



Types of solid biofuel available in New Zealand and Australia

Solid biofuels traded in New Zealand and Australia can be categorised as set out in the Bioenergy Association *Technical Guide 1 'Solid Biofuel Classification Guidelines'* - www.bioenergy.org.nz/resource/tg01-solid-biofuel-classification-guidelines and listed below:

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| Wood chips | Chipped woody biomass in the form of pieces, with a defined particle size produced by mechanical treatment with sharp tools such as knives. |  |
| Hog fuel | Fuel wood in pieces of varying size and shape produced by crushing with blunt tools such as rollers, hammers or flails. |  |
| Wood pellets | Wood that has been pulverised and pelletised under heat and high pressure to produce a cylindrical wood derived fuel of consistent size. <ul style="list-style-type: none"> • Cat A - premium pellets • Cat B - large premium pellets • Cat C - industrial grade pellets |  |
| Urban wood fuels | Wood residues derived from the urban activities including packaging materials, off-cuts from manufacturing, construction and demolition wood residues, yard trimmings, urban tree residues and land clearing. |  |
| Compressed firelogs and briquettes | A briquette or firelog is a block of compressed flammable matter used as fuel to start and maintain a fire. Common types include charcoal briquettes and biomass briquette. |  |
| Torrefied wood | Torrefied wood is completely desiccated biomass, with devolatilised hemicellulose, which has not yet reached the point of "char". This fuel may be compressed, fine or chunky. |  |

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| <p>Herbaceous wood fuels</p> | <p>These are ‘woody’ derived fuels sourced from Jerusalem artichoke, Miscanthus, Switchgrass, other grasses and straw and may be in the form of chip, hogged or pelletised fuels. Includes agricultural crop residues corn stover, bagasse, straw, etc.</p> |  |
| <p>Firewood</p> | <p>Larger piece size of wood used for kindling or for sustaining combustion in domestic solid wood fire appliances.</p> |  |

While solid biofuels is the technical term covering all biofuel from wood or herbaceous material it is often just referred to as wood fuel as in New Zealand this is by far the most dominant type of solid biofuel. In New Zealand the wood fuels are generally residues from plantation forestry pruning or harvesting. Wood fuels in Australia will also include biomass from mallee woodlands and herbaceous fuels such as bagasse from sugar cane which is very significantly available in the northern States.

Solid biofuels derived from municipal landfill or solid biowaste collection has been included as urban biomass. Urban biomass covers many sources and a wide range of characteristics depending on that source e.g., biosolids from wastewater treatment plant has a very high moisture content and often may contain significant contaminants.

Details on each fuel type and how they are defined in terms of size, moisture and contaminants are set out in Bioenergy Association *Technical Guide 1 ‘Solid Biofuel Classification Guidelines’* - www.bioenergy.org.nz/resource/tg01-solid-biofuel-classification-guidelines. The association has developed and published these Guidelines in order to assist buyers and sellers of solid biofuels to have clear definitions and standard terminology for the classification of all types of solid biofuel in New Zealand, (because they are voluntary, they are referred to as Guidelines).

The Guidelines provide a methodology for how buyers and sellers of wood fuel can describe the fuel being bought and sold. Without a common nomenclature uncertainty over the characteristics of the product lead to disputes.

The Guidelines are based on the [international solid biofuel standards](https://www.iso.org/standard/68811.html) ISO 17225 and all its relevant parts.