

Fonterra submission on Rewarding Industrial Demand Flexibility

July 2025

Fonterra welcomes the opportunity to provide input to the Electricity Authority's consultation on Rewarding Industrial Demand Flexibility.

Fonterra is a dairy co-operative owned by more than 8,000 New Zealand farming families with 27 manufacturing sites across the country, making us the country's largest exporter and a major supplier of dairy products to the domestic market.

With manufacturing operations spread throughout New Zealand, Fonterra is a major electricity user. We rely on stable and affordable access to electricity to support our operations. This reliable access underpins New Zealand's export competitiveness.

Fonterra welcomes the Authority's work to incentivise demand flexibility and agree that industrial users could play an important role in the electricity market by putting in place such incentives. Having a balanced system that maintains security of supply while minimising cost to electricity users is crucial, and demand flexibility is a lever that can support both outcomes.

Fonterra believes demand-side incentives should be viewed as part of a long-term approach to supporting resilience within the electricity market and we endorse a phased work programme over several years to develop a robust framework for rewarding industrial demand response.

We agree that the potential for industrial demand flexibility is currently limited, particularly in dairy processing where the load drops significantly during the winter months and runs at full capacity during seasonal peak.

Notwithstanding the current limitations, Fonterra has a significant decarbonisation programme underway, with major electrification investments expected across the country over the next decade. Where financially feasible, we will explore opportunities to participate in Demand Response.

Having in place a credible framework to incentivise demand-side participation will enable major electricity users to consider making necessary investments and/or changes to production profiles. We broadly support the Authority's proposed workstream, but we believe a broader range of actions could be pursued. For example, a specific workstream that explores more explicit Demand Response payments and better utilisation of the existing RTP scheme is recommended.

Our responses to the specific consultation questions are below. We welcome further engagement on our submission.

Consultation Question	Fonterra Response																										
<p>Do you agree with our approach of focusing on industrial demand flexibility as an early initiative to enable demand flexibility more broadly? Why/Why not? Do you have any information to indicate that demand response from other consumer types may be more readily accessed?</p>	<p>Fonterra agrees with the Authority's approach. Industrial load can deliver the largest demand response opportunity and large electricity users have the sophistication to respond in the short to medium term. As such, an approach that begins with a focus on enabling industrial demand flexibility is sensible.</p> <p>Fonterra supports enabling small-load aggregation to participate as part of the Authority's work programme. Aggregating small load and providing incentives for demand response participation could have a meaningful role in supporting a more balanced electricity system. For example, some dairy farms may be good candidates for future participation if the incentives are sufficient and the framework is structured appropriately.</p>																										
<p>Do you agree with our estimates of the potential industrial demand flexibility capacity available in New Zealand currently and into the future? Why/why not? Do you have any evidence to support a materially different estimate?</p>	<p>Estimating the potential of industrial demand flexibility capacity across the dairy processing sector is challenging.</p> <p>Fonterra's operations are seasonal by nature, with a peak period from September through to November. During this period, Fonterra's manufacturing plants generally run at or near capacity for twenty four hours a day, seven days a week, corresponding to the high milk inflows. There is limited capacity for Fonterra to shift or reduce production during this period due to the nature of our perishable raw ingredient and the volumes we receive.</p> <p>Conversely, during winter months our manufacturing plants are mostly idle for maintenance and upgrade activities.</p> <div data-bbox="464 1003 1469 1727"> <table border="1"> <caption>Annual Monthly Electricity Use (GWh)</caption> <thead> <tr> <th>Month</th> <th>Electricity Use (GWh)</th> </tr> </thead> <tbody> <tr><td>January</td><td>108</td></tr> <tr><td>February</td><td>95</td></tr> <tr><td>March</td><td>98</td></tr> <tr><td>April</td><td>85</td></tr> <tr><td>May</td><td>70</td></tr> <tr><td>June</td><td>28</td></tr> <tr><td>July</td><td>30</td></tr> <tr><td>August</td><td>65</td></tr> <tr><td>September</td><td>108</td></tr> <tr><td>October</td><td>122</td></tr> <tr><td>November</td><td>120</td></tr> <tr><td>December</td><td>118</td></tr> </tbody> </table> </div> <p>Notwithstanding these constraints, Fonterra does have capacity to adjust our load outside the peak, and we are currently undergoing a significant decarbonisation programme that will increase the diversity of fuels across our manufacturing footprint, with significant investments into electrode and biomass boilers planned over the coming decade.</p> <p>With the right settings in place, Fonterra will be well placed to consider greater participation in demand side schemes.</p>	Month	Electricity Use (GWh)	January	108	February	95	March	98	April	85	May	70	June	28	July	30	August	65	September	108	October	122	November	120	December	118
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Do you agree with our focus on intra-day demand flexibility for this initiative? Why/why not? What other approach would you suggest?	<p>Fonterra agrees with a focus on intra-day demand flexibility, although we believe there is merit in continuing to explore seasonal demand response options.</p> <p>In addition, we believe a workstream associated with direct payments should be included in the Authority's work programme, particularly further consideration of the merits of a mechanism to bid directly into the wholesale market alongside generation.</p> <p>Fonterra has been a supporter of the real time pricing scheme (RTP), but the settings associated with existing mechanisms means they are under-utilised. We recommend the Authority expands the work programme to include a workstream focused on direct payments and better utilisation of the RTP mechanisms.</p>
Do you agree with our description of the barriers affecting the provision of industrial demand flexibility? Why/why not? Are any other barriers relevant to the provision of demand flexibility from other consumer types?	There is likely to be significant complexity and cost associated with participation and potential concerns about data-confidentiality that will need careful consideration. These factors will be key drivers in whether industrial users are able to participate, in addition to the level of incentive available.
Do you agree that existing incentives and contracts for demand flexibility are resulting in inefficiently low levels of demand flexibility?	<p>Yes. While a small number of bilateral agreements have been reached, a more robust structure and clear incentives are necessary to enable participation that will support system-level impacts.</p> <p>The current price-only signals that electricity users receive do not cover lost-output risk or upfront capital requirements to justify participation. The price-only signals are contributing to the unwanted permanent closure of industrial manufacturing capacity, rather than providing a mechanism to enable already stressed electricity users to participate in demand response.</p>
Are you aware of any additional barriers to enabling more industrial demand flexibility?	<p>Several factors that are relevant to the dairy processing sector are likely to be food-safety shutdown constraints and the multi-site coordination costs.</p> <p>Fonterra's operations and product mix are optimised across our sites. Even with an incentive scheme in place, there will likely be limited opportunity to justify participation, particularly if it requires shifting or reducing production capacity at a particular plant that is scheduled to run.</p>
Do you agree with our vision for industrial demand flexibility? Why/why not?	Fonterra supports the vision statement. A clear vision that stresses enablement is crucial.
Do you believe that this vision is applicable to other forms of demand flexibility, or to flexibility more generally?	This vision is applicable, although the Authority may wish to consider adding the emphasis on the value of expanding to other forms over time.
Do you agree with our view that demand flexibility providers should be able to receive payment for providing	Fonterra strongly supports this view. Payment is critical to enabling meaningful participation. Spot price savings and existing market price signalling will not be sufficient.

flexibility services that exceeds avoided energy costs, provided the demand response is efficient (as defined)? Why/why not?	Not only are the opportunity costs of turning off a boiler and ceasing production significant, but there are potential capital and other costs, as well as wider implications associated with participation in a demand flexibility scheme that should be recognised in the same way that costs associated with new generation and fuel are acknowledged and recognised.
Do you agree with our proposed guiding principles? Why/why not? Are other specific considerations which you believe should be included in the evaluation framework?	Fonterra supports guiding principles that seek to be technology and vendor agnostic while seeking to find the most efficient minimisation of costs to consumers.
Do you agree with our view that there is currently insufficient potential industrial demand flexibility to justify the establishment of new market mechanisms or platforms other than the proposed ERS and standardised demand flexibility product?	While the ERS and hedge products appear reasonable, the Authority should also consider work on a more direct market payment mechanism relying on the existing real-time-pricing technology to make payment for dispatch at the rate of the resulting price stack as the role of demand response grows.
Do you consider there are other cost -effective measures that can be implemented urgently to enable industrial demand flexibility to support reliability and efficient in the wholesale market?	Enabling payment for demand response in RTP would be the fastest and simplest demand response scheme to implement. Fonterra does not support the MDAG views expressed in section 7.20 to 7.27 that paying for demand reduction that balances the market in real time is distortionary. There are costs to deliver any demand response, just as there are costs to deliver extra generation.
Do you agree with our proposal to establish an ERS? Why/why not?	Fonterra supports the proposal, despite the likely limited ability for participation over the short term.
For demand flexibility providers – do you consider it likely that you could make demand flexibility capacity available for an ERS in time for Winter 2026?	Fonterra is unlikely to be able to make significant capacity available for an ERS in time for Winter 2026.
Do you agree with our proposal to investigate a standardised demand flexibility product? Why/why not?	Fonterra supports investigating a standardised demand flexibility product.
Do you support our other proposed roadmap actions? Why/why not?	Fonterra supports the roadmap actions, particularly pilots that stack various incentives and make the economic case more compelling for participation.
Do you support the proposed sequence and timing of actions in our proposed roadmap? Why/why not?	The proposed sequence and timing of actions appears reasonable, although wherever possible we recommend running actions in parallel to enable clarity for industrial users as early as possible.