Appendix B Format for submissions

Maximising benefits from local generation

Submitter	Laydan Mortensen
Submitter's organisation	N/A (individual)

Please send your submission to connection.feedback@ea.govt.nz by **5pm, Wednesday 19 November 2025**

Questions	Comments
Q1. What are your views on the proposal to set a default 10kW export limit for Part 1A applications?	I am not opposed to higher export limits in principle. However, I do not support a universal 10 kW default. Several regions already face upstream congestion at the subtransmission or transmission level due to increasing rooftop PV alongside utility-scale solar. These constraints are generally invisible to DG owners and to most inverters. Due to current/thermal limits usually binding before voltage limits, volt-var and volt-watt do not help for subtransmission and transmission constraint. This means higher export limits may provide no benefits and increase costs. The Far North district is already one area experiencing issues from excessive solar generation. The Kaikohe–Maungatapere transmission line may overload during summer midday due to the combined output from utility-scale solar (Kohira, Pukenui, and Twin Rivers), small-scale rooftop PV, and Ngāwhā geothermal station. Increasing export limits for small-scale DG systems would only exacerbate this constraint, forcing Transpower to curtail utility-scale plants to remain within limits. This creates a paradox in which utility-scale solar is being curtailed to allow rooftop solar, which does nothing to help decrease emissions across the entire system. A similar issue also exists in the Ōpotiki district: the Waiotahe–Edgecumbe transmission line may overload during summer midday due to the combined output from Te Herenga o Te Rā solar farm and local rooftop PV .

	Furthermore, inefficient pricing signals means there is currently little incentive for DG owners to curtail, invest in storage or self-consume during times of export congestion, or for other consumers to increase demand to soak up the excess generation and relieve overloaded lines. The limited ability for EDBs to recover costs or impose line charges from small-scale DG owners also means they are reluctant invest in infrastructure, since this would have to be recovered from higher line charges for everyone. This would particularly be acute in the Far North, which has some of the highest electricity prices and poorest communities in New Zealand. A 10 kW default is reasonable in unconstrained networks, but not in regions with upstream bottlenecks. Export limits should reflect real hosting capacity, not a single national default.
Q2. What are your views on the Code clarifying that a distributor cannot limit the nameplate capacity of a Part 1A application, unless the capacity exceeds 10kW?	I am not opposed to this clarification. AS/NZS 4777.1 and 4777.2 already limits inverter size to 200 kVA, which limits Par 1A application nameplate capacity. The standards also require inverters to have export limit control, which requires inverters to curtail generation if the export limit is exceeded.
Q3. There are requirements for distributors in Proposal A1. Which of these do you support, or not support, and why?	No objection.
Q4. What are your views on the proposal for industry to develop an export limits assessment methodology?	No comment.
Q5. What would you do differently in Proposal A1, if anything?	I would sequence reforms differently: 1. Reform pricing and cost recovery first, so that export better reflects real network conditions. 2. Use the methodology to identify where a 10kW default is appropriate, rather than applying it nationally.

	3. Encourage or enable dynamic export limits in constrained areas.
Q6. What concerns, if any, do you have about requiring the 2024, rather than 2016, version of the inverter installation standard for Part 1A applications?	No concerns.
Q7. Do you support amending the New Zealand volt-watt and volt-var settings to match the Australian values for Part 1A applications - why or why not – what do you think are the implications?	I support aligning New Zealand's volt-watt, volt-var, and sustained overvoltage settings with those of Australia A for voltage-response behaviour. This is appropriate given the widening of the LV tolerance band to ±10%. However, this must be strictly limited to voltage response. Other New Zealand settings should be retained, as Australia A's may be unsuitable for New Zealand's system conditions.
Q8. What would you do differently in Proposal A2, if anything?	Retain the existing New Zealand profile and update only the voltage-response components (volt-var, volt-watt, sustained overvoltage) to match the Australia A curves. For example, under Australia A passive anti-islanding settings, inverters must disconnect within 0.2 seconds if the frequency exceeds 52 Hz and remain disconnected for 60 s before attempting to reconnect. Under New Zealand settings, as well as the Australia C settings used in Tasmania and Northern Territory, the over frequency limit is 55 Hz. At 10:12 on 23 October 2025, during a red wind warning, the Inter-Island HVDC tripped. This caused the South Island frequency to reach as high as 51.97 Hz, just 0.03 Hz short of the Australia A over-frequency limit. Had the frequency exceeded 52 Hz, this would have triggered inverters using Australia A settings to trip. On a larger scale, this could worsen system stability and contributed to a frequency response overshoot, potentially causing an under-frequency event or cascading failure.
Q9. Do you have any concerns about the Authority citing the Australian disconnection settings	No.

for inverters when high voltage is sustained?	
Q10. Do you have any concerns about the Authority requiring the latest version of the inverter performance standard for Part 1A applications?	No.
Q11. What are your views on the proposal that where distributors set bespoke export limits for Part 2 applications, they must do so using the industry developed assessment methodology?	No objection.
Q12. What are your views on the several requirements that must be adhered to regarding the distributors' documentation (see paragraph 5.96) relating to setting export limits under Part 2?	No objection.
Q13. Do you agree it is fair and appropriate that where distributors set export limits for Part 2 applications, applicants can dispute the limit? If so, what sort of process should that entail?	No comment.
Q14. What would you do differently in Proposal B, if anything?	No comment.
Q15. What are your thoughts on requiring the inverter performance standard (AS/NZS 4777.2:2020 incorporating Amendments 1 and 2) for low voltage DG applications in New Zealand?	No objection.
Q16. Do you consider the transitional arrangements workable regarding requirements and timeframes? If not, what arrangements would you prefer?	The arrangements are only partially workable. Four months is tight for industry to develop robust ELAM/BELAM methodologies. The 10 kW default takes effect before the methodology is complete, risking inconsistent or poorly justified limits. A more practical

	transition would include more time to develop ELAM/BELAM, implementing the 10 kW default after the methodology is completed.
Q17. What are your views on the objective of the proposed amendments?	The objective—more efficient DG export limits for long-term consumer benefit—is reasonable. However, the proposals assume that higher export limits are beneficial everywhere. In practice, benefits vary by region and depend on upstream constraints, local congestion, pricing signals, and equity considerations. The objective is sound, but the proposals do not fully support it in constrained areas.
Q18. Do you agree the benefits of the proposed amendments outweigh their costs? If not, why not?	Not universally. In unconstrained areas, benefits may exceed costs. In constrained areas, costs may exceed benefits due to greater congestion, increased curtailment of utility-scale renewables, operational and balancing challenges, and distributional impacts on consumers. The benefits and costs are location-dependent.
Q19. What are your views on the Authority's estimate of costs of lost benefits from a 5kW export limit?	The estimate is useful for illustrating that export limits have a cost, but it overstates the economic impact because: much spilling occurs during low-value periods, additional exports may force curtailment of large-scale renewable generation, buy-back rates do not reflect true system value, and network constraints limit actual export capacity. The estimate does not reflect net system benefit.
Q20. Are there costs or benefits to any parties (eg, distributors, DG owners, consumers, other industry stakeholders) not identified that need to be considered?	Unrecognised impacts include curtailment of utility-scale renewables in constrained areas, balancing and operational costs, system-security risks if inappropriate frequency settings are adopted, reduced incentives for storage or flexible load, and potential equity impacts in high-cost, low-SES regions.
Q21. Do you agree the proposed Code amendments are preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's main statutory objective in section	Not in the proposed form. A more effective option would combine code changes, industry-developed methodology, and pricing/cost-recovery reform. A universal 10 kW default is not necessarily preferable to a location-specific approach supported by stronger price signals.

15 of the Electricity Industry Act 2010	
Q22. Do you agree the Authority's proposed amendments comply with section 32(1) of the Act?	The proposals partially comply. They may promote competition and DG investment, but in constrained regions the amendments may reduce reliability and efficiency and increase costs for consumers. Section 32(1) compliance is therefore mixed.
Q23. Do you have any comments on the drafting of the proposed amendment?	The drafting for Proposal A2 is unclear. The current wording appears to require inverters to apply the entire Australia A profile, whereas the consultation text refers only to voltage-response settings. To avoid inadvertently applying inappropriate settings, the amendment should explicitly state that only volt-var, volt-watt, and sustained overvoltage settings are to align with Australia A, and all other settings should align with New Zealand. Without this clarity, there is a risk that the wrong profile will be applied at installation, potentially creating system-security risks.