

Prior to applying for the Low Carbon Buildings Grant, you must undertake energy efficiency measures to ensure that you are minimising your energy requirements. Specifically:

- Insulate loft to 270mm
- Install cavity wall insulation
- Fit low energy light bulbs
- Install basic controls for your heating system.

Contact your local energy savings trust on 0800 512012 for more information.

Details on micro-generation certification on products and technology for the assurance of consumers can be found at:

<http://www.greenbooklive.com/page.jsp?id=4>

Details on Energy Conservation
<http://www.helm.org.uk/upload/pdf/89410-EnergyConservation1.pdf>

Work is currently underway to finalize standards for biomass.

For more details on biomass heating, please visit: www.tvenergy.org

http://www.energysavingtrust.org.uk/generate_your_own_energy/types_of_renewables/biomass/

<http://www.dti.gov.uk/energy/sources/renewables/index.html>
www.est.org

To obtain a copy of this leaflet on tape or in large print please telephone (01296) 585112



Photograph Courtesy of TV Energy



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Renewable Energy:

Installing Biomass/ Wood-Fuelled Boilers, Heaters and Stoves – A Guide for Householders

Introduction to biomass and wood fuelled boiler systems

Biomass is organic matter of recent origin, unlike fossil fuels which have developed over millions of years. The CO₂ released when energy is generated from biomass is balanced by that absorbed during the growth of the plant. It is therefore largely carbon neutral.

Biomass (providing bio-energy) is produced renewably from organic materials, either directly from plants or indirectly from human processes. Biomass includes forest products, untreated wood products, energy crops, short rotation coppice (SRC), e.g. willow or animal waste, industrial and biodegradable municipal products from food processing and high energy crops, e.g. oil seed rape, sugar cane, maize.

Biomass can contribute to waste management by harnessing energy from timber products that are often disposed of at landfill sites. For domestic applications the fuel usually takes the form of wood pellets or logs. Wood chips may also be used in larger properties.

Biomass to heat a domestic property can be used via stoves (room heaters) or boilers.

Stand-alone stoves providing space heating for one or more rooms. These can be fuelled by logs or pellets but only pellets are automatically fed. Generally they are 6-12 kW in output, and some models can be fitted with a back boiler to provide water heating or be fitted with an integral back boiler to provide domestic hot water and central heating through radiators. Log stoves are similar but must be loaded by hand.

Automatic pellet or log boiler systems are more expensive and bulkier, but connect to the central heating system. Larger boilers may dual-fire both wood chips and pellets.

Requirements and Costs:

Capital costs depend on the type and size of system you choose. Stand alone room heaters are c £3,000 installed. The cost for boilers varies depending on the fuel choice; a typical 20kW (average size required for a three-bedroom semi-detached house) pellet boiler would cost around £5,500 - £12,000 installed, including the cost of the flue and commissioning. A manual log feed system of the same size would be slightly cheaper. As a general rule the running costs will be favourable if you live in an area that doesn't have a gas supply, but wood is increasingly competitive with gas, especially logs and chips.

Planning:

From 6 April 2008, any ancillary structures related to domestic biomass technologies will not require planning permission unless prominent within a Conservation Area or AONB or on a Listed Building. Contact AVDC Planners on 01296 585431 or TV Energy on 01635 817420 for more details or visit http://www.energysavingtrust.org.uk/generate_your_own_energy/planning_permission_for_renewable_energy_technologies . If the building is listed or in an area of outstanding natural beauty (AONB), then you will need to check with AVDC Planning Department before a flue is fitted. AVDC's Historic Buildings Officers can be contacted on 01296 585383 or 01296 585888 renewable energy systems in Listed

Buildings and Conservation Areas.

Considerations:

It is important to have storage space for the fuel, appropriate access to the boiler for loading and a local fuel supplier. Installations must comply with all safety and building regulations (see Part J of the Building Regulations). Wood can only be burnt on exempted appliances, under the Clean Air Act. The sustainability of certain first generation biofuel crops for transport is due to come under a certification scheme, but these issues do not apply to domestic biomass.

Payback:

Depending on the fuel being replaced, the type and source of wood fuel, the annual heat usage, grants and fossil fuel price trends, payback may be in the region of 5-15 years. Unlike many other forms of renewable energy, biomass systems require you to pay for the fuel. Fuel costs may depend on the distance from your supplier. With Energy Performance Certificates now a required component of house sales, the value of your wood energy system should be realised.

Household Grants:

Wood fuelled boiler systems: An overall maximum of £1,500 or 30% of the relevant eligible costs, whichever is the lower. Automated wood pellet fed room heaters/stoves: Overall maximum of £600 or 20% of the relevant eligible costs, whichever is the lower. Householder grants are available until June 2010 on a first come first served basis from: www.lowcarbonbuildings.org.uk