

31 July 2026

Submission on “A roadmap for the future of distribution system operation in New Zealand”

Electricity Authority Te Mana Hiko
By email: fsr@ea.govt.nz

Subject: Re: Feedback on A roadmap for the future of distribution system operation in New Zealand

Counties Energy welcomes the opportunity to provide feedback on the Electricity Authority’s draft roadmap for the future of distribution system operation in New Zealand. As an electricity distribution business serving a fast-growing and increasingly dynamic network area, Counties Energy has a strong interest in ensuring that DSO development is practical, scalable, consumer-focused, and grounded in real operational experience.

Our response supports the overall direction of the roadmap, particularly its focus on network visibility, interoperability, standardisation, and the development of flexibility as an alternative to traditional network investment. However, we consider that the roadmap should be sharpened to focus more on tangible roadmap items (such as delivery of flexible connections) for market participants to enable flexibility in line with EA expectations, similar to AER’s DSO Vision Dec2025 document.

1.0 Summary of Counties Energy’s position

Counties Energy supports the Authority’s objective of accelerating distribution system operator (DSO) capability, improving network visibility, and enabling greater use of flexibility to defer or avoid inefficient network investment. The roadmap correctly identifies the critical path: visibility of constraints, standardisation, interoperability, participation, and governance. However, the roadmap should be more explicit that the industry is already moving toward a hybrid DSO approach, and that premature decisions on the final operating model could create avoidable cost, confusion, stranded investment, and implementation delay.

In our view, the Authority should use Workstream 1 to define what a practical hybrid model means for New Zealand for the initial phases, rather than to re-open a binary choice between total TSO, hybrid, and total DSO models. The immediate priority should be to clarify roles, responsibilities, data flows, operating envelopes, procurement obligations, and minimum capability expectations for both mature and less mature distributors.



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Counties Energy considers that flexibility should be treated as an operational and planning capability, not primarily as an abstract market design exercise. In practice, all material flexibility that a network operator can rely on is ultimately contract-led: price is one term within a contract, and performance, assurance, dispatch rights, measurement, settlement, and firmness are the elements that make flexibility reliable. The Authority's roadmap should therefore place DSO-led orchestration, dynamic operating envelopes, and explicit firmness arrangements at the centre of flexibility development.

The roadmap should also bring retailer engagement forward. Retail offers such as free overnight EV charging and buy-back schemes priced many times above distributor export incentives can materially distort the value of flexibility and distributed generation. If left unaddressed, these offers may encourage investment decisions that later become uneconomic when incentives normalise, leaving consumers with stranded or underutilised assets. The Electricity Authority should require retailers, aggregators, and flexibility service providers to pass on distributor flexibility signals to customers, including price signals and operational instructions. If these signals are blocked or weakened, customers will not see the true value of flexibility, and the market will not develop in the right way.

Counties Energy's network includes a mix of urban growth, rural and semi-rural feeders, distributed generation, increasing electrification, and emerging opportunities for flexible demand. This reinforces our view that DSO arrangements must be grounded in local network visibility, engineering limits, and practical orchestration capability rather than theoretical market constructs alone.

Standardisation should also be considered in a trans-Tasman context. New Zealand should not reinvent the wheel where Australia has already developed and deployed practical interoperability arrangements for DER coordination. CSIP-AUS is now being mandated across Australian jurisdictions for flexible exports, emergency backstop arrangements, dynamic connections, and DER orchestration, with requirements progressively being introduced across states and networks. Aligning with this approach would give New Zealand access to a larger common market for compliant devices, reduce implementation cost and complexity, support supplier readiness, and improve the likelihood that distributor signals can be passed through consistently to retailers, aggregators, and customer devices. A deliberate alignment with Australian standards would therefore accelerate flexibility in New Zealand while avoiding bespoke requirements that could fragment the market or slow adoption.

2.0 Avoid premature operating model decisions

The roadmap notes that the Authority has not endorsed a DSO model at this stage, while also observing strong support for a hybrid DSO model and current pilots using variants of that approach. Counties Energy considers this the right starting point. However, Workstream 1 should not become a process for making a premature decision on a final operating model. Such a decision would have significant consequences for investment, capability development,

procurement, data architecture, workforce planning, and the commercial models emerging between distributors, retailers, aggregators, and Transpower.

The industry is already heading toward a hybrid model because it reflects operational reality. Distribution constraints are local, spatially granular, and increasingly dynamic. They require distribution network visibility, local engineering judgement, and direct operational accountability. At the same time, whole-system coordination with the system operator remains essential. A hybrid model is therefore not a compromise position; it is the practical architecture required to coordinate local network limits with national system needs.

Counties Energy recommends that the Authority use Workstream 1 to define the hybrid model in operational terms. This should include minimum expectations for mature distributors that are ready to perform DSO functions directly, and proportionate pathways for less mature distributors that may initially procure shared DSO services, collaborate regionally, or outsource specific functions. This would support scale and consistency without forcing all distributors into the same organisational model.

3.0 Flexibility should be led by orchestration, operating envelopes, and contracts

The distinction in the roadmap between “price-led” and “contract-led” flexibility is useful as a conceptual framing, but it risks creating a false dichotomy. For network operations and planning, all flexibility that is relied upon is ultimately contract-led. Price is agreed as part of the commercial arrangement, but price alone does not provide firmness, dispatchability, assurance, measurement, verification, or accountability. If flexibility is to be treated as a credible alternative to reinforcement, it must be underpinned by obligations that can be relied upon in planning and operations.

The Authority should therefore frame flexibility around DSO-led orchestration using dynamic operating envelopes (DOEs) or equivalent operating limits. DOEs define the physical limits of the network and provide the mechanism through which DER, CER, retailers, and aggregators can operate within those limits. Pricing should supplement this operating framework; it should not be the primary control mechanism for managing real-time network constraints.

The roadmap should also recognise different levels of firmness. High-firmness flexibility may be suitable for security of supply, operational constraint management, or deferral of committed reinforcement. Medium-firmness flexibility may be suitable for planned events, seasonal constraints, or probabilistic planning. Low-firmness flexibility may be useful for behavioural response, broad demand shaping, and consumer engagement, but should not be relied on as firm network capacity. This type of firmness framework would help translate flexibility from a policy concept into a usable engineering and commercial tool.

Planning methodologies should be updated to require a “flexibility first” assessment before conventional reinforcement is approved, while still applying engineering discipline to the

treatment of non-network solutions. The UK ENA security of supply framework provides a useful reference point because it recognises that demand side response, distributed generation, electricity storage, transfer capacity, and network assets can all contribute to system security, but only where their contribution can be assessed against defined restoration periods, availability, common-mode failure, and contractual certainty.

4.0 Bring retailer engagement and regulation forward

Retailer behaviour is already shaping customer investment decisions and network outcomes. The roadmap should therefore bring retailer engagement forward rather than treating it as a later-stage market development issue. Retail offers such as free overnight EV charging can produce correlated load at the start of low-price windows, while high buy-back schemes for export can distort the perceived value of distributed generation and batteries. These offers may be commercially rational for an individual retailer but inefficient from a network and consumer protection perspective if they create unmanaged peaks, voltage issues, or investment signals that later prove unsustainable.

The Authority should consider normalisation and regulatory oversight of retail offers that materially influence network demand, export behaviour, or consumer investment in CER. This does not mean preventing innovation. It means ensuring that retail products are transparent, durable, and aligned with network limits and long-term consumer interests. Without this, consumers may invest in assets such as distributed generation, batteries, or EV charging systems based on incentives that are not sustainable once network, wholesale, or retail conditions normalise.

A further requirement should be that retailers and flexibility aggregators are obliged to pass through distributor flexibility signals to customers, whether those signals are price-based, orchestration-based, or a combination of both. If a DSO identifies a local network constraint and provides a signal to manage demand, export, charging, or other flexible load, that signal needs to be capable of reaching the customer, customer device, or contracted flexibility resource in a clear and actionable way. If the signal is muted, repackaged, delayed, or not passed through by an intermediary, the distributor's investment in flexibility capability will not translate into operational outcomes. This would defeat the purpose of developing DSO systems, dynamic operating envelopes, flexibility procurement, and network-led orchestration, because the true network signal would not be visible to the parties able to respond.

5.0 Counties Energy supports standardisation, collaboration, and network visibility

Counties Energy strongly supports the roadmap's emphasis on standardisation and collaboration between distributors. New Zealand cannot afford 29 separate interpretations of DSO capability, flexibility products, data exchange, connection requirements, or operating

envelope formats. Equally, standardisation should not be so narrow that it locks the sector into a single approach too early and stifles innovation. In the initial stages, there may be merit in allowing a small number of common implementation pathways, for example two or three scalable approaches, so that distributors and market participants can test what works in different operating contexts while still converging around shared interfaces and requirements. Standardisation should therefore focus on the interfaces that matter most: data models, flexibility product definitions, connection processes, measurement and settlement, cyber security expectations, and the way operating limits are communicated to market participants.

Counties Energy also strongly supports the Authority's focus on network visibility. Visibility of network topology, capacity, load, export constraints, planned upgrades, reliability, and non-network solution opportunities is foundational to DSO development. However, Counties Energy considers low-voltage visibility should be prioritised ahead of high-voltage disclosure, rather than sequenced as a follow-on. Residential solar, EV charging, batteries, and hot water flexibility are all primarily low-voltage phenomena, and without LV visibility, distributors and flexibility providers will be unable to coordinate CER at scale. Addressing it first would remove the bottleneck constraining progress across the wider roadmap, rather than treating it as optional or secondary to HV disclosure.

6.0 Resolve device, inverter, and communications standards with urgency

Device and inverter standards, communications protocols, and cyber security requirements need to be resolved sooner rather than later. These are not peripheral technical matters; they determine whether CER can be safely and economically orchestrated. If New Zealand delays decisions on interoperability, distributors, retailers, aggregators, equipment suppliers, and consumers will make fragmented investments that become expensive to unwind.

New Zealand should align with Australia wherever possible for economic, political, and technical reasons. Australia is already progressing advanced DER integration, inverter standards, and operating envelope approaches at a scale that is directly relevant to New Zealand. Alignment would reduce equipment costs, support supplier participation, create a larger common market for compliant devices, and reduce the risk of New Zealand developing bespoke requirements that are hard to support.

7.0 Flexibility Plan 2.0 should not substitute for execution

The roadmap should be cautious about relying heavily on FlexForum's Flexibility Plan 2.0. The sector already has many groups discussing flexibility, and these forums often involve the same voices from the same parts of the sector. While engagement is useful, the question is what additional value is created if the same participants continue to discuss the same issues without shifting into delivery. Too few parties are funding trials, executing commercial arrangements, testing procurement models, or implementing pricing strategies at scale. The Authority should

assess the value delivered by FlexForum and similar working groups against tangible outcomes: operational trials, MW enrolled, constraints managed, consumer participation, procurement completed, prices tested, new capability built and learnings published.

Industry collaboration is valuable, but it should not become a substitute for delivery. The next phase should prioritise practical pilots, real procurement, operational orchestration, and evidence-based refinement. The Authority should direct effort toward implementation pathways rather than adding more forums, action lists, or strategic plans that are not tied to measurable delivery.

8.0 Time-of-use distribution pricing and herding risk

Time-of-use distribution pricing can help reveal cost-reflective signals, but it also creates herding risk. Customers, retailers, and automated energy management systems respond to the same price boundaries, often shifting demand to the same time. The roadmap already recognises that herding can shift peaks rather than remove them. This risk is particularly acute for EV charging and distributed generation because these are larger, less diversified, and less time-sensitive than traditional household loads.

International lessons and emerging local experience show that static ToU windows can create new peaks at the beginning of off-peak periods. For distribution networks, this can be as problematic as the original peak, particularly on feeders with high EV uptake, solar export, or low load diversity. Distribution pricing should therefore be paired with operating envelopes, managed charging, retailer coordination, and targeted procurement where network constraints are location-specific.

9.0 Flexibility marketplaces should follow evidence, not precede capability

Creating a national flexibility marketplace should be secondary to creating the systems, standards, operating practices, and commercial trials required to make flexibility real. At present, New Zealand does not yet have sufficient material, dispatchable, measured, and reliable flexibility to justify treating a marketplace as the primary focus. Flexibility also needs to be available at the appropriate level, at the right locations, and at a level of granularity that is meaningful for the constraint being managed. A broad volume of theoretical flexibility is not enough if it is not material to the network need, not located where the constraint exists, or not reliable at the feeder, transformer, or low-voltage level where the issue occurs. Granularity matters, and the reliability of granular flexibility is critical if it is to be considered in a material way for planning, operations, or deferral of network investment. The immediate task is to build scalable models with major flexibility aggregators, retailers, distributors, and technology providers that already have access to controllable load or CER.

A marketplace may be valuable in the future, but it should be evidence-based. It should emerge once the sector has proven product definitions, activation processes, baselining, settlement, performance assurance, consumer consent models, and firm operational use cases. Premature market platform development risks building an institutional solution before the underlying flexibility resource, operating need, and commercial arrangements are mature enough to support it.

10.0 Suggested changes to the roadmap

- Use Workstream 1 to define the practical hybrid DSO model, including roles, responsibilities, escalation paths, data requirements, and minimum capability expectations for different distributor maturity levels.
- Reframe flexibility around DSO-led orchestration, DOEs, and firmness-based contractual arrangements rather than a price-led versus contract-led distinction.
- Bring retailer engagement and oversight forward, particularly for retail offers that materially influence EV charging, export behaviour, or CER investment decisions.
- Introduce clear obligations for retailers and flexibility aggregators to pass through distributor flexibility signals, including price and orchestration signals, so that DSO signals are not muted, delayed, or repackaged in ways that undermine flexibility investment and operational outcomes.
- Accelerate device, inverter, communications, and cyber security standards, with a strong preference for alignment with Australian standards and implementation pathways.
- Maintain strong support for distributor standardisation, shared DSO services, common flexibility products, and network visibility, including a clear pathway to LV visibility.
- Prioritise trials, procurement, pricing implementation, and measured outcomes over further industry forums or plans that are not tied to delivery.
- Treat flexibility marketplaces as a later-stage enabler, developed only once there is sufficient evidence from trials, aggregators, and operational use cases.

11.0 Conclusion

Counties Energy considers that the roadmap is directionally sound and identifies the right critical path, but it should be sharpened to focus on practical implementation. The Authority should support the hybrid model that is already emerging, define what good looks like for different levels of distributor maturity, and prioritise the operational building blocks required for flexibility to become reliable network capability. The most important near-term outcomes are not a final operating model or a national flexibility marketplace; they are visibility, interoperability, orchestration, retailer alignment, contractual firmness, and real-world trials that prove what works.

Counties Energy would welcome the opportunity to continue engaging with the Authority as the roadmap is refined, particularly on hybrid DSO implementation, network visibility, operating envelopes, flexible connection arrangements, and practical trials that can demonstrate scalable consumer and network benefits.

Ngā mihi,

Counties Energy