

Waste to Energy Partnership

Primary process waste to heat solution
Winstone Pulp International Ltd

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We are adapting to succeed in a highly competitive international market and we are very pleased to be able to partner to address energy efficiency challenges.

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DAVID ANDERSON
WPI MANAGING DIRECTOR

Pioneer energy

WORKING TOGETHER TO REDUCE ENERGY COSTS AND EMISSIONS

As part of Pioneer's long-term vision to provide sustainable energy futures for New Zealand business, they have established long term partnerships with hospitals, councils and a number of New Zealand's leading manufacturers and processing businesses to supply their electricity and thermal energy needs.

By partnering, Pioneer Energy is able to work with customers to discover their energy future and assist in achieving continual environmental and operational energy cost efficiency improvements.

Winstone Pulp International Ltd (WPI) is a leading New Zealand forestry company who first worked with EFI, a specialist waste to energy business (acquired by Pioneer Energy), partnering to design a cutting edge heat generation plant in 2003. The plant produces heat for the drying of wood pulp at WPI's Karioi Pulp Mill.



LEADING BY EXAMPLE

As a leading clean energy solutions partner for New Zealand industry, Pioneer Energy provides some of New Zealand's leading institutions, exporters and manufacturers with globally competitive sustainable energy solutions.

In working with customers to discover their energy future Pioneer strives to maintain the integrity of the natural environment, while maximising the value of natural energy resources and reducing greenhouse gas emissions.

By using production residues WPI has been able to substantially reduce the use of LPG and put an end to the costly land filling of waste pulp biomass.

COST EFFECTIVE AND OPERATIONALLY SIGNIFICANT

The 12MWth Pioneer Energy heat plant produces the majority of WPI's heat requirements and conveys the heat to the pulp mill's flash dryers using thermal oil as the transfer medium.

The heat plant is fuelled by forestry and mill operation by-products – bark, wood residue and pulp sludge. Further savings and operational efficiency were achieved



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The alliance is an innovative approach to securing energy supply at the mill and securing further improvements in the company’s energy efficiency and environmental outcomes.

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DAVID ANDERSON - WPI MANAGING DIRECTOR

when a 2008 energy audit identified opportunities for additional savings and a Refinery Heat Recovery plant was subsequently added. This plant utilises the low grade heat which was being lost at the mill and serves as another example

of partnering and working with customers on achieving continual energy efficiency improvements can bring.

This “green” energy product complements the heat plant and reduced LPG consumption by a further 2.5 million litres/y, and reduced greenhouse gas emissions by 4,000 t/y CO₂e.



Pioneer Energy can help you reduce energy use, lower your operating costs, free up capital, and contribute to a cleaner energy future.

From a suite of intelligent energy management solutions, Pioneer works with you to build the right energy solution for your business.

Contact us to find out more about how we can help.

Facts at a glance

Project Description

Customer:
Winstone Pulp International Ltd,
Karioi Pulp Mill

Location:
Central North Island, NZ

Application:
Thermal heat supply for processing and production

Scope of Work:
Build, Own, Operate, Transfer (BOOT)
New Plant

Capacity:
12MWth Heat Plant
Steam Dryer
Refinery Heat Recovery Plant

Fuel:
Biomass - bark, wood residues and pulp sludge

Wood Fuel Moisture Content:
55%

System Highlights

Commissioned date:
2003

Availability:
98%

Avoided Emissions:
Displaces LPG



Awards

- Energy Efficiency & Conservation Authority
- 2009 (EECA) Large Business
- 2006 (EECA) Innovation Award

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