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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 ESTABLISHING AN EMERGENCY RESERVE SCHEME CONSULTATION PAPER

Unison Networks Limited (**Unison**) is an electricity distribution business operating in Hawke's Bay, Taupō, and Rotorua. Centralines Limited (**Centralines**) operates in Central Hawke's Bay. As consumer-owned organisations, our focus is on delivering safe, reliable, and affordable electricity to our communities.

Introduction

1. Unison and Centralines welcome the opportunity to comment on the Electricity Authority's (the Authority) consultation paper *Establishing an Emergency Reserve Scheme (**ERS**)*.
2. We strongly support measures that enhance New Zealand's security of electricity supply, particularly during emergencies such as unexpected generation capacity shortages, extreme weather events, or other high-impact risks to the power system. Ensuring the lights stay on in these circumstances is critical for the communities we serve.
3. However, we are concerned that the ERS, as currently proposed, may not achieve this objective in the most effective or efficient way. In particular, elements of the scheme risk duplicating existing Code-based processes, undermining market signals, and increasing costs for consumers without delivering commensurate reliability benefits.
4. Our submission is therefore framed constructively: we support the Authority's objective of improving system resilience, but we recommend refinements as set out in the following sections.

Emergency-Only Activation Limits Consumer Benefits

5. ERS is intended for rare, high-stress system events. While this can protect system reliability, it limits the scheme's value for consumers:
6. The scheme provides minimal benefit in moderating day-to-day wholesale electricity price volatility.
7. Maintaining readiness of ERS resources incurs costs (availability and pre-activation payments) that are unlikely to be offset by savings, given the infrequent use.
8. Consumers may pay for standby capacity that delivers little to no regular value outside emergencies.
9. Recommendation: Consider mechanisms to integrate ERS resources into day-to-day market participation where feasible, or ensure standby costs are strictly proportionate to the infrequent benefit to consumers.

Weak Market Integration and Inefficiency

10. ERS operates largely outside core spot market processes.
11. Lack of integration reduces efficiency of price discovery and weakens incentives for flexible loads to respond to real-time market signals.
12. Coordination and administrative costs of an out-of-market mechanism are ultimately borne by consumers.
13. Without market visibility, the System Operator (**SO**) cannot reliably distinguish truly additional load from load that would have responded to prices anyway, increasing the risk of overpayment and misallocation.
14. Recommendation: Explore options to integrate ERS into wholesale market processes where possible, improving efficiency, visibility, and alignment with existing demand response mechanisms.

Risk of Higher Consumer Costs Through Pre-Activation and Scarcity Price Distortion

15. ERS pre-activation can “quarantine” industrial load, paying for availability even if the load would have responded at lower spot prices.
16. This reduces the supply visible to the market, potentially raising wholesale spot prices.
17. If ERS is activated more frequently than necessary due to forecasting uncertainty, consumers face higher total costs, from both pre-activation payments and increased spot prices.
18. Recommendation: Limit pre-activation payments to situations where loads are genuinely incremental and implement robust forecasting and monitoring to reduce unnecessary ERS activation.

Limited Day-to-Day Value and Missed Opportunities

19. Unlike mechanisms integrated into the wholesale market, ERS does not utilise industrial or commercial flexibility on a day-to-day basis.
20. This limits the potential to flatten demand peaks, reduce scarcity rents, and reduce reliance on high-cost generation.
21. Consumers therefore face higher average costs, while the system foregoes efficiency gains that broader market integration could deliver.
22. Recommendation: Consider pathways for ERS resources to participate in regular wholesale market operations, capturing value outside emergency events and improving overall system efficiency.

Clear Boundaries to Avoid Double Dipping

23. ERS must prevent the same load being offered into multiple mechanisms simultaneously. Without safeguards, “double dipping” could occur, contracting the same load more than once and driving up costs without providing additional system security.
24. Recommendation: Establish explicit participation rules to prevent duplication across markets, ensuring consumers do not pay twice for the same demand response.

Avoiding Dualling Between SO and DSOs

25. There is a risk of "dualling," where both the SO and Distribution System Operators (**DSOs**) seek to procure or call on the same flexible load, leading to inefficient competition and unnecessary cost escalation. The Electricity Authority’s *Future System Operation* consultation paper highlights that as the system becomes more complex, clear

coordination between SO and DSOs is essential to avoid conflicting signals and inefficiencies. Similarly, the ENA's *Potential DSO Models for Aotearoa* report (developed by Baringa) emphasises that defining roles and responsibilities for DSOs relative to the SO is critical to prevent overlap and ensure efficient system operation.

26. Recommendation: Define clear roles and responsibilities for SO and DSOs, specifying which types of flexibility and demand each can procure or dispatch. Establish prioritisation rules where overlapping resources exist, ensuring that actions taken by SO and DSOs are coordinated to avoid dualling.

Risk of Undermining GEN/WRN and Difference Bids Arrangements

26. Following the August 2021 event, Code reforms enhanced the System Operator and distributor roles in visibility, coordination, and response via Warning Notices (**WRNs**) and Grid Emergency Notices (**GENs**), mainly relying on difference bids submitted into Wholesale Information and Trading System (**WITS**) to signal available controllable load. These arrangements have proven effective.
27. The introduction of ERS, if not carefully designed, risks undermining these improvements. Specifically:
    a. By providing out-of-market incentives, ERS could dampen demand and generation responses to wholesale price signals, thereby increasing the probability of emergencies.
    b. If ERS resources are dispatched pre-emptively, they may not be available as a residual safeguard under a GEN, reducing the level of emergency response when it is most needed.
    c. This sequencing risk creates the potential for ERS to substitute for, rather than complement, established WRN/GEN and difference bid arrangements.
28. We acknowledge that the intent of ERS is to act as an insurance layer, providing additional physical security during rare, high-impact events. However, to achieve this, its activation must be tightly controlled and clearly positioned as a last-resort measure, rather than a substitute for market signals and Code-based arrangements.
29. Recommendation: The Authority should ensure ERS design principles prioritise complementarity with existing Code changes and GEN/WRN and difference bid processes. ERS activation criteria should be clear and stringent, so that wholesale market signals and WRN/GEN and difference bid coordination remain the primary mechanisms for managing scarcity, with ERS reserved as a true backstop.

Additionality and Treatment of On-Site Generation

27. While the ERS seeks "additional" demand flexibility, current design presents risks:
28. Participation rules may inadvertently allow price-responsive assets or industrial generation to be included in ERS.
29. Lack of clarity on the treatment of on-site generation (e.g., backup diesel or embedded generation) could remunerate load that would otherwise respond to market signals, increasing costs without delivering true additionality.
30. Using ERS for non-wholesale purposes (e.g., direct transmission support) could crowd out more efficient solutions, further raising costs.
31. Recommendation: Clarify eligibility rules and explicitly address on-site generation to ensure ERS delivers genuinely incremental capacity, avoids market distortions, and minimises costs.

Pricing, Add-Back, and Cost Allocation

32. Adding ERS-activated demand back into nodal load schedules is critical to preserve efficient price signals and ensure that wholesale prices reflect actual supply and demand.

Costs must also be treated as whole-of-system charges rather than double-billed to consumers within a nodal pricing area.

33. Recommendation: Design ERS cost allocation to prevent double charging, ensure transparency, and distribute costs fairly across all consumers.

Interaction with the Load Management Protocol (LMP)

34. The LMP remains a reliable, low-cost mechanism for managing peak capacity risks via Distributor Emergency Notices (**DENs**), which respond to GENs issued by the System Operator. Industrial consumers may be more likely to participate in ERS due to commercial incentives, whereas mass-market load (especially hot water) is effectively managed via LMP.
35. Recommendation: Clarify the complementary roles of ERS and LMP to avoid duplication, with ERS primarily focused on incremental industrial demand flexibility.

Conclusion

36. Unison and Centralines share the Authority's objective of strengthening New Zealand's electricity system to withstand emergency conditions, including periods of generation scarcity. We support the principle of an ERS that acts as a genuine backstop, providing additional resilience beyond the day-to-day functioning of the wholesale market.
37. To achieve this objective, however, it is essential that the ERS is carefully designed to complement, rather than duplicate or undermine, existing Code processes, wholesale market mechanisms, and proven tools such as WRN/GEN coordination, difference bids, and the Load Management Protocol.
38. To mitigate these risks, the ERS should:
    a. Establish clear participation boundaries to **avoid double dipping**.
    b. Ensure coordination between SO and DSOs to **prevent dualling**.
    c. Apply a **robust additionality** test, with explicit guidance on on-site generation.
    d. Preserve **efficient price signals through add-back** while ensuring fair cost allocation.
    e. Recognise the complementary role of the **LMP**, with ERS focused on incremental industrial demand flexibility.
    f. Consider pathways to **integrate ERS with wholesale markets** (including difference bids) and day-to-day demand flexibility, capturing broader system efficiency gains.
39. By refining the scheme along these lines, the Authority can achieve its intended purpose: enhancing emergency resilience while preserving the efficiency, affordability, and fairness of the electricity market for consumers.
40. No part of this submission is confidential, and we acknowledge it will be published. Please do not hesitate to contact us for further information.

Nā māua noa, nā

Jason Larkin / Tomas Kocar
GROUP GM CUSTOMER, COMMERCIAL AND REGULATORY / PRINCIPAL REGULATORY ADVISOR
[redacted]