



Emissions and Wood Pellets

Note: Pellet burners are not included in the National Environmental Standard as they cannot be tested in accordance with the method specified due to their automatic feed mechanism. Pellet burners are however, extremely efficient and clean burning.

Further information on the National Environmental Standard for air quality is available from the Ministry for the Environment website here - www.mfe.govt.nz/air/air-regulations/national-environmental-standards-air-quality/about-nes

Advantage of using wood pellets

One of the key advantages of wood pellets is the significantly reduced emissions to air on burning. With poor air quality in a number of New Zealand cities, the clean burn solution that pellets and pellet appliances offer is a major advantage. The National Environmental Standards (NES) for air quality requires that all wood burners installed on properties less than 2 hectares must have a discharge of less than 1.5 grams of particles for each kilogram of dry wood burnt, and a thermal efficiency at least 65%.

Wood pellet fuelled heaters use manufactured low moisture fuel with combustion controlled by the speed of the electrically controlled feed auger. This means that they are a controlled heat source and there is very good combustion of the fuel producing maximum heat and with little ash remaining and few discharges of particulates to air which cause smoke. Solid wood fires however may be fed high moisture wood fuel which has incomplete combustion with a high discharge of particulates in the form of smoke and a lot of ash remaining.

Finding Council approved pellet burners

The Ministry for the Environment has produced a list of pellet burners approved by Environment Canterbury (ECAN) and Nelson Council. Details on emissions from these burners are noted (if they have been tested) at their website. The following Councils in New Zealand and Australia have released details on consented and approved pellet burners (as well as wood burners) available:

- [Environment Canterbury Regional Council - Approved burners](#): Ecan tests burners to make sure they pass an emissions test before authorising them for use based on their factory settings. If you are installing a burner within a Canterbury Clean Air Zone, you must follow these home heating rules and register your burner via the ECAN database.
- [Nelson City Council - Approved Burners](#): If you have an existing lawfully established (consented) wood burner or solid fuel enclosed burner, you can replace it with any one of the solid fuel burners listed. These have been authorised to be installed under rule AQr.25 of the Council's Air Quality Plan.

Also see the [Nelson City Council - Air Quality Plan](#): The Nelson Regional Air Quality Plan promotes the sustainable management of Nelson's air resource. It is a regional plan required

by the Nelson City Council under its regional responsibilities in terms of section 30 of the Resource Management Act 1991 (RMA).

- [Otago Regional Council - Approved burner list](#): This list shows domestic heating appliances (other than woodburners and pellet burners) with an emission standard of less than 1.5 g/kg and a thermal efficiency standard of 65% or more. A domestic heating appliance must have a heat generation capacity of 50 kW or less, otherwise it is classified as fuel burning equipment and is covered by different rules under the Air Plan. These appliances are not authorised for use if tampered with or modified, or if operated in a way not in accordance with manufacturers' instructions or not used with a manufacturer's recommended fuel.
- [Tasman District Council - Woodburners and solid fuel heaters](#): On the Tasman District Council's (TDC) website you will be find information about TDC's requirements for woodburners and how to apply for a woodburner building consent (sometimes known as a fire permit). All wood burners installed indoors after 1 September 2005, on a property less than 2 hectares anywhere in the District, must comply with the Ministry for the Environment's National Environment Standards for Air Quality (NES). This NES requires woodburners to meet an emission limit of less than 1.5 g/kg (grams of particulate per kilogram of wood burnt) and an efficiency of greater than 65 percent.