

4 June 2025

Electricity Authority
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Submitted via email: decentralisation@ea.govt.nz

To whom it may concern,

ENA welcomes the opportunity to submit on the Electricity Authority (the Authority) green paper on *Working together to ensure our electricity system meets the future needs of all New Zealanders*. ENA represents the 29 electricity distribution businesses (EDBs) in New Zealand (see Appendix B – ENA Members) which provide local and regional electricity networks. EDBs employ 7,800 people, deliver energy to more than two million homes and business and have spent or invested over \$6 billion in the last five years.

EDBs are very supportive of the opportunities that decentralisation will provide to their consumers and communities to become more engaged in the provision of electricity while ideally accessing lower cost services and enhanced security of supply and resilience. We are, however, mindful that the 'traditional' electricity industry has been largely successful in delivering secure and affordable electricity to consumers over a long period time, and industry arrangements – for example strong governance and regulatory structures – are a key enabler of this.

We are also aware that many electricity consumers are both cash-poor and time-poor and so some of the opportunities described in this green paper, even with regulatory and industry barriers removed, may remain inaccessible to them. In that case, we would want to ensure that these consumers are not disadvantaged or 'left behind' when other consumers access the opportunities that decentralisation offers.

Our answers to the specific questions in the green paper are included in appendix A of this submission. While these may appear to be critical of some of the concepts being explored, we wish to reiterate that we are supportive of decentralisation and associated concepts, where it makes sense both for the individual consumer or community involved and for the wider system and electricity consumers as a whole. We also understand that this green paper is just a first step by the Authority in exploring this exciting topic, and we welcome and encourage the Authority to follow-up this paper with more detailed and rigorous exploration of the quantifiable benefits and costs of the high-level concepts outlined here.

ENA and its members are of course eager to engage further with the Authority as it develops its thinking around the decentralisation concepts and are available whenever it suits the Authority to do so. Please contact Richard Le Gros (richard@electricity.org.nz), Policy and Innovation Manager at ENA, if you have any questions.

Regards,



Richard Le Gros
Policy and Innovation Manager

Appendix A: ENA response to green paper

Q1 - Do you agree with the description of decentralisation? If not, why not?

ENA suggests that a more appropriate definition for decentralisation would be along the lines of “...decentralisation means enabling smaller scale renewable generation and other DERs located closer to consumers, in addition to traditional large scale electricity generation at a small number of sites across the country.”

As currently presented in the paper, the definition suggests a departure from large scale electricity generation in preference of smaller-scale renewables. ENA thinks that both approaches have their merits, and each should be judged and deployed based on the economic, technical and operational considerations at hand in any specific circumstance. It should not be assumed *a priori* that either approach is preferable in every situation.

Q2 - Do you agree with the articulation of the potential outcomes and benefits from decentralisation for consumers? If not, why not?

ENA generally agrees with the descriptions of the potential outcomes and benefits from decentralisation, but we emphasise that these are potential benefits only – we think there is still some significant uncertainty as to whether these could or would be realised.

For example, the paper states that there may be “Equitable access to low-cost, locally generated electricity, through peer-to-peer sharing, local markets, community batteries and community virtual power plants.” We think it is still an unknown as to whether P2P trading, local energy markets, community-scale batteries and VPPs will deliver low-cost and equitable access to electricity, in comparison to the status quo. They may be particularly well suited to certain consumer/community/network configurations and less well suited (or entirely unsuited) to others. Understanding these aspects of the decentralization concepts should be a focus for any next steps the Authority undertakes.

It might be useful – and perhaps this is for a later piece of work – to consider the conditions that would need to be true for the potential benefits listed here to be realised. For example, community-scale batteries would need to be cheaper (on a per kWh stored/delivered basis) than an alternative network or grid scale alternative, for these to be considered ‘low cost’. In terms of resilience, it may be that 10,000 community-scale batteries are more resilient – due to simple geographic dispersal – than 1,000 grid-scale batteries. Conversely, it may be more economic and logistically viable to both carry out appropriate site selection (e.g. selecting sites with minimal natural hazard risk exposure) and then site hardening (e.g. flood barriers, raised plinths for critical equipment, etc) for a smaller number of larger sites. Realistically, it is most likely that there are pros and cons to each approach and understanding these in some detail will be necessary for decision-makers to make the right trade-offs in any particular situation. Likewise, the relative security and reliability of the surrounding distribution and transmission networks should be considered when assessing whether any locally generated electricity and/or storage would contribute to meaningful enhancements to security.

Q3 - Do you agree with the articulation of the possible challenges to unlocking the benefits of decentralisation? If not, why not?

ENA agrees with the possible challenges to unlocking the benefits of decentralisation listed in the green paper. In particular EDBs are very focussed on the energy hardship and energy affordability and their role in managing their share of costs in the electricity supply system. We would therefore expect the Authority to investigate and assure itself that decentralisation would lead to genuine improvements in electricity affordability for all electricity consumers, not just those who have the capital to invest in DER or the resources (e.g. time, energy literacy, etc) to engage in a more locally centred electricity market.

Similarly, in the area of supply security and reliability – something EDBs pay close attention to- the Authority should assure itself that decentralisation will provide improvements to the status quo, in both ‘business as usual’ and emergency situations.

Other potential challenges that come to mind include:

- If a local community invests in local generation – does that become ‘must run’ generation, irrespective of economic or wider system value?
- If so, would this undermine efficient use of the electricity transmission and higher voltage distribution system?
- If local generation of some scale is unavailable when called upon, is there some form of sanction against the local community owners? If not, does this imply that local generation of scale must always be backed up by ‘traditional’ generation? Who assures this, and who pays for it?
- Could this create or exacerbate a ‘post code lottery’ situation, where communities that happen to have the resources to invest in these types of decentralised resources benefit, and those that don’t, don’t?
- Consumers should be free to be engaged in their energy supply or not as suits them, without necessarily forgoing some benefit from choosing to be disengaged.

Q4 - Do you agree with the articulated opportunity statement for a more decentralised electricity system? If not, why not?

ENA agrees that the opportunity statement describes a desirable state for a decentralised electricity system. We also note that there are other, non-decentralised states that the electricity system could be in that may be equally appealing and useful to NZ, e.g. abundant low-cost grid-served renewable generation.

Consistent with our other responses to this green paper, we think that the ideal future scenario will be for both centralised and decentralised energy solutions to be deployed in the specific situations that maximise the benefits and minimise the costs of each.

Q5 - What other feedback would you like to provide to input into the discussion on, for example:

- a) **what a more decentralised electricity system might look like,**
- b) **how this might benefit consumers, and**
- c) **what might be needed to unlock these benefits.**

ENA thinks that, in order to address the a, b and c questions posed above, the Authority will need to carry out further technical and economic assessments of the most probable decentralisation scenarios. Consistent with our responses to earlier questions, we think decentralisation presents opportunities to communities in appropriate scenarios and contexts, but these need to be better explored and understood.

Most importantly, any specific decentralisation technology or technique needs to work in harmony with the existing centralised electricity supply system (and vice versa – to an extent). With no all-powerful ‘system architect’ overseeing the system, we rely upon accurate and quantifiable price signals, in concert with competitive markets and fit for purpose regulation, to ensure all elements work together to provide an electricity service to consumers of acceptable quality at an efficient price. If decentralised energy solutions are less viable within that framework, then care needs to be exercised that whatever interventions are made to promote them, do not inadvertently undermine the efficient operation of the whole.

Lastly, as the Authority develops its thinking in the area of decentralisation, we encourage it to expend further effort to capture the voice of the consumer – which we appreciate this green paper is the first step in doing. It is important that stakeholders are directly engaged in these proposals, to some reasonable level of specificity, to ensure that they are genuinely in the long-term interest of communities and consumers.

Appendix B: 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