



Thanks to real-time energy insights, New Zealand schools cut their emissions.

Total Utilities are helping New Zealand's education sector identify and resolve energy wastage, resulting in significant savings, lower carbon emissions and improved confidence in solar power.



1,500+
SENSORS
INSTALLED



ENERGY
MONITORED
IN 50+
SCHOOLS



LOWER
EMISSIONS



DATA-LED
SUSTAINABLE
DECISIONS



WHY THE SCHOOLS NEEDED US

To meet the government's goal of NetZero emissions by 2050, primary, secondary and intermediate schools required an affordable, data-driven solution to reduce waste and move towards the decarbonisation of their heating equipment. This included exploring if solar power makes sense and measuring the savings achieved from existing solar power equipment.

HOW WE HELPED

Over three months, we installed over 1,500 Energy Insights sensors from Centrica Business Solutions in more than 50 schools and investigated the best course of action to reduce their energy use, costs and carbon emissions. We used real-time energy data through complementary energy management platform, PowerRadar to highlight the immediate impact of changes.

INSIGHTS

With real time energy data it was easy to spot where schools were using an excessive amount of energy outside of occupied hours. We could also show which areas of schools contributed to peak demand. Having granular data also made it simple for schools to show staff, students and parents how much energy they were saving with installed solar. Data was also used to support energy awareness and impact behavioural change.



REAL WORLD EXAMPLES

By monitoring the heating equipment at each campus for energy wastage and potential failures, we identified energy saving measures.

ENERGY WASTE

Heating and computer equipment was running outside of normal school hours at many of the schools.

Automated heating controllers were manually overridden at one school, and their heating elements had faulty central controller issues and time clock issues.

In the above mentioned case, correcting these issues would save \$38,000 (38.5 tCO2-e) per year.



Energy Insights Sensors are used to collect real-time energy data and analytics from your devices.

PEAK LOAD

By adjusting controls and switching on schools' heating earlier in the day: we could lower the peak load during times when schools are charged for peak demand.

Some schools could lower their demand costs by \$10,000 to \$15,000 per year by adjusting their activities, such as heat pump temperature controls and load shifting.



Energy Insights Sensors are non-intrusive and the most cost-effective way to gain deeper insight into your energy consumption.



SOLAR

Many schools were interested in solar but couldn't access detailed data from their existing utility meters. But with the data from the newly installed Energy Insights sensors, Total Utilities could assess the viability of installing solar.

Many schools could reduce energy costs by between 40%-60% should solar arrays be installed. Four schools in particular could reduce usage by just over 40% saving 45 tCO2-e per year in emissions.

Where solar was already installed: Energy Insights measured their generation and their real-time energy cost savings. **PowerRadar was displayed in the school reception** to show staff, students and visitors how the school's solar power was performing.

A greener future for our children

Our Energy Insights solution from Centrica Business Solutions, allows the education sector to determine exactly how energy is consumed and potentially wasted at each campus. With this information, schools have made simple changes to reduce their carbon emissions and assess the viability of solar power.

This is only the beginning. The information that schools can now gather and display to staff, students and visitors helps everyone see the cost-savings and environmental benefits of solar, and helps inform future purchasing decisions in low or zero-carbon emitting energy assets.

