

## Fonterra submission on the future operation of New Zealand's power system

April 2024

Fonterra welcomes the opportunity to comment on the Electricity Authority's (EA) consultation on the future operation of New Zealand's power system.

Fonterra is a dairy co-operative owned by around 9,000 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 energy user and participant in the electricity markets.

Fonterra recognises that New Zealand has enjoyed a well functioning electricity market relative to many other countries historically. The current market structure should be capable of supporting the future operation of New Zealand's power system, but it will require evolution to continue providing reliable, affordable, and sustainable energy to consumers.

In particular, the incentives and behaviour of major participants on the generation side of the market have shifted, and a focus on the impact this is having should be a priority to ensure the market continues to support the above objectives.

On various occasions, the market has experienced situations where supply did not match demand, for example in 1996, 2001, 2003 and 2021. The historical solution has been to introduce a cost to generators if customers had to be asked to reduce demand due to generators not forecasting their fuel supplies, including water, correctly. The market dynamics have now shifted, and capacity margins are low due to the reluctance of generators to progress their consented generation builds above their retail book requirements.

This has been evidenced by the sustained high spot market prices for six years, above the Long Run Marginal Cost (LRMC) of new generation, which should be more than enough time to build consented projects at a much higher rate than what is being seen.

Instead, we are seeing significant profits reported from the generation side of gentailers, while retail divisions are run at a loss, which hampers competition in the retail market. The market settings in this regard are now effectively broken, with larger incumbent players stifling both new generation via consent sitting or pricing under new builds, and retail competition by being able to subsidise their retail divisions.

The effect is that industrial, commercial and retail users of electricity are paying more than they otherwise should be. For exporters, this is impacting on the international competitiveness, particularly as New Zealand is much further from consumer markets. It is also slowing the electrification of New Zealand's economy.

Unless there are changes in the market, prices will remain stubbornly high due to the thermal generation setting the marginal generation due to the input fuel cost, coupled with the growing cost associated with the Emissions Trading Scheme and reducing utilisation, necessitating higher fixed cost recovery. The high prices should signal that lower LRMC generation or Demand Response (DR) can be brought to market profitably.

In the shorter term, there is value in considering how to better utilise the available baseload capacity at Huntly to retain more hydro capacity for coming winter peaks. In the past, a Market Security Option (MSO) swaption was successfully used, but there remains a perverse situation where generators without baseload thermal capacity can rely on thermal plants to keep the lights on in winter at their own cost.

The transition into a more volatile environment over the medium to long term, as outlined in the Market Development Advisory Group (MDAG) report, supports the importance of new innovative solutions like DR and Distributed Generation (DG). These solutions should be seen as complementary measures to support the continued operation of an effective, competitive electricity market that remains reliable, affordable and sustainable. Fonterra supports the development and integration of these tools to manage price volatility risk.

### **Other Comments**

Fonterra supports the initiative to encourage the expansion of Distributed Generation to the point that the system displays a significant duck curve (i.e. demand decline to zero during midday). From a whole-of-system perspective, it makes sense to have a market tool that incentivises hydro generators to minimize solar and wind spill, thereby storing water wherever possible and avoiding expensive thermal generation.

New Zealand has significant install hydrogeneration capacity, at approximately 5,000 MW, but very limited hydro storage capacity, and so settings should be optimized to manage the available resources most efficiently and in support of the wider economy.

We also support the electricity market facilitating other technologies, like multiparty relationships at the ICP level, Demand Response, Distributed Generation, Battery Energy Storage Systems (BESS) and Internet of Things (IOT), to leverage non-network solutions to flatten the electricity curve and make demand more responsive to generation, rather than the traditional generation responding to demand.

Fonterra would like the EA and Commerce Commission to work together to ensure that both Transpower and Electricity Distribution Businesses (EDBs) maximise the utilization of their assets by utilizing non-network solutions.

With the scale of future demand forecast and therefore future capital spend required ranging from \$150B to \$300B, Fonterra cannot see how this is achievable while maintaining electricity affordability unless non-network solutions are the overriding focus. The two regulators should drive Transpower and EDBs to flatten their demand curves and increase overall 24hr system utilization instead of building for a few winter evening peaks.

There currently exists significant conflict of interest for EDBs to submit plans to the Commerce Commission that require capital spend that aims to increase their regulated asset base and therefore revenue. We can see that the non-regulated community owned EDBs are already exploring non-network solutions to solve their peak demand problems, and we believe this should be the priority more generally.

Finally, we believe it is critical that the issues and timeframe outlined by MDAG are implemented as soon as possible as the transition is already underway and we need as much time to trial and optimise the rollout of new innovative solutions.

**ENDS**