

## Plug-in generation and export limits

SUBJECT: Response to Electricity Authority consultation paper dated 8 September 2026 titled 'Exploring plug-in generation and Code improvements for export limits and connection processes'

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### Plug-in generation

Plug-in generation has potential to materially enhance our energy system. It is worth the EA's time to ensure it is regulated only to the degree necessary, rather than assume the incumbent regulatory arrangements for distributed generation are appropriate.

Plug-in generation almost certainly requires some of the same technical features as other distributed generation, for example anti-islanding protection. Some other technical standards, and the requirement for a connection approval process, are not necessary where the level of actual or potential export is relatively small.

Because plug-in devices are by nature easy to obtain without regulatory oversight, the best way to ensure that plug-in generation is not substantially over-sized relative to co-located load is to not pay the device owner for exported energy. This would create a clear incentive for consumers to size their plug-in generation to approximately match consumption (e.g. one 800W device is likely sufficient for most households, rather than multiple such devices) and to shift flexible consumption to times when generation is available (such as running a washing machine when it is sunny).

The plug-in generation regulatory framework should therefore combine:

- A technical standard including some, but likely not all, elements of AS/NZS 4777, plus a per-ICP inverter output capacity limit in the order of 800W.
- Ability to bypass connection approval processes under Part 6 of the Code.
- Exported energy is automatically treated as unaccounted for energy.
- Upgrade to an import/export meter upgrade not required solely for potential export from plug-in generation.
- Registration at point-of-sale could be required if this provides distributors with a meaningful level of visibility about the type and volume of devices in their networks.

A plug-in generation owner should be able to opt into the regular distributed generation processes and standards under the Code, and in doing so earn revenue for exported energy.

If there are major barriers to the above principles and their implementation then I would be glad to discuss these further with the EA.

## Export limits

The proposed adjustments to export limits appear generally sound, but I propose the EA reviews and more clearly signals to the public whether the default 10kW static export entitlement will be durable as distributed generation becomes more widespread.

Regulatory changes that took effect in May 2026 grant first movers a default 10kW static limit under the Part 1A process. Consumers are likely to interpret this as a permanent right. In many parts of New Zealand it would not be feasible for most or all customers to each export 10kW (without significant network upgrade), in which case permanent static limits for first movers will result in little or no export opportunity for later adopters.

An equitable and efficient future energy system likely involves a high penetration of household solar PV, storage and other distributed energy resources, with neighbours enjoying broadly equivalent network rights and consistent incentives to minimise peak network loading. Today's regulations ought to signal this future – rather than a 'first-in-best-dressed' principle that is more appropriate for utility-scale generation.

The EA proposes that distributors award 10kW static limits unless there is insufficient capacity based on existing generation plus a 10% buffer. There's a risk that in five years we would look back and find that approach short-sighted or at least incomplete.

At paragraph 5.48 of its consultation paper the EA appears to acknowledge that more sophisticated export control may be required in the long term. These policies and processes will take time to develop. But the EA can signal now – before DG-associated congestion becomes widespread – that even in cases where a 10kW static limit is suitable initially this limit may need to transition to a lower static limit or a flexible/dynamic arrangement in the future. Whilst this could slightly weaken consumer enthusiasm for DG today (especially systems that are oversized relative to co-located load), it is a more equitable and transparent foundation for long-term DG adoption.

An extension of this is that ideally DG would require the technical capability for remote export control, even if that capability is not activated immediately. South Australia provides technical and regulatory precedent; since mid-2023 new export-capable distributed generation installations have generally been required to use dynamic-export-capable equipment.

In summary, where a 10kW static export limit is supported by network capability then it is right to make use of it as a default position, but regulation should pave the way for transition to equitable export control once congestion arises, and clear signalling now is important to avoid future conflict between first movers and later adopters.