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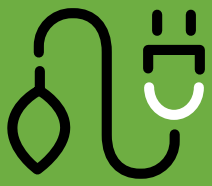

Save energy

Save tomorrow

Greener Heating Guide

All you need to know about upgrading
to a more efficient heating system

Contents

Time to upgrade your heating?

This Greener Heating Guide will take you through the whole process, from choosing a system to finding funding.

Did you know that in a typical household, over half of the fuel bills are spent on heating and hot water?

An efficient heating system that you can control easily can help reduce your fuel bills and cut your carbon emissions.

If we are to reach the net zero carbon emissions target set by the UK Government, we will need to reduce the carbon emissions from heating our homes by 95% over the next 30 years.

To put this into perspective, the average household generated 2,745kg of carbon dioxide from heating in 2017.
By 2050, we need to reduce this to just 138kg per household.

This is a significant reduction – but it is achievable.
Having an efficient heating system running on a low carbon fuel is one of the most important steps you can take to reduce your fuel bills and your carbon dioxide emissions.

01

Exploring your options

If you're planning a new heating system, it's always good to shop around and find out what's going to work best for you and your property.

To reach net zero we'll need to phase out oil and gas heating systems to reduce our dependency on fossil fuels, replacing them with renewable, low carbon technologies.

The good news is there are now more low carbon heating options than ever before, and they're becoming more and more affordable all the time.

The most popular renewable heating options are air source and ground source heat pumps and biomass. Solar water heating is also a good option if you're just looking to upgrade your hot water system.

If you're not quite ready to go for renewables, installing a modern energy efficient boiler with appropriate heating controls is still a good thing to do. You won't save as much carbon, but you should use less energy through having a more efficient system.

What are the options?

Heat pumps
There are two main types of heat pump: air source and ground source. The difference between them is simply where they get heat from: air source heat pumps absorb heat from the air, while ground source heat pumps absorb heat from the ground.

Find out more about air source and ground source heat pumps.

Biomass
Biomass heating systems burn renewable fuels such as wood pellets, chips or logs to provide warmth in a single room or to power central heating and hot water boilers. Biomass releases carbon dioxide when burned, but considerably less than fossil fuels.

Find out more about biomass.

01

Boilers
If it is time to change your boiler, you need to decide what type of boiler is right for you. Most boilers run on mains gas, but in areas where mains gas is not available, the boiler could run on oil, electricity, LPG (tank gas), coal or wood.

Modern boilers are generally condensing boilers, which makes them more efficient than older models.

Find out more about boilers.

Electric heating
Most UK homes that don't have a boiler and radiators have electric storage heaters. With a storage heating system, you will likely have a few panel heaters in less used rooms, like your bedroom, and a hot water cylinder heated by one or two immersion heaters for your hot water. Electric heating can be more expensive, with more complex tariff and meter options than mains gas, but as more of the UK's grid electricity comes from renewable sources, it's becoming a lower carbon option than before.

Find out more about electric heating.

Solar water heating
Solar water heating systems, or 'solar thermal' systems, use free energy from the sun to heat the water in your hot water tank. Although this isn't a full central heating system, it can be used alongside a standard system to provide hot water for the household. An immersion heater or conventional boiler can be used to make the water hotter, or to provide hot water when solar energy is unavailable.

Find out more about solar water heating.

Choose the most efficient model
Whichever heating system you decide on, it makes sense to choose the most efficient model. This will use less energy to run, saving you money on your bills as well as reducing your environmental impact. Topten UK brings together the most energy efficient products on the market, including heat pumps, biomass boilers and other home appliances.

Visit TopTen UK.

Do you live in Scotland?

The Home Renewables Selector is an exciting interactive tool that helps you decide what renewable energy technologies are best for your home.

Try the Home Renewables Selector now.

Take control of your heating system

If replacing your whole system isn't an option right now, how about installing heating controls? The right controls will let you keep your home at a comfortable temperature without wasting fuel or heat.

If you have a gas, oil or LPG central heating system, your full set of controls should ideally include a timer or programmer, a room thermostat and thermostatic radiator valves.

If you have an electric storage heating and hot water system, read our guide on electric heating systems for information about suitable controls.

You can upgrade or install heating controls without replacing your boiler, and it's a particularly good idea to think about this if your controls are more than 14 years old.

Take control of your heating system today.

02

What funding is available?

Unsurprisingly, cost is the main thing that puts people off replacing their heating system or making other energy saving home improvements. It can be expensive to install a new system but the cost savings you could see on bills – as well as your reduced carbon footprint – are well worth the investment if it's possible. You'll also benefit from a warm and comfortable home that doesn't cost the earth to heat.

There is a range of support available across the UK to help you install modern heating systems. You could even make money back from a renewable heating system.

Available grants, loans and financial schemes depend on where you live in the UK.

Renewable Heat Incentive

Under the UK Government's domestic Renewable Heat Incentive (RHI) scheme, you could receive quarterly cash payments over seven years if you install or have already installed an eligible renewable heating technology (excludes Northern Ireland).

Heating systems covered by the scheme include biomass boilers and stoves, heat pumps, solar thermal panels, and more.

Other financial help is available in a number of circumstances, with the focus on keeping warm for less. Different grants are available in England, Wales, Scotland and Northern Ireland.

02

England and Wales
For information and guidance on financial support, as well as advice on how to save energy, visit our website.

Some Welsh residents may be eligible for funding under the Welsh Government's Warm Home Nest scheme. Find out more on the Nest website.

Scotland
If you're based in Scotland, you can visit Home Energy Scotland, or call the service on 0808 808 2282, for free, impartial, expert advice, including information on grants and loans.

There's a wide range of financial support available for Scottish residents, including interest-free loans up to £17,500 when you install a renewable heating system.

Or you can use our funding finder tool to get started.

Some Scottish residents may be eligible for the Warmer Homes Scotland scheme. Check eligibility and find out more.

Northern Ireland
The Boiler Replacement Scheme offers owner occupiers a grant of up to £1,000 to replace inefficient boilers with energy efficient condensing oil or gas boilers; switch from oil to gas; or switch to a wood pellet boiler.

It is available to those who earn less than £40,000 a year with an inefficient boiler of at least 15 years old and is dependent on total gross income. Call 0300 200 7874 or email boiler-replacement@nihe.gov.uk to register.

If you would like more information about the current grants available, please contact Northern Ireland Energy Advice online, via email on nienergyadvice@nihe.gov.uk or call 0800 111 4455.

03

Finding an installer

Installing a renewable heating system

Once you've worked out what kind of system is right for your home, you'll need to find someone to fit it. We recommend you use an installer who is certified under the Microgeneration Certification Scheme (MCS). All installers or suppliers should be able to provide a detailed breakdown of the specification and costs of their proposed system.

We recommend you get at least three quotes from three different installers. Don't compare installers on cost alone – the cheapest may not be the best option. There are lots of review sites online where you can see how other customers have rated a company.

Depending on the kind of property and installation, you may also need to get planning permission or a building warrant from your local planning authority. Make sure you have the right permissions in place before beginning installation.

Finally, check with your home insurance provider to make sure your policy covers the changes to your home and make any adjustments you need.

Get advice on installing renewables.

If you live in Scotland, use the Renewables Installer Finder tool to search and read reviews for certified installers near you.

Installing an energy efficient boiler

For gas and LPG boilers, the installer must be Gas Safe registered. For oil boilers, we recommend that you use an OFTEC registered installer.

It's worth getting three quotes from different installers, and you may also want to check that installers have a local office and customer references that you can review (check for online reviews too).

Your registered installer will ensure that your system complies with current building regulations and will make sure you get all the documentation to prove this. Keep these documents safe as you will need them when you sell the property.

Installing other heating systems

Gas
If you are installing or replacing a fixed (wall-mounted or otherwise) gas heater then you will need to use a Gas Safe Register installer.

Electric
You should always use a qualified electrician to fit or replace storage heaters. You can use the Competent Persons Register to find an electrician who is registered with a government-approved accreditation scheme.

Portable heaters can be bought from DIY or home furnishing shops and do not need to be installed by a professional. You can just take them home and use them when you need them – but watch out, these can be expensive to run.

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Making the rest of your home work with your heating system

Getting the best out of your heating system isn't always as simple as installing it and switching it on. Insulating your home will help your new or existing heating system work as efficiently as possible. By adding insulation to the walls, floors and roof – and by draught-proofing under doors and around windows – you can prevent heat escaping from your home.

There are many simple yet effective ways to insulate your home, which can significantly reduce heat loss, lower your heating bills, and cut your home's carbon emissions.

Whether you're looking for quick wins around your home or a professional to install insulation, the suggestions below will help maintain a constant temperature in your home.

You can also use TopTen UK's calculator to work out the best energy set up for your home.

Give it a try here.

Wall insulation
Did you know that around a third of all heat lost from an uninsulated home escapes through the walls? Find out all you need to know about cavity and solid wall insulation.

Floor insulation
Floor insulation is a great way to keep your property warm. Generally, you only need to insulate the ground floor.

Find out more about floor insulation.

Roof and loft insulation
A quarter of heat is lost through the roof in an uninsulated home. Installed correctly, loft insulation should pay for itself many times over in its 40-year lifetime.

Find out more about roof and loft insulation.

Draught-proofing
Draught-proofing is one of the cheapest and most effective ways to save energy in any type of building. Block up unwanted gaps that let cold air in and warm air out.

Find out more about draught-proofing.

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What to expect from installation and beyond

Now that you've installed your new heating system, it's time to sit back and enjoy all the benefits it has to offer.

It's important to maintain your system with regular servicing to keep it working efficiently. If you're eligible for the renewable heat incentive you'll need to register your system, and if you've changed to a new fuel source it could be a good time to shop around for a cheaper tariff for your energy.

We have a range of case studies from across the UK of people who have made the switch to a renewable heating system, including some of our own colleagues and Energy Saving Trust. You can read their experiences below.

Solar water heating benefits

- A solar water heating system works all year round, though you'll need to heat the water further with a boiler or immersion heater during the winter.
- Sunlight is free, so your hot water costs will be reduced.
- It's a renewable water heating system that can reduce your household carbon emissions.

Heat pump benefits

- A heat pump could lower your fuel bills, especially if replacing conventional electric heating.
- It could provide you with an income through the Renewable Heat Incentive.
- It could lower your home's carbon emissions, although this depends on the fuel you are replacing.
- Unlike gas and oil boilers, heat pumps deliver heat at lower temperatures over much longer periods.
- In winter, it may need to be on constantly to heat your home efficiently, but radiators won't feel as hot to the touch as with a gas or oil boiler.

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Biomass benefits

- Although the price of wood fuel varies considerably, biomass is often cheaper than other heating options.
- Biomass boiler systems could benefit from the Renewable Heat Incentive. Biomass pellet stoves with integrated boilers providing space heating are also covered by the scheme.
- The carbon dioxide emitted when wood is burned is the same amount that was absorbed over the years the plant was growing. The process is sustainable if new plants continue to grow in place of those used for fuel.

General benefits when you replace your heating with a newer system

- Your new system will likely work more efficiently than the old one so you'll use less energy, lowering your carbon impact.
- You'll likewise pay less on your heating bills thanks to the new efficient system you've installed.
- Your home could feel warmer and more comfortable than before, if your old system wasn't working very well.

Case Sudies

Read these real life stories to find out about the process of installing a new heating system:

Heat pumps

England: Emilie's major home renovation included several energy efficiency improvements, as well as a low carbon heat pump.

Read Emilie's case study.

Wales: Ben decided to make the switch to a renewable air source heat pump, after his 25 year old boiler broke down.

Read Ben's case study.

Scotland: Joanna recently bought a flat with an old electric storage heating system and made the decision to install a heat pump.

Read Joanna's case study.

Rural: Fiona is making her rural home more sustainable by removing an oil heating system and installing an air source heat pump.

Read Fiona's case study.

Solar water heating

Mr Helme shows you the renewable technologies he's installed for his home and describes his experience living with them.

Watch Mr Helme's video case study.

Biomass

Mr Sherring shows you around his passivhaus, explaining his experience of living in a low-carbon home and what it means for his bills.

Watch Mr Sherring's video case study.

Next steps

Buying energy efficient products

Find out about the benefits of buying energy efficient products, how you can save on your bills once you have purchased them, and how to dispose of your older, less efficient products.

Find out more about buying energy efficient products.

Quick tips to save energy

Follow our tips and advice for straightforward ways to save energy, lower your bills and reduce your carbon footprint.

Get quick tips to save energy.

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Sign up for Energywire, our regular email bulletin with great content on sustainable living, net zero and tackling the climate emergency.