



SevernWye
ENERGY AGENCY

Pellet Heating Basics - Feature Stoves

Key Points

- Burning wood does not contribute to climate change if felled trees are replaced.
- Wood-fuel is a renewable heating fuel if from a sustainable source.
- Efficiencies of 85 to 95%, so minimal smoke and air pollution

Why is it Important?

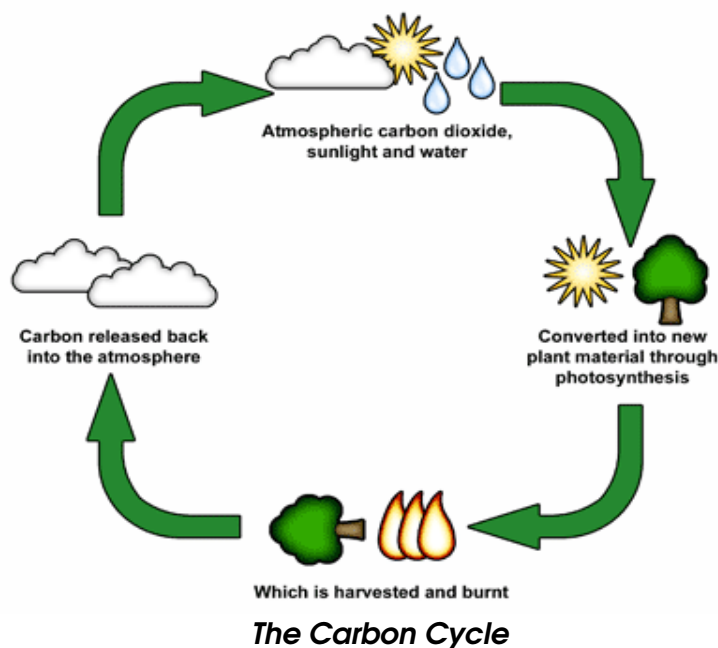
While Carbon dioxide (CO₂) is still released when wood is burned, this is approximately equivalent to the CO₂ which is taken in by the trees over their lifetime (see Carbon Cycle diagram adjacent).

The main source of material for pellets is sawdust and off cuts from wood processing. So pellets use what might otherwise go to waste.

Types of Heaters Available

There are stoves which can be designed as a feature of a room, with the real fire on display and there are larger pellet boilers which are designed to be installed in a boiler room (see separate information sheet).

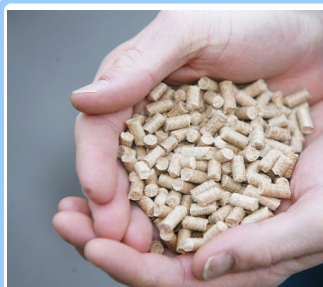
The feature stoves can come with fan assisted heating for the room, or with ducting to take fan assisted heating to other rooms or with a back boiler. A back boiler allows the pellet heating to provide heating to radiators and/or hot water, while also providing heat to the room. Back boilers can run in series with other heat sources, so no need to disconnect your old boiler system.



Modern Automation

Pellet heaters have come a long way since coal fires. They come fully automated, so there is maximum enjoyment for minimal work, no matches required. Typically there will be a control unit similar to your central heating system to program the heat supply or even turn-up the flame with a remote control.

Feature stoves have an integral pellet store in the unit, so you lift the lid and pour in pellets from a bag. This is easy with small bags of pellets & small stoves. With larger bags and taller units you may want to decant the bag to aid filling the stove. Ash is removed from the burn zone automatically, with long periods between ash tray emptying. Manuals may suggest emptying every other day, but it may not fill for a whole month.



Wood pellets are compressed wood which is very dry (typically around 6-10%), so has a high energy content and are convenient to store and use.

Pellet Heating Basics — Feature Stoves

Features to look for:

- Heat output rated in kW.
- Adjustable heat range, into the room and into the water heating.
- Size of hopper is expressed in kg or litres of pellets and maximum burn time on minimum heat.
- Height of unit can make it easier to fill



Pellets are poured from a bag into the top of the stove

Buying your pellets

Pellets can be purchased for about £210 (inclusive of 5% VAT) for 1 tonne of 40 bags weighing 25kg, including delivery. Smaller bags (e.g. 15kg) or smaller loads cost more. Pellets should conform to a European quality specification, but do look out for excessive proportions of dust in your delivery.

How to go about it

Most householders will want to get the LCBP grant for their unit. To get this you will need to use one of the accredited installers from their list, there are not many local options so this feels a little restrictive. Similarly, although there are numerous makes and models of unit, only some have been accredited with LCBP. But there is still plenty of choice of excellent units. Many installers limit themselves to one or two makes of unit. So ideally:

- Choose your make of unit
- Find your local installer who will install that make and get a quote
- Get quotes for associated works
- Apply for grants

Smoke Controlled Zones

Local authorities can declare smoke controlled areas. Check if your area is controlled at <http://www.uksmokecontrolareas.co.uk/> If it is, then your choice of unit will be restricted to a stove on their list that has an exemption certificate.

Typical units and indicative costs of installed units:

8kW room heat only - £3000

15kW with back boiler - £6000

Installation costs are highly dependant on individual circumstances, for instance, whether there is an existing flue and central heating pipe work.

Installation requirements

For a feature stove you will need:

- a raised plinth
- ability to plug in a mains socket (stoves use electronic controls and automation)
- a flue complying with the normal regulations for wood burning (at least 130mm diameter, but may change)
- stoves over 5kW will require fixed room ventilation (or air in-feed direct to the stove)
- If there is a back boiler, then there will need to be pipe work into the current radiator loop (the 22mm system, not the microbore 10mm) or new central heating system and/ or into the hot water cylinder.

Grants

Low Carbon Buildings Programme (LCBP)

Under review—see their web site for updated status. Domestic installations currently up to £600 for feature stoves with no back boiler and £1500 for units with a boiler. You need to comply with a list of energy efficiency measures to qualify.

Gloucestershire Renewable Energy Grants

With funding from all of the Gloucestershire Councils there is a further £1000 available for pellet feature stoves within Gloucestershire.

Further Information

Low Carbon Buildings Programme (LCBP)

www.lowcarbonbuildings.org.uk

0800 915 0990

Gloucestershire Renewable Energy Grants

01452 835087

Biomass Energy Centre

www.biomassenergycentre.org.uk

Supplier list - 'publications', 'wood pellets'

Severn Wye Energy Agency

Unit 15 Highnam Business Centre, Highnam
Gloucester GL2 8DN

www.swea.co.uk

01452 835087

renewables@swea.co.uk



ESPAÑA ESPACIO ATLÁNTICO
FRANCE ESPACE ATLANTIQUE
IRELAND ATLANTIC AREA
PORTUGAL ESPAÇO ATLÁNTICO
U.K. ATLANTIC AREA



Gloucestershire
Rural Renaissance