over where a consumer wants to enter an export payment arrangement. As most of these devices use an app, this would be the best place to require that registration to toggle on exporting as an option. Otherwise it is locked into cancelling imports only.
Q18. What issues do you see with more UFE in the reconciliation system as a result of more export from plug-in generation?	At the scale proposed for plug-in generation, I would expect the effect of individual systems on UFE to be very small. The relevant question is the aggregate effect over time. This should be monitored, but a theoretical future reconciliation issue should not justify burdensome requirements on each small device today. If one wants to better account for this production, EA, retailers, or distributors are encouraged to provide incentives for customers to provide this information automatically through their device.
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?	Yes, at least initially. Small incidental exports from compliant plug-in generation should be capable of being treated as UFE without requiring formal gifting paperwork from each consumer. The Authority should monitor aggregate volumes and revisit this only if plug-in generation becomes large enough for the reconciliation effect to become material. If EA, distributors, or generators wants to better account for this production, EA, retailers, or distributors are encouraged to provide incentives for customers to provide this information automatically through their device, or provide an anonymous aggregated number.
Q20. If gifting documentation were to be required by a plug-in generation consumer, how could this be facilitated?	If gifting documentation were required, it should be capable of being completed automatically or with a very simple digital acknowledgement through a retailer or device app. However, for very small incidental exports I do not think a separate gifting process is warranted.
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	Yes, but the purpose of the notification should be reconsidered. At low penetration and where reverse flow is

indicator be reconsidered, if more plug-in generation is used? Why, why not?	not creating a demonstrated network issue, the retailer response should essentially be: "We noticed that you appear to be exporting electricity. Would you like to be paid for it?" Any offer should explain very clearly whether accepting payment would change the consumer's electricity plan, fixed charges, import tariff, export tariff, metering costs, or any other terms, so that a small export payment does not inadvertently leave the consumer worse off. Otherwise, compliant incidental export should not trigger an enforcement or approval process. Consistent with my earlier submission on distributed generation pricing, stronger intervention should be staged and locally triggered only when actual export penetration and demonstrated feeder conditions begin to create material network effects, rather than being based simply on the presence of generation devices.
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?	Yes, for compliant plug-in generation within the defined plug-in class where the consumer is not seeking payment for export. Requiring import/export metering for small incidental exports would be disproportionate. If the consumer wants to be paid for export, appropriate metering can then be enabled or installed as part of that commercial arrangement.
Q25. Should Part 6 clarify requirements for a plug-in generation system being connected alongside approved permanently-fixed DG?	Yes, but the clarification should be simple. Where an ICP already has permanently fixed DG and an agreed export limit, any plug-in generation should not allow the site to exceed that existing network export limit. This does not require a separate approval process for the plug-in device if the existing site controls already ensure the export limit is respected.
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)?	Yes, a simple plug-in generation class would be useful. An 800 W maximum AC inverter or export capacity appears to be a reasonable starting point given international practice. DC panel capacity and other product-side limits should be dealt with through the applicable product and electrical-safety standard rather than the Code.
Q27. What sources of information could the Authority use to monitor uptake of plug-in generation and/or any issues that may arise?	Useful sources could include sales or activation data from manufacturers and retailers, aggregate smart-meter or reverse-flow data, and retailer records where consumers have registered in order to receive payment for exports. Monitoring should rely as much as possible on aggregate information rather than creating ongoing location-reporting obligations for portable devices.
Q28. Do you agree with our overall characterisation of the challenges of plug-in generation? Why, why not?	Broadly yes, but I think the paper risks overestimating the value of registration and approval processes for a product that may be plugged in, unplugged, moved between sockets or homes, or used off-grid. The regulatory response should follow actual network impact and should be proportionate to the scale of the device.
Q29. Which of the challenges outlined in this paper present the most pressing issue for the Authority to address?	The most pressing issue is proportionality. The framework should clearly separate product and electrical safety from network regulation, and should avoid applying a conventional Part 6 process to a small portable consumer product where the actual network effect is minimal. The rules should be simple enough that ordinary consumers can realistically understand and comply with them.

Submission form (DG-related Code changes)

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

Name	Jesse Card
Organisation	

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.	Yes. The default 10 kW export limit should apply consistently to small-scale DG under both Part 1A and Part 1 unless a network study demonstrates that a lower limit is necessary. The choice of application pathway should not, by itself, determine whether a consumer receives the benefit of the default export limit.
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.	Yes. Consumers should retain the option of compliant non-communicating inverters and static export limits unless there is a demonstrated network reason to require something more complex. Mandating communications capability or dynamic export arrangements before the supporting systems and consumer benefits are established risks imposing additional cost and reducing consumer choice.
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.	No, not on the evidence presented so far. I previously submitted on the Authority's distributed generation pricing reform and argued for staged, locally triggered responses because New Zealand remains at a relatively early stage of DG uptake and the international evidence cited there suggested material network issues generally emerge at substantially higher local penetration, often around 20-30%. The same principle applies here. The consultation identifies a concern about repeated network reassessment, but does not quantify how often this is occurring, its cost, or why a blanket 10% allowance is the appropriate response. Any threshold should also relate primarily to actual export onto the network, rather than simply installed DG capacity. A substantial share of small solar and plug-in generation may be consumed behind the meter and merely reduce imports, creating much less network impact than its nameplate capacity implies. Current applicants should not have usable export capacity restricted for hypothetical future generation without evidence of actual or imminent local export constraints.
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?	I am not convinced that a blanket 10% allowance has been justified. In my earlier submission on distributed generation pricing, I supported staged implementation based on local penetration thresholds rather than imposing costs or restrictions nationally at low penetration. I noted that the international examples discussed by the Authority generally involved significantly higher local penetration, often above 20-30%, before the more serious network issues emerged. I would apply the same reasoning here. A better interim approach is to use transparent feeder-level trigger points based on measured export and demonstrated network conditions, with reassessment when those thresholds are approached. Installed generation should not be treated as equivalent to export: self-consumed generation that cancels household imports does not use export hosting capacity in the same way as generation actually injected into the network. If a buffer is retained, it should be evidence-based, subject to review, and used only where a

	distributor can demonstrate that actual export growth would otherwise require unreasonably frequent reassessment.
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. Applicants should have access to the application pathway that is appropriate to their system, including the streamlined Part 1A process where its criteria are met. This supports consistency between distributors and avoids unnecessary cost and delay.
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. A streamlined process should have a meaningful and predictable timeframe. Pausing the clock while an applicant remedies genuinely incomplete information is reasonable, but distributors should not be able to extend the process unilaterally beyond the intended Part 1A timeframe.
Q36. Do you agree with the objectives of the proposed amendments? If not, why not?	I broadly agree with the objectives of making small-scale DG connection processes more consistent, efficient, and consumer-friendly. I do not think the objective of reducing reassessment frequency, by itself, establishes the need for a blanket 10% capacity buffer where this may reduce export available to current applicants.
Q37. Do you agree the benefits of the proposed amendments outweigh their costs?	For most of the amendments, yes. I am not yet convinced that the benefits of the proposed 10% DG penetration buffer outweigh its costs, because the consultation does not quantify the reassessment problem or demonstrate why a uniform 10% buffer is proportionate across different feeders.
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?	The assessment itself acknowledges that a standard 10% allowance may not reflect future DG uptake on every feeder and is a pragmatic rather than optimised assumption. I made a related point in my earlier submission on distributed generation pricing: network responses should be staged and locally triggered, with stronger interventions reserved for areas where penetration and actual network impacts justify them. I would like to see quantified evidence of how often reassessments are occurring, their cost, and why 10% is the appropriate figure. The analysis should also distinguish installed or nameplate DG capacity from actual export. Behind-the-meter generation that is self-consumed and reduces imports should not be assumed to create the same hosting-capacity constraint as equivalent generation exported onto the feeder.
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.	I support the proposed amendments overall, except for the proposed 10% DG penetration buffer. Consistent with my earlier submission on distributed generation pricing, I prefer a staged, locally triggered approach rather than a uniform restriction introduced well before material constraints are demonstrated. Transparent feeder-level trigger points should be based primarily on actual export and network conditions, not merely installed DG capacity, and should determine when reassessment is required. This would preserve available capacity for current consumers while still allowing distributors to respond as genuine local constraints emerge.
Q40. Do you agree the Authority's proposed amendments comply with section 32(1) of the Act?	
Q41. Do you have any comments on the drafting of the proposed amendments?	