



Electricity Networks Aotearoa **Briefing to the Incoming Minister of Energy**

February 2025

Contents

1	The opportunity to focus on what matters	3
	Recommended actions for your first 100 days	3
2	Introduction to ENA and the Electricity Distribution Businesses (EDBs)	4
3	Strategic issues for networks	5
3.1	Wholesale electricity market issues and effects	5
3.2	Strategic direction from central government	6
3.3	Sector changes are not impacting all EDBs in the same way	6
3.4	Regulation must keep pace with New Zealand's transformation	7
3.5	Energy sector and government decarbonisation framework	8
3.6	Workforce capability and capacity	9
3.7	Resilience and potentially increasing outages due to severe weather	10
3.8	Consumers	11
4	Live sector issues and potential 'pain points'	11
4.1	Just transition – how are the costs of network transformation equitably shared across society?11	
4.2	Repeal of low user fixed charge regulations – stay the course!	12
4.3	Network connections/capacity requests outpacing sector ability to service	12
4.4	Temporary traffic management (TTM) costs	13
5	Appendix A - ENA Members	14
6	Appendix B – ENA Board and Management	16
	The ENA Board are nominated at the annual AGM and are appointed for a two-year term. The current ENA Board is:	16
7	Appendix C Temporary Traffic Management report	17

1 The opportunity to focus on what matters

Congratulations on your appointment as Minister for Energy.

Electricity distribution businesses play a critical role in ensuring the safe, reliable, and cost-effective delivery of electricity across country. This briefing outlines the key opportunities and issues facing our sector and the areas where government policy and regulatory support will be crucial. The electricity sector, categorised as "electricity, gas, water, and waste services," by Statistics NZ contributes around 2.6% to New Zealand's GDP¹, but this belies the scale of how important this 2.6% is, as electricity is intertwined with and influences other, significant systems including transportation, agriculture, and buildings.

Recommended actions for your first 100 days

The electricity sector faces several long-term strategic and short-term immediate risks and issues. We recommend that you consider the following actions to begin addressing some of these challenges in your first 100 days in this new role. The distribution sector is ready and willing to work with your office and officials to deliver any or all of the following:

- Establish a clear line of sight for the security of supply challenges for winter, led by the Electricity Authority² (the Authority) and Transpower to address these.
- Understand the electricity price increases³ that will come into effect on or around 1 April 2025. Customers may have already been notified by their electricity retailers of these changes, which may spur public and political interest in this subject.
- Lower the cost of energy (new build generation) and Transmission and Distribution via RMA improvements and Temporary Traffic Management improvements.
- Work with the sector to understand and identify the right structural and/or policy changes arising from the government review of electricity market performance⁴.
- Improve the coordination and management of interdependencies between the government electricity sector policy and regulatory agencies (i.e. MBIE, EA, EECA, and the Commerce Commission), and employee churn in the public sector, so the right structures and capabilities are in the right roles for the energy transition.
- Deliver an Energy Strategy (ideally with cross-party support to give the market confidence and trust to invest) that clearly communicates the government's strategic direction for the sector transition. Developed in close collaboration with industry, it should define the overall vision, set specific targets, clarify stakeholder roles, and provide a coordinated delivery plan.

¹ [Gross domestic product: September 2024 quarter | Stats NZ](#)

² <https://www.ea.govt.nz/projects/all/managing-peak-electricity-demand/>

³ <https://comcom.govt.nz/regulated-industries/electricity-lines/electricity-lines-and-transmission-charges-what-are-they-why-are-they-changing-and-what-does-this-mean-for-your-electricity-bill>

⁴ <https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-consultations-and-reviews/review-of-electricity-market-performance>

2 Introduction to ENA and the Electricity Distribution Businesses (EDBs)

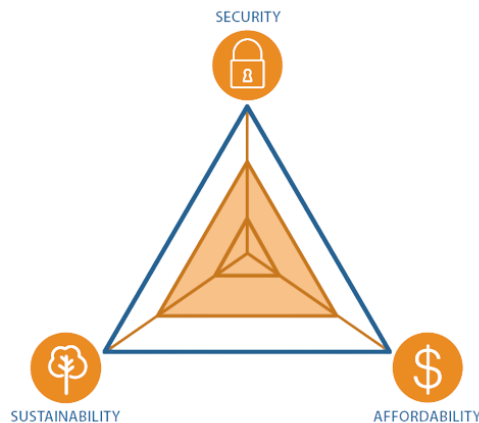
Electricity Networks Aotearoa (ENA) represents the 29 electricity distribution businesses (EDBs) in New Zealand (see Appendix A), which provide local and regional electricity networks. EDBs:

- employ 7,800+ people
- deliver electricity to more than two and a quarter million homes and businesses
- are expected to spend \$22 billion⁵ over the next five years to ensure that New Zealand has reliable (currently 99.9% uptime), resilient, and secure electricity to enable its decarbonisation.

New Zealand has been ranked in the top 10 of the World Energy Council's energy trilemma index⁶ since 2015. We are now ranked 9th out of 99 countries, suggesting that New Zealand's energy system is performing well in balancing the trilemma outcomes of security, environmental performance, and affordability.

But we cannot be complacent. Experts agree that to meet our net zero 2050 targets, electricity needs to increase from its current contribution of serving 25% of our total energy needs to around 60% by 2050.

The electricity sector can improve this ranking by playing a major role in decarbonising the wider energy sector. According to the BCG report *The Future is Electric*,⁷ delivering this would require an investment of \$42 billion in the 2020s, and specifically for electricity distributors, \$22 billion to prepare networks for rapid electrification and distributed generation.



⁵ <https://www.bcg.com/publications/2022/climate-change-in-new-zealand>

⁶ [World_Energy_Trilemma_Index_2022.pdf](https://www.worldenergy.org/publications/World_Energy_Trilemma_Index_2022.pdf) (worldenergy.org)

⁷ <https://www.bcg.com/publications/2022/climate-change-in-new-zealand>

The electricity distribution sector



employs over **7,800** people across Aotearoa



delivers energy to **2,256,767** homes and businesses



invested **\$6.2B** in network assets in the last five years

The electricity network



is connected **99.9%** of the time



could increase in demand by **68%** by 2050

EDBs are already working to achieve New Zealand’s low-emissions goals, but to do this successfully our distribution networks must have:

- **Regulation and policy settings** that keep pace with New Zealand’s transformation and growing need for resilience in the face of increasing natural disasters. Regulation and policy need to allow networks to invest ahead of time, while providing electricity to consumers in a way that is affordable and reliable. For a long time, a ‘just-in-time’ approach has been taken to transmission and distribution network investment, which risks stalling low-cost renewable generation development and electrification, increasing emissions and net prices for consumers. See also section 3.4 below.
- A **skilled workforce** that can deliver the networks we need today, as well as for the future. The electricity supply industry will need to find an additional 150 new employees each year (or 700 if contractors and consultants are included) to deliver the current levels of demand, as well as to support New Zealand in electrifying the economy. See also section 3.6 below.
- Accessible, real-time, and cost-effective **data on low voltage (LV) networks** is needed to improve LV network asset management, maintain service affordability and facilitate innovation. Networks need policies that make it easier to purchase, access, and use smart meter data.
- The assistance of the government for a ‘**just transition**’ for communities that will need support during the energy transition. See also section 4.1 below.

Working together alongside generation, transmission, and retailers, as well as government, ENA members seek to provide the best electricity choices for the long-term benefit of consumers.

The ENA Board are provided in Appendix B.

3 Strategic issues for networks

3.1 Wholesale electricity market issues and effects

The electricity sector has experienced tight generation supply margins over the previous two winters (2023 and 2024), especially at times of peak electricity usage – typically during ‘cold snaps’ that coincide with low solar and wind generation. EDBs have done what they can to protect their residential consumers against the worst effects of these tight supply situations, largely by using their load control systems (hot water load control or ripple control) to reduce demand from consumers in a way that does not negatively affect them.

The distribution sector has been very encouraged by recent signals from central government that it is considering relaxing the restrictions on EDBs owning distributed generation. Many EDBs would welcome the proposed actions in the Energy and Electricity Security Bill. The Bill would enable EDBs to deploy capital into new generation projects, particularly solar farms, wind, and geothermal, which would have multiple benefits for EDBs and their customers. These include improving local electricity resilience and security, enhancing regional economic activity during the build phase, and overall providing greater generation capacity into the wholesale market, which should help mitigate electricity price rises. We encourage the government to be as ambitious as possible in this regard and release the shackles on EDB investment in new renewable generation.

3.2 Strategic direction from central government

The whole energy industry would benefit from a national energy strategy and direction from central government. ENA stakeholders believe that central government should be leading this activity in collaboration with the sector. This does not need to be an extensive document but should provide clear direction to industry and investors on the medium-to long-term preferences of central government including some of the key trade-offs the sector is considering – investment versus affordability, future of fossil fuels (especially gas), and planning reform to enable new renewable generation to be built. This would ensure that, to the best extent possible, the sector and government (including independent regulators), can all pull in the same direction, as set out in the energy strategy. If differences of focus should arise within the sector, these can at least be judged against the expressed preferences of central government.

For the electricity sector to effectively and collectively move forward on the decarbonisation journey, strategic direction (with ideally cross-party support) from central government is imperative.

3.3 Sector changes are not impacting all EDBs in the same way

The electricity distribution sector has been in a relatively steady state for the past 40 years, with innovation and change occurring at an incremental pace. The prevailing regulatory regimes have suited this steady-state operating environment.

In addition to ensuring our critical infrastructure is resilient, the scale and timing of spending by EDBs needed to facilitate New Zealand's transition to an electrified and decarbonised economy is highly uncertain. To illustrate the extent of this variability, ENA worked with EDBs to develop a [national electricity demand and investment heatmap](#), which presents the drivers of electricity demand on a per-network basis out to 2050. One insight arising from the heatmap is that the nature and timing of changes in electricity demand due to electrification do not manifest uniformly across the country. For example, while all EDBs are anticipating that electric vehicle charging loads (especially in residential settings) will be a key driver of investment in their networks, the timeframes in which they expect this to manifest can vary a great deal. Broadly speaking, the major metro networks expect these impacts to arise between now and 2040, whereas the most regional and rural networks don't expect to see these impacts until beyond 2041. Another example of these impacts is the challenges posed by the potential phase-out of reticulated gas for hot water, space heating and cooking in those parts of the country that currently have it. While the timing for this is uncertain, for those networks that would see these loads which are currently served by gas switch to electricity, the impacts would be very significant.

The key takeaway from these insights from the interactive heatmap is that government and regulatory policy that impact upon the EDBs needs to accommodate a range of circumstances that the individual businesses may be dealing with. It is important that we do not try to impose a 'one size fits all' approach onto a diverse sector with many businesses facing unique and highly situational challenges.

The heatmap is interactive and can be viewed on the ENA website,⁸ and a high-level view is presented below.

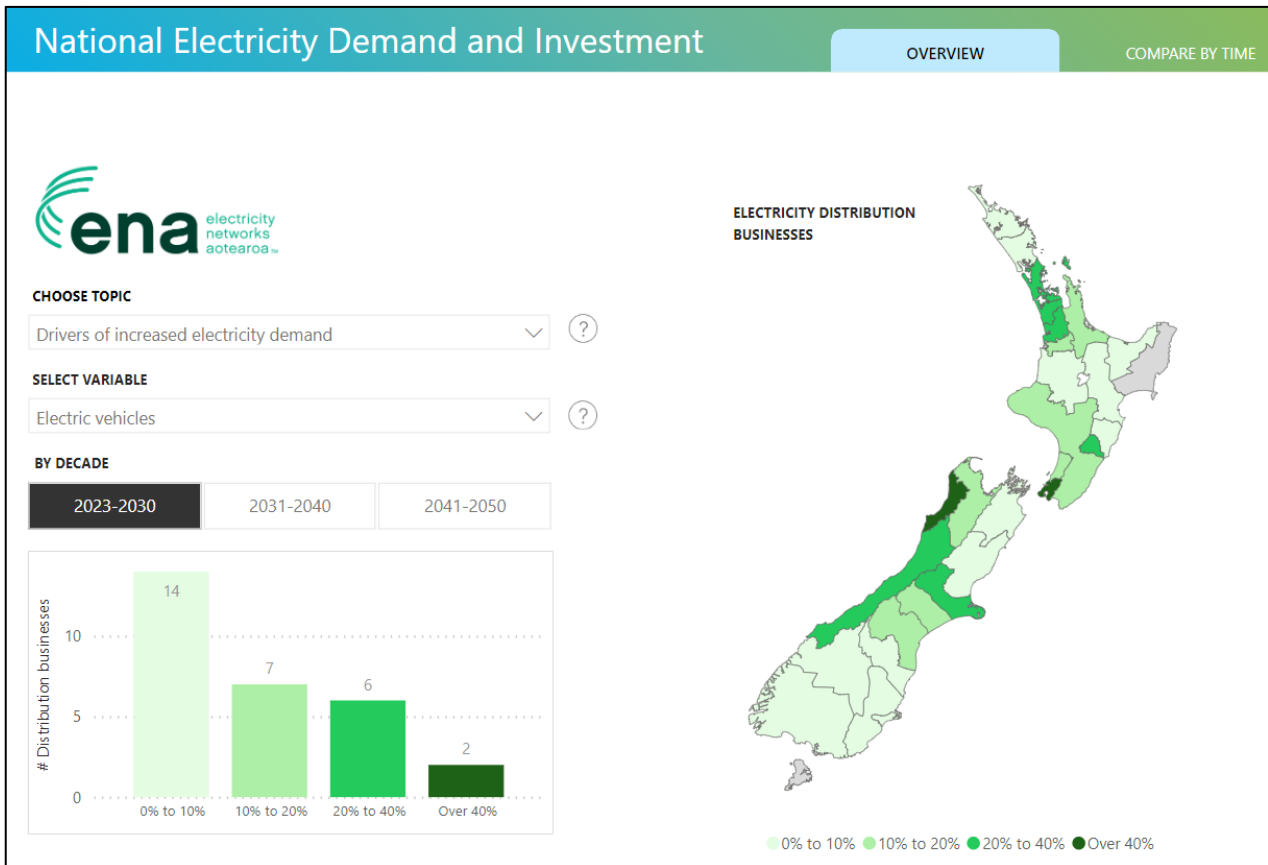


Figure 2 - ENA Electricity Demand and Investment Heatmap: Estimated EV electricity demand by region from 2023 to 2030

3.4 Regulation must keep pace with New Zealand’s transformation

The operations of New Zealand’s electricity distribution businesses are highly regulated by both the Electricity Authority (the Authority) and the Commerce Commission (the Commission). This includes determining how much EDBs can spend on building and operating their networks and setting the maximum revenue that they can earn.

The Commission manages the economic regulatory framework that applies to EDBs and Transpower. Most of our non-exempt EDBs⁹ are on ‘default price paths’ (DPP).¹⁰ In late November 2024, the

⁸ Electricity Networks Aotearoa. (n.d.). *EDBs investment driver heatmap*. Electricity Networks Association. <https://www.ena.org.nz/resources/edbs-investment-driver-heatmap/>

⁹ ‘Non-exempt’ is the term applied to EDBs within scope of the Commission’s Part 4 price-quality regulation. All EDBs, including ‘exempt’ EDBs, are within the scope of information disclosure regulation. A map showing ‘exempt’ and ‘non-exempt’ EDBs can be found here: [Commerce Commission - Electricity distributor map](#).

¹⁰ This regulatory framework is designed to balance rigour with a relatively mechanistic, low-cost approach to setting price paths. “If a default path does not suit the particular circumstances of a business, however, it can apply for and propose its own ‘customised’ path. Customised paths use more business specific information,

Commission made its final decision on DPP4, covering 1 April 2025 to 31 March 2030. The decision allowed for a significant uplift in expenditure (and therefore prices) to reflect the need for increased investment in the sector, both to maintain reliability and support growth. For EDBs, this equates to an average 24% increase in the first year, with lower business-specific increases in years two to five. When combined with increases allowed to Transpower as well, consumer bills will increase by an average of \$10 per month.¹¹

Regulations need to strike a balance between providing sufficient certainty and stability to encourage investment and underwrite the long-term financial health of the sector, while also maintaining enough flexibility to evolve with the economy over this critical transitional period. As illustrated by ENA's electricity demand and investment heatmap, transition effects that EDBs are experiencing and anticipating can be highly variable and localised. 'One size fits all' thinking and regulation are ill-suited to this environment.

EDBs are committed to spending every dollar needed to address the challenges posed by these differing drivers of electrification and resilience, but not a dollar more. EDBs are not averse to regulation. However, given its costs and longevity, we believe regulation should be targeted and used sparingly, as a backstop when guidance, principles and market solutions have failed. We also believe that regulators should follow their own principles,¹² as well as good regulatory practices¹³ and stewardship.¹⁴

3.5 Energy sector and government decarbonisation framework

The energy transition requires 'whole-of-system' thinking, and to that effect, sector participants have decided to get underway with acting consistent with the Energy Transition Framework. Ministerial officials are observers, as the Framework was not endorsed by the Government in 2024. There is an option for the Government to participate more actively should they choose.

This Framework establishes a structure for the energy sector to collaborate on the shared challenges of transitioning the energy system. The CEs Forum provides Steering Committee oversight of the work programme, with industry associations giving effect to the priority themes, which are:

- **Support accelerated renewables development** by ensuring consenting frameworks encourage the rapid deployment of renewables and enabling infrastructure, both through optimising existing assets and new developments, while maintaining competitive neutrality.
- **Scale up transmission and distribution** investment by seeking enabling investment incentives and appropriate regulatory settings in a manner that fosters affordability.

and rely on more in-depth audit, verification, and evaluation processes." [Commerce Commission - Electricity lines price-quality paths](#)

¹¹ Commerce Commission. (2024, November 20). *Joint-RCP4-DPP4-Final-decision-stakeholder-and-media-slides*. Commerce Commission. [Joint-RCP4-DPP4-Final-decision-stakeholder-and-media-slides-20-November-2024.pdf](#).

¹² Electricity Authority. (2024, February 27). *New consultation charter (1410202.8)*. Electricity Authority. [New Consultation Charter \(1410202.8\)](#)

¹³ Treasury. (2017, April). *Government expectations for good regulatory practice*. The Treasury. [Government Expectations for Good Regulatory Practice](#)

¹⁴ Treasury. (2022, December 6). *Starting out with regulatory stewardship: A resource*. The Treasury New Zealand. [Starting out with regulatory stewardship: A resource | The Treasury New Zealand](#)

- **Support people, industry, businesses and the workforce** by supporting consumers experiencing hardship and ensuring sector workforce development, so that there is improved diversity and capacity to deliver on the energy system transition.
- **Efficient pricing** by ensuring wholesale and retail markets are competitive, barriers to entry and expansion are addressed, and network regulation is such that charges to industry, and retail bills to businesses and consumers, reflect efficient pricing and are in the long-term interests of consumers (including from an affordability perspective).
- **Drive electrification at pace** by ensuring EV charging infrastructure can be successfully rolled out and that electrification projects for households, businesses, or large-scale initiatives can be implemented - encouraging load flexibility where possible.
- **Enable a 'smart electricity system'** to maximise the use of existing infrastructure to minimise future infrastructure investment, thereby reducing whole-of-system costs and delivering better consumer outcomes.
- **Network resilience** by improving the ability of networks to adapt to the effects of climate change and strengthening overall network resilience.
- **Encourage the right energy and capacity mix** by ensuring sufficient availability of natural gas, and efficient mechanisms for wholesale electricity market arrangements to enable electricity to play its role, fully and efficiently, in decarbonising New Zealand.
- **Resilient transition and security of supply** by recognising the role of appropriate transition fuels in supporting the security and resilience of the energy system, and supporting the interconnection between gas, electricity, and other fuels in achieving a resilient transition.

3.6 Workforce capability and capacity

The electricity supply industry needs to recruit two people every day for the next five years. This equates to an additional 150 new employees each year (or 700 if contractors and consultants are included)¹⁵ to deliver the current levels of demand as well as to support Aotearoa in electrifying the economy.

“One of the biggest challenges is going to be skills...the work is going to be queueing up on the skillsets that are needed. So we’d better double down on training our own and we’d better figure out where we are going to get the skills from to get it done...or we’ll have the strategy, we’ll have the finance, we’ll have the vision, but we will fall woefully short on execution.”

(source: Dr Rod Carr, NZ Infrastructure Commission – Symposium 2021)

Labour shortages are an issue for many sectors.

There’s no ‘silver bullet’ for this. However, we seek support from the government to ensure training and learning institutions are developing people with the skills to plan, build, operate, and maintain the electricity networks we need and that immigration settings also support the required talent pipeline. Without this, our decarbonisation efforts will be futile, as we simply won’t have the people we need to get the job done. The current review of the [Vocational Education and Training Sector](#) is therefore critical to enabling the talent the sector needs.

¹⁵ Waihanga Ara Rau. (2022). *Re-energise: ESI workforce development strategy report*. Waihanga Ara Rau. https://www.waihangaararau.nz/wp-content/uploads/2023/11/Re-energise-ESI-Workforce-Development-Strategy-Report_FEB2022.pdf

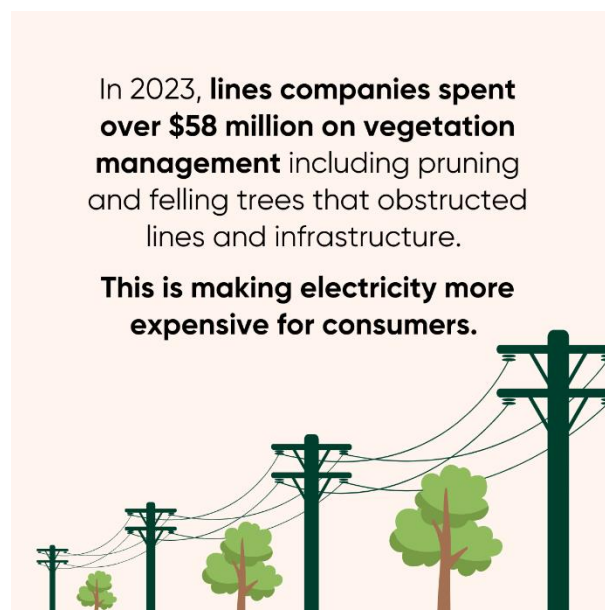
3.7 Resilience and potentially increasing outages due to severe weather

The electricity distribution sector has long experience in dealing with occasional wide-scale interruptions to its networks and service, usually caused by severe weather events. As such, EDBs have a good grasp of the criticality of their services to individuals, communities, and businesses. They design their assets and procedures to ensure that service can be restored safely and promptly following such events. Cyclone Gabrielle was an extreme example of these sorts of disruptions, and the sector has taken the opportunity to learn lessons from our response. ENA commissioned Energia to produce an independent ‘lessons learned’ report for the sector¹⁶, and this has also been shared with the government’s Cyclone Recovery Taskforce¹⁷ and officials at MBIE. Some of the key insights from that report, such as the impacts of vegetation, are referenced in the relevant sections of this briefing.

Nevertheless, with the increasing concentration of energy consumption towards electricity (e.g. electric vehicles, home heating) consumers’ reliance on their electricity supply will only increase. In parallel, the sector is anticipating an increase in the severity and frequency of extreme weather events. The sector is also aware of the increased interest in the resilience of critical infrastructure services by both consumers and the government and is working to provide increased confidence in its resilience.

The management of vegetation near electricity networks remains a key concern and challenge for the distribution sector.

The sector was very pleased to see the previous Minister progressing some prompt amendments to the key legislation governing this issue, the Electricity (Hazards from Trees) Regulations 2003. However, as the recent extreme weather event in Mangawhai¹⁸ shows, trees continue to cause significant damage to distribution networks in inclement weather. We look forward to further work with the officials at MBIE on the next steps in the reform of the regulations, in particular improvements to the management of plantation forestry around electricity networks. We hope to see more fit-for-purpose solutions for managing trees so we can improve electricity resilience for consumers



In 2023, lines companies spent over \$58 million on vegetation management including pruning and felling trees that obstructed lines and infrastructure.

This is making electricity more expensive for consumers.

¹⁶ Electricity Networks Aotearoa. (2023). *Electricity distribution sector: Cyclone Gabrielle review*. Electricity Networks Aotearoa. <http://ena.org.nz/resources/electricity-distribution-sector-cyclone-gabrielle-review/>

¹⁷ Cyclone Recovery Unit | Department of the Prime Minister and Cabinet (DPMC). (n.d.). *Cyclone recovery and government response*. Department of the Prime Minister and Cabinet. [Cyclone Recovery Unit | Department of the Prime Minister and Cabinet \(DPMC\)](https://www.dpmc.govt.nz/cyclone-recovery-unit/)

¹⁸ RNZ. (2023, February 13). *‘Like a war zone’: Homes in the dark after devastating Mangawhai tornado*. RNZ. <https://www.rnz.co.nz/news/national/539995/like-a-war-zone-homes-in-the-dark-after-devastating-mangawhai-tornado>

3.8 Consumers

As the world grapples with net zero, it is important to recognise that it is not just a technology and policy endeavour, but also a human one. Earning social licence and trust with communities and stakeholders is critical. A lack of social licence can lead to project delays, increased costs, and undermine public support for the energy transition itself. When communities understand, trust, and accept the need to increasingly transition to electricity, positive action can follow.

Concerns about the rising costs of energy, and declining confidence that New Zealand will reach its climate targets pose significant challenges. Increasing public awareness and knowledge is a key step towards ensuring a just energy transition.

There is an opportunity for Government, industry, academia and society to work more closely together to frame the narrative more positively on the future work that is required along with a greater appreciation of the benefits that electrification will play for Kiwis.

4 Live sector issues and potential ‘pain points’

4.1 Just transition – how are the costs of network transformation equitably shared across society?

An independent report ENA commissioned¹⁹ from economic consultancy, Sapere, confirmed that households using purely electric appliances combined with an EV will soon begin to comparatively reduce their total energy spend. By 2040, the expectation is that those comparative savings would be over \$2,000 a year.

However, there is a significant equity issue in play. As things stand, wealthier households will be the first to benefit from energy savings as they can afford to buy EVs, which is where the major cost savings are found. The upfront costs will be a barrier for many New Zealanders – particularly until EVs drop in price and the second-hand market deepens.

While renewable forms of electricity like wind and solar are relatively cheap to generate, there is a cost to both build this new generation and transport it to the places it’s needed, when it’s needed. This will, in theory, make our electricity more expensive, not less. However, if we don't electrify, Aotearoa will not meet its net zero emission aspirations. To navigate this, we need the government and regulator to focus on the social equity challenge, as it is not something the electricity distribution sector can influence.

¹⁹ Electricity Networks Aotearoa. (2022). *Electrification of NZ's energy needs*. Electricity Networks Aotearoa. <https://www.ena.org.nz/resources/electrification-of-nzs-energy-needs/document/1231>

4.2 Repeal of low user fixed charge regulations – stay the course!

The introduction of the Low Fixed Charge (LFC) regulations in 2004 was well intended and had the admirable goals of encouraging households to use less electricity and keeping the fixed component of bills low for households on lower incomes. Unfortunately, the LFC regulations did not have the desired effects and ultimately disadvantaged the households that could least afford it.

Many low-income households live in uninsulated homes, don't have access to energy-efficient appliances or technologies and are higher electricity users as a result. Conversely, the LFC regulations unintentionally favour wealthier consumers as they can afford the capital investment in things like solar, efficient lights, and well-insulated homes. This meant the LFC regulations resulted in the costs of electricity supply shifting from wealthy consumers to less-well-off consumers.

An amendment was made to the LFC regulations in 2021 which will see them phased out by 2027. The phase-out was recommended by the 2019 Electricity Price Review and is widely supported by the electricity sector including EDBs. It will remove the disincentives for the use of electricity to keep households warm and healthy, encourage the uptake of low-emission transport and remove the implicit cross-subsidies from low-income to wealthy households.

ENA and the Electricity Retailers Association of New Zealand (ERANZ) are supporting households adversely impacted by the phaseout by offering a \$110 power credit to households in energy hardship during each year of the transition.

The previous Minister wrote to ENA (and ERANZ) on 8 January 2025 to highlight some concerns he had regarding a small subset of consumers who have been found to be worse off by the transition out of the LFCs. He asked that ENA (and by extension, EDBs) continue to provide support to those consumers beyond the 2027 endpoint of the current planned phase-out of the LFCs.

ENA has subsequently written to you on 27 January 2025 confirming that we will continue to support those worse-off consumers beyond 2027. We are happy to work with your office and officials to ensure that the phase-out of the LFCs is completed but that vulnerable consumers are protected from any immediate negative effects during that process.

4.3 Network connections/capacity requests outpacing sector ability to service

The distribution sector (and electricity system more generally) is facing a significant challenge that will persist throughout the period of the transition from fossil fuels to electricity and other sources of renewable energy. This is the demand from new connecting parties – e.g. process heat users, electric vehicle charging point operators (CPOs), new urban developments, etc. – for access to the electricity distribution network and increased, sometimes significantly, capacity of electrical connections. ENA and its members are beginning to see a step-change in the volume of electrical connection inquiries, and demand for significantly greater capacity connections than have historically been the norm.

EDBs are doing what they can to address these challenges by investing in new tools, techniques, and greater human resources (e.g. planning engineers, etc.) to service this increase in connection activity. Nevertheless, the scale of increase is such that not all these connections will be able to be enabled in the timeframes and at a cost that some stakeholders would prefer. The distribution sector is working collectively through ENA to explore and implement changes to connection processes that will ease the barriers that connecting parties are facing, but the scale of change is

such that there may still be some dissatisfaction amongst these key stakeholders. A tangible example of this activity is the ENA Connections Journey Mapping Project, which has engaged extensively with CPOs and large distributed generation developers (e.g. solar farms) and has identified five 'quick win' areas where EDBs can work collaboratively to develop consistent approaches to elements of the connections journey. This is intended to improve the consistency of the connections experience, particularly for parties who are seeking network connections across the country from many different EDBs.

We've also seen EDBs proactively working to improve the accessibility of electricity network capacity information through the development of online GIS tools. Good examples of these are from Powerco²⁰ and Network Waitaki²¹, and many other EDBs are in the process of developing equivalent tools.

4.4 Temporary traffic management (TTM) costs

In common with many other utilities, EDBs carry out a significant volume of activity in the road corridor, as this is where many of their assets are located. Recent changes to the way in which TTM enables these works to be carried out have driven the costs of this element of EDB work much higher, in some cases increases of 30%. In many instances, the costs of TTM will be a very significant component (sometimes as high as 24%) of the overall works cost of a network upgrade project.

The changes are increasing costs to EDBs in two ways. Firstly, the responsibility for approving temporary traffic management plans has moved from Road Controlling Authorities (RCAs) such as Councils to EDB contractors, and this requires new systems and commercial arrangements to manage the expanded responsibility. Secondly, the disestablishment of a code of practice requires TTM controls to be developed from first principles. This increases the cost and skill level required for traffic management plans and this has a negative effect on the supplier market for these services, which is especially pronounced in the regions.

This photo shows the simplest permitted TTM for a quiet gravel road. The cost of this work is around \$1,000. For a simple job, this TTM will cost more than the actual network job itself. If the work requires the truck doing the work to be parked in any way on the road, then the cost increases to between \$1,500 and \$3,000 as Waka Kotahi TTM rules will require more cones and people.

The sector has welcomed NZTA's recent reforms to the TTM guidelines to address some of these issues. In parallel, ENA has commissioned BECA to carry out a review of the historic cost increases seen in the distribution sector associated with TTM, which we have attached as an appendix. We will monitor the effectiveness of NZTA's changes to make sure that these deliver the cost-reduction outcomes that the sector is seeking.



²⁰ Powerco. (n.d.). *Commercial and industrial electricity*. Powerco. <https://www.powerco.co.nz/get-connected/commercial-and-industrial-electricity>

²¹ Network Waitaki. (n.d.). *Generation hosting capacity maps*. Network Waitaki. <https://www.networkwaitaki.co.nz/customers/generation-hosting-capacity-maps/>

5 Appendix A - ENA Members

Electricity Networks Aotearoa represents all 29 lines companies in New Zealand. Their Ownership and regulation structure are shown in the table below.

EDB	Location	Island	Ownership type	Subject to Electricity Authority regulation	Subject to Commerce Commission Information Disclosure regulation	Subject to Commerce Commission Price-Quality regulation	Within scope of the Office of the Auditor-General	Number of connections (Ave ICPs '24)	Market share (Ave ICPs '24)
Alpine Energy	South Canterbury	South	Local Authority/ Trust	✓	✓	✓	✓	33,883	2%
Aurora Energy	Queenstown, Wanaka, Dunedin, Central Otago	South	Local Authority	✓	✓	✓	✓	95,241	4%
Buller Electricity	Buller district (NW South Island)	South	Trust	✓	✓		✓	4,889	0%
Centralines	Central Hawkes Bay	North	Trust	✓	✓	[2]	✓	9,285	0%
Counties Energy	South Auckland to Waikato	North	Trust	✓	✓		✓	48,147	2%
EA Networks	Mid Canterbury	South	Co-operative	✓	✓	✓		21,105	1%
Electra	Kapiti and Horowhenua	North	Trust	✓	✓		✓	46,749	2%
Electricity Invercargill [1]	Invercargill	South	Local Authority	✓	✓	✓	✓	17,645	1%
Firstlight Network	Tairāwhiti and Wairoa	North	Overseas investors	✓	✓	✓		25,934	1%
Horizon Energy	Eastern Bay of Plenty	North	Trust	✓	✓	✓		25,300	1%
MainPower NZ	North Canterbury	South	Trust	✓	✓			4,418	0%
Marlborough Lines	NE of South Island	South	Trust	✓	✓		✓	27,034	1%
Nelson Electricity	Nelson	South	Marlborough Lines/ Network Tasman	✓	✓	✓	✓	9,312	0%
Network Tasman	NW of South Island	South	Trust	✓	✓	✓	✓	42,816	2%
Network Waitaki	North Otago and parts of South Canterbury	South	Trust	✓	✓		✓	13,446	1%
Northpower	Whangarei	North	Trust	✓	✓		✓	63,782	3%
Orion NZ	Christchurch	South	Local Authority	✓	✓	✓	✓	223,047	10%

EDB	Location	Island	Ownership type	Subject to Electricity Authority regulation	Subject to Commerce Commission Information Disclosure regulation	Subject to Commerce Commission Price-Quality regulation	Within scope of the Office of the Auditor-General	Number of connections (Ave ICPs '24)	Market share (Ave ICPs '24)
OtagoNet Joint Venture [1]	Most of Otago	South	Joint Venture: Electricity Invercargill/ The Power Company	✓	✓	✓		20,029	1%
Powerco	Taranaki, Whanganui & Rangitikei, Manawatu, Wairarapa, Coromandel to South Waikato, Tauranga & Mt Maunganui	North	Private investors	✓	✓	✓		359,857	16%
Scanpower	Tararua and southern Hawke's Bay regions	North	Trust	✓	✓		✓	6,791	0%
The Lines Company	King Country, Ruapehu and Central Plateau	North	Trust	✓	✓	✓	✓	24,145	1%
The Power Company [1]	Queenstown Lakes, Stewart Island, South of South Island	South	Trust	✓	✓			37,720	2%
Top Energy	Northland	North	Trust	✓	✓	✓	✓	34,094	2%
Unison Networks	Hawkes Bay	North	Trust	✓	✓	✓	✓	119,182	5%
Vector Limited	Auckland	North	Trust/ Public	✓	✓	✓		616,705	27%
Waipa Networks	Waipa region (south Waikato-ish)	North	Trust	✓	✓		✓	28,972	1%
WEL Networks	North Waikato	North	Trust	✓	✓			100,250	4%
Wellington Electricity	Wellington (incl Porirua and Hutt Valley)	North	Private investors	✓	✓	✓		175,249	8%
Westpower	South Island West Coast	South	Trust	✓	✓		✓	14,326	1%

[1] PowerNet manages The Power Company, Electricity Invercargill, OtagoNet and Lakeland.

[2] Centralines had been subject to the DPP3 decision, but in July 2021, Centralines underwent a process to become completely consumer-owned by changing its trust deed to make all trustees consumer-elected. This made Centralines DPP exempt and no longer price-quality regulated.

6 Appendix B – ENA Board and Management

The ENA Board are nominated at the annual AGM and are appointed for a two-year term. The current ENA Board is:

Nigel Barbour, Chair

Nigel leads the Orion Group which comprises Orion's central Canterbury electricity distribution business and its wholly owned subsidiary, Connetics. Prior to joining Orion Group, Nigel was Chief Executive of Powerco, New Zealand's second largest electricity distribution business, based in New Plymouth.

Russell Shaw, Deputy Chair

Russell is the Chief Executive of Top Energy based in Kerikeri in the Far North. As an electrical engineer with over 25 years' experience in the utility sector, Russell has significant experience in strategy, management, risk and operations with extensive knowledge of asset management, performance improvement and engineering.

Jason Franklin, Board Member

Jason is Chief Executive of PowerNet, the distribution network delivering power to Invercargill City, Southland, West Otago, parts of Central Otago and Stewart Island. Previously he has worked for Rio Tinto (both internationally and at the Tiwai Point aluminium smelter) and ECNZ. He has been on the executive committee of the Major Electricity Users Group and the Wholesale Advisory Group for the Electricity Authority.

Sean Horgan, Board Member

Sean joined Waipa Networks as CEO in July 2022. He has over 20 years' successful business development, strategic management and operational leadership experience within the energy sectors of Asia, the United Kingdom, Australia and New Zealand, and has worked for entities such as The Lines Company, Northpower, Alstom, Meridian Energy and Mighty River Power.

Mark Toner, Board Member

Vector's Chief Public Policy and Regulatory Officer, Mark has over 25 years' experience across a range of sectors including energy, telecommunications, aviation and technology. He has consistently navigated market, regulatory and policy changes across industries in disruption, and is responsible for leading the Group's regulatory, public policy, decarbonisation and data insights functions.

Karen Frew, Board Member

Karen is the General Manager Electricity of Powerco. Karen has an electrical engineering degree and a diploma in management. She has over 25 years of experience in electricity generation, distribution and large industrial sectors in New Zealand and the United Kingdom. Karen joined Powerco in 2002 and since that time has worked in all areas of the business, joining the Executive Team in 2021.

Jaun Park, Board Member

In 2023, following 16 years of pivotal work to drive Unison Networks forward, Jaun took up the role of Group Chief Executive of the Unison Group. Jaun holds a Bachelor's degree in electrical and electronic engineering, and a Master's degree in electrical engineering. Jaun has a strong passion and commitment to the electricity sector and the important role the industry plays in enabling a sustainable energy future.

Gillian Blythe, Independent Director

With over thirty years of experience in the electricity and water sectors, Gillian brings strong leadership skills, commercial acumen and highly relevant expertise to the Board. Gillian is currently the Chief Executive of Water New Zealand and her career includes senior executive and governance roles in energy, construction, infrastructure, workforce and water. Gillian is ENA's first independent director.

For more information please contact:**Tracey Kai, Chief Executive**

Email: tracey@electricity.org.nz

Phone: 021 499 681

Tracey joined ENA in July 2023 and was previously the General Manager, Operations at the New Zealand Infrastructure Commission. Prior to this, she was New Zealand Rugby's General Manager, Communications. She is part of the Government's Supercharging EV Infrastructure Reference Group and on the Quality Review Panel of the National Infrastructure Plan.

7 Appendix C Temporary Traffic Management report