

To: Electricity Authority (EA)
wholesaleconsultation@ea.govt.nz

From: Electricity Engineers' Association of NZ

Date: 21 November 2025

Subject: EEA Submission – Consultation Paper - *Requiring the use of halfhourly data for reconciliation*

OVERVIEW

The Electricity Engineers' Association (EEA) welcomes the opportunity to comment on the Authority's proposal to require half-hourly metered electricity quantities to be submitted into the wholesale reconciliation process.

The EEA represents the technical and engineering expertise of New Zealand's electricity transmission and distribution sector. Our members build, operate, and maintain the assets that underpin a safe, reliable, and efficient electricity system. As electrification accelerates and consumer energy resources (CER) proliferate, high-quality operational data is increasingly essential to effective system management.

Overall Position

The EEA supports the proposal to mandate the submission of half-hourly metered data where it is available. With over 96% of ICPs now equipped with interval-capable metering, continuing to rely on profiling is neither efficient nor well aligned with the needs of a modern, flexible electricity system.

Accurate half-hourly data is now a core enabler of:

- efficient system operation
- demand-side flexibility
- improved network planning and utilisation
- robust power quality and voltage management
- informed technical and asset investment decisions

The proposal aligns directly with the EEA's focus on supporting a resilient, data-driven electricity system.

Technical Case for Improved Interval Data

1. More accurate reconciliation supports system efficiency:

Replacing profiled consumption with actual half-hourly data will materially improve the accuracy of wholesale allocation and reduce unaccounted-for energy. This results in clearer linkage between measured and allocated flows, which strengthens:

- load modelling
- loss factor development
- forecasting
- operational planning

For distribution networks, this improved visibility enhances both day-to-day operation and long-term engineering assessments.

2. Interval data strengthens the incentives for flexibility:

The consultation correctly highlights that profiling “smears” consumption across the month, dulling incentives for flexible behaviour and weakening traders’ ability to reflect true system costs.

From a network engineering perspective, this limits the effectiveness of CER orchestration and reduces the ability of system operators to rely on flexible load during peak or constrained periods. Accurate half-hourly data helps ensure:

- flexible actions occur in the right periods
- networks can trust and value load-shifting
- real-time and near-real-time control strategies (hot water, EVs, heat pumps, batteries) can operate as intended.

Better data ultimately reduces operational uncertainty and increases the value of coordinated flexible demand.

3. Alignment with EEA’s FlexTalk Programme

Through FlexTalk, the EEA and partners (EECA, EDBs, Cortexo, Ivory Egg and others) are demonstrating the real-world value of granular consumption data combined with intelligent device optimisation. Key insights to date include:

- half-hourly or better data is essential for optimising hot water control, EV charging, heat pump scheduling, and behind-the-meter storage
- delayed or profiled data erodes the operational and economic value of flexibility
- consumers engage more readily when signals match their real usage patterns

- accurate interval load data improves predictability of aggregated CER behaviour

The proposed Code change directly supports the technical foundations emerging from FlexTalk and other industry-led flexibility demonstrations.

4. Supporting Efficient Electrification

New Zealand’s electrification pathway requires optimising existing network capacity before committing to major new investment. Improved visibility of actual, rather than profiled, consumption supports:

- more accurate peak and load forecasting
- better hosting capacity assessments
- enhanced voltage and power quality management
- earlier detection of emerging capacity constraints
- more effective deployment of dynamic operating envelopes or flexible limits

Accurate interval data therefore contributes directly to efficient investment and long-term network stewardship—core responsibilities of EEA members.

5. Implementation Considerations

The EEA supports the Authority’s proposed “minimum change” implementation approach and agrees that most parties already have the capability to manage this transition. To ensure smooth implementation, we recommend:

- early publication of clear technical specifications and data validation requirements
- coordination with metering equipment providers and EDBs to maintain data integrity
- alignment with broader work on interoperability and data access
- ongoing engagement with industry to identify and resolve integration issues

The EEA is available to support further technical discussions if required.

Conclusion

The EEA supports the proposal to require half-hourly metered data for wholesale reconciliation. From an engineering and system operation perspective, this change:

- enhances data accuracy
- improves system efficiency
- strengthens the technical foundations for flexibility
- supports network visibility and operational planning
- enables more efficient investment decisions

- aligns with the sector's transition toward a more flexible, consumer-centric electricity system.

Our FlexTalk experience reinforces the importance of accurate interval data as a prerequisite for realising the full value of CER and flexible demand. The proposed amendment is timely, well-targeted, and consistent with the technical direction of the sector.

The EEA welcomes ongoing engagement with the Authority and stands ready to support implementation. s.

Contact

The EEA's contact person for this submission is Dr Stuart Johnston, Lead Advisor Engineering & Technical (stuart@eea.co.nz or 021 11986535).