



Misawa Homes of Finland

Japan's Misawa Homes Finds Success with Demand-side Flexibility in Finland



PARTICIPATION

700 kW



MARKET

FCR-D Up

MISAWA

Since 2017, Sympower has guided Misawa Homes through seamless participation in Finland's balancing markets, selling their flexibility on the FCR-D Up market and unlocking additional revenues for their sawmill operation.

Energy Savings and Revenue Generation for Japanese Sawmill Misawa Homes in Finland

Since 1994, Misawa Homes, a Finland-based sawmill, has supplied high-quality timber exports primarily to Japan. With a capacity of 82,000 m³, the company produces and sells kiln-dried spruce lumber.

Their most energy-intensive assets are their kiln chambers, where heat is distributed via water radiators and circulated using electric fan motors. **With a combined motor capacity of around 700 kilowatts across 13 chambers, these systems offer a valuable potential for demand-side flexibility** without impacting the main production process and unlock revenue opportunities through Finland's balancing markets.

Unlocking Energy Savings Through Flexibility

Companies participating in the FCR-D balancing market are financially compensated for every hour they make their energy assets available and able to deliver, regardless of whether they are activated.

Together with Misawa Homes, Sympower identified the FCR-D Up market as the most suitable opportunity to unlock additional revenue. By analysing the assets's energy consumption patterns, we helped optimise their operations to maximise availability for the market — all without impacting their core processes.

The results were impressive. Misawa Homes achieved a 15% reduction in their electricity consumption without any impact on their core lumber drying processes.

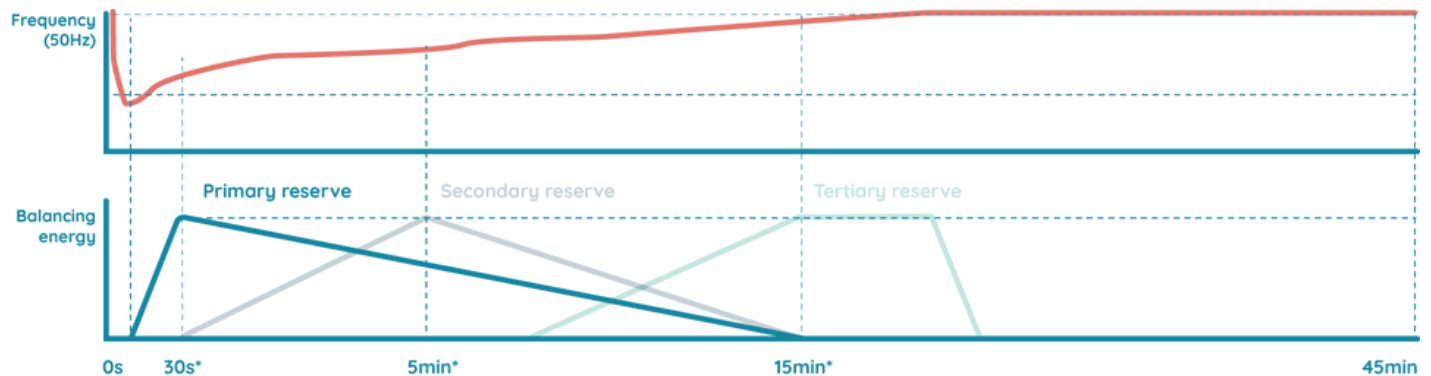
As we use lots of electrical energy for wood drying, we are always interested in new projects that could save us money.

Pasi Lähdelähti | Misawa Homes of Finland's Factory Manager

FCR-D Up market

One of the core challenges for European grid operators is keeping electricity grids at a maintained frequency of 50Hz to avoid power outages and grid supply interruptions. Balancing markets play a key role in regulating grid frequency.

The Nordic's Frequency Containment Reserve for Disturbance situations (FCR-D) market is designed to **automatically intervene within 30 seconds to help restore the grid's safety and security by balancing electricity supply and demand.**



Unlocking Flexibility Without Sacrificing Productivity

Today, Sympower and Misawa Homes successfully manage around 0.7 megawatts on the FCR-D Up balancing market. Since the beginning, Sympower has worked closely with Misawa Homes as a trusted partner, ensuring their energy assets' flexibility is carefully managed without disrupting core operations.

The installation and operation of Sympower's solutions have not affected the drying time or quality of our timber. Instead, we use less energy to get the same high-quality dried timber

Pasi Lähdelähti | Misawa Homes of Finland's Factory Manager

Flexible assets in the Pulp and Paper industry



BESS

Can be **charged and discharged to meet grid demands**, while other equipment stays operational. It can also handle the site's peaks of energy usage.



HVAC SYSTEMS

While HVAC systems optimise temperature, they **can also be adjusted to decrease or increase energy usage** when needed to.



E-BOILERS

The speed in which **e-boilers can respond to control signals** and the ability to adjust their power usage, makes them highly flexible.



COMPRESSORS

Air compressor operation can be **optimised** to align with fluctuations in grid demand. If needed the system's compressed-air storage is utilised.



CRUSHERS

During periods of high demand, **crushing equipment can be remotely managed** to adjust speed and operation without affecting core production operations.



DRYERS

Adjusting pump speed can reduce or increase energy consumption to balance the grid, without affecting production.

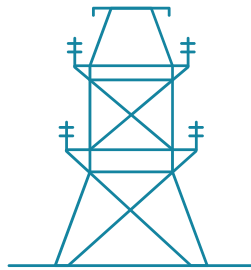
Other flexible assets: **heat pumps, wood pulp refiners, pumps, and more.**

Benefits of demand response



New Revenue Streams

Businesses can **unlock new revenue streams** by offering their energy flexibility to the grid during periods of peak hours.



Reliable Grid

The flexibility of businesses, ensures that grid frequency stays balanced. Everyone connected to the grid **benefits from this reliable energy supply.**



Sustainable solution

The energy transition needs demand response to help phase out fossil fuels, making it **essential to a sustainable energy system.**



Unlock your flexibility and Maximise Revenue!

[Book a meeting with one of our Energy Experts](#)



Powering Change Together