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SevernWye
energy agency

A guide to

heaters and fires



SevernWye energy advice

There are two main ways that homes may be heated:

1) A central heating system where the heat is produced centrally and then distributed around each room (usually using radiators).

2) Heat is produced individually by heaters or fires in each room.

This leaflet is aimed at those with individual heaters or fires in each room. If you have central heating, please see our leaflet on 'Wet central heating systems.'

This leaflet covers the following types of heaters:

- Storage heaters
- Other electrical heaters
- Portable bottle gas heaters
- Solid fuel fires

We have covered the most common types of heating. For more detailed information about specific heating technologies, please call our advice line on **0800 500 30 76** and speak to one of our friendly advisors.



References

*For details of the references used in this document please scan the QR image, visit **www.warmandwell.co.uk/warm-and-well/advice-materials.html** or call us on 0800 500 30 76

Storage Heaters

The most common form of storage heaters are night storage heaters. These contain an electric element embedded inside a ceramic or concrete block. The element heats up during the night when electricity can be purchased more cheaply and transfers its heat to the block where it is stored until it is released the following day.

Economy 7

In order to benefit from cheaper night-time electricity, homes with storage heaters are often on an economy 7 tariff where electricity is available at a cheaper rate for 7 hours during the night. There are also economy 10 tariffs that provide electricity at a cheaper rate during specified hours during both the day and night. This means you can have a heating boost or top up during the day. However, both these tariffs only work out cheaper when you have a high night-time demand for electricity as the day rate will be higher than a standard tariff. Therefore, if you replace night storage heaters with another type of heating, you may be better off moving to a standard tariff.

The difficulty with most storage heating is that there is minimal control over the release of the heat, and if insufficient, it will need to be supplemented with heat produced from peak-rate electricity.

Controlling storage heaters

Storage heaters are controlled manually by an input and output, which needs to be altered daily in response to how much heat is required. Therefore, the householder needs to pay careful attention to weather forecasts to predict how much heat will need to be stored overnight (using the input), ready for release the following day (using the output).

In order to avoid this issue, modern storage heaters are often equipped with automatic weather compensation which will automatically adjust the amount of heat stored according to the outside temperature (as sensed by an external thermostat). They may also be fan assisted with an adjustable fan, enabling you to more effectively control the rate at which heat is released.

If you have an old night storage heating system, it may be worth considering upgrading to a more modern version.

Other electric heaters

There are a variety of other forms of electric heaters including oil filled radiators, convector heaters, fan heaters and halogen heaters. These are most commonly used as a back-up rather than as a primary source of heating.

There are several issues to consider with these types of heaters. Firstly, extra care needs to be taken around children or vulnerable adults due to the high temperatures that the heaters can reach, making them harmful to the touch. In addition, they require plenty of surrounding space, especially fan heaters, as they draw in air from around the heater, and halogen heaters, which have an oscillating movement. There are often limited controls on stand-alone electrical heating devices, which can result in energy being wasted. Therefore, look out for heaters with thermostatic controls which will give them the capability of switching off once a particular temperature is reached.

Electric heating – things to consider

- Electricity is more expensive per unit than oil or gas.
- Using mains electricity for heating currently produces greater carbon emissions than using gas or oil fired heating.
- Electric heating tends to be more difficult to control.



Oil filled



Halogen



Fan



Convector

Gas fires and fixed gas heaters



Gas fires come in a range of styles and options. If you are looking to buy a new gas fire, one of the key things to look for is the efficiency of the fire. This is the amount of energy contained in the gas that is actually converted to heat and enters the room. Older gas fires lose around 40-50% of their heat up the flue*[1]. Modern versions are much more efficient meaning they use less gas and are cheaper to run.



Portable bottle gas heaters

Bottled gas heaters tend to be rather bulky, meaning they can be a challenge to move around, and the bottles have to be changed over once empty. A major issue to consider with the use of bottled gas heaters is the fumes given off by the heaters and the moisture they produce. These heaters should only be used in well ventilated spaces in order to avoid health issues and prevent a build-up of condensation. Due to these issues, along with the relatively high cost of LPG, their use has become much less common.

Gas fires require annual servicing by a Gas Safe engineer. This will help to maintain their efficiency as well as ensuring that they continue to run safely.

GAS safe REGISTER

Solid fuel fires

Solid fuel fires burn coal, wood or other solid fuels. Coal has a higher energy density than wood, but wood is a more environmentally friendly option. If you live in a smoke control area or a smokeless zone, this can affect which solid fuels can be burnt. Enclosed and glass-fronted stoves that burn wood and coal-based solid fuels are often exempt from this, and tend to burn the fuel more efficiently.





Energy saving tips

There are lots of ways of reducing the amount of energy used for heating:

- If you are cold, try putting on a jumper before resorting to turning the heating up (whilst ensuring that children and the vulnerable or elderly do not become too cold).
- Avoid opening external windows and doors whilst the heating is on as this lets valuable heat escape (however, some ventilation is required in order to avoid the build-up of condensation).
- Make sure that heaters are not covered and have plenty of space around them to allow the heat to circulate effectively.
- Avoid covering heaters with curtains.
- If you are improving your heating system, you might want to consider improving your home's insulation and draught-proofing at the same time. We have additional leaflets in our range to support you with this.

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Severn Wye Energy Agency is a not-for-profit company and charity (charity no. 1083812), established in 1999 under the European Commission SAVE programme to promote sustainable energy and affordable warmth through partnership, awareness-raising, innovation and strategic action.

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Warm and Well has been running for over 10 years and has helped thousands of people tackle their energy bills and make their homes more comfortable. Our friendly advisors provide free advice on reducing energy use and on the grants and incentives available.

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This fact sheet is part of a series that includes information on heating and hot water, home power generation, lighting and electrical appliances and reducing heat loss.
The full series of fact sheets can be found at:
www.warmandwell.co.uk

Large print copies are available on request

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