

Submission

System Operator Strategy Phase 2

22 July 2026



Fonterra welcomes the opportunity to provide input to System Operator Strategy Phase 2 consultation.

Fonterra is a dairy co-operative owned by over 8,000 New Zealand farming families with manufacturing sites across the country, making us New Zealand's largest exporter and a major supplier of dairy products to the domestic market.

With manufacturing operations spread throughout New Zealand, a regulatory requirement to stop using coal by 2037 and a significant decline in future natural gas supply, timely low-cost access to electricity for process heat is critical.

Fonterra supports the overall direction of the draft System Operator Strategy. The proposed priorities — operating a secure, highly variable power system; efficient market operations and information provision; evolving operational capability; leveraging data and distributed resource integration; and strengthening industry resilience — are all relevant to the future reliability and affordability of New Zealand's electricity system.

Fonterra particularly supports the System Operator's recognition that the electricity system is becoming more complex as electrification accelerates, renewable and inverter-based generation increases, distributed resources grow, and electricity demand becomes more variable in scale, timing and location.

However, Fonterra considers the strategy should place greater emphasis on the implications of large industrial electrification. The strategy discusses large new loads, including data centres, but industrial heat electrification is also a material and near-term driver of electricity demand. Industrial electrification differs from some other large loads because it is often connected to productive export activity, may have regional concentration, may interact with existing thermal fuel systems, and may offer flexibility where market and operational settings support it.

Fonterra recommends the final strategy be amended in five areas.

1. Explicitly recognise large industrial electrification loads

Fonterra recommends that the final strategy explicitly identify large industrial electrification loads, including electric boilers and process heat conversion, as a distinct class of new load.

The current strategy appropriately recognises that large new loads can create challenges for system stability, emergency management, connection timing and capacity planning. However, the examples and framing should be broadened beyond data centres to include industrial process heat electrification.

This matters because industrial electrification is directly linked to New Zealand's emissions reduction pathway and export economy. A system that cannot connect and operate major industrial electrification projects in a timely, affordable and secure way will risk slowing industrial decarbonisation.

Requested change:

Add references to "large industrial electrification loads, including electric boilers and process heat conversion"

in Priorities 1, 2 and 3, particularly where the strategy discusses large new loads, commissioning, market onboarding and system security.

2. Enable industrial demand flexibility as a system resource

Fonterra supports the strategy's focus on firming and flexibility. The strategy identifies a growing need for flexible resources, including demand response, to manage variability from intermittent generation and demand.

Large industrial users can potentially provide valuable flexibility through interruptible load, thermal storage, production scheduling, fuel switching, refrigeration optimisation, demand response and emergency load reduction. However, this flexibility will only be available if market products, operational protocols and information systems are designed to recognise industrial constraints.

Fonterra recommends that the System Operator and Electricity Authority develop clear participation pathways for large industrial flexible demand, including:

- clear baselines and measurement methodologies;
- practical dispatch and communication arrangements;
- appropriate compensation or market treatment;
- recognition of site-specific production, food safety, restart and export supply chain constraints;
- access to ancillary services, demand response and emergency reserve products where technically feasible.

Requested change:

Under initiatives P2.2, P2.5 and P2.6, include a specific action to develop market and operational arrangements for large industrial demand flexibility.

3. Improve security-of-supply information for major electricity users

Fonterra supports the proposed evolution of the Security of Supply framework, including improvements to the Security of Supply Assessment, Electricity Security Outlook, New Zealand Generation Balance alignment, modelling tools, forecasting processes and external risk visualisation.

Fonterra recommends that future security-of-supply information include clearer regional and operational indicators, including:

- regional or island-level capacity and energy risk;
- peak demand risk;
- dry-year exposure;
- expected periods where demand response would be most valuable;
- likely implications for major loads;
- clear explanation of what participant actions would reduce system risk.

Requested change:

Under P2.3 and P2.4, include a commitment that security-of-supply reporting will be designed to be actionable for major electricity users, not only generators, retailers and policy makers.

4. Ensure new data requirements are proportionate and protect commercially sensitive information

Fonterra supports the intent of improving data visibility, interoperability and whole-of-system coordination. The strategy identifies data access, common operational datasets, TSO–DSO coordination and visibility of distributed resources as foundational to secure future system operation.

However, new data-sharing requirements must be carefully designed. Major industrial sites may hold information that is commercially sensitive, operationally sensitive, or related to food safety, production volumes, plant configuration, energy procurement or site resilience.

Fonterra supports data sharing where it is necessary for secure system operation, but recommends that the final strategy include the following principles:

- data requirements should be proportionate to system need;
- data should be requested once and reused where appropriate;
- reporting obligations should be standardised across Transpower, EDBs, retailers and aggregators;
- commercially sensitive information must be protected;
- cyber security and access controls must be clearly defined;
- participants should understand how data will be used and who will have access to it.

Requested change:

Under Priority 4, include explicit data governance principles covering proportionality, confidentiality, cyber security, commercial sensitivity and avoidance of duplicated reporting.

5. Co-design emergency demand management with major industrial users

Fonterra supports the strategy's focus on strengthening industry resilience and improving emergency demand management. The strategy proposes development of a national load management protocol and improved visibility of controllable load for emergency management.

Major industrial users should be directly involved in the design and testing of these arrangements. Industrial loads are not all discretionary. Some loads are critical to food safety, environmental compliance, refrigeration, wastewater treatment, milk collection, production continuity and safe plant restart.

Emergency demand management protocols should distinguish between:

- discretionary flexible load;
- interruptible but time-limited load;
- production-critical load;

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- safety-critical load;
 - loads with long or complex restart requirements.

Fonterra recommends that emergency load management arrangements be co-designed with large industrial users so that protocols are practical, pre-agreed and tested before they are needed in real events.

Requested change:

Under P5.4, explicitly include major industrial electricity users in the development, operationalisation and testing of the Common Load Management Protocol.

Additional comments

Fonterra also supports the strategy's emphasis on affordability and value-for-money operations. The System Operator's decisions can influence overall system costs through operational requirements, data obligations, ancillary service arrangements, compliance requirements and market implementation costs.

Fonterra recommends that any new obligations on participants be subject to transparent cost-benefit assessment, including consideration of impacts on large electricity users, regional employment, export competitiveness and decarbonisation investment.

Fonterra also supports work to streamline commissioning and market onboarding processes. The strategy identifies the need to support new asset types, including large loads, and to streamline commissioning and onboarding through improved tools and processes. This work should include large industrial load connections and electrification projects, not only generation, BESS and distributed resources.

Fonterra would welcome the opportunity to continue engaging with Transpower, the System Operator and the Electricity Authority on these matters.

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