

Washing, drying and cleaning – THL look for ways to reduce energy usage

Tourism Holdings Ltd's (THL) Mangere site had an energy audit completed as part of the Tourism Energy Efficiency Programme (TEEP) in January 2009.

THL is one of New Zealand's largest tourism operators with extensive operations in New Zealand, Australia and Fiji. THL's operations include car and motor home rentals, a specialist caravan and motor home manufacturing company in Hamilton and transport and tourism activities in key regional locations around New Zealand.



Cleaning campervans - a big energy user for THL

THL's Mangere site operates primarily as a major pick up and drop off point for its four campervan and rental car brands, Maui, Britz, Backpacker and ExploreMore, and is used by hundreds of international and domestic tourists every month to travel independently around New Zealand.

Energy Usage

Electricity is used for a wide range of purposes at the Mangere site, but primarily for lighting, air conditioning and office equipment as is common in many office premises.

Another major user of power is THL's in-house laundry which uses about four industrial washing machines and dryers powered by Liquefied Petroleum Gas (LPG). Each time a campervan is returned to THL the entire campervan is stripped back and cleaned. THL wash everything – bed linen, towels, tea-towels, and curtains – the works. An industrial dishwasher is also needed to wash all cutlery, crockery and pots and pans each time a campervan is returned to the site.

The total cost of electricity in the most recent year was \$59,786 for the use of 464,394kWh of energy, while LPG was associated with a cost of \$46,108 for 318,075kWh of energy. This brings the site's total energy cost to \$105,893 and total energy consumption to 782,469kWh.

A total of about **44,480kWh** and **\$20,200** of potential annual savings were identified as a result of the energy audit, which is about **19.1%** of the site's

current annual energy expenditure and **5.7%** of the current energy consumption.

Kate Meldrum, Marketing & Customer Experience Manager for THL says undertaking an energy audit has helped the company to identify some useful energy savings that can be made at the site and prioritise what to do first.



“Monitoring energy usage is not our core area of expertise so it was great to have an expert come into the business, identify what could be done and suggest an action plan for us to follow over the next few months.

“Probably the most interesting result we found out from the Energy Audit was that the LPG used for the hot water, washing and drying in the laundry was responsible for nearly half the power usage at our Mangere premises,” Ms Meldrum says.

“If we want to make the call to change from using LPG to natural gas then we could save about \$13,000 in energy costs each year. This is something we are considering but there are a number of factors we still need to take into account including the upfront capital costs of the changeover.

“We are also using LPG at the site to fill up the campervan gas bottles, so even if we stop using it for the laundry then we will still need to keep LPG on site for refilling the gas bottles,” she adds.

There are a number of easier energy savings options that THL will also be considering, including paying electricity invoices by direct debit to obtain discounts.

The learnings from the Mangere audit may also be useful for other THL sites around the country,” Ms Meldrum says.

“THL’s Christchurch site, believed to be the busiest campervan branch in the world, has also recently undergone an energy audit and THL are hoping to share mutual learnings between the two audits.”

THL’S ACTION PLAN CONSIDERATIONS WILL INCLUDE:

Action	Potential Annual kWh Savings	Potential Annual \$ Savings	Annual CO2 Savings	Payback
Pay electricity invoices by direct debit to always obtain discounts	0	\$ 998	0 tonnes	Instant

Switch off the mechanical and grooming bay lighting during daytime	7,675	\$ 834	1.77 tonnes	Instant
Turn the call centre PCs off when they are not in use	7,060	\$ 760	1.62 tonnes	Instant
Disconnect the lamps identified by this report	3,176	\$ 399	0.73 tonnes	Instant
Disconnect the Coca-Cola machine's internal lighting	753	\$ 83	0.17 tonnes	Instant
Repair all compressed air leaks	5,362	\$ 592	1.23 tonnes	1 month
Replace all incandescent lighting with compact fluorescent lamps	1,050	\$ 120	0.24 tonnes	3 months
Insulate the front, top and sides of Dryer #3	4,937	\$ 926	1.06 tonnes	1.4 years
Use natural gas instead of LPG in water heating and drying	0	\$ 13,566	4.78 tonnes	1.6 years
Insulate the copper pipework within the laundry	779	\$ 146	0.17 tonnes	2.5 years
Install High Five lighting in the paint workshop	13,686	\$ 1,775	3.15 tonnes	3.1 years
TOTAL	44,478	\$ 20,199		