



Major Electricity
Users' Group

Promoting
a robust
electricity
market

Case study:

**ELECTRICITY
AUTHORITY**
TE MANA HIKO



The Regulator: The Electricity Authority

Electricity Authority (the Authority) is acting to ensure the regulatory environment manages the balance between immediate need and a future power system where:

- consumers are provided with choice and are engaged in providing flexible demand and energy resources
- our market settings reward and incentivise flexibility while ensuring that innovation can take place
- participants actively manage their risks in a way that builds overall system resilience.

While recognising that there are also challenges to be overcome, the Authority views demand response as a strategic priority for the future of New Zealand's electricity system.

Understanding and quantifying the available demand-side flexibility

Earlier this year, the Authority released a survey to better understand and quantify the level of available demand-side flexibility, which elicited 13 responses. The [survey identified](#) that around 450MW of demand flexibility could be available in the market now, including 160MW of hot water ripple control likely already offered by Electricity Distribution Businesses (EDBs). The survey also found that most of the demand-side flexibility (250MW) could be provided by large-scale consumers.



The current state of play

There are [three options to signal flexibility in the wholesale electricity market offered by the Authority](#):

- dispatchable demand
- dispatch notification
- and difference bids.

Norske Skog Tasman was an early adopter of the dispatchable demand regime and participated from 2014 until their closure in 2022. No other Industrial consumers have participated in dispatchable demand, but other participants use these services. For example, battery energy storage systems use dispatchable demand and EDBs use difference bids to signal their flexible resources when needed a period of high demand.

The Authority observes that some major electricity users respond to high wholesale prices by reducing their load to avoid exposure to high spot prices. The Authority is encouraged by how some industrial users recognise the value of demand flexibility through their bilateral contracting arrangements.

Deals such as the New Zealand Steel demand flexibility contract and Meridian's winter energy flexibility contract with the New Zealand Aluminium Smelter are examples of industrial users recognising this value and managing their risk through contracts with affected parties.

Modern industrial equipment can be configured for ease of control and faster start-up and shutdown processes. This makes the ideal time to configure systems for demand flexibility during plant refurbishment or upgrade – as has happened at New Zealand Steel's Glenbrook plant with their new electric arc furnace.

These arrangements can provide a win-win for both the contracted parties and the overall security of supply.

In line with the recently issued Government Policy Statement, the Authority considers these an efficient way to realise the value of demand flexibility between consumers and their suppliers. The short-term value of flexibility is rewarded through a supply contract tailored to each consumer's unique circumstances.

Signalling the appetite of industrial users to provide flexibility to the market would help avoid high price forecasts and provide downward pressure on spot prices, reducing the "risk premium" paid by large industrial consumers for the contracted part of their load.

In the long term, the Authority would like to see the price aspect of these agreements reflected in the wholesale market, which would provide more stable spot pricing and lower risk premiums in the hedge contract market. This would provide additional value to industrial consumers when they need to negotiate a supply contract.

Therefore, the Authority remains open to solution-focused suggestions from major users and has stated that it remains committed to facilitating demand-side flexibility.

Electricity Authority actions related to demand response

On 18 July this year, the Authority released its decision paper after consulting on [Potential solutions for peak electricity capacity issues](#). This paper was partly informed by lessons learnt after the [low residual situation](#) on 10 May 2024.

The Authority recognises that battery storage and demand response are the most likely sources of flexible capacity to manage winter peak demand in the immediate future.

One of the solutions the paper focuses on is accelerating demand response participation. The Authority is considering potential enhancements, such as changes to dispatchable demand, to better reflect the operational limitations of industrial processes.

In September, the Authority launched the [Power Innovation Pathway](#) to accelerate and support innovation in New Zealand's electricity sector. The Pathway provides innovators with more accessible, more efficient access to regulatory information and support, enabling them to bring new ideas to market faster. It also offers opportunities to increase flexibility and demand response.

The [Energy Competition Task Force](#) (jointly established with the Commerce Commission) is also looking at ways to reward industrial consumers for providing short-term demand flexibility. This would free up more supply and reduce the need for more expensive electricity generation to manage peaks. This could also provide industrial users with an additional revenue stream.

