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Electricity Authority Te Mana Hiko
The Energy Competition Task Force

By email to taskforce@ea.govt.nz

Tēnā koutou

SUBMISSION ON REWARDING INDUSTRIAL DEMAND FLEXIBILITY ISSUES AND OPTIONS PAPER

Unison Networks Limited (**Unison**) is an electricity distribution business operating in Hawke's Bay, Taupō and Rotorua. Centralines Limited (**Centralines**) is a distributor operating in Central Hawke's Bay.

1. Introduction

Unison and Centralines appreciate the opportunity to provide feedback on the Task Force and the Electricity Authority's consultation on enabling efficient industrial demand flexibility. We support the objective of promoting a more competitive, reliable, and efficient electricity system that delivers long-term benefits to consumers.

We recognise that industrial demand flexibility has significant potential, particularly as a source of short-term flexibility during periods of system stress. However, we believe that greater emphasis should first be placed on unlocking more readily available, cost-effective sources of flexibility, especially residential hot water control and emerging opportunities from EV charging, which offer higher relative value and scale. While we are broadly supportive of the Authority's vision and roadmap, we are cautious about how it will be implemented in practice. Several key areas, particularly scope, incentives, coordination, and regulatory alignment, require further refinement to ensure the roadmap delivers on its potential without introducing unnecessary risk or cost. We would also like the Authority and Task Force to recognise that electricity demand curtailment for industrial customers can come at a cost, especially if it adversely impacts New Zealand economy through reduction of export earnings.

2. Understanding Industrial Flexibility

We support the Authority's focus on encouraging greater industrial participation in demand-side flexibility, as this is a valuable resource that can enhance grid reliability and potentially lower costs for consumers. However, a more nuanced understanding of customer preferences, operational constraints, and behavioural barriers is essential.

Some industrial consumers may choose to tolerate higher prices rather than actively adjust demand in response to market signals. This is not necessarily a sign of inefficiency, but often a rational decision based on their operational priorities and risk tolerance.
From our discussions with a retailer involved in selling and coordinating flexibility, we understand that industrial customers face relatively low financial barriers to participating in the Instantaneous Reserves (**IR**) Market. This market offers strong rewards for minimal disruption, as industrial consumers tend to be willing to curtail load for short periods, typically up to 20–30 minutes, but are highly sensitive to limitations beyond that duration.

3. Problem Definition and Evidence

We encourage the Authority to ensure that the roadmap is underpinned by a clearly defined problem statement and robust evidence base. At present, it is unclear whether the low levels of demand flexibility participation reflect genuine barriers or are simply consistent with industrial users' preferences.

Before introducing new mechanisms or regulatory changes, we recommend a stronger focus on identifying and addressing existing frictions, such as coordination issues, lack of awareness, and transaction costs. This would likely yield faster and more cost-effective improvements in flexibility outcomes.

4. Caution on the Emergency Reserve Scheme (ERS)

We understand the rationale for the proposed Emergency Reserve Scheme as a last-resort mechanism to help avoid uneconomic load shedding. However, before introducing a new tool into the emergency management framework, we recommend the Authority consider the broader landscape of emergency response and demand-side coordination.

It is essential that any such scheme complements existing mechanisms, avoids duplication, and supports effective coordination between system operators, distributors, and flexibility providers. We welcome the Authority's intention to consult separately on this proposal and look forward to engaging more fully at that stage.

We also recommend that this work be closely linked with the Future Networks Forum's Load Management Protocol project, which is being led by Electricity Networks Aotearoa. That project is directly focused on improving the coordination of demand-side flexibility between distributors and retailers, including industrial demand flexibility and the **IR** market.

5. Market Mechanisms and Payments Beyond Avoided Costs

We agree with the Authority that efficient demand flexibility may require payments beyond avoided energy costs. In some cases, these services deliver value that exceeds current energy prices, particularly when they defer investment or enhance security of supply.

However, we stress that these payments must be targeted, reliable, and transparent. If demand flexibility does not ultimately reduce total system costs or investment requirements, there is a risk of consumers “paying twice”, once for the flexibility service, and again for the investment it was supposed to avoid.

6. Enabling Third Parties and Connection Readiness

We support exploring Code changes to enable wider participation from third-party providers. Expanding access and enabling competition can help scale the market and deliver more choice to consumers. Similarly, it is sensible to ensure that new industrial connections are “demand flexibility ready” from the outset.

However, these changes should not come at the cost of system coordination. Distributors and Transpower require visibility and control frameworks that ensure load management actions align with grid stability and local network reliability.

7. Regulatory Coordination

We are concerned that Action 8 of the roadmap, monitoring the use of flexibility for non-network solutions, appears to be proceeding in isolation and risks undermining the Commerce Commission’s established role in regulating network investment decisions.

The majority of Electricity Distribution Businesses (**EDBs**) are already subject to clear expectations and incentives to consider non-network solutions through the Default and Customised Price-Quality Path (**DPP/CPP**) frameworks, the Innovation and Non-Traditional Solutions Allowance (**INTSA**), and the Information Disclosure Determination (**IDs**), which apply to all EDBs. The IDs now explicitly require disclosure of costs associated with non-network solutions provided by related or third parties. In addition, the Incremental Rolling Incentive Scheme (**IRIS**) provides a totex-based incentive framework that promotes efficient investment and operational decisions by treating opex and capex equivalently. This encourages EDBs to pursue both capex-replacement through non-traditional solutions such as flexibility and lower-cost opex alternatives where feasible. We note that where uptake of these solutions remains limited, it is more likely due to practical or operational constraints rather than a lack of regulatory incentive.

To avoid duplication or regulatory misalignment, we strongly recommend that any monitoring or reporting requirements introduced by the Authority are closely coordinated with the Commission and integrated with its existing frameworks. This will help ensure consistent signals to industry, reduce compliance costs, and better support the effective deployment of innovative non-network solutions, including flexible demand.

8. Scope of Flexibility

We caution against the Authority's focus on industrial flexibility as the initial priority. While industrials have potential, significant demand-side resources already exist under EDB control, particularly, residential hot water load management. These resources are often faster to activate, lower cost, and already proven.

By prioritising industrials ahead of these existing tools, the Authority may risk distorting incentives and missing quick wins. A more balanced, participant-agnostic approach would be preferable.

9. Protecting Economic Value in a Flexible Electricity System

As New Zealand moves toward greater use of demand-side flexibility to manage electricity network constraints, it is important to recognise the economic cost imposed when industrial users are required to reduce or shift load. While flexibility solutions can help defer or avoid network upgrades, their use is not without consequence. For many large industrial customers, including manufacturers, food processors, and exporters, electricity curtailment directly reduces production volumes, impacting revenue, profitability, and ultimately, New Zealand's export earnings.

Unlike energy retailers and distributors who may financially benefit from avoided spot market exposure or deferred capital expenditure, curtailed industrial users often receive limited compensation for the lost output. Repeated or prolonged curtailments risk undermining investment confidence and productivity in sectors critical to the national economy. The economic opportunity cost, particularly for export-oriented firms like dairy processors or steel, methane and timber manufacturers, can run into the hundreds of millions annually if not carefully managed. As such, demand-side flexibility must be deployed in a way that explicitly accounts for these wider impacts, with fair mechanisms for compensation and coordination built into flexibility procurement and regulatory oversight.

In macroeconomic terms, persistent curtailment of export-earning industrial activity has adverse consequences for New Zealand's Gross Domestic Product (**GDP**) and balance of payments. By reducing the volume and value of goods available for export, curtailment undermines one of the few levers New Zealand has to earn foreign exchange and fund imports. This weakens the trade balance and contributes to downward pressure on the New Zealand dollar. Furthermore, where curtailment becomes a structural feature of the electricity system, it risks disincentivising long-term investment in productive energy infrastructure — particularly generation and transmission assets that support economic growth.

While curtailment may serve short-term objectives, such as maintaining grid stability or containing wholesale price spikes, the longer-term consequence may suppress national output without necessarily improving electricity affordability or security of supply. The deferral of infrastructure investment through industrial curtailment can lead to stagnation in system capability, leaving the country more exposed to supply-side shocks and less able to accommodate future electrification and decarbonisation. In this context, over-reliance on

industrial demand curtailment becomes not just a sectoral issue, but a drag on national economic potential.

10. Adaptive Roadmap

We support the idea of a multi-year roadmap. However, it must remain adaptive. The demand flexibility landscape is evolving rapidly, and some reforms already underway may materially shift the opportunities and barriers over the next few years.

We suggest the roadmap be treated as a living document, updated regularly based on pilot outcomes, reviews of mechanisms like **ERS** and hedging products, and international developments.

11. Conclusion

Unison and Centralines support the Authority's goal of enabling more efficient industrial demand flexibility, and we appreciate the comprehensive thinking reflected in the proposed roadmap.

However, we urge the Authority to remain cautious and pragmatic in its approach. That means ensuring any new mechanisms are well justified, aligned with existing frameworks, and do not impose unintended burdens or risks on networks or consumers. In particular, we highlight that industrial demand flexibility is not without cost. When large industrial customers are curtailed or asked to reduce production as part of flexibility solutions, the impact extends beyond the energy sector. These customers often produce high-value exports or essential goods, and their curtailed output represents lost economic opportunity for New Zealand. Meanwhile, energy retailers or distributors may benefit from reduced exposure or avoided costs. This asymmetry highlights the importance of transparency, fair compensation mechanisms, and regulatory awareness of the broader economic trade-offs involved.

We encourage the Authority to ensure that the development of flexibility markets incorporates mechanisms to properly value industrial load and its contribution to national productivity, alongside the more traditional network and wholesale market benefits. To that end, we recommend the Authority:

- Recognise and appropriately value industrial load flexibility, particularly where it supports export activity and national economic performance
- Focus initially on identifying and reducing existing barriers to participation across all flexibility providers
- Ensure regulatory consistency and alignment across relevant agencies to avoid duplication or conflicting signals
- Maintain neutrality across different types of flexibility providers to support a level playing field
- Account for the operational realities and constraints faced by both electricity distributors and industrial consumers

- Keep the flexibility roadmap adaptable as new information, technologies, and market responses emerge
- Coordinate with related workstreams, including the FNF Load Management Protocol project, to ensure coherent system-level outcomes

We look forward to continuing engagement with the Authority as this work progresses and are happy to support the development of fit-for-purpose, efficient solutions that benefit all consumers.

No part of this submission is confidential, we acknowledge it will be published. Please do not hesitate to contact us for further information including on operational requirements.

Nā māua noa, nā

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