

Summary of submissions - enabling efficient non-network solutions

21 April 2026

The following is a summary of points raised in submissions to the Commerce Commission, Electricity Authority and Energy Efficiency & Conservation Authority's letter to distributors on efficient use of non-network solutions (NNS).¹

Outline

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1. Overview of responses

We received 25 submissions from across the electricity sector, reflecting a wide range of operational, commercial, consumer and system-level perspectives on non-network solutions.

- **Electricity distributors:** Aurora, Buller Electricity Ltd., Counties Energy, Electra, MainPower, Network Waitaki, Orion, Powerco, Unison/Centralines, Vector, Waipā Networks, Wellington Electricity
- **Retailers:** Genesis, Meridian, Simply Energy
- **Industry bodies:** ENA, MEUG, SEANZ
- **Technology, flexibility, advisory service providers:** Ecologic, Bluecurrent, Revolve
- **Transmission network owner / system operator:** Transpower
- **Consumer & public interest groups:** Rewiring Aotearoa
- **Individuals:** John Irving, Winston Moreton

Across most of the submissions there was strong support for the intent of the joint letter: that non-network solutions (NNS) can play a material role in delivering least-cost outcomes for consumers as electrification progresses and that they should no longer sit at the margins of network planning.

¹ This document has been partially generated using Microsoft Copilot on 6 April 2026. Copilot was used as a support tool to identify common themes and summarise patterns across submissions. All submissions were read in full by our team and all summaries, interpretations and conclusions were reviewed, refined and approved by human authors.

Where submitters differed was on how quickly, through what mechanisms and with what safeguards NNS should be relied upon.

There were (broadly) three key perspectives that came through:

- Flexibility as a system capability to be enabled primarily through pricing and markets
 - Flexibility as a useful but contingent planning tool that must be carefully risk-managed
 - Flexibility as something already demonstrably working, but held back by commercial and regulatory friction
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2. Views on the steps distributors can take to enable efficient non-network solutions

2.1 Considering NNS alongside network solutions

Areas of consensus

There was broad agreement on the principle of treating non-network solutions on equal footing with network solutions, but continued disagreement on what equal footing looks like in practice - especially how uncertainty, deliverability and downside risk should be weighted.

There was near-universal agreement that NNS should be considered earlier and more explicitly in planning processes. Distributors such as Vector, Counties, Powerco, Electra, MainPower, Unison/Centralines and Waipā all describe moves to embed NNS within options analysis frameworks, AMPs, or internal “flexibility-first” principles. Retailers and flexibility providers broadly welcomed this shift, noting that early signalling is the difference between a viable market opportunity and a theoretical one.

Where views diverge

Several distributors (Electra, Waipā, Network Waitaki) and Transpower emphasised that risk is asymmetric: once built, a substation or line delivers capacity with certainty; a third-party flexibility service depends on uptake, persistence and delivery at stressed moments. From this perspective, NNS are considered most valuable where demand growth is uncertain, investment is lumpy or deferrable, or where short peak duration support buys meaningful time. Some submitters also noted that where non-network solutions are relied on to defer network investment, planning processes should include clear contingency or fallback arrangements if expected services do not eventuate or persist (Transpower, MainPower). NNS are less appropriate for immediate, highly localised, or end-of-life asset replacement needs. Wellington Electricity went further, warning against overstating the value of deferral: deferring a \$10m upgrade by two years does not save \$10m for consumers and the true value must be calculated carefully. ENA stressed that conventional network solutions will remain essential in many cases and distributors must retain the ability to choose the option that delivers the lowest-cost, reliable outcome for consumers, supported by coordinated regulatory and industry capability.

By contrast, consumer advocates, SEANZ and flexibility providers (Rewiring Aotearoa, Ecologic, Simply Energy) argued that NNS - particularly solar, batteries and automated demand response - are often screened out not because they are unreliable, but because evaluation frameworks favour assets that look familiar and controllable. Rewiring Aotearoa, in particular, was critical of what it sees as “disingenuous” modelling that understates the economics of distributed solar and batteries and calls for regulator-led “sense checks” of network business cases.

2.2 Pricing as an enabler of flexibility

The submissions suggest broad agreement that pricing must “do more of the heavy lifting over time”, but limited consensus that it can do so alone or immediately. Controlled load, contracts and emergency override capabilities were widely seen as transitional necessities - even by some advocating strongly for a price-led end state.

Areas of consensus

Pricing was consistently framed as the foundation of scalable flexibility, yet submissions revealed materially different expectations of what pricing can achieve in the near to medium term.

Where views diverge

Retailers (Genesis, Meridian, Simply Energy), Vector and Rewiring Aotearoa strongly supported a future in which flexibility is price-activated, automated and mediated through retailers or customer technologies rather than direct distributor control. Vector’s submission was the clearest articulation of this view, proposing a layered architecture in which long-run marginal cost signals anchor investment behaviour, short-run scarcity adders manage local constraints and contracts are used selectively as a safeguard. From this perspective, contracts should buy reliability, not behaviour that pricing already incentivises.

Rewiring Aotearoa’s submission went further, arguing that direct incentives to consumers - via pricing and export tariffs - are more robust and lower risk than reliance on aggregators or large batteries. It was sceptical of claims that networks “need” contracted or third-party-managed flexibility before allowing pricing signals to flow and sees suppressed export pricing for batteries as a major barrier to efficient outcomes.

Many distributors and Transpower, however, are more cautious. Network Waitaki and Waipā emphasised that a large proportion of network costs are fixed, that distribution pricing signals are often diluted by retailer bundling and that controlled load remains a proven and reliable tool - particularly in provincial and rural networks. Wellington Electricity and Transpower also highlight the uncertainty introduced by retailer pass-through and synchronised demand response, noting that from a system security perspective, pricing alone offers less certainty than direct control or contracts. Waipā considers that since retailers are not passing through price signals to consumers, some continued reliance on controlled load will be needed during the transition to be certain the network gets the response it needs. Buller Electricity highlighted the practical difficulties that pricing reform can have for small and regionally constrained networks like unintended peak creation and impacts of existing controlled load arrangements.

2.3 Engaging with the market for NNS

Most submitters identified market fragmentation as a critical barrier to scaling NNS.

Flexibility providers and retailers repeatedly noted that navigating 29 different distributor processes, contracts, baselines and data interfaces materially increases transaction costs and deters investment. Some distributors that are actively procuring flexibility (Powerco, Counties) acknowledged that bespoke approaches are inefficient and hard to scale.

There was strong support for:

- Standardised product definitions and contracts
- Shared platforms or coordinated procurement approaches (e.g. LocalFlex, Government Electronic Tenders Service (GETS)-style models)
- Clear separation and transparency where distributors develop in-house solutions

Electra and Wellington Electricity explicitly advocated for regulator-led development of a single NNS marketplace or framework, drawing parallels with ancillary services markets and international examples such as the Australian state of Victoria, or Norway.

At the same time, several distributors (Powerco, Network Waitaki, Waipā) cautioned against assuming a deep, liquid flexibility market exists in most locations. They argued that standardisation should reduce friction, not impose burdens that smaller networks or thin markets cannot realistically support.

3. How regulators can support NNS

Across submissions there was a strong and consistent call for clearer leadership, coordination and standardisation across agencies, with a focus on reducing fragmentation and uncertainty.

Submitters asked the agencies to:

- Publish a joint, time-bound roadmap (e.g. 12–24 months) setting out sequencing across pricing reform, planning expectations, procurement, data standards and evidence requirements for relying on non-network solutions (Vector, Meridian, ENA, Transpower)
- Define “what good looks like” when using NNS - including minimum expectations for reliability, duration, deliverability and evidence needed to justify deferral or avoidance of network investment (Vector, Rewiring Aotearoa, Transpower, Unison/Centralines, Waipā Networks)
- Standardise key foundations nationally, to reduce friction for flexibility providers, including:
 - common flexibility product definitions
 - baseline evaluation principles
 - consistent disclosure of constraints and opportunities

(Vector, ENA, Meridian, SEANZ, Simply Energy)

- Provide consistent signals across regulation, so that pricing, planning, incentives and market development reinforce each other rather than pull in different directions (Meridian, Genesis, ENA, Powerco)

Electricity Authority - pricing, signals and activation of flexibility

Submitters were very clear that pricing reform is the primary enabler of scalable NNS and wanted the Authority to be more explicit and firmer in its direction.

Key asks of the Electricity Authority were to:

- Give clearer guidance on the pathway to cost-reflective, time-varying (and where feasible locational) distribution pricing, including the intended end-state and transition guardrails (Vector, Genesis, Meridian, Orion)
- Reinforce that pricing should be used first and given time to work, before distributors move to contracting or network reinforcement (Simply Energy, Rewiring Aotearoa, Vector)
- Clarify principles for valuing flexibility contracts, including that payments should reflect only the incremental certainty or firmness beyond what price signals already deliver (Vector, Simply Energy)

- Provide clearer settings for controlled load and the transition to price-responsive flexibility, including guidance on sequencing and coexistence (Aurora, Vector, Network Waitaki, Waipā Networks)
- Strengthen expectations on competitive neutrality, particularly where distributors participate near flexibility markets or propose in-house solutions (Vector, Genesis, Meridian, SEANZ)
- Revisit export pricing settings, with several submitters asking that export tariffs better reflect long-run marginal network value and avoid overly conservative adjustments (Rewiring Aotearoa, SEANZ)

Commerce Commission - incentives, planning discipline and neutrality

Submissions addressing the Commission focused on ensuring that regulatory incentives do not bias decisions toward traditional network investment and that NNS are genuinely viable.

Key asks of the Commerce Commission were to:

- Clarify how NNS-enabling capability investments and opex-heavy solutions are treated under DPP and ID settings, so distributors can invest in visibility, data and orchestration with confidence (Vector, Powerco, Unison/Centralines)
- Strengthen and standardise “equal footing” disclosure expectations in AMPs, including transparent comparison of network and non-network options and reasons for selection (Vector, Meridian, Rewiring Aotearoa, Transpower)
- Ensure incentive settings are genuinely neutral between capex and opex and recognise the option value of deferring irreversible investment under uncertainty (Vector, Powerco, ENA)
- Apply regulatory scrutiny, including conditions on approval or acceptance, where major growth capex proceeds without evidence that pricing or non-network solutions have been meaningfully tested first. (Simply Energy, Rewiring Aotearoa, MEUG)
- Monitor equity and cost-allocation impacts, to avoid cost-shifting onto consumers unable to participate in flexibility (Powerco, Transpower, Unison/Centralines)

Energy Efficiency & Conservation Authority - market development, participation and trust

EECA was seen as central to building capability and confidence, rather than setting hard technical rules.

Key asks of EECA were to:

- Support a wide range of consumer participation models, from retailer-managed services to direct consumer automation, without picking winners (Vector, Rewiring Aotearoa, Meridian)
- Invest in market capability building, including practical toolkits, playbooks and shared evaluation approaches to reduce duplication across distributors (Vector, ENA, Ecologic)
- Lead work on consumer trust frameworks, covering transparency, data use, cybersecurity and override rights (Vector, Genesis, Meridian)

- Address equity and access barriers, so consumers without capital or automation can still share in flexibility benefits (Vector, Powerco, MEUG)
 - Co-fund and actively evaluate transferable pilots and publish learnings to accelerate sector-wide uptake (Vector, Counties Energy, Powerco)
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4. Examples from submitter experience

Submissions were particularly valuable in setting out the practical experience already accumulated across the sector, highlighting that non-network solutions are not theoretical. Many submitters described specific pilots, demonstrations and procurement exercises, alongside longer-standing operational practices that continue to shape how distributors and market participants assess risk, reliability and scalability.

Established operational experience

Many distributors grounded their views in decades of proven load control, particularly ripple-controlled hot water. Network Waitaki, Waipā Networks, Electra, Powerco and others emphasised that this remains one of New Zealand's largest, lowest-cost and most reliable demand-response mechanisms. Submissions from these parties emphasised caution about moving too quickly to exclusively market-based or third-party-delivered flexibility without equivalent certainty, visibility and control while also recognising that ripple control achieves its reliability through a level of direct control that may not be appropriate or necessary as a benchmark for emerging forms of flexibility.

Dedicated projects, pilots and trials

Alongside this legacy capability, submissions described a wide range of discrete projects and pilots, often explicitly designed to test whether non-network solutions can credibly defer or avoid network investment.

Below we list the initiatives highlighted in submissions at a high-level. Note that some of these projects have since concluded, others are ongoing. Readers seeking additional detail are encouraged to review the full submissions.

Electricity Distribution Businesses

Aurora

- SolarZero virtual power plant (VPP) pilot - early exploration of residential battery aggregation for network support (now concluded).
- Vehicle-to-Grid (V2G) trials - testing bidirectional EV charging as a potential source of flexibility.
- Community battery initiatives - investigating shared storage to manage local constraints and improve utilisation.
- Queenstown regional DER scenario modelling - a commissioned modelling exercise to understand long-term DER uptake and inform planning assumptions.

Vector

- Kupe Street DER integration trial - a live low-voltage trial integrating solar, batteries and automation to understand operational impacts.
- EECA Demand Flex pilot - Multi-retailer LV orchestration pilot (Auckland) – a pilot testing price- and envelope-based coordination across multiple retailers to assess whether pricing-led approaches can credibly defer reinforcement.

- Involvement in LocalFlex – a flexibility procurement platform being developed by Our energy. Vector are participating alongside Powerco and Unison/Centralines. Genesis is also involved as a flex provider.

Counties Energy

- EECA Demand Flex pilot - Karaka Harbourside - a funded demonstration testing the procurement and delivery of local flexibility at a growing development.
- Dynamic Operating Envelope (DOE) collaboration (with Unison/Centralines) - practical trials of dynamic limits to enable more flexible connections under uncertainty.

Electra

- Mangahao GXP hot water control programme - continued use of controlled load to delay or avoid major upstream investment.
- Waitārere Beach resilience assessment - formal evaluation of storage and other alternatives alongside traditional reinforcement.
- Retailer load-management trials - testing third-party delivery of controlled demand.

Network Waitaki

- Low-voltage visibility rollout - deployment of monitoring systems now providing ~80% urban LV network visibility, enabling more targeted hosting capacity decisions.

Powerco

- South Waikato and Coromandel flexibility tenders - competitive procurement exercises testing market appetite for non-network alternatives to major reinforcement.
- SolarZero Coromandel contract – a contracted flexibility solution subsequently suspended, shaping views on delivery risk.
- Kwetta / Z Energy flexible EV fast-charging pilots - deployment of fast chargers capable of reducing load or providing voltage support in constrained locations.
- Retailer-led smart hot-water trial - a large-scale programme (>30,000 ICPs) demonstrating portfolio-based automated load shifting.
- EECA Demand Flex pilot - Ōmokoroa mass-market flexibility demonstration - a scaled community project aiming to defer approximately \$20m of planned network investment.

Unison / Centralines

- Local flexibility initiatives - targeted trials exploring how flexible demand and DER can manage emerging local constraints.
- Dynamic operating envelope trials (with Counties Energy) - joint learning on applying DOE concepts in practice.

Waipā Networks

- Te Awamutu hybrid solution - a combined sub-transmission investment supported by strategically located batteries and solar to improve resilience and defer further build.

Wellington Electricity

- EV Connect programme - testing managed EV charging as a non-network solution.
- Resi-Flex trials - residential flexibility pilots exploring customer response and automation.

Retailers, providers and technology firms

Meridian

- Zero EV charging network - a national fast-charging rollout designed to manage load and leverage off-peak capacity.
- Smart Hot Water Programme (with Bluecurrent) - retailer-managed automated load control delivering both customer and network value.

Genesis

- LocalFlex participation - active use of a standardised flexibility platform to develop portfolio-based offerings across multiple networks.

Bluecurrent

- Network Operations Data (NOD) services - delivery of LV network visibility across 12 distribution networks.
- High-frequency LV data pilots - trials with Vector and Northpower to support more granular planning and operation.
- Dynamic Load Control deployments - large-scale automated control replacing or augmenting traditional ripple systems.

Ecologic

- Automated demand-response deployments in schools and commercial buildings - behind-the-meter optimisation delivering measurable peak reduction and deferral value.
- High-frequency control platforms - use of rapid data and closed-loop control to safely maximise utilisation on constrained assets.

Ongoing capability building and BAU evolution

In addition to these bounded projects, many submissions described ongoing “business-as-usual” capability development, including:

- progressive pricing reform and TOU tariff redesign;
- development of flexible connection offerings;
- publication of capacity and hosting maps;
- investment in LV monitoring and analytics platforms;
- internal changes to planning processes to better compare network and non-network options.

Submitters generally stressed that both streams matter: concrete pilots build evidence and confidence, while BAU capability investments are essential to make non-network solutions repeatable, scalable and financeable when trials end.