25 June 2025

Electricity Authority
PO Box 10041
Wellington 6143
By E- Mail: decentralisation@ea.govt.nz

Re: Working together to ensure our electricity system meets the future needs of all New Zealanders – Green paper

Counties Energy Limited (**CEL**) welcomes the opportunity to comment on the Electricity Authority's (**EA's**) consultation on the 'Working together to ensure our electricity system meets the future needs of all New Zealanders – Green paper'.

CEL supports the potential opportunities that decentralisation can bring to consumers and communities. We consider that this includes improved resilience, increased flexibility, modularity,[1] and opens opportunities to directly address social and equity issues within communities more effectively than traditional approaches.

However, the primary challenge will be in balancing both centralised and decentralised approaches for dynamic efficiencies to occur. This is because, while there may be areas that could be improved through decentralisation, there are also centralised aspects of our current electricity system that work well, and may continue to work well, for consumer outcomes.

As noted in the MDAG report[2], while our system is becoming far more diverse and decentralised which offers benefits to consumers, it will still need to be tightly coordinated if it is to be reliable. This requires a new approach that recognises the 'neural' characteristics of the system going forward.

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[1] Aoun, A. et al, Centralised vs Decentralised Electric Grid Resilience Analysis Using Leontief's Input-Output Model, 9 March 2024. https://www.mdpi.com/1996-1073/17/6/1321

[2] Market Development Advisory Group (MDAG), Price discovery in a renewables-based electricity system – Final recommendations paper. 11 December 2023. p 42. https://www.ea.govt.nz/documents/4335/Appendix_A2_-_Final_recommendations_report.pdf

As many decentralised solutions are currently being piloted and in the exploratory and/or experimental stages of development, a key factor will be in reducing the risk and uncertainty of decentralised solutions to identify the use cases they may serve.[3] The regulatory framework and policy settings will need to evolve to provide parties with confidence to invest, and to discover and capture the benefits and opportunities that decentralisation provides.

However, CEL cautions against policy settings and rules that pre-determines outcomes or biases towards specific innovations or technologies before this occurs.[4] This is because of the rapid pace at which technology is changing, and the risk of unintended consequences if policy settings result in perverse incentives that deteriorates economic efficiency, going forward.[5]

This said, decentralisation is expected to catalyse the emergence of new business models as parties explore and test the market and evolving technologies. These models may include innovative services such as peer-to-peer energy trading, localised energy management, and flexible demand offerings. As these opportunities unfold, there is a growing risk of increased energy inequality. For example, households that can afford technologies like electric vehicles, solar panels, and home batteries are likely to benefit most, while those already experiencing energy hardship may be left behind—an issue already observed in Australia.[6]

This underscores the importance of the EA continuing to support inclusive and equitable innovation, such as the Community Battery trial by CEL, Ara Ake and Climate Connect Aotearoa. These efforts aim to ensure that the benefits of decentralisation are shared more broadly across all communities. Therefore, we consider the principal focus for regulators and policy makers should be on enabling market discovery by participants for dynamic efficiencies to occur. This will ensure we are making optimal, not sub-optimal, step-changes to develop New Zealand's electricity sector to address the specific challenges we face. If not, there is a real risk that this may result in additional costs for future consumers that may be difficult to reverse.

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[3] Sagar, A. D., Zwaan, B. Technological innovation in the energy sector: R&D, deployment, and learning-by-doing. Volume 34, Issue 17. November 2006. https://www.sciencedirect.com/science/article/abs/pii/S0301421505001217

[4] OECD, Shaping the Future of Regulators: The Impact of Emerging technologies on Economic Regulators, The Governance of Regulators. 2020. p 72. https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/11/shaping-the-future-of-regulators_3c55d5ca/db481aa3-en.pdf

[5] Economic efficiency includes productive, allocative and dynamic efficiency of the electricity system.

[6] Best, R., Chareunsy, A., and Taylor, M., Changes in inequality for solar panel uptake by Australian homeowners. Volume 209, July 2023. https://www.sciencedirect.com/science/article/abs/pii/S0921800923001143

We again reiterate our support for the EA's initiative to engage on the pathway forward for a more decentralised system. We acknowledge that designing a better energy system for New Zealand will be challenging. However, we look forward to working with the EA and relevant teams as it develops this exciting work further. CEL would be happy to discuss any aspect of this submission further.

Yours sincerely,

Marcus Sin
Senior Regulatory Manager

Annex – Response to questions

Questions	CEL comments
1. Do you agree with the description of decentralisation? If not, why not?	CEL agrees in principle with EA's proposed description of decentralisation. However, we consider that the current definition would benefit from greater clarity on, and consideration of, the following: • A key point in the EA's paper is that "local energy systems would be connected across the country by the grid's strong central spine".[7] We consider this will be an important focus for any step-changes in our system as there are many aspects of our current system that work well, and may continue to work well, for future consumers. Any transition away from this will need to take this into account; • While decentralisation or DER costs may be decreasing, CEL considers that any future regulatory settings/policies will need to ensure that resources continue to be deployed and used in a least cost manner or in an economically efficient way. This means allowing for market discovery to occur (and dynamic efficiencies to be realised), while still preserving the existing systems that continue to be optimal in a new market environment; and • While decentralised decision-making creates opportunities for consumers to take greater ownership and control, this needs to be balanced with appropriate safeguards to ensure that the right risks continue to sit with the best party(ies) able to manage them. This requires consumers to be more actively engaged in the sector, as well

[7] The Electricity Authority, Working together to ensure our electricity system meets the future needs of all New Zealanders – Green paper. 30 April 2025. p 6, para 2.3. https://www.ea.govt.nz/projects/all/meeting-the-future-needs-of-new-zealanders/consultation/working-together-to-meet-the-needs-of-new-zealanders/

	as being more well-informed and educated in how our electricity system works.
2. Do you agree with the articulation of the potential outcomes and benefits from decentralisation for consumers? If not, why not?	CEL agrees in principle with the potential outcomes and benefits indicated in the paper. This is because the costs of decentralisation are declining, such as renewable generation, and battery storage. As the economic feasibility of decentralisation improves, this creates opportunities for the sector. However, given the current market climate, we consider that it is still relatively uncertain whether the benefits and intended outcomes from decentralisation will materialise and/or materialise in the way we expect. A key role for Government will be in stewarding the change to ensure the system evolves in an efficient way that allows decentralisation opportunities to be capitalised on by parties. This is likely to be a gradual and dynamic process, as parties continue to invest to reduce risk and uncertainty in innovations over time, and the 'optimal' use cases for new technologies begin to emerge.
3. Do you agree with the articulation of the possible challenges to unlocking the benefits of decentralisation? If not, why not?	CEL agrees in principle with the high-level challenges that the EA has indicated. In addition to this, we consider a key risk to unlocking decentralisation benefits will be the rapid pace at which technological change occurs. We believe the EA's focus should be on enabling market discovery, and the ongoing development of the system for dynamic efficiencies (or, 'optimal' step changes) to occur. For example, this could involve alleviating regulatory hurdles and/or barriers for innovations to be trialled, and for new market solutions to be discovered – which we understand is the primary intention of the EA's Power Innovation Pathway.
4. Do you agree with the articulated opportunity statement for a more decentralised electricity system? If not, why not?	CEL agrees in principle with the EA's opportunity statement. However, we consider that decentralisation will need to be assessed on a 'fair and equal' basis against centralised approaches, and the status quo. The key to achieving this will be to take a measured

	approach that evolves our electricity system to one that enables decentralisation to stand up on its own merits, that works efficiently and effectively with the 'neural' or centralised parts of the system.
5. What other feedback would you like to provide to input into the discussion on, for example: • What a more decentralised electricity system might look like, • How might this benefit consumers; and • What might be needed to unlock these benefits	While CEL welcomes the EA's initial thinking on decentralisation, we consider that further work is needed to better understand how our sector can transition to a more decentralised system that better achieves consumer outcomes, and the impacts this has on participants and consumers. This will require collaboration across the sector, including policymakers, network owners/operators, generators, retailers and communities. All are essential as research and development, infrastructure upgrades, and regulatory frameworks will need to be closely coordinated to successfully integrate decentralisation into existing systems. As observed in the French energy market (i.e. the Foresight Committee), such collaboration that involves the wider energy sector can provide significant benefits in terms of regulatory design.[8] For this reason, we welcome the EA's efforts in publishing this paper as an initial step. We consider that there is value in sector-wide thinking on how a 'hybrid' centralised/decentralised system may look like, that is both economically efficient, and that is effective in working with our existing systems. As a next step to this, we consider that further sector-wide engagement either as a workshop or a subsequent discussion paper would be useful to better understand in a greater level of detail:

[8] OECD, Shaping the Future of Regulators: The Impact of Emerging technologies on Economic Regulators, The Governance of Regulators. 2020. p 58
https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/11/shaping-the-future-of-regulators_3c55d5ca/db481aa3-en.pdf

	• Which aspects of our electricity system would likely benefit the most from greater decentralisation, relative to the current status quo; • The known (and unknown) risks and uncertainties in capitalising on these opportunities; and • Any changes or actions that could be made to our existing framework that would enable these opportunities to be more actively pursued, going forward.