

FACTSHEET: REPLACING ELECTRIC STORAGE HEATERS



Electric storage heaters, or night storage heaters, are some of the most common electric heating systems in Scotland. To make your system work best for you, it's important you understand how it works and how to use the heating controls.

If your storage heaters are old and you're thinking about upgrading your heating system, this might be a good time to consider alternatives to storage heaters, for example, a heat pump.

If you decide that storage heaters are the best option for you, read on to find out what to consider when replacing your old storage heaters with modern ones.

How does an electric storage heater work?

Electric storage heaters use electricity to make heat, and store this heat inside the heater's core.

In older storage heaters, input and output dials give you some control over this. The input controls the electricity - the higher it is set, the more electricity it will use. The output dial controls the release of heat, and the higher it is set, the quicker heat emits from the heater.

Some storage heaters are fitted with convector heaters, too. These usually look like a grill at the top of the unit. These are intended to give you some 'boost' to your heating if you run out of stored heat. Try not to rely on these too often, as it's usually cheaper to use electricity to make heat to store, than to use straight away in your convector heater.

When the heaters use electricity to make heat to store depends on what meter type and tariff you have.

Some households will have an Economy 7 type meter with a dual rate tariff. These people will receive a cheaper rate in a single period overnight that they can charge their heaters with (and any other appliance they use during that period will also benefit).

Other households might have restricted meters. There are different types, but it might be that you receive afternoon or early evening 'top up' cheaper rate periods in addition to an overnight period. This cheaper rate is often limited to just your heating or heating and hot water, so any other appliances won't use this rate.

More information about electricity meters is available in our **factsheet Electricity meters, billing and restricted meter types**

Should I upgrade?

Storage heating technology has improved considerably since their introduction in the 1960s. Storage heaters manufactured after 2018 must meet stricter efficiency standards and have better controls – although it is still possible to buy older models.

Upgrading to modern storage heaters could make your home more comfortable and save you money.

Compared to older storage heaters, modern heaters:

- Can hold more heat (they have higher 'heat retention').
- Have better insulation (insulation slows the rate of heat loss from the hot core, meaning there will be more stored heat available to you when you need it)
- Can release heat more quickly when needed (their output is easier to control).

They are also often fitted with improved controls, including an automatic charge control, thermostat and programmer.

The programmer allows you to set the temperature you want the room to be heated to and when.

The automatic charge control works out how much electricity it needs to store to meet that programme, and only draws the amount of electrical charge required to meet the programme.

The thermostat tells the heater to release more of the stored heat if it detects the room is colder than what you set, and to stop releasing heat if it detects the room is warmer than what you set.

These controls work together to mean that once the programme is set, the heater can control itself without you needing to make any other adjustments, unless you want to change the programme. If you upgrade, you should find that these heaters make your home more comfortable.

Which heaters are best?

Ultimately, the best heater will be the one that matches your heating needs and budget.

Similar sounding technologies can be confusing. Some panel heaters can hold on to heat for a while after being switched off, but are not storage heaters. Storage heaters can hold enough charge to give you a full day's worth of heat, and do not need to use electricity at the same time as they are giving off heat.

We recommend you get a quote from at least three installers. Make sure the salesperson is aware of the details of your electricity meter and tariff, especially if you have a restricted meter, as the wiring required might be different. Beware of heavy-handed sales techniques like

pressure to sign on the day, high prices with large discounts, and discounts only available if you sign a contract on the spot.

We recommend finding an installer through SELECT, the trade association for the electricity industry in Scotland. SELECT members follow the association's code of practice to make sure they provide a good quality service.

Can I replace storage heaters myself?

No, a registered electrician should replace your storage heaters. Storage heaters are very heavy because of their heat-retaining core – some larger models weigh more than 150kg. Storage heaters also need to be connected to the correct circuit in your home and are hard-wired to the circuit (rather than plugged in by a socket). Only a registered electrician should do this. Storage heaters installed before 1974 may contain asbestos – in this case, specialist asbestos removers should remove the heater.

A trained installer will also be able to advise which size of heater you need. This is important because over-sized heaters mean you will be paying too much, while too small a heater means you will not get enough heat.

The installer might ask you to turn off the heaters you are removing for 24 hours or more before the appointment, to allow the core to cool down enough for them to handle it.

Funding

If your storage heaters are old, with manual controls, and you are finding them difficult to control, upgrading your heaters could help.

New storage heaters can be expensive. If you're paying for a new heating system yourself, you might consider just replacing the heaters in the rooms you use the most first, then replace others when you can.

Home Energy Scotland can help you access funding to help with the initial costs of a new heating system or to improve your home and make it more energy efficient.

You might be able to spread the cost with an interest-free loan, funded by the Scottish Government.

If you struggle to keep your home warm and you meet certain criteria, you might qualify for help from the Scottish Government, your energy supplier or your local council to pay for the improvements.

To find out what funding you might be eligible for, give us a call or try our online [Funding Finder](#).

Types of electric heating and their functions

	Store a full day's worth of heat	Digital programmers and thermostats	Automatic charge control	If E7-type meter, use off-peak (night) rate	If restricted meter, use heat/control rate
Panel heaters and electric radiators	✗	✓ (very old panel heaters might not have this)	✗	✗	✓ (depends on meter type and how heater was installed)
Older storage heaters	✓ (poor insulation in some can mean heat is lost too early in the day)	✗	✗	✓	✓
Older storage heaters with convector heaters	✓ (poor insulation in some can mean heat is lost too early in the day)	✗	✗	✓ (but convector heater will use peak (day) rate outside night hours)	✓ (depends on meter type and how heater was installed)
Modern storage heaters (manufactured after 2018)	✓	✓	✓	✓	✓
High heat retention storage heaters (manufactured after 2018)	✓	✓	✓	✓	✓

We're here to help



If you have more questions, [Home Energy Scotland](https://www.homeenergyscotland.org) is here to help. Call us free on 0808 808 2282 to have a chat about your energy use, how to get the most out of your heating system and save money on your bills.