

Consultations Team, System Operator

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Enel X Response to ASPP Emergency Reserve Consultation

Enel X welcomes the proposal by Transpower New Zealand, in its role as System Operator, to introduce Emergency Reserve as a new ancillary service. We support the objective of strengthening system reliability and reducing the likelihood and extent of involuntary demand curtailment during periods of acute system stress. We also welcome the recognition within the proposed framework of the important role that aggregators and demand-side resources can play in supporting power system security.

The proposed framework represents an important step forward for demand-side participation in New Zealand. In particular, the proposed use of aggregation, self-certification, performance assessment and activation processes recognises that flexible demand can provide system value in a manner comparable to more traditional supply-side resources.

While Enel X is broadly supportive of the proposal, we encourage the System Operator and the Electricity Authority to consider whether the proposed Emergency Reserve mechanism on its own, as currently envisaged, will provide a sufficiently strong investment signal to support the long-term development of a robust demand response sector in New Zealand.

We therefore encourage the System Operator and Electricity Authority to:

1. Consider how procurement arrangements can support sustained investment in demand response capability.
2. Recognise that demand response can provide benefits beyond emergency reliability services.
3. View Emergency Reserve as a foundation for broader demand-side participation over time.
4. Develop a longer-term roadmap for the evolution of demand-side resources within the New Zealand electricity market.

Investment Signals and Market Scale

A key consideration for aggregators is the relationship between the cost of developing demand response capability, the size of the market opportunity available to support that investment and the certainty any programme will provide revenue.

Establishing demand response capability requires significant upfront and ongoing investment, including:

- customer acquisition and contracting;
- site assessments and eligibility reviews;
- metering and data integration
- software development and ongoing support;
- communication and dispatch systems;
- portfolio management;
- compliance and reporting obligations; and
- ongoing customer engagement and retention.

Many of these costs are largely fixed and do not vary significantly with the size of the procurement programme.

The consultation paper describes Emergency Reserve as a mechanism that will be used only as a final operational measure before instructed involuntary demand management. As a result, the service is expected to be activated relatively infrequently and may involve comparatively modest procurement volumes, particularly during initial implementation.

Enel X is concerned that a small-volume, emergency-only procurement programme may not provide sufficient revenue certainty or long-term investment confidence for aggregators to develop significant demand response capability. Where procurement volumes are small and participation occurs through competitive tendering processes, there is a risk that clearing prices may not adequately reflect the investment required to bring flexible demand resources into the market.

We encourage the System Operator to consider how procurement arrangements can provide a durable investment signal that supports the development of a broader and more mature demand response ecosystem over time.

Emergency Reserve as a Foundation for Broader Demand-Side Participation

In Enel X's view, the proposed Emergency Reserve framework contains many of the foundational elements that would be required for broader demand-side market participation.

These include:

- aggregation of customer loads;
- dispatchable demand response capability;
- baseline calculation methodologies;
- performance measurement and verification;
- event activation processes; and
- digital communication and control frameworks.

For this reason, we suggest that Emergency Reserve be viewed not only as an emergency reliability mechanism, but also as a potential first step toward broader participation of demand-side resources in New Zealand's electricity market.

Demand response has the potential to provide value across a much wider range of market conditions than emergency events alone. In many markets internationally, demand response participates in wholesale market operations and contributes to:

- reduced wholesale price volatility;
- lower peak demand;
- improved competition;
- reduced reliance on peaking generation;
- more efficient network utilisation; and
- improved integration of renewable energy resources.

These broader system benefits may not be fully realised through a mechanism that is reserved solely for emergency conditions.

Lessons from the Australian Wholesale Demand Response Mechanism

The experience of the Australian Energy Market Commission (AEMC) and the Wholesale Demand Response Mechanism (WDRM) may provide useful insights for future development of demand-side participation in New Zealand.

The AEMC's 2025 review concluded that the WDRM should continue operating and found that the mechanism had produced dispatch efficiency benefits in excess of its operational costs. The review estimated approximately \$5.32 million in benefits between October 2021 and June 2025, compared with annual operational costs of approximately \$350,000 to \$500,000. It was also found that the mechanism has reduced spot prices by \$265.6 million, with average price savings of \$28/MWh during WDR dispatch. The review also concluded that demand response participation can be effectively incorporated into market outcomes in a way that benefits electricity consumers.

Enel X notes that the Australian framework was designed to facilitate participation of demand-side resources in wholesale market outcomes rather than solely during emergency reliability events. While New Zealand's market design differs from Australia's, the underlying principle remains relevant: enabling flexible demand to participate more broadly can unlock benefits that extend beyond emergency reliability services.

There are many attributes the proposed Emergency Reserve Scheme has that would be required if New Zealand was to adopt a WDRM structure of its own. Specifically, the recalculation of the wholesale energy price to reflect the counterfactual price is a key design feature that has previously been suggested as too difficult to implement for a WDRM mechanism. Secondly, the Dispatchable Demand framework appears to have the mechanism for offering and dispatching so the only major missing component is reconciliation of site load data to the counterfactual to keep the market whole. We encourage Transpower and the Electricity Authority to consider what components of the WDRM may be useful if implemented in New Zealand and how this could utilise the ERS and Dispatchable Demand frameworks.

Long-Term Development Pathway

Enel X supports implementation of Emergency Reserve as a pragmatic and proportionate first step. However, we encourage the System Operator and the Electricity Authority to consider publishing a longer-term roadmap for the evolution of demand-side participation in New Zealand. Such a roadmap could consider whether the capabilities being established through Emergency Reserve might ultimately support broader participation by flexible demand resources in market operations.

Providing visibility of this longer-term direction would improve investment certainty for market participants and increase confidence that capability developed for Emergency Reserve today may provide additional value streams in the future.

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