

Central Otago's fully electric, zero emission cherry orchard.

Total Utilities helped Forest Lodge save money, gain real-time data visibility, and prove their net-zero emission claims to grant providers. All to drive sustainable growth and set an example for food producers around the world.



Real-time data
from 19 sensors &
2 power metres



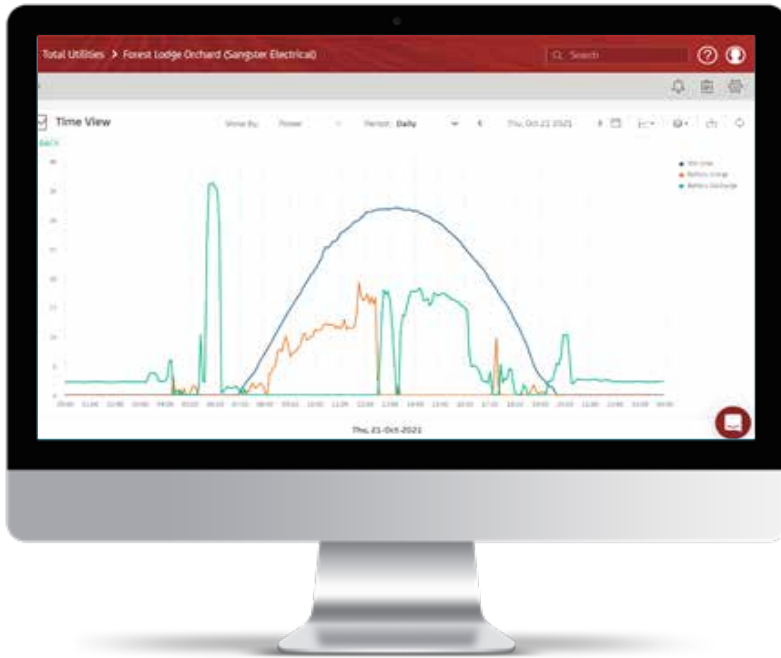
Smart energy
savings



Not a fossil
fuel in sight



Data-led
decisions drive
sustainable growth



Centrica Business Solutions Pan-10 Wireless Sensor



Real-time energy intelligence

Snap-and-fit implementation

Wireless and self-powered

Why they needed us

Forest Lodge Orchard, a high-density cherry orchard in Cromwell, New Zealand, has gone fully electric with a hybrid solar and battery system tied to the grid. Owner-operator Mike Casey supports the national grid by exporting power at peak times. He also aims to provide an example of how an agricultural site can electrify everything.

Forest Lodge Orchard received a government grant to purchase 2 x 30kW electric frost fighting fans. A condition of the grant was to provide supporting data and reporting to show the source of the electricity powering the fans.

The site's industrial electrician, Jase Lee, recommended Total Utilities and Centrica's energy insights for the job. It's been a great success - PowerRadar now provides new levels of visibility of the solar gains, loads, and the charging and discharging profiles onsite.

NZ cherry orchard ripe for clean, optimised energy usage.

"I like to see the solar graph and then overlay the charging loads, and I can make sure that they sit within that solar curve. Sometimes we need to tap the grid for something, but we are just trying to optimise that energy usage as much as possible."

Real-time energy intelligence delivers savings, shapes decisions, and provides new opportunities for sustainable growth.

Real-time data used to support claims for government grant

The electric frost fighting fans save Forest lodge up to \$1,000 per evening compared to diesel-run fans. PowerRadar provides the usage data to substantiate these claims.

Complete oversight over battery charging and discharging

PowerRadar calculates and provides a real-time view of the battery charge and discharge traces. Effectively this was the missing piece for Mike Casey, who now has full visibility of the electrical flow on his site. He can also track how the operation affects the health and longevity of his batteries.

Solar insights inform operational and strategic decisions

By monitoring the real-time solar gain onsite, Forest Lodge can decide when they will perform operations such as irrigation, vehicle work and charging, therefore optimising their energy usage.

Calculating the running costs of their new electric tractor

Forest Lodge received another grant for a state-of-the-art fully electric tractor. Energy insights will be used to determine the amount of kW drawn from solar and how much comes from the grid (and when), so the tractor's operational running costs can be calculated.

Contributing to energy education and climate change advocacy.

Forest Lodge were invited to join EECA's Gen Less campaign and become part of the climate change solution. The data collected by the energy insights system will play a significant part in the next chapter of their zero emission story.