19 November 2025

Electricity Authority
PO Box 10041
Wellington 6143

Submitted via email: connection.feedback@ea.govt.nz

To whom it may concern,

Electricity Networks Aotearoa (ENA) is the industry membership body that represents the electricity distribution businesses (EDBs) that take power from the national grid and deliver it to homes and businesses (our members are listed in Appendix A).

EDBs employ over 7,800 people, deliver energy to more than two million homes and businesses, and have invested $6.2 billion in network assets over the last five years. ENA harnesses members' collective expertise to promote safe, reliable, and affordable power for consumers.

We welcome the opportunity to provide feedback to the Electricity Authority (the Authority) on its consultation on *Maximising benefits from local electricity generation*. ENA supports the intent of the Authority's proposal, that consumers should be able to maximise the value of their investments in small-scale distributed generation (SSDG).

We've observed the success South Australia Power Networks (SAPN) have had with their flexible export regime – allowing all SSDG consumers to have a fair share of network capacity, as conditions allow. This would be a more sophisticated and equitable approach to managing export constraints and could be extended to other technologies (e.g. Vehicle To Grid, small-scale batteries, etc) as these are adopted by consumers. We strongly recommend that the Authority take additional time to reconsider this proposal and adapt it to more readily allow for the adoption of dynamic export limits by EDBs.

In addition to this recommendation, we have a number of other concerns about this proposal:

- Allowing SSDG customers to export at 10kW (unless a lower limit is otherwise justified) introduces a significant 'first mover' advantage for those early SSDG customers.
- The 'Australia A' settings proposed as the default may not be appropriate for New Zealand – in particular the frequency response settings appear to be outside the range Transpower considers optimal. It is not clear that the Authority has conducted a robust technical assessment to determine if all elements of the Australia A' settings are appropriate.
- The proposals described in the paper do not entirely reflect the full scope and effect of the proposed Code drafting, though we appreciate this may simply be unintended.

Our responses to the specific consultation questions are attached as Appendix B of this submission. We're very happy to discuss this subject further with the Authority, if that would be of use to you. Please contact Richard Le Gros, Policy and Innovation Manager [redacted], in the first instance.

Yours sincerely,

[redacted]

Richard Le Gros
Policy and Innovation Manager
Electricity Networks Aotearoa

# Appendix A: ENA Members

Electricity Networks Aotearoa makes this submission along with the support of its members, listed below.

- Alpine Energy
- Aurora Energy
- Buller Electricity
- Centralines
- Counties Energy
- Electra
- EA Networks
- Firstlight Network
- Horizon Energy Distribution
- MainPower NZ
- Marlborough Lines
- Nelson Electricity
- Network Tasman
- Network Waitaki
- Northpower
- Orion New Zealand
- Powerco
- PowerNet (which manages The Power Company, Electricity Invercargill, OtagoNet and Lakeland Network)
- Scanpower
- The Lines Company
- Top Energy
- Unison Networks
- Vector
- Waipa Networks
- WEL Networks
- Wellington Electricity Lines
- Westpower

# Appendix B: ENA Submission

**Maximising benefits from local generation**

| SUBMITTER | RICHARD LE GROS |
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| Submitter's organisation | **Electricity Networks Aotearoa** |

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

| QUESTIONS | COMMENTS |
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| Q1. What are your views on the proposal to set a default 10kW export limit for Part 1A applications? | ENA supports actions that will enable consumers to adopt technologies that provide benefits to themselves and their communities. We therefore wish to see those consumers who choose to take up residential solar photovoltaic systems receive the maximum utility possible from their investments, and we recognise that a key element of this will be the extent to which they can export power on to the local distribution network and receive a payment for doing so.<br><br>We note that many (though not all) EDBs do not currently impose a blanket export limit on their networks and instead evaluate each Part 1A application individually. For those EDBs that currently apply an export limit less than 10kW, this is largely based on the need to have a logistically straightforward approach to providing consumers with a limit that will ensure the ongoing safe operation of the local distribution network, especially with regard to risks of exceeding the (now former) statutory voltage limits of ±6%. Many EDBs also do so to limit the chances of creating congestion and constraints, which would risk future customers being unable to export at all.<br><br>With the Government changes to the statutory voltage limits, we recognise that those less than 10kW limits should now be re-examined by the EDBs that have applied them. In addition, access to improved visibility of network conditions on the LV network (via access to smart metering data) has also allowed some EDBs to re-consider these limits with greater confidence |

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| | about the real conditions in any specific part of the network.<br><br>That all said, EDBs must retain flexibility to impose different (sometimes lower) export limits on a per ICP or network section basis, where technical considerations justify it. We appreciate that the Authority proposals allow for this via the ELAM and BELAM tools, but stress to the Authority that the requirements around the application of these tools must be practicable.<br><br>Lastly, many EDBs are actively considering the development and use of more dynamic load and export limits for network connections – sometimes referred to as dynamic operating envelopes (DOEs) - a method that adjusts real-time export limits based on actual network conditions. These techniques have been used very effectively in overseas jurisdictions to manage the impacts of significant solar export during times of low network demand, most notably in South Australia[1].<br><br>We encourage the Authority to be very careful to ensure that their proposals here – or indeed in any subsequent consultation – do not unduly constraint EDBs from adopting these more modern and flexible techniques to managing load and export in areas of network constraint. Indeed, it would be preferable for the Authority instead to focus its efforts on regulating for the capability required to enable DOEs in future, such as remotely-manageable (i.e. 'smart') inverters connected to the internet. |
| 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? | ENA agrees with this proposal in the consultation. EDBs are generally ambivalent regarding the capacity of devices behind the meter that give rise to export (or indeed, demand) on the distribution network.<br><br>A corollary to this is that consumers should be aware that an e.g. maximum export limit of 10kW applies to the ICP, not the individual devices connected at that ICP. So, a consumer with a 10kW SSDG system, small battery and/or a Vehicle To Grid system with some export capacity must ensure that their total export to the network across both devices does not exceed the 10kW limit. Consumers with an interest in adopting multiple systems of this sort should be |

[1] https://www.sapowernetworks.com.au/industry/flexible-exports/

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| | mindful of this ICP-based limit and size the systems they procure appropriately. |
| Q3. There are requirements for distributors in Proposal A1. Which of these do you support, or not support, and why? | ENA questions the requirement for EDB CEOs (or equivalent) to provide attestations confirming how export limits have been determined. Many other network standards and other information are published by EDBs (e.g. network congestion information) without requiring this senior level attestation. There are a handful of certification requirements in the Code, but in this instance this is a particularly technical domain to require a CEO to sign off on. Generally, certification is appropriate where the information is in the personal knowledge of the person required to make the declaration, or is at least capable of being understood and tested by them through a management challenge process.<br><br>Why does the Authority propose to treat these export limit settings differently? We do not understand the rationale for this requirement, and it is not explained in the consultation material. We therefore do not support this requirement. |
| Q4. What are your views on the proposal for industry to develop an export limits assessment methodology? | ENA supports instances, such as in this proposal, where the Authority has set the outcomes if wishes the industry to achieve but has provided some autonomy and flexibility to the industry on how exactly to achieve it. We are concerned, however, that the timescales proposed (four months from gazetting the relevant Code changes) will be difficult for the sector to meet to develop both the ELAM and BELAM tools. If the Authority were to gazette the Code changes to give effect to these proposals prior to Christmas 2025 – which seems possible – then that four month time period would encompass a time when many EDB and key stakeholder staff take extended leave. This would effectively reduce the available working time by approximately a month. It would therefore be very challenging to be productive during that period with respect to developing an ELAM and BELAM. We encourage the Authority to consider whether four months is an appropriate length of time to develop these methodologies, should that period encompass Christmas, New Year, and summer holidays. |

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| | With regards to the intended scope of the ELAM and BELAM themselves, we are concerned that there does not appear to be a mechanism for EDBs to consider future SSDG consumers on a section of network when calculating appropriate export limits. That is to say, the export limits will be calculated only on the existing (and currently applying) SSDG consumers on that section of network. No consideration would be afforded to potential future SSDG consumers on that section of network, to their significant disadvantage.<br><br>The proposed Code amendment also states that lower export limits can be set only where the EDB assesses there to be a voltage or network safety concern. Thermal limits on LV networks are a significant constraining factor, and the Code drafting should be amended to allow for these to be considered as well. Preferably, the Code amendment should be re-drafted to allow for EDBs to impose export limits if a network constraint (arising from whatever source) or safety concerns should exist.<br><br>The Code drafting also appears to require EDBs to conduct a BELAM where a lower than 10kW export limit has been set as a result of an ELAM assessment, and an SSDG consumer requests it. This suggests that in effect ALL export limits set by way of ELAM assessment would then potentially be subject to a separate BELAM assessment, which is surely not the Authority's intent. |
| Q5. What would you do differently in Proposal A1, if anything? | As per our response to question 3 above, we think the requirement for a signed attestation from EDB CEOs (or equivalent role) regarding the determination of export limits is onerous, unnecessary and inconsistent with the treatment of other comparable information published by EDBs, and other instances in the Code of attestation being required. |
| 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? | ENA does not have any concerns about requiring the 2024, rather than 2016 version of the relevant inverter standards. As a general rule, we encourage the Authority and other regulatory bodies (e.g. MBIE) to ensure regulation is kept up to date with modern electro-technical standards.<br><br>We hope that this change represents a new trend to adoption of modern standards and is maintained over |

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| | time and does not simply reflect the transitory political whims of the moment. |
| 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? | ENA supports the adoption by EDBs of a single, consistent set of volt-watt and volt-var settings for inverters, unless local technical considerations support a deviation. We are concerned that the entirety of the Australia A settings may not be appropriate for use in the NZ context, e.g. frequency response settings. We encourage the Authority to conduct a more thorough and robust technical assessment of the suitability of the Australia A settings, before mandating these as the default in NZ.<br><br>The Authority should also consider whether mechanisms or new powers for EDBs could be introduced into the Code to lay the groundwork for the use of dynamic operation envelopes, such as the ability to mandate those things necessary for DOEs (e.g. 'smart' inverters connected to utility control systems, etc).<br><br>In due course, it seems likely that settings in AS/NZS 4777.2 to reflect NZ's new statutory voltage limits. When that occurs, we encourage the Authority to update this requirement to refers to those new settings in an updated version of AS/NZS 4777.2. |
| Q8. What would you do differently in Proposal A2, if anything? | No comment. |
| Q9. Do you have any concerns about the Authority citing the Australian disconnection settings for inverters when high voltage is sustained? | ENA does not have any concerns about this aspect of the proposal, though we note that these settings are aimed at managing voltage, but do not address potential thermal constraint issues. |
| Q10. Do you have any concerns about the Authority requiring the latest version of the inverter performance standard for Part 1A applications? | ENA encourages the Authority and other regulatory bodies (e.g. MBIE) to ensure regulation is kept up to date with modern electro-technical standards. We therefore do not have any concerns about the Authority requiring the latest version of the inverter performance standard for Part 1A applications. |
| Q11. What are your views on the proposal that where distributors | ENA supports instances, such as in this proposal, where the Authority has set the outcomes if wishes |

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| set bespoke export limits for Part 2 applications, they must do so using the industry developed assessment methodology? | the industry to achieve but has provided some autonomy and flexibility to the industry on how exactly to achieve it. We are concerned, however, that the timescales proposed (four months from gazetting the relevant Code changes) will be difficult for the sector to meet to develop both the ELAM and BELAM tools – especially if that period includes significant holidays such as Christmas, New Year and school summer holidays. |
| 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? | ENA considers that these requirements for information provision by EDBs to applicants are reasonable and appropriate. |
| 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? | ENA considers the requirement that EDBs act in 'good faith' is unhelpful and unnecessary. By introducing this requirement on these specific provisions, the obvious implication is that EDBs need not act in good faith in other regards – which is obviously not the intent. We therefore see no obvious reason this arguably redundant requirement should apply only to EDBs, and only with regard to these specific proposed provisions. The Authority and stakeholders should take it as a given that EDBs (and for that matter, all industry participants) will act in good faith, without requiring a specific admonishment to do so and only in specific cases.<br><br>Setting the 'good faith' aspect of these provisions aside, we have significant concerns with other aspects of dispute resolution clauses in Sch 6.1, cl 1G. For example:<br>I. It is not clear on what grounds a dispute can be brought – e.g. is it that the limit doesn't comply with the BELAM, or the BELAM doesn't comply with the Code, or that it's unreasonable for some other reason? All of the above? This clause should make clear on what grounds disputes can be raised (and it shouldn't include that the SSDG customer simply thinks the limit isn't reasonable.)<br>II. The escalation process doesn't work because various steps are at the discretion of certain |

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| | parties. E.g. we "may" escalate to the CEs, but what if we don't? The clause is silent on what happens then. It should be clear.<br>III. The clause says "the chief executive officers…may" refer to mediation. Both of them together? Either of them separately?<br>IV. Given this is a technical/engineering matter, it's not clear that it's appropriate for mediation, which is necessarily a process of compromise. These won't be 'commercial' disputes – the EDB's position will likely be that the export limit is required for network security/voltage quality.<br>V. Because the scope of permitted disputes is not defined, it's not clear how the arbitrator is supposed to decide it.<br>Overall, ENA considers that substantial latitude should be given to the EDB to set the limits which are then not subject to dispute by SSDG customers, or only within a very narrow scope.<br>Considering the broader risks that EDBs are trying to manage in setting export limits, the possible permutations are:<br>i. the EDB is being overly conservative in their export limit settings – a small subset of SSDG consumers are not able to export to the limit that they otherwise would (but can nevertheless export to some degree and self-consume to whatever level they wish).<br>ii. The EDB is overly 'generous' in their export limits setting (or the 10kW default is inappropriate in this case) - ALL customers (SSDG or not) may suffer due to poor network power quality and security.<br>So, the outcomes of the EDB export limits settings in terms of risks being managed) are not symmetrical, and therefore the scope of SSDG consumers to dispute these settings should be appropriately limited. |
| Q14. What would you do differently in Proposal B, if anything? | ENA suggests that the provisions related to dispute resolution with respect to export limits be rewritten. We would like to see much more specificity in the Code amendment around the grounds under which such a dispute can be raised (and we think these |

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| | should be very narrow) and the process to then be followed through to mediation. |
| 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? | ENA does not have any concerns about this aspect of the proposal, the proposed inverter performance standards are appropriate for use in New Zealand. |
| Q16. Do you consider the transitional arrangements workable regarding requirements and timeframes? If not, what arrangements would you prefer? | ENA recommends that the transitional arrangements be amended to avoid the need for re-work by EDBs in carrying out export limits assessments before the ELAM and BELAM are available. The obligations on EDBs in these proposals should therefore not become operative until these tools have been developed and made available to EDBs. This would avoid the need to carry out potentially onerous technical assessments, and then some few months later, re-do these same assessments using the ELAM and BELAM tools. In addition, carrying out these two technical assessments using potentially different methodologies creates the risks that the outcomes may be different, which could lead to confusion and annoyance for SSDG consumers who have connected to the network in the intervening period.<br><br>Regarding the proposed four month period for the industry to develop the ELAM and BELAM tools, if the significant holiday periods of Christmas and New Year fall within this four-month period then this becomes closer to two-three months of actual usable time to develop the proposals. We therefore suggest that a more appropriate period for development of these tools would be six months. |
| Q17. What are your views on the objective of the proposed amendments? | ENA is of the view that most EDBs would very likely have moved to a default 10kW export limit for SSDG within six months of the change to the statutory voltage ranges. These proposed amendments from the Authority are therefore unnecessary to achieve the outcomes it is seeking, and potentially harmful in that they may (if poorly drafted) interfere with the ability for EDBs to adopt more modern techniques (e.g. dynamic operating envelopes) for managing constraints on their networks. The requirement on the industry to develop the ELAM and BELAM (accepting |

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| | that these should largely draw on existing guidance documents) is an additional burden during a time of significant regulator-driven change in the sector's connection processes (e.g. reforms to Part 6). The proposed transitional provisions – especially the requirement to implement the 10kW limit ahead of the development of the ELAM and BELAM – also potentially introduces some burden of re-work for EDBs who feel they need to introduce lower than 10kW limits in some parts of their networks. |
| Q18. Do you agree the benefits of the proposed amendments outweigh their costs? If not, why not? | The benefits of the proposed amendments that the Authority has calculated appear to be predicated on the assumption that EDBs would not increase their default export limit from 5kW to 10kW, except if this proposal were to go ahead. This is demonstrably not the case, as many EDBs (Aurora Energy, Powerco, Northpower) have already adopted a 10kW default export limit, and ENA is aware of many others who are actively of assessing and making this change. In addition, many EDBs have not historically used an export limit of any kind – instead assessing SSDG applications on a case-by-case basis, so again, this proposed change generates no benefits in those cases (and is potentially actively hindering the interests of SSDG owners on those networks).<br><br>The benefits case also does not capture the 'disbenefit' of exhausting latent network export capacity (which may be driven by a thermal, rather than voltage limit, constraint) on a smaller number of larger SSDG customers. Once that latent capacity is consumed, the EDBs options become to either expand the capacity of the network at significant expense (which cannot be recouped directly from the principle beneficiaries – SSDG customers) to support the connection of more SSDG customers at the 10kW export limit, or to constrain new (and potentially existing) SSDG customers below the 10kW limit, or to simply not allow additional SSDG customers to connect to that section of network. |
| Q19. What are your views on the Authority's estimate of costs of lost benefits from a 5kW export limit? | The Authority's assessment does not appear to consider that many of these SSDG customers may already be connected to networks that don't operate a 5kW default export limit, but instead have assessed their solar export on a case-by-case basis against the |

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| | capacity of the local network. In these instances, changes to statutory voltage limits notwithstanding, there is not necessarily any increased export capacity in the network that can be made available to these customers, irrespective of the Authority's proposals in this paper. |
| Q20. Are there costs or benefits to any parties (eg, distributors, DG owners, consumers, other industry stakeholders) not identified that need to be considered? | Existing SSDG owners will need to update their inverter settings to allow for greater allowable voltage range on the local network before curtailing export, and there will presumably be some cost associated with this. If they choose not to make this change to their inverter settings, and other new and existing SSDG customers do make the change, they may find that the local network begins to more frequently operate outside the historic statutory voltage ranges which will cause their un-updated inverter to curtail export more frequently than it has historical done. This will ultimately be a dis-benefit to them, as they will be unable to export as much power as they have previously been able to. |
| 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 15 of the Electricity Industry Act 2010 | No comment. |
| Q22. Do you agree the Authority's proposed amendments comply with section 32(1) of the Act? | ENA agrees that the Authority's proposed amendments comply with the relevant sections of the Act. |
| Q23. Do you have any comments on the drafting of the proposed amendment? | We refer you to our comments on:<br>• Cl 6.3A(8) – See our response to Q5.<br>• Sch 6.1, cl 1G – See our response to Q13.<br><br>In addition to the above points, proposed clause 6.3A(3) refers to "section of network… the ICP or group of ICPs…". This is very vaguely phrased and could be interpreted to apply to just about any size of 'section' of network, which could in turn lead to inconsistent application across EDBs. We suggest |

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| | some thought be given to better defining the intended scope of this clause. |