

# An introduction to biomass boilers

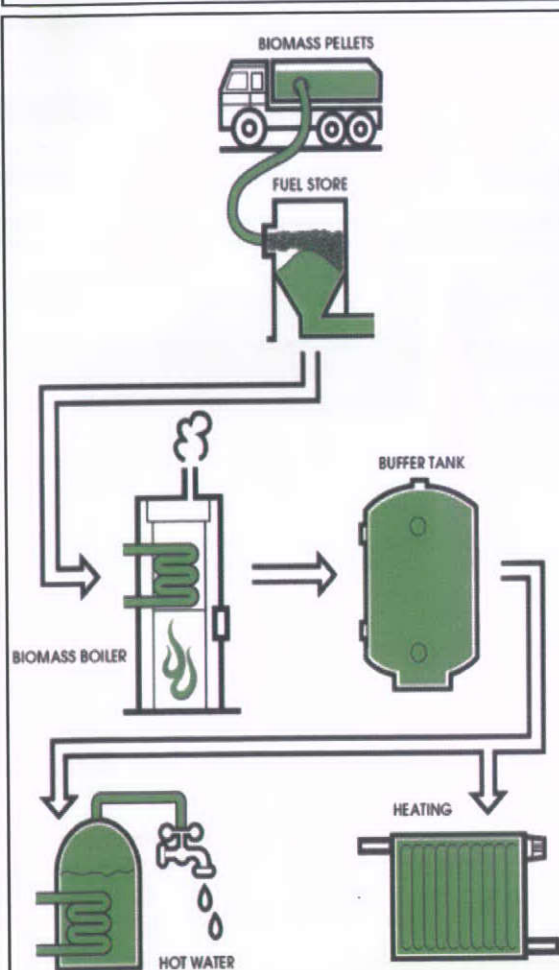


**BIOMASS  
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*A greener more efficient future.*

**What is a biomass boiler?** It's a boiler that burns a 'renewable fuel' such as wood, specially grown energy crops such as *miscanthus* or agricultural waste products such as *olive pits*, *wheat and rape straw*.

They are similar size to conventional oil or gas boilers and operate in a very similar way in that they burn a fuel to heat up water, which is then piped around a building.



## How does a biomass boiler work?

Biomass boilers come in a range of sizes, depending on heating requirements. They are clean and easy to maintain.

Whilst these systems operate in a similar way to conventional fossil fuel boilers, which burn gas or oil there are differences in respect to fuel delivery, storage and maintenance.

The boilers burn biomass fuel Pellets or chips made from wood or other biofuels and are automatically fed to the boiler. The fuel is then burned and the heat from this process creates the hot water for the property's heating system.

The boilers produce an ash waste, which needs to be emptied out periodically. This is a valuable potash fertiliser.

Like an oil fed boiler, a biomass boiler requires an area to hold a fuel store, which should be sited to allow easy access for delivery vehicles.

**What grants are available to fund biomass boilers?** Currently UK government has in place a very generous grant scheme that reward those switching over to biomass and other renewable heating technologies. The Renewable Heat Incentive launched in late 2011 provides a 20 year index linked grant payable on the heat produced from a system.

This incentive is currently so generous in most cases it will cover not only the fuel and repayment of the boiler but provide a surplus as well.

In the case of one community centre we recently installed a system into they are earning a surplus of £4000 pa after covering the cost of fuel and servicing.



### Where can biomass boilers be used?

Biomass systems are ideal for most buildings, especially those with high heating and hot water requirements, eg: hospitals, schools, churches, workshops, hotels, golf clubs, swimming pool complexes and leisure clubs.

A new biomass boiler can usually be connected to your existing heating system with very little or no disruption to your premises. Additionally systems can be put into prefabricated pods and positioned close to your site if internal fitting is difficult.

Because of their environmental credentials, the grants available, tax incentives and the concern over the increasing costs of fossil fuels biomass boilers are becoming increasingly popular. Major retailers and supermarkets such as Tesco routinely fit biomass boilers for their new stores. Sky TV have installed a £5m mega scheme to power their new studios and HQ in London.

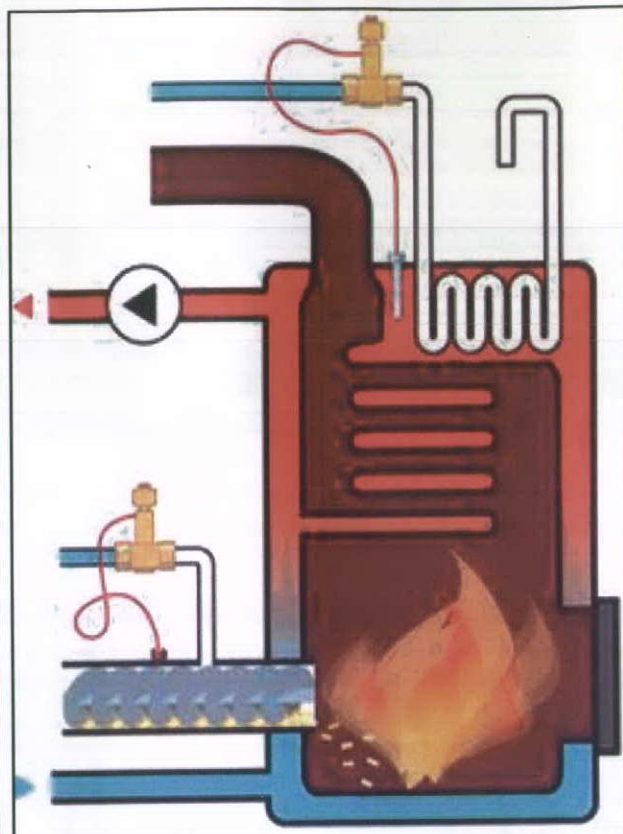


Illustration showing the basic elements of a biomass boiler

### How much does biomass fuel cost compared to traditional fuels?

The price of biomass fuel is significantly cheaper than other heating options such as oil, electricity or LPG gas. It is comparable in price to natural gas piped in from the grid.

As the biomass industry grows and develops it is expected that the cost of wood fuel will become more competitive as more suppliers enter the market and the numbers of customers increase.

However from an ethical sustainability point of view there are some concerns in the industry about the long term availability of UK sourced wood fuel which may lead suppliers to import stocks from overseas. And as most biomass boiler systems currently being installed in the UK can only burn wood this is causing some ethical concerns about sustainability.

As a result the Biomass Energy Co-op have decided to specialise in the supply of boilers that can burn more than wood pellets ie. wood chip, straw pellets, and other agri-waste.

We believe our approach is more economic and environmentally sustainable. Due to a innovative design these boilers have the flexibility to burn a variety of products and can therefore be adjusted to burn the most viable fuel source given location and market price.

**We have produced a range of information sheets about biomass boilers, their fuel, benefits and ways they can be funded easily.**

**If you would like any more information please get in touch.**

**Contact us: 0161 724 8577, 07534419571, [www.biomassenergy.coop](http://www.biomassenergy.coop)**