YOUR CONTACTS

CORGI
0870 401 2300
www.corgi-gas-safety.com

Energy Efficiency Advice Centre
0800 512 012
www.saveyour20percent.co.uk

Home Heating Information Council
0845 60 2200
www.centralheating.co.uk

National Grid Gas plc
01926 653000
www.nationalgrid.com/uk

OFTEC
0845 65 85 80
www.oftec.co.uk

Scottish Building Standards Agency
01506 600 400
www.sbsa.gov.uk

Remember to contact your Local Authority Building Standards Department for advice on when a building warrant is required.

To request a version of this booklet with large print please call 020 7222 0101.

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HOW YOU CAN SAVE ON HEATING YOUR HOME

natural scotland
SCOTTISH EXECUTIVE

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SCOTTISH BUILDING STANDARDS AGENCY

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Is your home heating system wasting energy and money?

Scottish winters can be cold and harsh so it is important to keep your home warm throughout winter. But you could be paying more than is necessary to run the system used to heat your home.

We want to help you understand how your heating works and how to use it efficiently. We can also suggest ways that you might be able to modernise your system and save some money in the process.

Heating and hot water accounts for about 60 per cent of the average household fuel bill. By changing parts of your existing system or by installing a new, more energy efficient system you might make some big savings. In the process you may be able to save a significant amount of money and also help the environment.

Greenhouse gases and your home heating

To generate the energy and electricity needed to heat our homes we normally burn coal, oil and gas. Burning these fossil fuels produces greenhouse gases. These gases are changing our climate and damaging the environment. The most common of these gases is carbon dioxide (CO_2).

In 2004 the United Kingdom's CO_2 emissions amounted to 580 million tonnes per year. The energy used in our homes is responsible for over a quarter of these emissions. If you were to save just 20% of the energy you use each day you'll help combat climate change.

Save your 20%

For more information call **0800 512 012**
or visit **www.saveyour20percent.co.uk**

Heating your home

Boilers and radiators – known as "wet" central heating

These are radiators heated by a boiler. The boiler may use natural gas, oil, solid fuel or liquefied petroleum gas (LPG) and will usually provide hot water and heat.

The most common fuel is natural gas. It is cheaper than other fossil fuels and relatively clean in terms of CO_2 emissions.

- **Combination or 'combi' boilers** heat your home and provide instant hot water without the need for a tank.
- **Regular boilers** also heat your home and provide hot water but need a separate hot water tank.
- **Condensing boilers** are 10-15 per cent more efficient than regular boilers as they extract more heat from the flue gases.

Electric storage heaters

These work by storing heat when electricity is cheaper. The heat is then released during the day and evening. To get the most from these systems, it is essential the controls are set correctly so that the heat is stored until it is needed. You should also install a timer to heat your water during off peak periods.

Individual room heaters

If you have a smaller, well insulated property you may find that individual heaters are cheaper to install and can effectively heat your home. They can also be used to supplement a central heating system. There are several kinds including gas fires, convection heaters and solid fuel, multi-fuel and wood-burning stoves.

When is a good time to consider upgrading your heating system?

If your boiler is inefficient or if you are undertaking major renovations, it may be best to buy a new boiler at the same time to keep down the costs and disruption. For example, if you are renovating a floor and need to lift the floorboards you could hide radiator pipes by installing them under the floor before the floor is re-laid.

An example of a typical boiler

How to use your central heating efficiently

Inefficient boilers

If your boiler is over 15 years old it will be around 65 per cent efficient. This means for every £1 you spend on fuel, only 65p is used to heat your home. The other 35p is wasted.

Modern condensing boilers are far more efficient and typically convert 90 per cent of the fuel they use into heat for your home and to provide hot water.

Replacing your old system with a new high efficiency boiler and a full set of heating controls could save you up to £180 a year, and cut your home's CO_2 emissions.

You may be able to find out how efficient your own boiler is or check the efficiency of one before you buy. For further information visit www.boilers.org.uk

Installing or upgrading your heating system

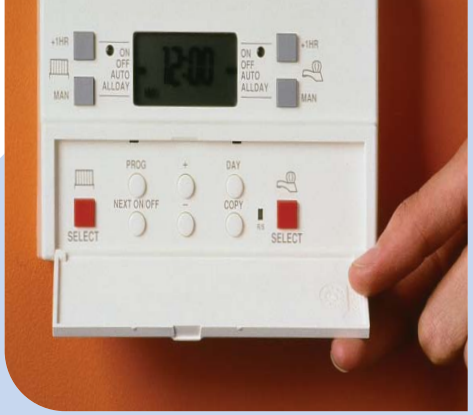
You will need a professional to help to install, replace or maintain your boiler. All work carried out on gas appliances must be by a CORGI-registered installer. If fitting an oil-fired boiler use an installer who is registered with OFTEC.

Heating controls

You should be able to turn your heating controls on and off and they should react to changes in room temperature. They should also provide varying levels of heat in different parts of your home and stop your boiler from working when it is not needed.

- **Radiators** allow heat to be released into a room. They should be appropriate for the size of the room. You should 'bleed' your radiator if you notice it is not as warm as it should be. You do this by carefully unscrewing a small valve with a special key allowing air to escape. Seek help if you have a pressurised heating system or if you are unsure of how to do this.

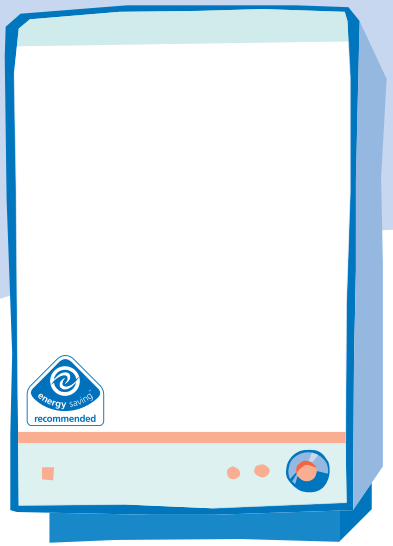
A typical example of a thermostatic radiator valve (TRV) connected to a radiator



An example of a typical programmer

- **Thermostatic radiator valves (TRVs)** control the temperature of each room separately. They reduce the flow of water into the radiator when it reaches the required temperature. They work best in rooms which overheat or which are used infrequently.
- **Programmers or time-clocks** are the most useful controls as they turn your heating and hot water on and off depending on the times you set. They should be capable of controlling the heating and hot water independently.
- **Room thermostats** automatically switch your heating off once the chosen temperature is reached. Set your thermostat at the lowest comfortable temperature. This is usually 18°C - 21°C. Lowering a thermostat by just 1°C can cut up to 10 per cent off heating bills.

Thermostats all need a free flow of air to sense the temperature, so they must not be covered by curtains, blocked by furniture, close to draughts and direct sunlight or other sources of heat.



Having the correct heating controls and knowing how to use them properly can instantly improve the efficiency of any central heating system, cutting your energy costs by up to 17 per cent. If you are unsure of how to use your heating controls or system, call your Energy Efficiency Advice Centre on **0800 512 012.**

Heating your water

If your system includes a tank or if you have an electric immersion heater you need to ensure you are heating and storing the water as efficiently as possible.

If you do not have a hot water tank, your system is likely to be heated by a combination boiler which heats your water instantaneously when you turn on your tap.

Thermostats

You should have a thermostat fitted on the tank. Water need not be heated to a scalding temperature as this will waste your money. Setting the thermostat at 60°C (or 140°F) is hot enough.

A typical example of a boiler thermostat

Hot water jackets

If you insulate your hot water tank the water will stay warm longer and you will waste less energy. An insulating jacket costs around £5 - £10, and should pay for itself in under a year. If your existing jacket is less than 75mm (3 inches) thick replace it or put another one on top. Modern tanks come pre-insulated with solid foam.

Hot water pipes

Insulating hot water pipes, especially those between the boiler and the hot water cylinder, can save you an extra £10 a year.

Maintaining your system

Any gas appliance should be serviced once a year to keep the system safe and prolong the life and efficiency of the boiler. Why not ask your service engineer about upgrading your heating controls?

Look for the logo

The energy saving recommended logo is a way of easily identifying the most energy efficient products on the market. Products with this logo meet strict criteria for energy efficiency, so are guaranteed to use less energy, thereby saving you money as well as cutting down on CO_2 emissions. To find out which products apply, visit **www.est.org.uk/recommended**

energy saving® recommended
www.energysavingtrust.org.uk

Certification mark

For more information call **0800 512 012**
or visit **www.saveyour20percent.co.uk**

Don't limit yourself to 20% – do more

An example of solar PV on a home

There are other simple steps you can take to make your home more energy efficient.

- **Insulating** your home properly can help you save money, energy and reduce CO_2 emissions. Uninsulated walls account for over 30 per cent of heat loss in the average home. Cavity wall insulation is one of the most cost-effective energy efficiency measures you can make in your home. It can reduce heat loss through the wall and save between £100-£120 each year on your heating bill. You can also insulate your loft, floors and windows. You could be eligible for a grant or discount to help with the cost.
- **Renewable energy** means you don't have to use fossil fuels alone to meet all your energy needs. The wind, sun and flowing water can provide alternative sources of energy.

Examples of technologies that harness renewable resources are solar water heating, photovoltaics, micro wind turbines, ground source heat pumps and wood chips or biomass stoves. If you already have a multi-fuel stove, burning wood chips rather than other fuels will save on emissions. For more advice on insulation and renewable energy, call your local Energy Efficiency Advice Centre on 0800 512 012.

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