

This is a sample of Technical Guide 04 : Tender Guidelines for the Specification, Supply and Installation of Wood Energy Plant.

The full document is available free to members and can be accessed in the Members Only Area on the Bioenergy Association website –

<http://www.bioenergy.org.nz/resource/tg04-tender-guidelines-for-wood-energy-specification>

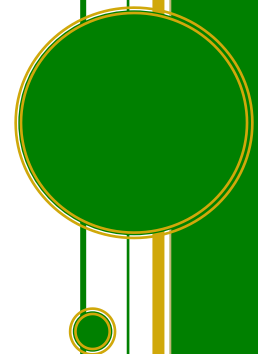
Alternatively, it can be purchased from admin@bioenergy.org.nz

Tender Guidelines for the Specification, Supply and Installation of Wood Energy Plant

Bioenergy Association Technical Guide 04

Version 4

December 2011



About this Guide:

1. The compilation of this Technical Guide has been facilitated by contributions and oversight of the relevant expert members of the Bioenergy Association.
2. The aim of the Association's Technical Guides is to encourage delivery of high quality and consistent best practice bioenergy solutions. These Guidelines are voluntary but essentially provide a regulatory framework for the New Zealand bioenergy and biofuels sector.
3. The Guide is an outcome of industry discussion and collaboration. It captures the collective technical knowledge of a range of relevant leading bioenergy sector personnel. In addition, it benefits from the collective review and use by relevant asset owners, guide users, policy makers and regulators.
4. This guide is provided in good faith as an addition to the ongoing body of knowledge relating to the bioenergy and biofuels sector in New Zealand and Australia. However, as the guide is general and not specific to any application the Association and none of those involved with its preparation accept any liability either for the information contained herein, or its application.
5. As with all Bioenergy Association technical guidance documents, this guide is a 'living document' and will be revised from time to time and reissued, as new information comes to our attention. If you have suggested additions to this guide please contact admin@bioenergy.org.nz.
6. Any enquiries regarding these guidelines should be referred to:
Executive Officer
Bioenergy Association
P O Box 11595
Manners Street
Wellington 6142
admin@bioenergy.org.nz
www.bioenergy.org.nz

CAVEAT

Bioenergy Association recommends that any party undertaking a project to upgrade or replace a bioenergy facility should undertake a full evaluation of all possible options prior to fixing on a specific new project solution.

As a decision maker, it's important to understand the pro's and cons of each option and have them set out by an appropriate expert in a way that ensures they are easily comparable. Too often a client rushes into a solution without properly evaluating all the options.

These Technical Guides are only a guide and users should ensure that they have engaged appropriate expert to consider their specific application.

EXECUTIVE SUMMARY

This Technical Guide has been developed by the Bioenergy Association for those seeking to upgrade from an existing coal fired boiler or install a new wood fuelled boiler and who have limited experience in such works. It presents a guide for the specification, supply and installation of wood energy plant and specifically targets organisations going out to tender for the supply and installation of appropriate equipment and services.

The use of the Guide should not substitute for the engagement of professional engineering advice but may assist the user as part of the overall process.

The Guide sets out the key elements that must be taken into account prior to the specification, selection and installation of a new wood fuel boiler and associated site works. It has been written such that both engineers likely to tender for wood fuel boiler installations or conversions, and those likely to be seeking such services (typically non-experts such as school staff or school/hospital boards) can understand what is required. A concerted effort has been made to ensure that this Guide is accessible to both the client and the service provider and it has been written accordingly.

There is an increasing interest by owners or administrators of schools, hospitals, swimming pools, and other commercial buildings and manufacturing operations in the installation of wood chip or wood pellet boilers for the supply of heat. Many of those considering using wood fuel for the production of heat from their boilers are outside the bioenergy industry and have little experience in sourcing new heat plant, in managing the engineering to modify an existing boiler from using coal to wood fuel, or in understanding the importance of procuring high quality wood fuel.

In addition, there are several examples in recent years where even though wood energy may have provided the most cost effective heating solution, it was never considered as an option. As noted above, Bioenergy Association recommends that a full evaluation of all fuel options (including wood) is made prior to making a decision on a heating solution.

This document provides anyone who is considering installing a new wood fuel boiler with a Guide to the issues that should be considered when choosing a new plant supplier and/or installer, or someone to modify an existing boiler. This Guide recommends (and to some extent assumes) the boiler supplier or 'consultant' will be undertaking much of the plant specification as the scale of these kinds of projects generally do not allow for extensive costs for consulting engineers. Often, packaged equipment is supplied and the supplier or 'consultant' undertakes the design engineering as part of the tender process.

This document presents pre-tendering information for the client or heat plant owner so as to ensure that they understand the information that should be sought and provided throughout the tender process. Having this information will assist with the process of adjudication between tender offers as being on the basis of the key criteria identified at the outset of the process.

In larger projects the client often engages the services of an appropriately experienced Project Manager to undertake this work and see through the tender process, the installation, and the subsequent successful commissioning of the new heating system. In this situation too it is hoped that this Guide will provide useful information to the client when entering into discussions with a Project Manager.

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1. INTRODUCTION

This Technical Guide has been developed by the Bioenergy Association of New Zealand (BANZ) for those seeking to upgrade from an existing coal fired boiler or install a new wood fuelled boiler and who have limited experience in such works. It presents a guide for the specification, supply and installation of wood energy plant and specifically targets organisations going out to tender for the supply and installation of appropriate equipment and services.

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The Guide sets out the key elements that must be taken into account prior to the specification, selection and installation of a new wood fuel boiler and associated site works. It has been written such that both engineers likely to tender for wood fuel boiler installations or conversions (referred to as 'the consultant'), and those likely to be seeking such services (referred to as 'the client'), (typically non-experts such as school staff or school/hospital boards) can understand what is required. A concerted effort has been made to ensure that this Guide is accessible to both the client and the service provider (consultant) and it has been written accordingly.

2. BACKGROUND

There is an increasing interest by owners or administrators of schools, hospitals, swimming pools, and other commercial buildings and manufacturing operations in the installation of wood chip or wood pellet boilers for the supply of heat. Many of those considering using wood fuel for the production of heat from their boilers are outside the bioenergy industry and have little experience in sourcing new heat plant, in managing the engineering to modify an existing boiler from using coal to wood fuel, or in understanding the importance of procuring high quality wood fuel.

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In larger projects the client often engages the services of an appropriately experienced Project Manager to undertake this work and see through the tender process, the installation, and the subsequent successful commissioning of the new heating system. In this situation too it is hoped that this Guide will provide useful information to the client when entering into discussions with a Project Manager.

Regardless of whether the client manages the work themselves or engages a Project Manager this Guide will enable the recipient of the boiler (and associated infrastructure if required) to ensure that the plant installed is as follows:

- a. fit for purpose having taken into consideration existing conditions and facilities/technologies and the existing heating system at the site,
- b. based on an appropriate technology for the application,
- c. includes all ancillary components necessary for the plant to work efficiently and safely,
- d. cost effective,
- e. installed correctly (and has been appropriately tested) to the time and cost agreed by contract,
- f. can be operated efficiently, effectively and safely without additional cost or excessive training,
- g. will be easily maintained to an appropriate standard,
- h. has clear performance expectations, and
- i. is covered by clearly specified terms and conditions on customer support and service as required.

This Guide covers the key aspects of the tender process that should be taken into consideration as part of the process to appoint a contractor to undertake the work. In particular it focuses on the development of the Tender Documents.

Bioenergy Association of New Zealand (BANZ)
PO Box 11595
Manners Street
Wellington 6142

admin@bioenergy.org.nz

www.bioenergy.org.nz

Telephone: +64 (0)4 385 3398

Mobile: +64 (0)274 771 048