

Care Homes, Rest Homes & Hospital Facilities Using Wood Fuel

Introduction

The large number of heat plant now running on wood pellets or chips in New Zealand in the retirement and health sectors shows great potential for others to follow suit, as does the number of different parties offering heat plant installation and conversion services. There are a number of obvious advantages to using wood pellets or chips, the most obvious of which is that compared to coal they are a relatively clean burning and sustainable fuel with added advantages including ease of use, cleaning and maintenance.

Cost and current condition will always be a factor in anyone's choice of fuel and heat plant technology. Many for example have funded replacement of their existing heat plant and shifted from coal or LPG to chips or pellets in the process. Others have been able to convert existing heat plants from coal and/or LPG to run on chips or pellets. For the nine heat plant listed below, the total capacity is just over 4,000 kW.

Wood Fuel - Quality

Whatever the application, the use of high quality fuels is paramount. The Bioenergy Association's Technical Guide 01: Solid Biofuel Classification Guidelines - www.bioenergy.org.nz/resource/tg01-solid-biofuel-classification-guidelines was prepared to provide a common terminology and methodology for classifying, specifying and declaring the quality and properties of traded solid biofuel in New Zealand. In most cases it is expected that the traded fuel will be a wood fuel. This is an industry lead initiative with Government support.



Guidelines for the Conversion of coal plant to wood fuelling

BANZ has developed a Technical Guide which is intended to provide guidance on the conversion of existing coal fired heat plants to wood pellet operation.

The Guide covers all aspects of conversions from coal to wood fuel - www.bioenergy.org.nz/resource/tg02-conversion-solid-fuel-boilers-from-coal-wood-pellet-firing. Converted coal boilers should also meet the EECA guide for PM10 emission.



Bioenergy Facilities Directory

Details on health/rest home facilities can be found in the BANZ Bioenergy Facilities Directory - (www.bioenergyfacilities.org).

The directory is a comprehensive source of information on bioenergy facilities in operation throughout New Zealand, or to facilities developed by New Zealand and Australian based companies. The directory can be used to find out more about the wide range of uses of bioenergy in New Zealand today and to find those specialists with the experience to build similar projects.

The website enables users to search for information on applications by type and location. At a glance, users can see graphically where facilities are located across New Zealand and Australia, or elsewhere internationally and find the contact details for relevant specialist service providers.



Case Studies

One of the easiest ways to find out more about the success of a new wood fuel heat plant installation in a health care / rest home situation is to look at a Case Study. A number of health/rest home focused Case Studies are presented on the BANZ Wood energy website www.usewoodfuel.org.nz/wood-energy-case-studies.

Hospitals / Care facilities using Wood Fuel

	Facility	City	Conversion / Replacement	Fuel Used	Heat plant output (kW)	Bioenergy Projects Database Code
1	Little Sisters of the Poor - Care home and hospital	Dunedin	Replaced LPG	Wood chips	300	1011
2	Golden Bay Health – Health Clinic	Takaka	New facility	Wood chips	2 x 200	1276
3	Ross Home and Hospital – Care Home/Hospital	Dunedin	Replaced LPG	Wood chips	300	118
4	Wakari Hospital - Hospital	Dunedin	Replaced coal	Wood chips	950	1205
5	Ashburn Clinic – Health Clinic	Dunedin	Replaced LPG/coal	Wood chips	220	1007
6	Hillmorton Hospital - Hospital	Christchurch	Replaced LPG	Wood chips	1500	1259
7	Dunstan Hospital - Hospital	Alexandra	Replaced coal	Wood chips	500	1381
8	West Otago Health - Hospital	Otago	New build	Wood chips	90	tbc
9	Titoki Healing Centre	Bay of Plenty		Wood Pellets	50	1122
Total (kW)					4,310	

Wood Fuel Equipment Catalogue

The Equipment Catalogue www.usewoodfuel.org.nz/wood-equipment-catalogue on the BANZ Wood energy website provides information on the wide range of equipment available in Australasia. Equipment has been presented in the following categories:

- Monitoring and measuring (Moisture and Emissions)
- Wood fuel production (Chippers and Shredders, Drying, Transport)
- Wood fuel handling and storage
- Heat plant (Combustion plant, Gasifiers, Ancillary equipment, Air quality and Residential heaters)
- Electricity generation.



When seeking expert advice on decisions around new heat plant check first to see if they are members of BANZ - look for the BANZ Membership decal. Membership of the Association shows that the organisation is engaged in New Zealand's bioenergy sector and is keeping up-to-date with the latest technologies and market information.

Accredited Wood Fuel Suppliers

BANZ has a scheme for Accrediting Wood Fuel Suppliers. You should purchase only from an accredited Wood Fuel Supplier to ensure that you will reliably receive fuel that consistently meets the contract specification.



Registered Wood Energy Advisers

Wood Energy Advisers that meet specified best practice criteria are registered by BANZ. Look for them on www.usewoodfuel.org.nz

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